

CONTRACT DOCUMENTS AND TECHNICAL SPECIFICATIONS

SCADA SYSTEM IMPROVEMENTS

for the
CITY OF STOCKBRIDGE
C&S Project No.: S9100.015

JANUARY 2018



Carter & Sloop

CONSULTING ENGINEERS

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**SECTION 00003
TABLE OF CONTENTS**

DIVISION 00 – CONTRACTING REQUIREMENTS

| <u>Section No.</u> | <u>Title</u> |
|--------------------|--|
| 00003 - | Table of Contents |
| 00100 - | Invitation to Bid |
| 00200 - | Instructions to Bidders |
| 00400 - | Bid Form |
| 00460 - | Bid Bond |
| 00470 - | Qualifications of Bidder |
| 00481 - | Noncollusion Affidavit of Prime Bidder |
| 00483 - | Contractor Affidavit and Agreement |
| 00484 - | Sub-Contractor Affidavit for E-Verify Contractor |
| 00485 - | SAVE Affidavit |
| 00500 - | Agreement |
| 00610 - | Performance Bond |
| 00615 - | Payment Bond |
| 00620 - | Certificate of Owner's Attorney |
| 00621 - | Notice of Award |
| 00622 - | Notice to Proceed |
| 00700 - | General Conditions |
| 00800 - | Supplementary Conditions |
| 00840 - | Administrative and Procedural Items |

DIVISION 01 – GENERAL REQUIREMENTS

| <u>Section No.</u> | <u>Title</u> |
|--------------------|-----------------------------------|
| 01020 - | Allowances |
| 01025 - | Measurement and Payment |
| 01070 - | Abbreviations |
| 01200 - | Project Meeting |
| 01300 - | Submittals |
| 01370 - | Schedule of Values |
| 01400 - | Quality Control |
| 01510 - | Temporary Utilities |
| 01560 - | Environmental Controls |
| 01605 - | Shipment, Protection, and Storage |
| 01700 - | Restoration of Improvements |
| 01701 - | Contract Closeout Procedures |
| 01710 - | Final Cleanup |
| 01720 - | Project Record Documents |
| 01730 - | Operations and Maintenance Data |
| 01740 - | Warranties and Bonds |

DIVISION 02- SITE CONSTRUCTIONS – NOT USED

DIVISION 03 – CONCRETE – NOT USED

DIVISION 04 – MASONRY – NOT USED

DIVISION 05 – METALS – NOT USED

DIVISION 06 – WOOD, PLASTICS, AND COMPOSITES – NOT USED

DIVISION 07 – THERMAL AND MOISTURE PROTECTION – NOT USED

DIVISION 08 – OPENINGS – NOT USED

DIVISION 09 – FINISHES

| <u>Section No.</u> | <u>Title</u> |
|--------------------|--------------------------------------|
| 09865 - | Surface Prep and Shop Prime Painting |
| 09900 - | Painting |

DIVISION 10 – SPECIALTIES – NOT USED

DIVISION 11 – EQUIPMENT – NOT USED

DIVISION 12 – FURNISHINGS – NOT USED

DIVISION 13 – SPECIAL CONSTRUCTION – NOT USED

DIVISION 14 – CONVEYING EQUIPMENT – NOT USED

DIVISION 15 – MECHANICAL – NOT USED

DIVISION 16 – ELECTRICAL – NOT USED

END OF SECTION

INVITATION TO BID

PART 1. GENERAL

1.1 COMPETITIVE COST SEALED BIDS

Sealed bids for installation of the **SCADA System Improvements** will be received until **March 29, 2018 at 12:00 p.m.** at **4640 North Henry Blvd., Stockbridge, GA 30281** at which time and place they will be publicly opened and read aloud. **Any bid received after said time and date will not be considered by the Owner.** No bid may be withdrawn after the closing time for the receipt of bids for a period of sixty (60) days except as specifically may be provided in the Instructions to Bidder and /or by State law.

1.2 SCOPE OF WORK

The work to be completed shall consist of furnishing all labor, equipment and materials necessary to complete the electrical improvements shown herein including, but not limited to, installing seven (7) cellular based SCADA panels and accessories at seven (7) existing sewage pump stations and installing seven (7) RTU's in the water distribution system at the existing ground water pumping station, well sites, elevated storage tanks and valve station shown on the plans, reconnecting the SCADA panels, power and controls, modifying the existing chemical pump controller at the ground water pumpstation, modifying pump control panels, mounting antennas, replacing flow transmitters and sensors, replacing pressure transducers, adding circuit breakers in the existing pump control panels, extending cables and conduit as required, installing an 8" butterfly valve and actuator, installing concrete pads, extending the existing Unistrut support, demolition, and other appurtenances necessary to provide a complete installation.

Time allotted for completion of work is **210 consecutive calendar days**. All Work shall be completed in accordance with the plans and specifications. The Work will be awarded in **one (1) Contract**.

1.3 PLANS, SPECIFICATIONS AND CONTRACT DOCUMENTS

Plans, Specifications and Contract Documents are on file at CARTER & SLOOPE, INC. Copies may be obtained from Carter & Sloope, Inc., 1031 Stonebridge Parkway, Watkinsville, Georgia 30677, Phone: 706-769-4119, Fax: 706-769-4546, upon payment of **\$200 for each full-size set or \$100 for PDF set** (non-refundable). A copy of your check is needed in order to ship the documents. You can fax it to the fax number above or email a scanned copy to hcash@cartersloope.com. All plans and documents will be shipped via UPS Ground. If you choose to have them shipped overnight or via another carrier, please submit your Fed Ex Overnight or UPS Express account number.

1.4 CONTRACTOR LICENSE

The Scope of Work as described herein is defined as “electrical contracting” in accordance

with O.C.G.A 43-14-2(6) so the Contractor performing the work must provide proof of a valid license by the State of Georgia as an “Electrical Contractor”. **Therefore, the Contractor submitting a bid must list the license number of the Contractor performing the electrical contracting on the bid form and provide proof of a valid license with the bid.** See Instruction to Bidders for additional bidding requirements.

1.5 BONDS

Bids shall be accompanied by a bid bond or certified cashier’s check in an amount not less than 10% of the base bid. All bonds shall be by a surety company licensed in Georgia with an “A” minimum rating of performance and a financial strength of at least five (5) times the contract price as listed in the most current publication of “Best’s Key Rating Guide Property Liability”. Performance and Payment Bonds, each in an amount equal to 100% of the contract price shall be required of the successful bidder if contract is awarded. Each Bond shall be accompanied by a “Power of Attorney” authorizing the attorney-in-fact to bind the surety and certified to include the date of the bond.

1.6 PERMITS

All anticipated Federal, State and local permits have been obtained or will be obtained by the Owner prior to issuing the Notice to Proceed, unless noted otherwise. The status of each permit is as follows:

| <u>PERMITS/AGENCIES</u> | <u>STATUS</u> |
|-------------------------------|----------------------------------|
| A. Building/Electrical Permit | To be obtained by the Contractor |

1.7 EASEMENTS & RIGHTS-OF-WAY

All easements and rights-of-way for permanent installations have been obtained or will be obtained by the Owner prior to issuing the Notice to Proceed.

1.8 GEORGIA SECURITY AND IMMIGRATION COMPLIANCE ACT AFFIDAVIT

All qualifying Contractors and Subcontractors performing work with the **City of Stockbridge** must register and participate in the federal work authorization program commonly known as E-Verify, or any subsequent replacement program, to verify the work eligibility information of new employees. In order for a Bid to be considered, it is mandatory that the Bidder’s Affidavit of Compliance with O.C.G.A. §13-10-91 be completed and submitted with the Bid.

1.9 RESERVATION OF RIGHTS

Owner reserves the right to reject any or all Bids, including without limitation, the rights to reject any or all nonconforming, nonresponsive, unbalanced or conditional Bids and to 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, whether because the Bid is not responsive or the

Bidder is unqualified or of doubtful financial ability or fails to meet any other pertinent standard or criteria established by the Owner.

1.10 FUNDING SOURCES

Funding is to be provided by local funds.

CITY OF STOCKBRIDGE
OWNER

END OF SECTION

INSTRUCTIONS TO BIDDERS

TABLE OF CONTENTS

| | Page |
|--|-------------|
| ARTICLE 1 – DEFINED TERMS | 2 |
| ARTICLE 2 – COPIES OF BIDDING DOCUMENTS | 2 |
| ARTICLE 3 – QUALIFICATIONS OF BIDDERS..... | 2 |
| ARTICLE 4 – EXAMINATION OF BIDDING DOCUMENTS, OTHER RELATED DATA, AND SITE | 3 |
| ARTICLE 5 – PRE-BID CONFERENCE..... | 5 |
| ARTICLE 6 – SITE AND OTHER AREAS..... | 5 |
| ARTICLE 7 – INTERPRETATIONS AND ADDENDA | 6 |
| ARTICLE 8 – BID SECURITY | 6 |
| ARTICLE 9 – CONTRACT TIMES | 6 |
| ARTICLE 10 – LIQUIDATED DAMAGES | 6 |
| ARTICLE 11 – SUBSTITUTE AND “OR-EQUAL” ITEMS | 7 |
| ARTICLE 12 – SUBCONTRACTORS, SUPPLIERS AND OTHERS | 7 |
| ARTICLE 13 – PREPARATION OF BID | 8 |
| ARTICLE 14 – BASIS OF BID; COMPARISON OF BIDS | 8 |
| ARTICLE 15 – SUBMITTAL OF BID..... | 9 |
| ARTICLE 16 – MODIFICATION AND WITHDRAWAL OF BID..... | 9 |
| ARTICLE 17 – OPENING OF BIDS..... | 10 |
| ARTICLE 18 – BIDS TO REMAIN SUBJECT TO ACCEPTANCE..... | 10 |
| ARTICLE 19 – EVALUATION OF BIDS AND AWARD OF CONTRACT..... | 10 |
| ARTICLE 20 – CONTRACT SECURITY AND INSURANCE..... | 11 |
| ARTICLE 21 – SIGNING OF AGREEMENT | 11 |
| <i>ARTICLE 22 – MODIFICATIONS OF QUANTITIES.....</i> | <i>12</i> |
| <i>ARTICLE 23 – LAWS AND REGULATIONS.....</i> | <i>12</i> |
| <i>ARTICLE 24 – CONTRACTOR’S AND SUBCONTRACTOR’S INSURANCE.....</i> | <i>12</i> |
| <i>ARTICLE 25 – TERMINATION OF CONTRACTS.....</i> | <i>12</i> |

INSTRUCTIONS TO BIDDERS

ARTICLE 1 – DEFINED TERMS

- 1.01 Terms used in these Instructions to Bidders have the meanings indicated in the General Conditions and Supplementary Conditions. Additional terms used in these Instructions to Bidders have the meanings indicated below:
- A. *Issuing Office* – The office from which the Bidding Documents are to be issued and where the bidding procedures are to be administered. *For this project, Carter & Sloope, Inc., 1031 Stonebridge Parkway, Watkinsville, GA 30677 is the Issuing Office.*
 - B. *Bidder* – *One who submits a Bid directly to Owner as distinct from a sub-bidder, who submits a bid to a Bidder.*
 - C. *Successful Bidder* – *The lowest, responsible and responsive Bidder to whom Owner (on the basis of Owner’s evaluation as hereinafter provided) makes an award.*
 - D. *Bid* – *A Complete and properly signed offer to execute work for the prices stipulated in Bid Form and submitted in accordance with the Bidding Documents.*
 - E. *Addenda* – *Graphic or written documents issued by Engineer prior to the opening of Bids issued to clarify, revise and to, or delete information in the original bidding documents or in previous addenda.*

ARTICLE 2 – COPIES OF BIDDING DOCUMENTS

- 2.01 Complete sets of the Bidding Documents in the number and for the **non-refundable** deposit sum, ~~if any,~~ stated in the Advertisement or Invitation to Bid, may be obtained from the Issuing Office *by bona fide Bidders.* ~~The deposit will be refunded to each document holder of record who returns a complete set of Bidding Documents in good condition within 30 days after opening of 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 authorize or confer a license for any other use. *All such documents are copyrighted by and remain the property of the Engineer.*

ARTICLE 3 – QUALIFICATIONS OF BIDDERS

- 3.01 To demonstrate Bidder’s qualifications to perform the Work, *each Bidder must prepare the be prepared to submit within of Owner’s request, Bidder shall submit written evidence such as financial data, previous experience, present commitments, and such other data as may be call for below* Qualifications of Bidders Documents (Section 00470) and submit the document to the Issuing Office no later than the time and date listed in the Invitation to Bid.

- 3.02 *Each Bid must contain evidence of Contractor's authority to conduct business in the state where the Work is to be performed. State Contractor license number, if applicable, must also be shown on the Bid Form.*

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

4.01 *Subsurface and Physical Conditions*

A. The Supplementary Conditions identify:

1. Those reports known to Owner of explorations and tests of subsurface conditions at or contiguous to the Site *that Engineer has used in preparing the Bidding Documents.*
2. Those drawings known to Owner of physical conditions relating to existing surface or subsurface structures at *or contiguous to* the Site (except Underground Facilities) *that Engineer has used in preparing the Bidding Documents.*

- B. Copies of reports and drawings referenced in Paragraph 4.01.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 4.02 of the General Conditions has been identified and established in Part ~~4.02~~ 6 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.

4.02 *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 Condition*

- A. The Supplementary Conditions identify those reports and drawings **known to Owner** 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 Part ~~4.06~~ 6 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 subsurface or physical 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 Part 2](#) of the Supplementary 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, and the other related data identified in the Bidding Documents;
 - 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 relating to existing surface or subsurface structures at the Site (except Underground Facilities) that have been identified in [Paragraph 4.02 Part 6](#) of the Supplementary Conditions ~~as containing reliable “technical data,”~~ and (2) reports and drawings of Hazardous Environmental Conditions, if any, at the Site that have been identified in [Paragraph 4.02 Part 6](#) of the Supplementary Conditions ~~as containing reliable “technical data”~~;
 - E. Consider the information known to Bidder; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and the Site-related reports and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) 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 (3) Bidder's safety precautions and programs;

- 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 required, 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. 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
- I. 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.

4.09 *Rights-of-Way and Easements: Several temporary and/or permanent rights-of-way or easements are required for this project and shown on the Drawings where needed.*

ARTICLE 5 – PRE-BID CONFERENCE

5.01 *A Pre-bid Conference will not be held for this project.*

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 are to be obtained and paid for by Contractor.

ARTICLE 7 – INTERPRETATIONS AND ADDENDA

- 7.01 All questions about the meaning or intent of the Bidding Documents are to be submitted to Engineer in writing. Interpretations or clarifications considered necessary by Engineer in response to such questions will be issued by Addenda mailed or delivered to all parties recorded by Engineer as having received the Bidding Documents. Questions received less than ten days prior to the date for opening of Bids may not be answered. Only questions answered by Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.
- 7.02 Addenda may be issued to clarify, correct, or change the Bidding Documents as deemed advisable by Owner or Engineer.

ARTICLE 8 – BID SECURITY

- 8.01 A Bid must be accompanied by Bid security made payable to Owner in an amount of 10 percent of Bidder's maximum Bid price and in the form of a certified check, 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. *The Surety Company must be licensed in the State of Georgia with an "A" minimum rating of performance and a financial strength of at least five times the contract price as listed in the most current publication of "Best's Key Ratings Guide Property Liability."*
- 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 consider Bidder to be in default, annul the Notice of Award, and the Bid security of that Bidder will be forfeited. Such forfeiture shall be Owner's exclusive remedy if Bidder defaults. 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 The number of days within which, or the dates by which, the Work is to be substantially completed and ready for final payment are set forth in the Agreement.

ARTICLE 10 – LIQUIDATED DAMAGES

- 10.01 Provisions for liquidated damages, if any, are set forth in the Agreement.

ARTICLE 11 – SUBSTITUTE AND “OR-EQUAL” ITEMS

11.01 The Contract, if awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents, or those substitute or “or-equal” materials and equipment approved by Engineer and identified by Addendum. The materials and equipment described in the Bidding Documents establish a standard of required type, function and quality to be met by any proposed substitute or “or-equal” item. No item of material or equipment will be considered by Engineer as a substitute or “or-equal” unless written request for approval has been submitted by Bidder and has been received by Engineer at least 15 days prior to the date for receipt of Bids. Each such request shall conform to the requirements of Paragraph 6.05 of the General Conditions. The burden of proof of the merit of the proposed item is upon Bidder. Engineer’s decision of approval or disapproval of a proposed item will be final. If Engineer approves any proposed item, such approval will be set forth in an Addendum issued to all prospective Bidders. Bidders shall not rely upon approvals made in any other manner.

ARTICLE 12 – SUBCONTRACTORS, SUPPLIERS AND OTHERS

12.01 ~~If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, individuals, or entities to and resumes of the project manager and project superintendent shall be submitted by the apparent Successful Bidder and any other Bidder so requested, within five (5) days after the Bid Opening. 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 five 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 in which case apparent Successful Bidder shall submit an acceptable substitute, Bidder’s Bid price will be increased (or decreased) by the difference in cost occasioned by such substitution, and Owner may consider such price adjustment in evaluating Bids and making the Contract award.~~

12.02 If apparent Successful Bidder declines to make any such substitution, Owner may award the Contract to the next lowest Bidder that proposes to use acceptable Subcontractors, Suppliers, individuals or entities. Declining to make requested substitutions will not constitute grounds for forfeiture of the Bid security of any Bidder. Any Subcontractor, Supplier, individual, or entity so listed and against which Owner or Engineer makes no written objection prior to the giving of the Notice of Award will be deemed acceptable to Owner and Engineer subject to revocation of such acceptance after the Effective Date of the Agreement as provided in Paragraph 6.06 of the General Conditions.

12.03 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. Additional copies may be obtained from Engineer.
- 13.02 All blanks on the Bid Form shall be completed in ink and the Bid Form signed in ink. Erasures or alterations shall be initialed in ink by the person signing the Bid Form. A Bid price shall be indicated for each Bid Item listed therein. In the case of optional alternatives the words “No Bid,” “No Change,” or “Not Applicable” may be 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.
- 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.
- 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.
- 13.06 A Bid by an individual shall show the Bidder’s name 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.
- 13.08 All names shall be 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 Postal and e-mail addresses 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 Bidder shall covenant in writing to obtain such authority and qualification prior to award of the Contract and attach such covenant to the Bid. Bidder’s state contractor license number, if any, shall also be shown on the Bid Form.

ARTICLE 14 – BASIS OF BID; COMPARISON OF BIDS

14.01 *Lump Sum*

- A. Bidders shall submit a Bid on a lump sum basis as set forth in the Bid Form.

14.02 *Unit Price*

- A. Bidders shall submit a Bid on a unit price basis for each item of Work listed in the Bid Schedule.
- B. The total of all estimated prices will be the sum of the products of the estimated quantity of each item and the corresponding unit price. The final quantities and Contract Price will be determined in accordance with paragraph 11.03 of the General Conditions.
- C. Discrepancies between the multiplication of units of Work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum and any column of figures and the correct sum thereof will be resolved in the favor of the correct sum.

14.03 Allowances

- A. For cash allowances, the Total Base Bid price shall include such amounts as the Bidder deems proper for Contractor's overhead, costs, profit, and other expenses on account of cash allowances, if any, named in the Contract Documents, in accordance with Paragraph 11.02.B of the General Conditions.*

14.04 *Completion Time Comparisons – NOT USED*

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, and, ~~if required~~, the Bid Bond Form. The ~~unbound copy of the~~ Bid Form is to be completed and submitted with the Bid security and the ~~following~~ documents *listed in Article 7 of the Bid Form (00400)*.
- 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 an opaque sealed envelop plainly marked with the Project title (and, if applicable, the designated portion of the Project for which the Bid is submitted), 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 –SCADA System Improvements.**” A mailed Bid shall be addressed to 4640 North Henry Blvd., Stockbridge, GA 30281.
- 15.03 *Bids may be submitted only by entities listed on the Bid Registry of the Engineer as having obtained bidding documents from the Engineer. The Bidder shall submit one (1) original plus five (5) copies of the bidding documents with their bid.*

ARTICLE 16 – MODIFICATION AND WITHDRAWAL OF BID

- 16.01 A Bid may be modified or withdrawn ~~by~~ *without revealing the amount of the bid by submitting* an appropriate document duly executed in the same 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 In accordance with O.C.G.A 36-91-52, if within 48 hours after Bids are opened any Bidder files a duly signed written notice with Owner and promptly thereafter demonstrates to the reasonable satisfaction of Owner that there was a material and substantial mistake in the preparation of its Bid, that Bidder may withdraw its Bid, and the Bid security will be returned.*
- A. *Such error in the calculation of the bid can be documented by clear and convincing written evidence;*
 - B. *Such error can be clearly shown by objective evidence drawn from inspection of the original work papers, documents, or materials used in the preparation of the bid sought to be withdrawn;*
 - C. *The bidder serves written notice upon the Owner either prior to the award of the contract or not later than forty-eight (48) hours after the opening of bids, excluding Saturdays, Sundays and legal holidays.*
 - D. *The bid was submitted in good faith and the mistake was due to a calculation or clerical error, an inadvertent omission or typographical error as opposed to an error in judgment; and*
 - E. *The withdrawal of the bid will not result in undue prejudice to the Owner or other bidders by placing them in a materially worse position than they would have occupied if the bid had never been submitted.*

Thereafter, if the Work is rebid, that Bidder will be disqualified from further bidding on the Work. Furthermore, no Bidder who is permitted to withdraw a Bid shall for compensation be allowed to supply any material or labor, or perform any subcontract or other work agreement for, the person or firm to whom the contract is awarded or otherwise benefit, directly or indirectly, from the performance of the project for which the withdrawn Bid was submitted.

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. An abstract of the amounts of the base Bids and major alternates, if any, will be made available to Bidders after the opening of Bids.

ARTICLE 18 – BIDS TO REMAIN SUBJECT TO ACCEPTANCE

- 18.01 All Bids will remain subject to acceptance for the period of time stated in the Bid Form, 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.

- 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, unit prices and other data, as may be requested in the Bid Form or prior to the Notice of Award.
- 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 proposed for those portions of the Work in accordance with the Contract Documents.
- 19.06 If the Contract is to be awarded:
- A. Owner will award the Contract to the Bidder whose Bid is in the best interest of the Project;
 - B. *Owner will provide the Successful Bidder a Notice of Award within sixty (60) days after the Bid Opening;*
 - C. *Contract will be awarded on the lowest qualified Base Bid, including any "Accepted Equal" or "Substitute" Equipment selected by the Owner.*

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, it shall be accompanied by such bonds.

ARTICLE 21 – SIGNING OF AGREEMENT

- 21.01 When Owner issues a Notice of Award to the Successful Bidder, it shall be accompanied by the required number of unsigned counterparts of the Agreement along with the other Contract Documents which are identified in the Agreement as attached thereto. Within 15 days

thereafter, Successful Bidder shall sign and deliver the required number of counterparts of the Agreement and attached documents to Owner. Within ten days thereafter, Owner shall deliver one fully signed counterpart to Successful Bidder with a complete set of the Drawings with appropriate identification.

ARTICLE 22 – MODIFICATIONS OF QUANTITIES

22.01 *If the lowest bona fide Bid exceeds the money available for the Work, the Owner reserves the right to delete enough of the work to bring the costs within the available funds. The Owner also reserves the right to delete whichever items or portions of items he considers to be in the best interest of the Owner.*

ARTICLE 23 – LAWS AND REGULATIONS

23.01 *The Contractor shall comply with local, District, County, State and Federal laws applicable to the work.*

The Contractor shall comply with the Department of Labor Safety and Health Regulations for Construction promulgated under the Occupational Safety and Health Act of 1970 (PL 91-596) and under Section 107 of the Contract Work and Safety Standards Act (PL 91-54). The regulations are administered by the Department of Labor and the Contractor shall allow access to the project to personnel from that Department.

ARTICLE 24 – CONTRACTOR’S AND SUBCONTRACTOR’S INSURANCE

24.01 *Contractor shall not commence work under this contract until he has obtained all the insurance required by the Supplementary Conditions.*

ARTICLE 25 – TERMINATION OF CONTRACTS

25.01 *If the Owner is made to stop construction of the work because of an order from a Court or State Department, the contract shall be terminated. Payment will be made for work completed and a prorating of the work underway, materials stored, and for the overhead and profit of the completed work and work underway. Payment will not be made for anticipated profit and overhead on work not completed or underway.*

END OF SECTION

BID FORM

INDEX

| | Page |
|---|-------------|
| ARTICLE 1 – BID RECIPIENT | 2 |
| ARTICLE 2 – BIDDER’S ACKNOWLEDGEMENTS | 2 |
| ARTICLE 3 – BIDDER’S REPRESENTATIONS..... | 2 |
| ARTICLE 4 – BIDDER’S CERTIFICATION..... | 4 |
| ARTICLE 5 – BASIS OF BID..... | 4 |
| ARTICLE 6 – TIME OF COMPLETION..... | 5 |
| ARTICLE 7 – ATTACHMENTS TO THIS BID | 6 |
| ARTICLE 8 – DEFINED TERMS | 6 |
| ARTICLE 9 – BID COMMUNICATION..... | 6 |
| ARTICLE 10 – BID SUBMITTAL..... | 7 |

BID FORM

ARTICLE 1 – BID RECIPIENT

1.01 Project Identification:

SCADA SYSTEM IMPROVEMENTS

Carter & Sloope Project No. : S9100.015

1.02 This Bid is submitted to:

CITY OF STOCKBRIDGE

4640 NORTH HENRY BLVD.

STOCKBRIDGE, GA 30281

1.03 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.

1.04 **The Bidder must submit one (1) original plus five (5) copies of the Bidding Documents with their Bid.**

ARTICLE 2 – BIDDER’S ACKNOWLEDGEMENTS

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.

2.02 The undersigned further agrees that in case of failure on his part to execute the said contract and the Bond within fifteen (15) consecutive calendar days after written notice being given of the award of the contract, the check or bid bond accompanying this bid, and the monies payable thereon shall be paid into the funds of the Owner as liquidated damages for such failure, otherwise, the check or bid bond accompanying this Bid shall be returned to the undersigned.

ARTICLE 3 – BIDDER’S REPRESENTATIONS

3.01 In submitting this Bid, Bidder represents that:

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

Addendum No.

Addendum Date

City of Stockbridge
SCADA System Improvements

C & S Project No. S9100.015

January 2018

-
-
-
- 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 Laws and Regulations that may affect cost, progress, and performance of the Work.
- D. Bidder has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) that have been identified in ~~SC-4.02 as containing reliable "technical data,"~~ *Part 6 of the Supplemental Conditions* and (2) reports and drawings of Hazardous Environmental Conditions, if any, at the Site that have been identified in ~~SC-4.06 as containing reliable "technical data"~~ *Part 6 of the Supplemental Conditions*.
- E. Bidder has considered the information known to Bidder; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and the Site-related reports and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) 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; and (3) Bidder's safety precautions and programs.
- F. Based on the information and observations referred to in Paragraph 3.01.E above, Bidder does not consider that 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 required, 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 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.
- I. 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.
- J. *Bidder will submit written evidence of its authority to do business in the State where the Project is located no later than the date of its execution of the Agreement.*

ARTICLE 4 – BIDDER’S CERTIFICATION

4.01 Bidder certifies 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 collusive 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 engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 4.01.D:
 - 1. “corrupt practice” means the offering, giving, receiving, or soliciting of any thing of value likely to influence the action of a public official in the bidding process;
 - 2. “fraudulent practice” means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;
 - 3. “collusive practice” means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels; and
 - 4. “coercive practice” means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

ARTICLE 5 – BASIS OF BID

5.01 The Contractor is directed to Section 01025 – Measurement & Payment for methods and limits for payments to the Contractor for the pay items listed below:

ITEM NO. DESCRIPTION

- 1. Water System Improvements:
Bidder agrees to furnish all labor, equipment and materials necessary to construct the mechanical, electrical and SCADA system improvements to the water system as shown on the Drawings and as specified here, including, but not limited to, mobilization/demobilization, bonds, insurance, demolition, restoration, piping, 8” butterfly valve and actuator, flow transmitters and meters, painting, computers, seven (7) RTU’s, programming, modifying pump control panels, modifying a chemical pump controller, power and controls, antennas, concrete pads and other appurtenances necessary to provide a complete and working installation for the lump sum amount of:

Lump Sum in Words

Dollars and Cents

2. Sewerage System Improvements:

Bidder agrees to furnish all labor, equipment and materials necessary to construct the electrical and SCADA system improvements to the sewer system as shown on the Drawings and as specified here, including, but not limited to, mobilization/demobilization, bonds, insurance, demolition, restoration, electrical, work necessary to install seven (7) cellular based RTU's and antennas and other appurtenances necessary to provide a complete and working installation for the lump sum amount of:

Lump Sum in Words

Dollars and Cents

3. Allowance (Section 01020)

| | | | |
|--------------------------------|----|--------|---------|
| a. Supplemental Work Allowance | \$ | 50,000 | Dollars |
|--------------------------------|----|--------|---------|

TOTAL BASE BID, ITEMS 1-3 INCLUSIVE, THE AMOUNT OF:

\$

Dollars & Cents

Price in Words

ARTICLE 6 – TIME OF COMPLETION

6.01 Bidder agrees that the Work will be substantially complete within **210** calendar days *after* the date when the Contract Times commence to run as provided in Paragraph 2.03 of the General Conditions, and will be completed and ready for final payment in accordance with Paragraph 14.07 of the General Conditions within **230** calendar days after the date when the Contract Times commence to run.

Bidder accepts the provisions of the Agreement as to liquidated damages in the event of failure to complete the Work within the times specified in the Agreement.

ARTICLE 7 – ATTACHMENTS TO THIS BID

- 7.01 The following documents are submitted with and made a condition of this Bid:
- A. Required Bid security in the form of 10% of the Total Bid Price;
 - B. List of Project References;
 - C. List of Proposed Subcontractors (may be submitted within 5 days of Bid Opening);
 - D. List of Proposed Suppliers (may be submitted within 5 days of Bid Opening);
 - E. Evidence of authority to do business in the state of the Project; or a written covenant to obtain such license within the time for acceptance of Bids;
 - F. License No. of Contractor performing the work or evidence of Bidder's ability to obtain a State Contractor's License and a covenant by Bidder to obtain said license within the time for acceptance of Bids;
 - G. Qualifications of Bidder (*Section 00470*)
 - H. Noncollusion Affidavit of prime Bidder (*Section 00481*)
 - I. Contractor Affidavit and Agreement (*Section 00483*)
 - J. Subcontractor Affidavit and Agreement (*Section 00484*)
 - K. Save Affidavit (*Section 00485*)

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 COMMUNICATION

- 9.01 COMMUNICATION CONCERNING THIS BID SHALL BE ADDRESS TO:

MR. MARTIN C. BOYD, P.E.
CARTER & SLOOPE, INC.
1031 STONEBRIDGE PARKWAY
WATKINSVILLE, GEORGIA 30677
PHONE: 706-769-4119

ARTICLE 10 – BID SUBMITTAL

10.01 This Bid is submitted by:

If Bidder is:

An Individual

Name (typed or printed): _____

By: _____

(Individual's signature)

Doing business as: _____

A Partnership

Partnership Name: _____

By: _____

(Signature of general partner -- attach evidence of authority to sign)

Name (typed or printed): _____

A Corporation

Corporation Name: _____ (SEAL)

State of Incorporation: _____

Type (General Business, Professional, Service, Limited Liability): _____

By: _____

(Signature -- attach evidence of authority to sign)

Name (typed or printed): _____

Title: _____

(CORPORATE SEAL)

Attest _____

Date of Qualification to do business in *Georgia*
is ____/____/____.

A Joint Venture

Name of Joint Venture: _____

First Joint Venturer Name: _____ (SEAL)

By: _____
(Signature of first joint venture partner -- attach evidence of authority to sign)

Name (typed or printed): _____

Title: _____

Second Joint Venturer Name: _____ (SEAL)

By: _____
(Signature of second joint venture partner -- attach evidence of authority to sign)

Name (typed or printed): _____

Title: _____

(Each joint venturer must sign. The manner of signing for each individual, partnership, and corporation that is a party to the joint venture should be in the manner indicated above.)

Bidder's Business Address _____

Phone No. _____ Fax No. _____

E-mail _____

SUBMITTED on _____, 20____.

State Contractor License No. *of Contractor performing the work.* _____

END OF SECTION

BID BOND

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

BIDDER (*Name and Address*):

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

OWNER (*Name and Address*):

City of Stockbridge
4640 North Henry Blvd.
Stockbridge, GA 30281

BID

Bid Due Date:
Description: SCADA System Improvements,

BOND

Bond Number:
Date (*Not earlier than Bid due date*):
Penal sum _____

(Words)

\$ _____

(Figures)

Surety and Bidder, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Bid Bond to be duly executed by an authorized officer, agent, or representative.

BIDDER

SURETY

(Seal)

(Seal)

Bidder's Name and Corporate Seal

Surety's Name and Corporate Seal

By:

Signature

By:

Signature (Attach Power of Attorney)

Print Name

Print Name

Title

Title

Attest:

Signature

Attest:

Signature

Title

Title

Note: Above addresses are to be used for giving any required notice. Provide execution by any additional parties, such as joint venturers, if necessary.

City of Stockbridge
SCADA System Improvements

C & S Project No. S9100.015
January 2018
Revision 0

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 Bidder's and Surety's liability. Recovery of such penal sum under the terms of this Bond shall be Owner's sole and exclusive remedy upon default of Bidder.
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 of 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.
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 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

QUALIFICATIONS OF BIDDER

All questions must be answered and the data given must be clear and comprehensive. This statement must be notarized. If necessary, questions may be answered on separate attached sheets. The Bidder may submit any additional information they desire.

1. Legal Name of Bidder. If the corporate name of Bidder has changed within the last 5 years, provide information on the previous name.
2. Permanent main office address. Provide name, address and telephone number of Bidder's corporate office, regional office(s) and subsidiaries, if any.
3. Provide name, title and biographic summary of all corporate officers.
4. If a corporation, provide year of incorporation and where incorporated.
5. How many years have you been engaged in the contracting business under your present firm or trade name?
6. General character of work performed by your company.
7. Contracts on hand: (List all other projects currently under contract, the current contract amounts, scheduled completion dates and contact reference names for Owners on these jobs.)
8. The Bidder must demonstrate a history of completing projects consistently on time and within the bid amount. Provide a statement that the applicant has not been involved in liquidated damages in the past five years or served the Owner with a claim for additional compensation prepared by an attorney or a claims consultant, excluding routing change order requests. If this is not the case, provide an explanation.
9. Has Bidder ever failed to complete any work awarded to you? Provide a statement that the applicant has never failed to complete a project. If this is not the case, explain where and why.
10. The Bidder has a history of not being involved in litigation against Owners or Engineering Firms. The applicant should provide a statement that they have not been involved in litigation as a plaintiff against the Owner or Engineering Firm in the past five years. If this is not the case, explain.
11. The applicant has access to adequate equipment to complete the project. Provide a list of major equipment proposed to perform the work and indicate whether owned or leased.
12. Experience in construction work similar in importance to this project.
13. The Bidder has available project management personnel with at least five-years experience on projects with the technical characteristics listed in paragraph 17 below to

SECTION 00470-2
QUALIFICATIONS OF BIDDER

complete the project. Provide **full resumes** for proposed project manager and field superintendent who would supervise and be in charge of the project. Experience can be from previous employment but must be pertinent to technical information in Item 17 (Below). If your firm is the successful bidder, at least both of these key personnel must be actively involved in the day-to-day operations on the proposed project.

14. The Bidder has sufficient bonding capacity to provide performance and payment bonds, both in the amount of 100 percent of the contract amount. Provide a statement of bonding capacity, bonding company, insurance agent contact persons, and telephone numbers.
15. The Bidder must have adequate financial capacity to build the project. Provide a statement of credit available and a bank reference including contact information for verification.
16. Will the Bidder, upon request, fill out a detailed financial statement and furnish any other information that may be required by the City of Stockbridge? Yes _____ No _____
17. The Bidder shall provide Technical Experience including information about two (2) similar projects completed in the United States during the last ten (10) years. The projects must have a scope of work similar to what is proposed herein with this project. Also provide a listing of your last 5 projects over \$500,000 for each reference project listed include the:
 - (a) Name of project as bid; name of Owner; name of engineering firm; name, position or title, address and telephone number of contact person currently employed by each of the above; percent of labor related items performed by the applicant's own work force.
 - (b) A complete description of each project.
 - (c) The bid amount and final cost to Owner, with an explanation of cost overrun, if any, including change orders.
 - (d) The contract time as bid, actual time to complete project and completion date, with an explanation of time overrun, if any.

The undersigned authorizes and requests any person, firm, or corporation to furnish any information requested by the City of Stockbridge, Georgia in verification of the recitals comprising the Statement of Bidder's Qualifications. Dated at _____ this _____ day of _____, 20____.

(Name of Bidder)

By _____

Title _____

SECTION 00470-3
QUALIFICATIONS OF BIDDER

State of _____

County of _____

_____, being duly sworn deposes and says
that he is _____ of _____
(Name of Organization)

and that the answers to the foregoing questions and all statements therein contained are true and correct.

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

(Notary Public)

My Commission expires:

_____, 20____

END OF SECTION

NONCOLLUSION AFFIDAVIT OF PRIME BIDDER

State of Georgia

County of Henry

_____, being first duly sworn, deposed and says that:

- (1) He is _____ of
(owner, partner, officer, representative, or agent)
_____,
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;
- (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 affidavit, 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 **City of Stockbridge** (Local Public Agency) 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 affidavit.

SECTION 00481-2
NONCOLLUSION AFFIDAVIT OF PRIME BIDDER

By: _____

Title: _____

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

(Notary Public)

My commission expires _____

_____, 20__

END OF SECTION

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 engaged in the physical performance of services on behalf of the **City of Stockbridge** has registered with, is authorized to use and uses the federal work authorization program commonly known as E-Verify, or any subsequent replacement program, in accordance with the applicable provisions and deadlines established in O.C.G.A. § 13-10-91. Furthermore, the undersigned contractor will continue to use the federal work authorization program throughout the contract period.

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 the **City of Stockbridge**, contractor will secure from such subcontractor(s) similar verification of compliance with O.C.G.A. 13-10-91 Contractor further agrees to maintain records of such compliance and provide a copy of each such verification to the **City of Stockbridge** at the time the subcontractor(s) is retained to perform such service. Contractor hereby attests that its federal work authorization user identification number and date of authorization are as follows:

Federal Work Authorization User Identification Number

Date of Authorization

Name of Contractor

Name of Project

I hereby declare under penalty of perjury that the foregoing is true and correct.

Executed on _____, _____, 20__ in _____(city), _____(state).

Signature of Authorized Officer or Agent

Printed Name and Title of Authorized Officer or Agent

SUBSCRIBED AND SWORN BEFORE ME
ON THIS THE _____ DAY OF _____, 20__

NOTARY PUBLIC
My Commission Expires: _____

SUBCONTRACTOR AFFIDAVIT AND AGREEMENT

By executing this affidavit, the undersigned sub-contractor 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 for _____ (name of sub-contractor with whom such sub-contractor has privity of contract) and _____ (name of contractor) on behalf of **City of Stockbridge** has registered with, is authorized to use and uses the federal work authorization program commonly known as E-Verify, or any subsequent replacement program, in accordance with the applicable provisions and deadlines established in O.C.G.A. § 13-10-91. Furthermore, the undersigned sub-contractor will continue to use the federal work authorization program throughout the contract period and the undersigned sub-contractor will contract for the physical performance of services in satisfaction of such contract only with sub-contractors who present an affidavit to the sub-contractor with the information required by O.C.G.A. § 13-10-91(b). Additionally, the undersigned subcontractor will forward notice of the receipt of an affidavit from a sub-subcontractor within five business days of receipt. If the undersigned subcontractor receives notice that a sub-subcontractor has received an affidavit from any other contracted sub-subcontractor, the undersigned subcontractor must forward, within five business days of receipt, a copy of the notice to the contractor. Sub-contractor hereby attests that its federal work authorization user identification number and date of authorization are as follows:

Federal Work Authorization User Identification Number

Date of Authorization

Name of Sub-Contractor

Name of Project

Name of Public Employer

I hereby declare under penalty of perjury that the foregoing is true and correct.

Executed on _____ 20__ in _____ (city), _____ (state).

Signature of Authorized Officer or Agent

Printed Name and Title of Authorized Officer or Agent

SECTION 00484-2
SUBCONTRACTOR AFFIDAVIT AND AGREEMENT

SUBSCRIBED AND SWORN BEFORE ME

ON THIS THE _____ DAY OF _____, 20__

NOTARY PUBLIC

My Commission Expires: _____

SAVE AFFIDAVIT

STATE OF GEORGIA
HENRY COUNTY

By executing this affidavit under oath, as an applicant for a public benefit, as referenced in O.C.G.A. § 50-36-1, administered by the Georgia Department of Community Affairs the undersigned applicant verifies one of the following with respect to my ability to enter into a contract with the City of Stockbridge:

- 1) _____ I am a United States citizen.
- OR**
- 2) _____ I am a legal permanent resident of the United States.
- OR**
- 3) _____ I am an otherwise qualified alien or non-immigrant under the Federal Immigration and Nationality Act and lawfully present in the United States with an alien number issued by the Department of Homeland Security or other federal immigration agency. My alien number issued by the Department of Homeland Security or other federal immigration agency is:_____.

The undersigned applicant also hereby verifies that he or she has registered with, is authorized to use and uses the federal work authorization program commonly known as E-Verify, or any subsequent replacement program, in accordance with the applicable provisions and deadlines established in O.C.G.A. § 13-10-91. Furthermore, the undersigned sub-subcontractor will continue to use the federal work authorization program throughout the contract period and the undersigned sub-subcontractor will contract for the physical performance of services in satisfaction of such contract only with sub-subcontractors who present an affidavit to the sub-subcontractor with the information required by O.C.G.A. § 13-10-91(b). The undersigned sub-subcontractor shall submit, at the time of such contract, this affidavit to _____ (name of sub-subcontractor with whom such sub-subcontractor has privity of contract). Additionally, the undersigned sub-subcontractor will forward notice of the receipt of any affidavit from a sub-subcontractor to _____ (name of sub-subcontractor with whom such sub-subcontractor has privity of contract). Sub-subcontractor hereby attests that its federal work authorization user identification number and date of authorization are as follows:

Federal Work Authorization User Identification Number

Date of Authorization

Name of Subcontractor

Name of Project

Name of Public Employer

I hereby declare under penalty of perjury that the foregoing is true and correct.

Executed on _____ 20__ in _____ (city), _____ (state).

Signature of Authorized Officer or Agent

Printed Name and Title of Authorized Officer or Agent

SUBSCRIBED AND SWORN BEFORE ME

ON THIS THE _____ DAY OF _____, 201__

NOTARY PUBLIC

My Commission Expires: _____

**AGREEMENT
BETWEEN OWNER AND CONTRACTOR
FOR CONSTRUCTION CONTRACT**

THIS AGREEMENT is by and between City of Stockbridge (“Owner”) and
_____ (“Contractor”).

Owner and Contractor hereby 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:

THE WORK TO BE COMPLETED SHALL CONSIST OF FURNISHING ALL LABOR, EQUIPMENT AND MATERIALS NECESSARY TO COMPLETE THE ELECTRICAL IMPROVEMENTS SHOWN HEREIN INCLUDING, BUT NOT LIMITED TO, INSTALLING SEVEN (7) CELLULAR BASED SCADA PANELS AND ACCESSORIES AT SEVEN (7) EXISTING SEWAGE PUMP STATIONS AND INSTALLING SEVEN (7) RTU'S IN THE WATER DISTRIBUTION SYSTEM AT THE EXISTING GROUND WATER PUMPING STATION, WELL SITES, ELEVATED STORAGE TANKS AND VALVE STATION SHOWN ON THE PLANS, RECONNECTING THE SCADA PANELS, POWER AND CONTROLS, MODIFYING THE EXISTING CHEMICAL PUMP CONTROLLER AT THE GROUND WATER PUMPSTATION, MODIFYING PUMP CONTROL PANELS, MOUNTING ANTENNAS, REPLACING FLOW TRANSMITTERS AND SENSORS, REPLACING PRESSURE TRANSDUCERS, ADDING CIRCUIT BREAKERS IN THE EXISTING PUMP CONTROL PANELS, EXTENDING CABLES AND CONDUIT AS REQUIRED, INSTALLING AN 8" BUTTERFLY VALVE AND ACTUATOR, INSTALLING CONCRETE PADS, EXTENDING THE EXISTING UNISTRUT SUPPORT, DEMOLITION, AND OTHER APPURTENANCES NECESSARY TO PROVIDE A COMPLETE INSTALLATION.

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:

**City of Stockbridge
SCADA System Improvements**

ARTICLE 3 – ENGINEER

3.01 The Project has been designed by Carter & Sloope, Inc. (Engineer), which 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 *Time of the Essence*

- A. All time limits for Milestones, if any, Substantial Completion, and completion and readiness for final payment as stated in the Contract Documents are of the essence of the Contract.

4.02 *Days to Achieve Substantial Completion and Final Payment*

- A. The Work will be substantially completed within **210** days after the date when the Contract Times commence to run as provided in Paragraph 2.03 of the General Conditions, and completed and ready for final payment in accordance with Paragraph 14.07 of the General Conditions within **230** days after the date when the Contract Times commence to run.

4.03 *Liquidated Damages*

- A. Contractor and Owner recognize that time is of the essence as stated in Paragraph 4.01 above and that Owner will suffer financial loss if the Work is not completed within the times specified in Paragraph 4.02 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 delay (but not as a penalty), Contractor shall pay Owner **\$500.00** for each day that expires after the time specified in Paragraph 4.02 above for Substantial Completion until the Work is substantially complete. After 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 **\$500.00** for each day that expires after the time specified in Paragraph 4.02 above for completion and readiness for final payment until the Work is completed and ready for final payment. *Liquidated damages for failing to timely attain Substantial Completion and Final Completion are not additive and will not be imposed concurrently.*

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 pursuant to Paragraph below:

A. For all Work, a sum of:

Words

Dollars & Cents

ARTICLE 6 – PAYMENT PROCEDURES

6.01 *Submittal and Processing of Payments*

A. 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 30th day of each month during performance of the Work as provided in Paragraph 6.02.A.1 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 Unit Price Work based on the number of units completed) or, in the event there is no schedule of values, as provided in the General Requirements.

1. Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage indicated below but, in each case, less the aggregate of payments previously made and less such amounts as Engineer may determine or Owner may withhold, including but not limited to liquidated damages, in accordance with Paragraph 14.02 of the General Conditions.

a. 90 percent of Work completed (with the balance being retainage). 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, then as long as the character and progress of the Work remain satisfactory to Owner and Engineer, there will be no additional retainage; and

b. 90 percent of cost of materials and equipment not incorporated in the Work (with the balance being retainage).

B. Upon Substantial Completion, Owner shall pay an amount sufficient to increase total payments to Contractor to 100 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 200 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*

- A. 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.

ARTICLE 7 – INTEREST

- 7.01 All moneys not paid when due as provided in Article 14 of the General Conditions shall bear interest at the ~~rate of ___ percent per annum~~ *maximum legal rate*.

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: (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities), if any, that have been identified in ~~Paragraph SC 4.02~~ Part 6 of the Supplementary Conditions ~~as containing reliable “technical data,”~~ and (2) reports and drawings of Hazardous Environmental Conditions, if any, at ~~or contiguous to~~ the Site that have been identified in ~~Paragraph SC 4.06~~ Part 6 of the Supplementary Conditions ~~as containing reliable “technical data”.~~
- E. Contractor has considered the information known to Contractor; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Contract Documents; and the Site-related reports and drawings identified in the Contract Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, including any specific means, methods, techniques, sequences, and procedures of construction expressly required by the Contract Documents; and (3) Contractor’s safety precautions and programs.
- F. Based on the information and observations referred to in Paragraph 8.01.E above, Contractor does not consider that 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.

- G. 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.
- 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 8, inclusive).
 - 2. Performance bond (pages 1 to 4, inclusive).
 - 3. Payment bond (pages 1 to 4, inclusive).
 - 4. Other bonds (pages _____ to _____, inclusive).
 - a. _____ (pages _____ to _____, inclusive).
 - b. _____ (pages _____ to _____, inclusive).
 - c. _____ (pages _____ to _____, inclusive).
 - 5. General Conditions (pages 1 to 69, inclusive).
 - 6. Supplementary Conditions (pages 1 to 13, inclusive).
 - 7. Specifications as listed in the table of contents of the Project Manual.
 - 8. Drawings consisting of 14 sheets with each sheet bearing the following general title:
SCADA System Improvements, City of Stockbridge, Henry County, Georgia, January 2018.
 - 9. Addenda (numbers _____ to _____, inclusive).
 - 10. Exhibits to this Agreement (enumerated as follows):
 - a. Contractor's Bid.

- b. Documentation submitted by Contractor prior to Notice of Award.
11. 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.
 - b. Work Change Directives.
 - c. Change Orders.
- 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*

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

10.02 *Assignment of Contract*

- A. 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*

- A. 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*

- A. 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 *Contractor's Certifications*

- A. Contractor certifies that it has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for or in executing the Contract. For the purposes of this Paragraph 10.05:
1. "corrupt practice" means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process or in the Contract execution;
 2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process or the execution of the Contract to the detriment of Owner, (b) to establish Bid or Contract prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;
 3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish Bid prices at artificial, non-competitive levels; and
 4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

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

This Agreement will be effective on _____ (which is the Effective Date of the Agreement).

OWNER:

CONTRACTOR

By: _____

By: _____

Title: _____

Title: _____

(If Contractor is a corporation, a partnership, or a joint venture, attach evidence of authority to sign.)

Attest: _____

Attest: _____

Title: _____

Title: _____

Address for giving notices:

Address for giving notices:

(If Owner is a corporation, attach evidence of authority to sign. If Owner is a public body, attach evidence of authority to sign and resolution or other documents authorizing execution of this Agreement.)

License No.: _____
(Where applicable)

END OF SECTION

PERFORMANCE BOND

Any singular reference to Contractor, Surety, Owner, or other party shall be considered plural where applicable.
CONTRACTOR (*Name and Address*): SURETY (*Name, and Address of Principal Place of Business*):

OWNER (*Name and Address*):
City of Stockbridge
4640 North Henry Blvd.
Stockbridge, GA 30281

CONTRACT
Effective Date of Agreement:
Amount:
Description (*Name and Location*): SCADA System Improvements ,
Stockbridge, GA 30281

BOND
Bond Number:
Date (*Not earlier than Effective Date of Agreement*):
Amount:
Modifications to this Bond Form:

Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Performance Bond to be duly executed by an authorized officer, agent, or representative.

CONTRACTOR AS PRINCIPAL

SURETY

Contractor's Name and Corporate Seal (Seal)

Surety's Name and Corporate Seal (Seal)

By: _____
Signature

By: _____
Signature (Attach Power of Attorney)

Print Name

Print Name

Title

Title

Attest: _____
Signature

Attest: _____
Signature

Title

Title

Note: Provide execution by additional parties, such as joint venturers, if necessary.

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.

1. If Contractor performs the Contract, Surety and Contractor have no obligation under this Bond, except to participate in conferences as provided in Paragraph 2.1.
2. If there is no Owner Default, Surety's obligation under this Bond shall arise after:
 - 2.1 Owner has notified Contractor and Surety, at the addresses described in Paragraph 9 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
 - 2.2 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 2.1; and
 - 2.3 Owner has agreed to pay the Balance of the Contract Price to:
 1. Surety in accordance with the terms of the Contract; or
 2. Another contractor selected pursuant to Paragraph 3.3 to perform the Contract.
3. When Owner has satisfied the conditions of Paragraph 2, Surety shall promptly, and at Surety's expense, take one of the following actions:
 - 3.1 Arrange for Contractor, with consent of Owner, to perform and complete the Contract; or
 - 3.2 Undertake to perform and complete the Contract itself, through its agents or through independent contractors; or
 - 3.3 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 5 in excess of the Balance of the Contract Price incurred by Owner resulting from Contractor Default; or
 - 3.4 Waive its right to perform and complete, arrange for completion, or obtain a new contractor, and with reasonable promptness under the circumstances:
 1. After investigation, determine the amount for which it may be liable to Owner and, as soon as practicable after the amount is determined, tender payment therefor to Owner; or
 2. Deny liability in whole or in part and notify Owner citing reasons therefor.
4. If Surety does not proceed as provided in Paragraph 3 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 3.4, 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.

5. After Owner has terminated Contractor's right to complete the Contract, and if Surety elects to act under Paragraph 3.1, 3.2, or 3.3 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 the 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:
 - 5.1 The responsibilities of Contractor for correction of defective Work and completion of the Contract;
 - 5.2 Additional legal, design professional, and delay costs resulting from Contractor's Default, and resulting from the actions of or failure to act of Surety under Paragraph 3; and
 - 5.3 Liquidated damages, or if no liquidated damages are specified in the Contract, actual damages caused by delayed performance or non-performance of Contractor.
6. 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.
7. Surety hereby waives notice of any change, including changes of time, to Contract or to related subcontracts, purchase orders, and other obligations.
8. 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.
9. Notice to Surety, Owner, or Contractor shall be mailed or delivered to the address shown on the signature page.
10. 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.
11. Definitions.
 - 11.1 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.

SECTION 00610-4
PERFORMANCE BOND

- 11.2 Contract: The agreement between Owner and Contractor identified on the signature page, including all Contract Documents and changes thereto.
- 11.3 Contractor Default: Failure of Contractor, which has neither been remedied nor waived, to perform or otherwise to comply with the terms of the Contract.
- 11.4 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 otherwise comply with the other terms thereof.

FOR INFORMATION ONLY – *(Name, Address and Telephone)*

Surety Agency or Broker:

Owner's Representative *(Engineer or other party)*:

Carter & Sloope, Inc.
1031 Stonebridge Parkway
Watkinsville, GA 30677
706.769.4119

PAYMENT BOND

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

CONTRACTOR (*Name and Address*): SURETY (*Name, and Address of Principal Place of Business*):

OWNER (*Name and Address*):

City of Stockbridge
4640 North Henry Blvd.
Stockbridge, GA 30281

CONTRACT

Effective Date of Agreement:

Amount:

Description (*Name and Location*): SCADA System Improvements ,
Stockbridge, GA 30281

BOND

Bond Number:

Date (*Not earlier than Effective Date of Agreement*):

Amount:

Modifications to this Bond Form:

Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Payment Bond to be duly executed by an authorized officer, agent, or representative.

CONTRACTOR AS PRINCIPAL

SURETY

(Seal)
Contractor's Name and Corporate Seal

(Seal)
Surety's Name and Corporate Seal

By: _____
Signature

By: _____
Signature (Attach Power of Attorney)

Print Name

Print Name

Title

Title

Attest: _____
Signature

Attest: _____
Signature

Title

Title

Note: Provide execution by additional parties, such as joint venturers, if necessary.

1. Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to Owner to pay for labor, materials, and equipment furnished by Claimants for use in the performance of the Contract, which is incorporated herein by reference.
2. With respect to Owner, this obligation shall be null and void if Contractor:
 - 2.1 Promptly makes payment, directly or indirectly, for all sums due Claimants, and
 - 2.2 Defends, indemnifies, and holds harmless Owner from all claims, demands, liens, or suits alleging non-payment by Contractor by any person or entity who furnished labor, materials, or equipment for use in the performance of the Contract, provided Owner has promptly notified Contractor and Surety (at the addresses described in Paragraph 12) of any claims, demands, liens, or suits and tendered defense of such claims, demands, liens, or suits to Contractor and Surety, and provided there is no Owner Default.
3. With respect to Claimants, this obligation shall be null and void if Contractor promptly makes payment, directly or indirectly, for all sums due.
4. Surety shall have no obligation to Claimants under this Bond until:
 - 4.1 Claimants who are employed by or have a direct contract with Contractor have given notice to Surety (at the address 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 (at the address described in Paragraph 12) 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 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 otherwise comply with the other terms thereof.

FOR INFORMATION ONLY – *(Name, Address, and Telephone)*

Surety Agency or Broker:

Owner’s Representative *(Engineer or other)*:

Carter & Sloope, Inc.
1031 Stonebridge Parkway
Watkinsville, GA 30677
706.769.4119

CERTIFICATE OF CONTRACTOR'S ATTORNEY

I, the undersigned, _____, the duly authorized and acting legal representative of the _____, do hereby certify as follows: I have examined the foregoing contract and surety bonds 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 that the foregoing agreements constitute valid and legally binding obligations upon the parties executing the same in accordance with terms, conditions and provisions thereof.

Signature of Attorney

Date

NOTICE OF AWARD

To: _____ Date: _____

PROJECT: **SCADA SYSTEM IMPROVEMENTS**

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

You are hereby notified that your BID has been accepted for items in the amount of _____ Dollars (\$ _____)

You are required by the Instructions to Bidders to execute the Agreement and furnish the required CONTRACTOR's Performance BOND, Payment BOND and Certificates of Insurance with fifteen (15) calendar days from the date of the Notice to you.

If you fail to execute said Agreement and to furnish said BONDS within fifteen (15) days from the date of this notice, said OWNER will be entitled to consider all your rights arising out of the OWNER'S acceptance of your BID as abandoned and as a forfeiture of your BID BOND. The OWNER will be entitled to such other rights as may be granted by law.

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

Dated this ____ day of _____, 20__.

CITY OF STOCKBRIDGE

By: _____

Title: _____

ACCEPTANCE OF NOTICE

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

By: _____

Title: _____

END OF SECTION

NOTICE TO PROCEED

Date:

Project SCADA System Improvements,

Owner: City of Stockbridge

Owner's Contract No.:

Contract:

Engineer's Project No.: S9100.015

Contractor:

Contractor's Address:

You are notified that the Contract Times under the above Contract will commence to run on _____ . On or before that date, you are to start performing your obligations under the Contract Documents. In accordance with Article 4 of the Agreement, the date of Substantial Completion and readiness for final payment is _____ .

Before you may start any Work at the Site, Paragraph 2.01.B of the General Conditions provides that you and Owner must each deliver to the other (with copies to Engineer and other identified additional insureds and loss payees) certificates of insurance which each is required to purchase and maintain in accordance with the Contract Documents.

Owner

Authorized Signature

Title

Date

Accepted By:

Contractor

Authorized Signature

Title

Date

GENERAL CONDITIONS OF THE
CONSTRUCTION CONTRACT
TABLE OF CONTENTS

| | Page |
|---|-------------|
| Article 1 – Definitions and Terminology | 5 |
| 1.01 Defined Terms..... | 5 |
| 1.02 Terminology | 9 |
| Article 2 – Preliminary Matters | 10 |
| 2.01 Delivery of Bonds and Evidence of Insurance..... | 10 |
| 2.02 Copies of Documents | 11 |
| 2.03 Commencement of Contract Times; Notice to Proceed..... | 11 |
| 2.04 Starting the Work | 11 |
| 2.05 Before Starting Construction | 11 |
| 2.06 Preconstruction Conference; Designation of Authorized Representatives | 11 |
| 2.07 Initial Acceptance of Schedules..... | 12 |
| Article 3 – Contract Documents: Intent, Amending, Reuse | 12 |
| 3.01 Intent..... | 12 |
| 3.02 Reference Standards..... | 12 |
| 3.03 Reporting and Resolving Discrepancies..... | 13 |
| 3.04 Amending and Supplementing Contract Documents..... | 14 |
| 3.05 Reuse of Documents | 14 |
| 3.06 Electronic Data..... | 14 |
| Article 4 – Availability of Lands; Subsurface and Physical Conditions; Hazardous Environmental Conditions; Reference Points..... | 15 |
| 4.01 Availability of Lands | 15 |
| 4.02 Subsurface and Physical Conditions | 15 |
| 4.03 Differing Subsurface or Physical Conditions | 16 |
| 4.04 Underground Facilities | 17 |
| 4.05 Reference Points ⁷ | 18 |
| 4.06 Hazardous Environmental Condition at Site..... | 18 |
| Article 5 – Bonds and Insurance | 20 |
| 5.01 Performance, Payment, and Other Bonds | 20 |
| 5.02 Licensed Sureties and Insurers | 21 |
| 5.03 Certificates of Insurance | 21 |
| 5.04 Contractor’s Insurance..... | 21 |
| 5.05 Owner’s Liability Insurance | 23 |
| 5.06 Property Insurance | 23 |
| 5.07 Waiver of Rights | 24 |
| 5.08 Receipt and Application of Insurance Proceeds..... | 25 |
| 5.09 Acceptance of Bonds and Insurance; Option to Replace..... | 26 |

| | | |
|---|---|----|
| 5.10 | Partial Utilization, Acknowledgment of Property Insurer | 26 |
| Article 6 – Contractor’s Responsibilities | | 26 |
| 6.01 | Supervision and Superintendence..... | 26 |
| 6.02 | Labor; Working Hours..... | 26 |
| 6.03 | Services, Materials, and Equipment | 27 |
| 6.04 | Progress Schedule | 27 |
| 6.05 | Substitutes and “Or-Equals” | 27 |
| 6.06 | Concerning Subcontractors, Suppliers, and Others..... | 30 |
| 6.07 | Patent Fees and Royalties | 31 |
| 6.08 | Permits..... | 32 |
| 6.09 | Laws and Regulations | 32 |
| 6.10 | Taxes | 32 |
| 6.11 | Use of Site and Other Areas | 33 |
| 6.12 | Record Documents..... | 33 |
| 6.13 | Safety and Protection | 34 |
| 6.14 | Safety Representative..... | 35 |
| 6.15 | Hazard Communication Programs | 35 |
| 6.16 | Emergencies | 35 |
| 6.17 | Shop Drawings and Samples | 35 |
| 6.18 | Continuing the Work..... | 37 |
| 6.19 | Contractor’s General Warranty and Guarantee..... | 37 |
| 6.20 | Indemnification | 38 |
| 6.21 | Delegation of Professional Design Services | 39 |
| Article 7 – Other Work at the Site..... | | 39 |
| 7.01 | Related Work at Site | 39 |
| 7.02 | Coordination..... | 40 |
| 7.03 | Legal Relationships..... | 40 |
| Article 8 – Owner’s Responsibilities..... | | 41 |
| 8.01 | Communications to Contractor..... | 41 |
| 8.02 | Replacement of Engineer..... | 41 |
| 8.03 | Furnish Data | 41 |
| 8.04 | Pay When Due | 41 |
| 8.05 | Lands and Easements; Reports and Tests..... | 41 |
| 8.06 | Insurance | 41 |
| 8.07 | Change Orders..... | 41 |
| 8.08 | Inspections, Tests, and Approvals | 41 |
| 8.09 | Limitations on Owner’s Responsibilities | 42 |
| 8.10 | Undisclosed Hazardous Environmental Condition | 42 |
| 8.11 | Evidence of Financial Arrangements | 42 |
| 8.12 | Compliance with Safety Program..... | 42 |
| Article 9 – Engineer’s Status During Construction | | 42 |
| 9.01 | Owner’s Representative | 42 |

| | | |
|---|--|----|
| 9.02 | Visits to Site | 42 |
| 9.03 | Project Representative | 43 |
| 9.04 | Authorized Variations in Work | 43 |
| 9.05 | Rejecting Defective Work | 43 |
| 9.06 | Shop Drawings, Change Orders and Payments..... | 43 |
| 9.07 | Determinations for Unit Price Work | 44 |
| 9.08 | Decisions on Requirements of Contract Documents and Acceptability of Work..... | 44 |
| 9.09 | Limitations on Engineer’s Authority and Responsibilities | 44 |
| 9.10 | Compliance with Safety Program..... | 45 |
| Article 10 – Changes in the Work; Claims | | 45 |
| 10.01 | Authorized Changes in the Work | 45 |
| 10.02 | Unauthorized Changes in the Work | 45 |
| 10.03 | Execution of Change Orders..... | 46 |
| 10.04 | Notification to Surety..... | 46 |
| 10.05 | Claims..... | 46 |
| Article 11 – Cost of the Work; Allowances; Unit Price Work..... | | 47 |
| 11.01 | Cost of the Work..... | 47 |
| 11.02 | Allowances..... | 50 |
| 11.03 | Unit Price Work | 50 |
| Article 12 – Change of Contract Price; Change of Contract Times | | 51 |
| 12.01 | Change of Contract Price..... | 51 |
| 12.02 | Change of Contract Times | 52 |
| 12.03 | Delays..... | 52 |
| Article 13 – Tests and Inspections; Correction, Removal or Acceptance of Defective Work | | 53 |
| 13.01 | Notice of Defects | 53 |
| 13.02 | Access to Work | 53 |
| 13.03 | Tests and Inspections | 53 |
| 13.04 | Uncovering Work..... | 54 |
| 13.05 | Owner May Stop the Work..... | 55 |
| 13.06 | Correction or Removal of Defective Work..... | 55 |
| 13.07 | Correction Period..... | 55 |
| 13.08 | Acceptance of Defective Work..... | 56 |
| 13.09 | Owner May Correct Defective Work | 57 |
| Article 14 – Payments to Contractor and Completion..... | | 57 |
| 14.01 | Schedule of Values..... | 57 |
| 14.02 | Progress Payments | 57 |
| 14.03 | Contractor’s Warranty of Title | 60 |
| 14.04 | Substantial Completion..... | 60 |
| 14.05 | Partial Utilization | 61 |
| 14.06 | Final Inspection..... | 62 |
| 14.07 | Final Payment..... | 62 |

| | |
|---|----|
| 14.08 Final Completion Delayed | 63 |
| 14.09 Waiver of Claims | 63 |
| Article 15 – Suspension of Work and Termination | 64 |
| 15.01 Owner May Suspend Work | 64 |
| 15.02 Owner May Terminate for Cause | 64 |
| 15.03 Owner May Terminate For Convenience | 65 |
| 15.04 Contractor May Stop Work or Terminate | 66 |
| Article 16 – Dispute Resolution | 66 |
| 16.01 Methods and Procedures | 66 |
| Article 17 – Miscellaneous | 67 |
| 17.01 Giving Notice | 67 |
| 17.02 Computation of Times | 67 |
| 17.03 Cumulative Remedies | 67 |
| 17.04 Survival of Obligations | 67 |
| 17.05 Controlling Law | 67 |
| 17.06 Headings | 67 |

**STANDARD GENERAL CONDITIONS OF THE
CONSTRUCTION CONTRACT**

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. *Agency*—The Federal or State agency named as such in the Agreement.
 3. *Agreement*—The written instrument which is evidence of the agreement between Owner and Contractor covering the Work.
 4. *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.
 5. *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.
 6. *Bid*—The offer or proposal of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.
 7. *Bidder*—The individual or entity who submits a Bid directly to Owner.
 8. *Bidding Documents*—The Bidding Requirements and the proposed Contract Documents (including all Addenda).
 9. *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.
 10. *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.

11. *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.
12. *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.
13. *Contract Documents*—Those items so designated in the Agreement. Only printed or hard copies of the items listed in the Agreement are Contract Documents. Approved Shop Drawings, other Contractor submittals, and the reports and drawings of subsurface and physical conditions are not Contract Documents.
14. *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).
15. *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.
16. *Contractor*—The individual or entity with whom Owner has entered into the Agreement.
17. *Cost of the Work*—See Paragraph 11.01 for definition.
18. *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.
19. *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.
20. *Engineer*—The individual or entity named as such in the Agreement.
21. *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.
22. *General Requirements*—Sections of Division 1 of the Specifications.
23. *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.
24. *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.

25. *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.
26. *Liens*—Charges, security interests, or encumbrances upon Project funds, real property, or personal property.
27. *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.
28. *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.
29. *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.
30. *Owner*—The individual or entity with whom Contractor has entered into the Agreement and for whom the Work is to be performed.
31. *PCBs*—Polychlorinated biphenyls.
32. *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.
33. *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.
34. *Project*—The total construction of which the Work to be performed under the Contract Documents may be the whole, or a part.
35. *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.
36. *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.
37. *Related Entity*—An officer, director, partner, employee, agent, consultant, or subcontractor.
38. *Resident Project Representative*—The authorized representative of Engineer who may be assigned to the Site or any part thereof.

39. *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.
40. *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.
41. *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.
42. *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.
43. *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.
44. *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.
45. *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.
46. *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.
47. *Successful Bidder*—The Bidder submitting a responsive Bid to whom Owner makes an award.
48. *Supplementary Conditions*—That part of the Contract Documents which amends or supplements these General Conditions.
49. *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 Subcontractor.
50. *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.

51. *Unit Price Work*—Work to be paid for on the basis of unit prices.
52. *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.
53. *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 words and terms discussed in Paragraph 1.02.B through F are not defined but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.
- B. *Intent of Certain Terms or Adjectives:*
 1. The Contract Documents include the terms “as allowed,” “as approved,” “as ordered,” “as directed” or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives “reasonable,” “suitable,” “acceptable,” “proper,” “satisfactory,” or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action, or determination will be solely to evaluate, in general, the Work for compliance with the information in the Contract Documents and with the design concept of the Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility contrary to the provisions of Paragraph 9.09 or any other provision of the Contract Documents.
- C. *Day:*
 1. The word “day” means a calendar day of 24 hours measured from midnight to the next midnight.

D. *Defective:*

1. The word “defective,” when modifying the word “Work,” refers to Work that is unsatisfactory, faulty, or deficient in that it:
 - a. does not conform to the Contract Documents; or
 - b. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or
 - c. has been damaged prior to Engineer’s recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 14.04 or 14.05).

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

1. The word “furnish,” when used in connection with services, materials, or equipment, shall mean to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.
 2. The word “install,” when used in connection with services, materials, or equipment, shall mean to put into use or place in final position said services, materials, or equipment complete and ready for intended use.
 3. The words “perform” or “provide,” when used in connection with services, materials, or equipment, shall mean to furnish and install said services, materials, or equipment complete and ready for intended use.
 4. When “furnish,” “install,” “perform,” or “provide” is not used in connection with services, materials, or equipment in a context clearly requiring an obligation of Contractor, “provide” is implied.
- F. Unless stated otherwise in the Contract Documents, words or phrases that have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

ARTICLE 2 – PRELIMINARY MATTERS

2.01 *Delivery of Bonds and Evidence of Insurance*

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

2.02 *Copies of Documents*

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

2.03 *Commencement of Contract Times; Notice to Proceed*

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

2.04 *Starting the Work*

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

2.05 *Before Starting Construction*

- A. *Preliminary Schedules:* Within 10 days after the Effective Date of the Agreement (unless otherwise specified in the General Requirements), Contractor shall submit to Engineer for timely review:
1. a preliminary Progress Schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract Documents;
 2. a preliminary Schedule of Submittals; and
 3. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

2.06 *Preconstruction Conference; Designation of Authorized Representatives*

- A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Engineer, *Agency* and others as appropriate will be held to establish a working understanding among the parties as to the Work and to discuss the schedules referred to in Paragraph 2.05.A, procedures for handling Shop Drawings and other submittals, processing Applications for Payment, and maintaining required records.
- B. At this conference Owner and Contractor each shall designate, in writing, a specific individual to act as its authorized representative with respect to the services and responsibilities under the

Contract. Such individuals shall have the authority to transmit instructions, receive information, render decisions relative to the Contract, and otherwise act on behalf of each respective party.

2.07 *Initial Acceptance of Schedules*

- A. At least 10 days before submission of the first Application for Payment a conference attended by Contractor, Engineer, and others as appropriate will be held to review for acceptability to Engineer as provided below the schedules submitted in accordance with Paragraph 2.05.A. Contractor shall have an additional 10 days to make corrections and adjustments and to complete and resubmit the schedules. No progress payment shall be made to Contractor until acceptable schedules are submitted to Engineer.
1. The Progress Schedule will be acceptable to Engineer if it provides an orderly progression of the Work to completion within the Contract Times. Such acceptance will not impose on Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work, nor interfere with or relieve Contractor from Contractor's full responsibility 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's Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to component parts of the Work.

ARTICLE 3 – CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE

3.01 *Intent*

- A. The Contract Documents are complementary; what is required by one is as binding as if required by all.
- B. It is the intent of the Contract Documents to describe a functionally complete project (or part thereof) to be constructed in accordance with the Contract Documents. Any labor, documentation, services, materials, or equipment that reasonably may be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the indicated result will be provided whether or not specifically called for, at no additional cost to Owner.
- C. Clarifications and interpretations of the Contract Documents shall be issued by Engineer as provided in Article 9.

3.02 *Reference Standards*

- A. Standards, Specifications, Codes, Laws, and Regulations
1. Reference to standards, specifications, manuals, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, shall mean the standard, specification, manual, code, or Laws or Regulations

in effect at the time of opening of Bids (or on the Effective Date of the Agreement if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.

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

3.03 *Reporting and Resolving Discrepancies*

A. *Reporting Discrepancies:*

1. *Contractor's Review of Contract Documents Before Starting Work:* Before undertaking each part of the Work, Contractor shall carefully study and compare the Contract Documents and check and verify pertinent figures therein and all applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy which Contractor discovers, or has actual knowledge of, and shall obtain a written interpretation or clarification from Engineer before proceeding with any Work affected thereby.
2. *Contractor's Review of Contract Documents During Performance of Work:* If, during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents, or between the Contract Documents and (a) any applicable Law or Regulation, (b) any standard, specification, manual, or code, or (c) any instruction of any Supplier, then Contractor shall promptly report it to Engineer in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 6.16.A) until an amendment or supplement to the Contract Documents has been issued by one of the methods indicated in Paragraph 3.04.
3. Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Contractor had actual knowledge thereof.

B. *Resolving Discrepancies:*

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the Contract Documents shall take precedence in resolving any conflict, error, ambiguity, or discrepancy between the provisions of the Contract Documents and:
 - a. the provisions of any standard, specification, manual, or code, or the instruction of any Supplier (whether or not specifically incorporated by reference in the Contract Documents); or

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

3.04 *Amending and Supplementing Contract Documents*

- A. The Contract Documents may be amended to provide for additions, deletions, and revisions in the Work or to modify the terms and conditions thereof by either a Change Order or a Work Change Directive.
- B. The requirements of the Contract Documents may be supplemented, and minor variations and deviations in the Work may be authorized, by one or more of the following ways:
 - 1. A Field Order;
 - 2. Engineer's approval of a Shop Drawing or Sample (subject to the provisions of Paragraph 6.17.D.3); or
 - 3. Engineer's written interpretation or clarification.

3.05 *Reuse of Documents*

- A. Contractor and any Subcontractor or Supplier shall not:
 - 1. have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or its consultants, including electronic media editions; or
 - 2. reuse any such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adaptation by Engineer.
- B. The prohibitions of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein shall preclude Contractor from retaining copies of the Contract Documents for record purposes.

3.06 *Electronic Data*

- A. Unless otherwise stated in the Supplementary Conditions, the data furnished by Owner or Engineer to Contractor, or by Contractor to Owner or Engineer, that may be relied upon are limited to the printed copies (also known as hard copies). Files in electronic media format of text, data, graphics, or other types are furnished only for the convenience of the receiving party. Any conclusion or information obtained or derived from such electronic files will be at the user's sole risk. If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.
- B. Because data stored in electronic media format can deteriorate or be modified inadvertently or otherwise without authorization of the data's creator, the party receiving electronic files agrees

that it will perform acceptance tests or procedures within 60 days, after which the receiving party shall be deemed to have accepted the data thus transferred. Any errors detected within the 60-day acceptance period will be corrected by the transferring party.

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

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

4.01 *Availability of Lands*

- A. Owner shall furnish the Site. Owner shall notify Contractor of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work. Owner will obtain in a timely manner and pay for easements for permanent structures or permanent changes in existing facilities. If Contractor and Owner are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, as a result of any delay in Owner's furnishing the Site or a part thereof, Contractor may make a Claim 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 known to Owner of explorations and tests of subsurface conditions at or contiguous to the *Site that Engineer has used in preparing the Bidding Documents*; and
 - 2. those drawings known to Owner of physical conditions relating to existing surface or subsurface structures at *or contiguous to* the Site (except Underground Facilities) *that Engineer has used in preparing the Bidding Documents*
- B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto; or
2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or
3. any Contractor interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions, or information.

4.03 *Differing Subsurface or Physical Conditions*

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

1. is of such a nature as to establish that any "technical data" on which Contractor is entitled to rely as provided in Paragraph 4.02 is materially inaccurate; or
2. is of such a nature as to require a change in the Contract Documents; or
3. differs materially from that shown or indicated in the Contract Documents; or
4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

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

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, neither Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors shall be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.

4.04 *Underground Facilities*

- A. *Shown or Indicated:* The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the Site is based on information and data furnished to Owner or Engineer by the owners of such Underground Facilities, including Owner, or by others. Unless it is otherwise expressly provided in the Supplementary Conditions:
 1. Owner and Engineer shall not be responsible for the accuracy or completeness of any such information or data provided by others; and
 2. the cost of all of the following will be included in the Contract Price, and Contractor shall have full responsibility for:
 - a. reviewing and checking all such information and data;
 - b. locating all Underground Facilities shown or indicated in the Contract Documents;
 - c. coordination of the Work with the owners of such Underground Facilities, including Owner, during construction; and
 - d. the safety and protection of all such Underground Facilities and repairing any damage thereto resulting from the Work.

B. *Not Shown or Indicated:*

1. If an Underground Facility is uncovered or revealed at or contiguous to the Site which was not shown or indicated, or not shown or indicated with reasonable accuracy in the Contract Documents, Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 6.16.A), identify the owner of such Underground Facility and give written notice to that owner and to Owner and Engineer. Engineer will promptly review the Underground Facility and determine the extent, if any, to which a change is required in the Contract Documents to reflect and document the consequences of the existence or location of the Underground Facility. During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.
2. If Engineer concludes that a change in the Contract Documents is required, a Work Change Directive or a Change Order will be issued to reflect and document such consequences. An equitable adjustment shall be made in the Contract Price or Contract Times, or both, to the extent that they are attributable to the existence or location of any Underground Facility that was not shown or indicated or not shown or indicated with reasonable accuracy in the Contract Documents and that Contractor did not know of and could not reasonably have been expected to be aware of or to have anticipated. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment in Contract Price or Contract Times, Owner or Contractor may make a Claim 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:* The Supplementary Conditions identify those reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at the Site.
- B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by Contractor and safety precautions and programs incident thereto; or
 2. other data, interpretations, opinions and information contained in such reports or shown or indicated in such drawings; or
 3. any Contractor interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions or information.
- C. Contractor shall not be responsible for any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work. Contractor shall be responsible for a Hazardous Environmental Condition created with any materials brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible.
- D. If Contractor encounters a Hazardous Environmental Condition or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, Contractor shall immediately: (i) secure or otherwise isolate such condition; (ii) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 6.16.A); and (iii) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any. Promptly after consulting with Engineer, Owner shall take such actions as are necessary to permit Owner to timely obtain required permits and provide Contractor the written notice required by Paragraph 4.06.E.
- E. Contractor shall not be required to resume Work in connection with such condition or in any affected area until after Owner has obtained any required permits related thereto and delivered written notice to Contractor: (i) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work; or (ii) specifying any special conditions under which such Work may be resumed safely. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, or both, as a result of such Work stoppage or such special conditions under which Work 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, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition: (i) was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be included within the scope of the Work, and (ii) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06.G shall obligate Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- H. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06.H shall obligate Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- I. The provisions of Paragraphs 4.02, 4.03, and 4.04 do not apply to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 5 – BONDS AND INSURANCE

5.01 *Performance, Payment, and Other Bonds*

- A. Contractor shall furnish performance and payment bonds, each in an amount at least equal to the Contract Price as security for the faithful performance and payment of all of Contractor's obligations under the Contract Documents. These bonds shall remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 13.07, whichever is later, except as provided otherwise by Laws or Regulations or by the Contract Documents. Contractor shall also furnish such other bonds as are required by the Contract Documents.
- B. All bonds shall be in the form prescribed by the Contract Documents except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in the list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. All bonds signed by an agent or attorney-in-fact must be accompanied by a certified copy of that individual's authority to bind the surety. The evidence of authority shall show that it is effective on the date the agent or attorney-in-fact signed each bond.

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

5.02 *Licensed Sureties and Insurers*

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

5.03 *Certificates of Insurance*

- A. Contractor shall deliver to Owner, with copies to each additional insured and loss payee identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Owner or any other additional insured) which Contractor is required to purchase and maintain.
- B. Owner shall deliver to Contractor, with copies to each additional insured and loss payee identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Contractor or any other additional insured) which Owner is required to purchase and maintain.
- C. Failure of Owner to demand such certificates or other evidence of Contractor's full compliance with these insurance requirements or failure of Owner to identify a deficiency in compliance from the evidence provided shall not be construed as a waiver of Contractor's obligation to maintain such insurance.
- D. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor.
- E. The insurance and insurance limits required herein shall not be deemed as a limitation on Contractor's liability under the indemnities granted to Owner in the Contract Documents.

5.04 *Contractor's Insurance*

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

1. claims under workers' compensation, disability benefits, and other similar employee benefit acts;
 2. claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor's employees;
 3. claims for damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees;
 4. claims for damages insured by reasonably available personal injury liability coverage which are sustained:
 - a. by any person as a result of an offense directly or indirectly related to the employment of such person by Contractor, or
 - b. by any other person for any other reason;
 5. claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom; and
 6. claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance or use of any motor vehicle.
- B. The policies of insurance required by this Paragraph 5.04 shall:
1. with respect to insurance required by Paragraphs 5.04.A.3 through 5.04.A.6 inclusive, be written on an occurrence basis, include as additional insureds (subject to any customary exclusion regarding professional liability) Owner and Engineer, and any other individuals or entities identified in the Supplementary Conditions, all of whom shall be listed as additional insureds, and include coverage for the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of all such additional insureds, and the insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby;
 2. include at least the specific coverages and be written for not less than the limits of liability provided in the Supplementary Conditions or required by Laws or Regulations, whichever is greater;
 3. include contractual liability insurance covering Contractor's indemnity obligations under Paragraphs 6.11 and 6.20;
 4. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other additional insured identified in the Supplementary Conditions to whom a certificate of insurance has been issued (and the certificates of insurance furnished by the Contractor pursuant to Paragraph 5.03 will so provide);

5. remain in effect at least until final payment and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work in accordance with Paragraph 13.07; and
6. include completed operations coverage:
 - a. Such insurance shall remain in effect for two years after final payment.
 - b. Contractor shall furnish Owner and each other additional insured identified in the Supplementary Conditions, to whom a certificate of insurance has been issued, evidence satisfactory to Owner and any such additional insured of continuation of such insurance at final payment and one year thereafter.

5.05 *Owner's Liability Insurance*

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

5.06 *Property Insurance*

- A. Unless otherwise provided in the Supplementary Conditions, Owner 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, members, partners, employees, agents, consultants, and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as a loss payee;
 2. be written on a Builder's Risk "all-risk" policy form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, falsework, and materials and equipment in transit, and shall insure against at least the following perils or causes of loss: fire, lightning, extended coverage, theft, vandalism and malicious mischief, earthquake, collapse, debris removal, demolition occasioned by enforcement of Laws and Regulations, water damage (other than that caused by flood), and such other perils or causes of loss as may be specifically required by the Supplementary Conditions.
 3. include expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects);
 4. cover materials and equipment stored at the Site or at another location that was agreed to in writing by Owner prior to being incorporated in the Work, provided that such materials and equipment have been included in an Application for Payment recommended by Engineer;

5. allow for partial utilization of the Work by Owner;
 6. include testing and startup; and
 7. be maintained in effect until final payment is made unless otherwise agreed to in writing by Owner, Contractor, and Engineer with 30 days written notice to each other loss payee to whom a certificate of insurance has been issued.
- B. Owner shall purchase and maintain such equipment breakdown insurance or additional property insurance as may be required by the Supplementary Conditions or Laws and Regulations which will include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as a loss payee.
- C. All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with this Paragraph 5.06 will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other loss payee to whom a certificate of insurance has been issued and will contain waiver provisions in accordance with Paragraph 5.07.
- D. Owner shall not be responsible for purchasing and maintaining any property insurance specified in this Paragraph 5.06 to protect the interests of Contractor, Subcontractors, or others in the Work to the extent of any deductible amounts that are identified in the Supplementary Conditions. The risk of loss within such identified deductible amount will be borne by Contractor, Subcontractors, or others suffering any such loss, and if any of them wishes property insurance coverage within the limits of such amounts, each may purchase and maintain it at the purchaser's own expense.
- E. If Contractor requests in writing that other special insurance be included in the property insurance policies provided under this Paragraph 5.06, Owner shall, if possible, include such insurance, and the cost thereof will be charged to Contractor by appropriate Change Order. Prior to commencement of the Work at the Site, Owner shall in writing advise Contractor whether or not such other insurance has been procured by Owner.

5.07 *Waiver of Rights*

- A. Owner and Contractor intend that all policies purchased in accordance with Paragraph 5.06 will protect Owner, Contractor, Subcontractors, and Engineer, and all other individuals or entities identified in the Supplementary Conditions as loss payees (and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them) in such policies and will provide primary coverage for all losses and damages caused by the perils or causes of loss covered thereby. All such policies shall contain provisions to the effect that in the event of payment of any loss or damage the insurers will have no rights of recovery against any of the insureds or loss payees thereunder. Owner and Contractor waive all rights against each other and their respective officers, directors, members, partners, employees, agents, consultants

and subcontractors of each and any of them for all losses and damages caused by, arising out of or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Subcontractors and Engineer, and all other individuals or entities identified in the Supplementary Conditions as loss payees (and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them) under such policies for losses and damages so caused. None of the above waivers shall extend to the rights that any party making such waiver may have to the proceeds of insurance held by Owner as trustee or otherwise payable under any policy so issued.

- B. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them for:
1. loss due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other perils whether or not insured by Owner; and
 2. loss or damage to the completed Project or part thereof caused by, arising out of, or resulting from fire or other insured peril or cause of loss covered by any property insurance maintained on the completed Project or part thereof by Owner during partial utilization pursuant to Paragraph 14.05, after Substantial Completion pursuant to Paragraph 14.04, or after final payment pursuant to Paragraph 14.07.
- C. Any insurance policy maintained by Owner covering any loss, damage or consequential loss referred to in Paragraph 5.07.B shall contain provisions to the effect that in the event of payment of any such loss, damage, or consequential loss, the insurers will have no rights of recovery against Contractor, Subcontractors, or Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them.

5.08 *Receipt and Application of Insurance Proceeds*

- A. Any insured loss under the policies of insurance required by Paragraph 5.06 will be adjusted with Owner and made payable to Owner as fiduciary for the loss payees, as their interests may appear, subject to the requirements of any applicable mortgage clause and of Paragraph 5.08.B. Owner shall deposit in a separate account any money so received and shall distribute it in accordance with such agreement as the parties in interest may reach. If no other special agreement is reached, the damaged Work shall be repaired or replaced, the moneys so received applied on account thereof, and the Work and the cost thereof covered by an appropriate Change Order.
- B. Owner as fiduciary shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing within 15 days after the occurrence of loss to Owner's exercise of this power. If such objection be made, Owner as fiduciary shall make settlement with the insurers in accordance with such agreement as the parties in interest may reach. If no such agreement among the parties in interest is reached, Owner as fiduciary shall 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.

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; and
 - 3) it has a proven record of performance and availability of responsive service.
 - b. Contractor certifies that, if approved and incorporated into the Work:
 - 1) there will be no increase in cost to the Owner or increase in Contract Times; and
 - 2) it will conform substantially to the detailed requirements of the item named in the Contract Documents.
2. *Substitute Items:*
 - a. If in Engineer’s sole discretion an item of material or equipment proposed by Contractor does not qualify as an “or-equal” item under Paragraph 6.05.A.1, it will be considered a proposed substitute item.
 - b. Contractor shall submit sufficient information as provided below to allow Engineer to determine if the item of material or equipment proposed is essentially equivalent to that named and an acceptable substitute 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 by the General Requirements, and as Engineer may decide is appropriate under the circumstances.
 - d. Contractor shall make written application to Engineer for review of a proposed substitute item of material or equipment that Contractor seeks to furnish or use. The application:
 - 1) shall certify that the proposed substitute item will:

- a) perform adequately the functions and achieve the results called for by the general design,
 - b) be similar in substance to that specified, and
 - c) be suited to the same use as that specified;
- 2) will state:
- a) the extent, if any, to which the use of the proposed substitute item will prejudice Contractor's achievement of Substantial Completion on time,
 - b) whether use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item, and
 - c) whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty;
- 3) will identify:
- a) all variations of the proposed substitute item from that specified, and
 - b) available engineering, sales, maintenance, repair, and replacement services; and
- 4) shall contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including costs of redesign and claims of other contractors affected by any resulting change.
- B. *Substitute Construction Methods or Procedures:* If a specific means, method, technique, sequence, or procedure of construction is expressly required by the Contract Documents, Contractor may furnish or utilize a substitute means, method, technique, sequence, or procedure of construction approved by Engineer. Contractor shall submit sufficient information to allow Engineer, in Engineer's sole discretion, to determine that the substitute proposed is equivalent to that expressly called for by the Contract Documents. The requirements for review by Engineer will be similar to those provided in Paragraph 6.05.A.2.
- C. *Engineer's Evaluation:* Engineer will be allowed a reasonable time within which to evaluate each proposal or submittal made pursuant to Paragraphs 6.05.A and 6.05.B. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No "or equal" or substitute will be ordered, installed or utilized until Engineer's review is complete, which will be evidenced by a Change Order in the case of a substitute and an approved Shop Drawing for an "or equal." Engineer will advise Contractor in writing of any negative determination.
- D. *Special Guarantee:* Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.

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

6.06 *Concerning Subcontractors, Suppliers, and Others*

- A. Contractor shall not employ any Subcontractor, Supplier, or other individual or entity (including those acceptable to Owner as indicated in Paragraph 6.06.B), whether initially or as a replacement, against whom Owner may have reasonable objection. Contractor shall not be required to employ any Subcontractor, Supplier, or other individual or entity to furnish or perform any of the Work against whom Contractor has reasonable objection.
- B. If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, or other individuals or entities to be submitted to Owner in advance for acceptance by Owner by a specified date prior to the Effective Date of the Agreement, and if Contractor has submitted a list thereof in accordance with the Supplementary Conditions, Owner's acceptance (either in writing or by failing to make written objection thereto by the date indicated for acceptance or objection in the Bidding Documents or the Contract Documents) of any such Subcontractor, Supplier, or other individual or entity so identified may be revoked on the basis of reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor, Supplier, or other individual or entity, and the Contract Price will be adjusted by the difference in the cost occasioned by such replacement, and an appropriate Change Order will be issued. No acceptance by Owner of any such Subcontractor, Supplier, or other individual or entity, whether initially or as a replacement, shall constitute a waiver of any right of Owner or Engineer to reject defective Work.
- C. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of the Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work just as Contractor is responsible for Contractor's own acts and omissions. Nothing in the Contract Documents:
1. shall create for the benefit of any such Subcontractor, Supplier, or other individual or entity any contractual relationship between Owner or Engineer and any such Subcontractor, Supplier or other individual or entity; nor
 2. shall create any obligation on the part of Owner or Engineer to pay or to see to the payment of any moneys due any such Subcontractor, Supplier, or other individual or entity except as may otherwise be required by Laws and Regulations.

- D. Contractor shall be solely responsible for scheduling and coordinating the Work of Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work under a direct or indirect contract with Contractor.
- E. Contractor shall require all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work to communicate with Engineer through Contractor.
- F. The divisions and sections of the Specifications and the identifications of any Drawings shall not control Contractor in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.
- G. All Work performed for Contractor by a Subcontractor or Supplier will be pursuant to an appropriate agreement between Contractor and the Subcontractor or Supplier which specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of Owner and Engineer. Whenever any such agreement is with a Subcontractor or Supplier who is listed as a loss payee on the property insurance provided in Paragraph 5.06, the agreement between the Contractor and the Subcontractor or Supplier will contain provisions whereby the Subcontractor or Supplier waives all rights against Owner, Contractor, Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or loss payees (and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them) for all losses and damages caused by, arising out of, relating to, or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work. If the insurers on any such policies require separate waiver forms to be signed by any Subcontractor or Supplier, Contractor will obtain the same.

6.07 *Patent Fees and Royalties*

- A. Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if, to the actual knowledge of Owner or Engineer, its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by Owner in the Contract Documents.
- B. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, and its officers, directors, members, partners, employees, agents, consultants, and subcontractors from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device specified in the Contract Documents, but not identified as being subject to payment of any license fee or royalty to others required by patent rights or copyrights.

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

6.08 *Permits*

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

6.09 *Laws and Regulations*

- A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.
- B. If Contractor performs any Work knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work. However, it shall not be Contractor's responsibility to make certain that the Specifications and Drawings are in accordance with Laws and Regulations, but this shall not relieve Contractor of Contractor's obligations under Paragraph 3.03.
- C. Changes in Laws or Regulations not known at the time of opening of Bids (or, on the Effective Date of the Agreement if there were no Bids) having an effect on the cost or time of performance of the Work shall be the subject of an adjustment in Contract Price or Contract Times. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made 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, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused by or based upon Contractor's performance of the Work.

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

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

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

6.12 *Record Documents*

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

Work, these record documents, Samples, and Shop Drawings will be delivered to Engineer for Owner.

6.13 *Safety and Protection*

- A. Contractor shall be solely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. Such responsibility does not relieve Subcontractors of their responsibility for the safety of persons or property in the performance of their work, nor for compliance with applicable safety Laws and Regulations. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:
1. all persons on the Site or who may be affected by the Work;
 2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and
 3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.
- B. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection. Contractor shall notify owners of adjacent property and of Underground Facilities and other utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property.
- C. Contractor shall comply with the applicable requirements of Owner's safety programs, if any. The Supplementary Conditions identify any Owner's safety programs that are applicable to the Work.
- D. Contractor shall inform Owner and Engineer of the specific requirements of Contractor's safety program with which Owner's and Engineer's employees and representatives must comply while at the Site.
- E. All damage, injury, or loss to any property referred to in Paragraph 6.13.A.2 or 6.13.A.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).

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

6.14 *Safety Representative*

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

6.15 *Hazard Communication Programs*

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

6.16 *Emergencies*

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

6.17 *Shop Drawings and Samples*

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

1. *Shop Drawings:*

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

2. *Samples:*

- a. Submit number of Samples specified in the Specifications.

- b. Clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the submittal for the limited purposes required by Paragraph 6.17.D.
- B. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.
- C. *Submittal Procedures:*
 1. Before submitting each Shop Drawing or Sample, Contractor shall have:
 - a. reviewed and coordinated each Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;
 - b. determined and verified all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;
 - c. determined and verified the suitability of all materials offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and
 - d. determined and verified all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto.
 2. Each submittal shall bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review and approval of that submittal.
 3. With each submittal, Contractor shall give Engineer specific written notice of any variations that the Shop Drawing or Sample may have from the requirements of the Contract Documents. This notice shall be both a written communication separate from the Shop Drawings or Sample submittal; and, in addition, by a specific notation made on each Shop Drawing or Sample submitted to Engineer for review and approval of each such variation.
- D. *Engineer's Review:*
 1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the Schedule of Submittals acceptable to Engineer. Engineer's review and approval will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.

2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction (except where a particular means, method, technique, sequence, or procedure of construction is specifically and expressly called for by the Contract Documents) or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.
3. Engineer's review and approval shall not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 6.17.C.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer's review and approval shall not relieve Contractor from responsibility for complying with the requirements of Paragraph 6.17.C.1.

E. *Resubmittal Procedures:*

1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous submittals.

6.18 *Continuing the Work*

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

6.19 *Contractor's General Warranty and Guarantee*

- A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer and its officers, directors, members, partners, employees, agents, consultants, and subcontractors shall be entitled to rely on representation of Contractor's warranty and guarantee.
- B. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:
 1. abuse, modification, or improper maintenance or operation by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or
 2. normal wear and tear under normal usage.
- C. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents or a release of Contractor's obligation to perform the Work in accordance with the Contract Documents:

1. observations by Engineer;
2. recommendation by Engineer or payment by Owner of any progress or final payment;
3. the issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;
4. use or occupancy of the Work or any part thereof by Owner;
5. any review and approval of a Shop Drawing or Sample submittal or the issuance of a notice of acceptability by Engineer;
6. any inspection, test, or approval by others; or
7. any correction of defective Work by Owner.

6.20 *Indemnification*

- A. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the performance of the Work, provided that any such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work or anyone for whose acts any of them may be liable .
- B. In any and all claims against Owner or Engineer or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 6.20.A shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.
- C. The indemnification obligations of Contractor under Paragraph 6.20.A shall not extend to the liability of Engineer and Engineer's officers, directors, members, partners, employees, agents, consultants and subcontractors arising out of:
 1. the preparation or approval of, or the failure to prepare or approve maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications; or

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

6.21 *Delegation of Professional Design Services*

- A. Contractor will not be required to provide professional design services unless such services are specifically required by the Contract Documents for a portion of the Work or unless such services are required to carry out Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. Contractor shall not be required to provide professional services in violation of applicable law.
- B. If professional design services or certifications by a design professional related to systems, materials or equipment are specifically required of Contractor by the Contract Documents, Owner and Engineer will specify all performance and design criteria that such services must satisfy. Contractor shall cause such services or certifications to be provided by a properly licensed professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings and other submittals prepared by such professional. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to Engineer.
- C. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications or approvals performed by such design professionals, provided Owner and Engineer have specified to Contractor all performance and design criteria that such services must satisfy.
- D. Pursuant to this Paragraph 6.21, Engineer's review and approval of design calculations and design drawings will be only for the limited purpose of checking for conformance with performance and design criteria given and the design concept expressed in the Contract Documents. Engineer's review and approval of Shop Drawings and other submittals (except design calculations and design drawings) will be only for the purpose stated in Paragraph 6.17.D.1.
- E. Contractor shall not be responsible for the adequacy of the performance or design criteria required by the Contract Documents.

ARTICLE 7 – OTHER WORK AT THE SITE

7.01 *Related Work at Site*

- A. Owner may perform other work related to the Project at the Site with Owner's employees, or through other direct contracts 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, provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work, and properly coordinate the Work with theirs. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering such work; provided, however, that Contractor may cut or alter others' work with the written consent of Engineer and the others whose work will be affected. The duties and responsibilities of Contractor under this Paragraph are for the benefit of such utility owners and other contractors to the extent that there are comparable provisions for the benefit of Contractor in said direct contracts between Owner and such utility owners and other contractors.
- C. If the proper execution or results of any part of Contractor's Work depends upon work performed by others under this Article 7, Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.

7.02 *Coordination*

- A. If Owner intends to contract with others for the performance of other work on the Project at the Site, the following will be set forth in Supplementary Conditions:
1. the individual or entity who will have authority and responsibility for coordination of the activities among the various contractors will be identified;
 2. the specific matters to be covered by such authority and responsibility will be itemized; and
 3. the extent of such authority and responsibilities will be provided.
- B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

7.03 *Legal Relationships*

- A. Paragraphs 7.01.A and 7.02 are not applicable for utilities not under the control of Owner.
- B. Each other direct contract of Owner under Paragraph 7.01.A shall provide that the other contractor is liable to Owner and Contractor for the reasonable direct delay and disruption costs incurred by Contractor as a result of the other contractor's wrongful actions or inactions.

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

ARTICLE 8 – OWNER'S RESPONSIBILITIES

8.01 Communications to Contractor

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

8.02 Replacement of Engineer

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

8.03 Furnish Data

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

8.04 Pay When Due

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

8.05 Lands and Easements; Reports and Tests

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

8.06 Insurance

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

8.07 Change Orders

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

8.08 Inspections, Tests, and Approvals

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

8.09 *Limitations on Owner's Responsibilities*

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

8.10 *Undisclosed Hazardous Environmental Condition*

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

8.11 *Evidence of Financial Arrangements*

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

8.12 *Compliance with Safety Program*

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

ARTICLE 9 – ENGINEER'S STATUS DURING CONSTRUCTION

9.01 *Owner's Representative*

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

9.02 *Visits to Site*

- A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe as an experienced and qualified design professional the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.
- B. Engineer's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in Paragraph 9.09. Particularly, but without limitation, during or as a

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

9.03 *Project Representative*

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

9.04 *Authorized Variations in Work*

- A. Engineer may authorize minor variations in the Work from the requirements of the Contract Documents which do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. These may be accomplished by a Field Order and will be binding on Owner and also on Contractor, who shall perform the Work involved promptly. If Owner or Contractor believes that a Field Order justifies an adjustment in the Contract Price or 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 13.04, whether or not the Work is fabricated, installed, or completed.

9.06 *Shop Drawings, Change Orders and Payments*

- A. In connection with Engineer's authority, and limitations thereof, as to Shop Drawings and Samples, see Paragraph 6.17.
- B. In connection with Engineer's authority, and limitations thereof, as to design calculations and design drawings submitted in response to a delegation of professional design services, if any, see Paragraph 6.21.

- C. In connection with Engineer's authority as to Change Orders, see Articles 10, 11, and 12.
- D. In connection with Engineer's authority as to Applications for Payment, see Article 14.

9.07 *Determinations for Unit Price Work*

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

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

- A. Engineer will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the Work thereunder. All matters in question and other matters between Owner and Contractor arising prior to the date final payment is due relating to the acceptability of the Work, and the interpretation of the requirements of the Contract Documents pertaining to the performance of the Work, will be referred initially to Engineer in writing within 30 days of the event giving rise to the question.
- B. Engineer will, with reasonable promptness, render a written decision on the issue referred. If Owner or Contractor believes that any such decision entitles them to an adjustment in the Contract Price or Contract Times or both, a Claim may be made under Paragraph 10.05. The date of Engineer's decision shall be the date of the event giving rise to the issues referenced for the purposes of Paragraph 10.05.B.
- C. Engineer's written decision on the issue referred will be final and binding on Owner and Contractor, subject to the provisions of Paragraph 10.05.
- D. When functioning as interpreter and judge under this Paragraph 9.08, Engineer will not show partiality to Owner or Contractor and will not be liable in connection with any interpretation or decision rendered in good faith in such capacity.

9.09 *Limitations on Engineer's Authority and Responsibilities*

- A. Neither Engineer's authority or responsibility under this Article 9 or under any other provision of the Contract Documents nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer shall create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.
- B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws

and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

- C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.
- D. Engineer's review of the final Application for Payment and accompanying documentation and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Paragraph 14.07.A will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals that the results certified indicate compliance with, the Contract Documents.
- E. The limitations upon authority and responsibility set forth in this Paragraph 9.09 shall also apply to the Resident Project Representative, if any, and assistants, if any.

9.10 *Compliance with Safety Program*

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

ARTICLE 10 – CHANGES IN THE WORK; CLAIMS

10.01 *Authorized Changes in the Work*

- A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work by a Change Order, or a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved which will be performed under the applicable conditions of the Contract Documents (except as otherwise specifically provided).
- B. If Owner and Contractor are unable to agree on entitlement to, or on the amount or extent, if any, of an adjustment in the Contract Price or Contract Times, or both, that should be allowed as a result of a Work Change Directive, a Claim may be made therefore as provided in Paragraph 10.05.

10.02 *Unauthorized Changes in the Work*

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

10.03 *Execution of Change Orders*

- A. Owner and Contractor shall execute appropriate Change Orders recommended by Engineer covering:
1. changes in the Work which are: (i) ordered by Owner pursuant to Paragraph 10.01.A, (ii) required because of acceptance of defective Work under Paragraph 13.08.A or Owner's correction of defective Work under Paragraph 13.09, or (iii) agreed to by the parties;
 2. changes in the Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive; and
 3. changes in the Contract Price or Contract Times which embody the substance of any written decision rendered by Engineer pursuant to Paragraph 10.05; provided that, in lieu of executing any such Change Order, an appeal may be taken from any such decision in accordance with the provisions of the Contract Documents and applicable Laws and Regulations, but during any such appeal, Contractor shall carry on the Work and adhere to the Progress Schedule as provided in Paragraph 6.18.A.

10.04 *Notification to Surety*

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

10.05 *Claims*

- A. *Engineer's Decision Required:* All Claims, except those waived pursuant to Paragraph 14.09, shall be referred to the Engineer for decision. A decision by Engineer shall be required as a condition precedent to any exercise by Owner or Contractor of any rights or remedies either may otherwise have under the Contract Documents or by Laws and Regulations in respect of such Claims.
- B. *Notice:* Written notice stating the general nature of each Claim shall be delivered by the claimant to Engineer and the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto. The responsibility to substantiate a Claim shall rest with the party making the Claim. Notice of the amount or extent of the Claim, with supporting data shall be delivered to the Engineer and the other party to the Contract within 60 days after the start of such event (unless Engineer allows additional time for claimant to submit additional or more accurate data in support of such Claim). A Claim for an adjustment in Contract Price shall be prepared in accordance with the provisions of Paragraph 12.01.B. A Claim for an adjustment in Contract Times shall be prepared in accordance with the provisions of Paragraph 12.02.B. Each Claim shall be accompanied by claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant believes it is entitled as a result of said event. The

opposing party shall submit any response to Engineer and the claimant within 30 days after receipt of the claimant's last submittal (unless Engineer allows additional time).

- C. *Engineer's Action:* Engineer will review each Claim and, within 30 days after receipt of the last submittal of the claimant or the last submittal of the opposing party, if any, take one of the following actions in writing:
1. deny the Claim in whole or in part;
 2. approve the Claim; or
 3. notify the parties that the Engineer is unable to resolve the Claim if, in the Engineer's sole discretion, it would be inappropriate for the Engineer to do so. For purposes of further resolution of the Claim, such notice shall be deemed a denial.
- D. In the event that Engineer does not take action on a Claim within said 30 days, the Claim shall be deemed denied.
- E. Engineer's written action under Paragraph 10.05.C or denial pursuant to Paragraphs 10.05.C.3 or 10.05.D will be final and binding upon Owner and Contractor, unless Owner or Contractor invoke the dispute resolution procedure set forth in Article 16 within 30 days of such action or denial.
- F. No Claim for an adjustment in Contract Price or Contract Times will be valid if not submitted in accordance with this Paragraph 10.05.

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

11.01 *Cost of the Work*

- A. *Costs Included:* The term Cost of the Work means the sum of all costs, except those excluded in Paragraph 11.01.B, necessarily incurred and paid by Contractor in the proper performance of the Work. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, the costs to be reimbursed to Contractor will be only those additional or incremental costs required because of the change in the Work or because of the event giving rise to the Claim. Except as otherwise may be agreed to in writing by Owner, such costs shall be in amounts no higher than those prevailing in the locality of the Project, shall not include any of the costs itemized in Paragraph 11.01.B, and shall include only the following items:
1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor. Such employees shall include, without limitation, superintendents, foremen, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits, which shall include social security contributions, unemployment, excise, and payroll taxes, workers'

compensation, health and retirement benefits, bonuses, sick leave, vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, shall be included in the above to the extent authorized 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, as imposed by Laws and Regulations.
 - e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or

anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.

- f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of property insurance established in accordance with Paragraph 5.06.D), provided such losses and damages have resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses shall be included in the Cost of the Work for the purpose of determining Contractor's fee.
- g. The cost of utilities, fuel, and sanitary facilities at the Site.
- h. Minor expenses such as telegrams, long distance telephone calls, telephone service at the Site, express and courier services, and similar petty cash items in connection with the Work.
- i. The costs of premiums for all bonds and insurance Contractor is required by the Contract Documents to purchase and maintain.

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

- 1. Payroll costs and other compensation of Contractor's officers, executives, principals (of partnerships and sole proprietorships), general managers, safety managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, 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.

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

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

12.01 Change of Contract Price

- A. The Contract Price may only be changed by a Change Order. Any Claim for an adjustment in the Contract Price shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.
- B. The value of any Work covered by a Change Order or of any Claim for an adjustment in the Contract Price will be determined as follows:
 - 1. where the Work involved is covered by unit prices contained in the Contract Documents, by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 11.03); or
 - 2. where the Work involved is not covered by unit prices contained in the Contract Documents, by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 12.01.C.2); or
 - 3. where the Work involved is not covered by unit prices contained in the Contract Documents and agreement to a lump sum is not reached under Paragraph 12.01.B.2, on the basis of the Cost of the Work (determined as provided in Paragraph 11.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 12.01.C).
- C. *Contractor's Fee:* The Contractor's fee for overhead and profit shall be determined as follows:
 - 1. a mutually acceptable fixed fee; or

2. if a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:
 - a. for costs incurred under Paragraphs 11.01.A.1 and 11.01.A.2, the Contractor's fee shall be 15 percent;
 - b. for costs incurred under Paragraph 11.01.A.3, the Contractor's fee shall be five percent;
 - c. where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraphs 12.01.C.2.a and 12.01.C.2.b is that the Subcontractor who actually performs the Work, at whatever tier, will be paid a fee of 15 percent of the costs incurred by such Subcontractor under Paragraphs 11.01.A.1 and 11.01.A.2 and that any higher tier Subcontractor and Contractor will each be paid a fee of five percent of the amount paid to the next lower tier Subcontractor;
 - d. no fee shall be payable on the basis of costs itemized under Paragraphs 11.01.A.4, 11.01.A.5, and 11.01.B;
 - e. the amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in cost will be the amount of the actual net decrease in cost plus a deduction in Contractor's fee by an amount equal to five percent of such net decrease; and
 - f. when both additions and credits are involved in any one change, the adjustment in Contractor's fee shall be computed on the basis of the net change in accordance with Paragraphs 12.01.C.2.a through 12.01.C.2.e, inclusive.

12.02 *Change of Contract Times*

- A. The Contract Times may only be changed by a Change Order. Any Claim for an adjustment in the Contract Times shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.
- B. Any adjustment of the Contract Times covered by a Change Order or any Claim for an adjustment in the Contract Times will be determined in accordance with the provisions of this Article 12.

12.03 *Delays*

- A. Where Contractor is prevented from completing any part of the Work within the Contract Times due to delay beyond the control of Contractor, the Contract Times will be extended in an amount equal to the time lost due to such delay if a Claim is made 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 their officers, directors, members, partners, employees, agents, consultants, or subcontractors shall not be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.
- E. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delays within the control of Contractor. Delays attributable to and within the control of a Subcontractor or Supplier shall be deemed to be delays within the control of Contractor.

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

13.01 Notice of Defects

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

13.02 Access to Work

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

13.03 Tests and Inspections

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

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- 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 Paragraph 13.04.C; and
 3. as otherwise specifically provided in the Contract Documents.
- C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.
- D. Contractor shall be responsible for arranging and obtaining and shall pay all costs in connection with any inspections, tests, or approvals required for Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work; or acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work. Such inspections, tests, or approvals shall be performed by organizations acceptable to Owner and Engineer.
- E. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, Contractor shall, if requested by Engineer, uncover such Work for observation.
- F. Uncovering Work as provided in Paragraph 13.03.E shall be at Contractor's expense unless Contractor has given Engineer timely notice of Contractor's intention to cover the same and Engineer has not acted with reasonable promptness in response to such notice.

13.04 *Uncovering Work*

- A. If any Work is covered contrary to the written request of Engineer, it must, if requested by Engineer, be uncovered for Engineer's observation and replaced at Contractor's expense.
- B. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, Contractor, at Engineer's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Engineer may require, that portion of the Work in question, furnishing all necessary labor, material, and equipment.
- C. If it is found that the uncovered Work is defective, Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and Owner shall be entitled to an appropriate decrease in the Contract Price. If

the parties are unable to agree as to the amount thereof, Owner may make a Claim 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 written notice, Contractor shall correct all defective Work, whether or not fabricated, installed, or completed, or, if the Work has been rejected by Engineer, remove it from the Project and replace it with Work that is not defective. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or removal (including but not limited to all costs of repair or replacement of work of others).
- B. When correcting defective Work under the terms of this Paragraph 13.06 or Paragraph 13.07, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.

13.07 *Correction Period*

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

3. if the defective Work has been rejected by Owner, remove it from the Project and replace it with Work that is not defective, and
 4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others or other land or areas resulting 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 for the diminished value of the Work to the extent not otherwise paid by Contractor pursuant to this sentence. If any such acceptance occurs prior to Engineer's recommendation of final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work, and Owner shall be entitled to an appropriate decrease in the Contract Price, reflecting the diminished value of Work so accepted. If the parties are unable to agree as to the amount thereof, Owner may make a Claim 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 of the executed Work as an experienced and qualified design professional, and on Engineer's review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:
 - a. the Work has progressed to the point indicated;
 - b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, the results of any subsequent tests called for in the Contract Documents, a final determination of quantities and classifications for Unit Price Work under Paragraph 9.07, and any other qualifications stated in the recommendation); and
 - c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.
3. By recommending any such payment Engineer will not thereby be deemed to have represented that:

- a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract Documents; or
 - b. there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.
4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:
- a. to supervise, direct, or control the Work, or
 - 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~~ **Thirty** 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 remedies the reasons for such action.
3. Upon a subsequent determination that Owner's refusal of payment was not justified, the amount wrongfully withheld shall be treated as an amount due as determined by Paragraph 14.02.C.1 and subject to interest as provided in the Agreement.

14.03 *Contractor's Warranty of Title*

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

14.04 *Substantial Completion*

- A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete (except for items specifically listed by Contractor as incomplete) and request that Engineer issue a certificate of Substantial Completion.
- B. Promptly after Contractor's notification, Owner, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons 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 remove its property and complete or correct items on the tentative list.

14.05 *Partial Utilization*

- A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions:
1. Owner at any time may request Contractor in writing to permit Owner to use or occupy any such part of the Work which Owner believes to be ready for its intended use and substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor, Owner, and Engineer will follow the procedures of Paragraph 14.04.A through D for that part of the Work.
 2. Contractor at any time may notify Owner and Engineer in writing that Contractor considers any such part of the Work ready for its intended use and substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.

3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons 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.6;
 - b. consent of the surety, if any, to final payment;
 - c. a list of all Claims against Owner that Contractor believes are unsettled; and
 - d. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of or Liens filed in connection with the Work.
3. In lieu of the releases or waivers of Liens specified in Paragraph 14.07.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (i) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (ii) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner might in any way be responsible, or

which might in any way result in liens or other burdens on Owner's property, have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien.

B. Engineer's Review of Application and Acceptance:

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

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 repeated disregard of the authority of Engineer; or
 4. Contractor's violation in any substantial way of any provisions of the Contract Documents.
- B. If one or more of the events identified in Paragraph 15.02.A occur, Owner may, after giving Contractor (and surety) seven days written notice of its intent to terminate the services of Contractor:
 1. exclude Contractor from the Site, and take possession of the Work and of all Contractor's tools, appliances, construction equipment, and machinery at the Site, and use the same to the full extent they could be used by Contractor (without liability to Contractor for trespass or conversion);
 2. incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere; and
 3. complete the Work as Owner may deem expedient.

- C. If Owner proceeds as provided in Paragraph 15.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Owner arising out of or relating to completing the Work, such excess will be paid to Contractor. If such claims, costs, losses, and damages exceed such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, when so approved by Engineer, incorporated in a Change Order. When exercising any rights or remedies under this Paragraph, Owner shall not be required to obtain the lowest price for the Work performed.
- D. Notwithstanding Paragraphs 15.02.B and 15.02.C, Contractor's services will not be terminated if Contractor begins within seven days of receipt of notice of intent to terminate to correct its failure to perform and proceeds diligently to cure such failure within no more than 30 days of receipt of said notice.
- 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.

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- 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 the intent to submit the Claim to a court of

competent jurisdiction.

ARTICLE 17 – MISCELLANEOUS

17.01 Giving Notice

- A. Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if:
1. delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended; or
 2. delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the giver of the notice.

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

SECTION 00800
SUPPLEMENTARY CONDITIONS
INDEX

| | | |
|----------|--|----|
| PART 1. | TERMS | 2 |
| PART 2. | SCOPE OF THE WORK | 2 |
| PART 3. | CONSTRUCTION DRAWINGS | 2 |
| PART 4. | COMMENCEMENT AND COMPLETION OF WORK | 2 |
| PART 5. | SUBSTITUTIONS OR "OR EQUAL" | 3 |
| PART 6. | REPORTS AND DRAWINGS USED BY THE ENGINEER | 4 |
| PART 7. | INSURANCE..... | 4 |
| PART 8. | CERTIFICATES OF INSURANCE..... | 5 |
| PART 9. | BUILDER'S RISK..... | 6 |
| PART 10. | ACCIDENTS | 6 |
| PART 11. | HOLD HARMLESS CLAUSE..... | 6 |
| PART 12. | CONTRACTOR'S STATUS..... | 6 |
| PART 13. | CONTRACTOR'S AFFIDAVIT..... | 6 |
| PART 14. | RESIDENT PROJECT ENGINEER | 7 |
| PART 15. | ACCESS FOR INSPECTION | 7 |
| PART 16. | UTILITIES..... | 7 |
| PART 17. | ADJUSTMENT OF DISCREPANCIES | 7 |
| PART 18. | MEASUREMENT AND PAYMENT | 7 |
| PART 19. | MODIFICATION OF QUANTITIES | 7 |
| PART 20. | SAFETY AND HEALTH REGULATIONS..... | 8 |
| PART 21. | SANITARY CONVENIENCES..... | 8 |
| PART 22. | UTILITY SERVICES..... | 8 |
| PART 23. | ENVIRONMENTAL IMPACT..... | 8 |
| PART 24. | CONSTRUCTION STAKEOUT..... | 9 |
| PART 25. | EQUIPMENT ADJUSTMENT AND CALIBRATION | 10 |
| PART 26. | SYSTEM START-UP..... | 10 |
| PART 27. | INSTRUCTION OF OWNER'S EMPLOYEES..... | 11 |
| PART 28. | OPERATION AND MAINTENANCE (O & M) INSTRUCTION MANUALS..... | 11 |
| PART 29. | RECORD DATA AND DRAWINGS | 11 |
| PART 30. | PROPERTY CORNERS..... | 12 |
| PART 31. | RESTORATION..... | 12 |
| PART 32. | MAINTENANCE DURING CONSTRUCTION..... | 12 |
| PART 33. | BARRICADES, DANGER, WARNING AND DETOUR SIGNS..... | 12 |
| PART 34. | HIGH VOLTAGE ACT..... | 13 |
| PART 35. | SIGNS..... | 13 |
| PART 36. | BUY AMERICAN..... | 13 |

SECTION 00800
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.

PART 1. TERMS

1.1 The terms used in these Supplementary Conditions which are defined in the Standard General Conditions of the Construction Contract have the meanings assigned to them in the General Conditions.

PART 2. SCOPE OF THE WORK

2.1 The work to be completed shall consist of furnishing all labor, equipment and materials necessary to complete the electrical improvements shown herein including, but not limited to, installing seven (7) cellular based SCADA panels and accessories at seven (7) existing sewage pump stations and installing seven (7) RTU's in the water distribution system at the existing ground water pumping station, well sites, elevated storage tanks and valve station shown on the plans, reconnecting the SCADA panels, power and controls, modifying the existing chemical pump controller at the ground water pumpstation, modifying pump control panels, mounting antennas, replacing flow transmitters and sensors, replacing pressure transducers, adding circuit breakers in the existing pump control panels, extending cables and conduit as required, installing an 8" butterfly valve and actuator, installing concrete pads,

PART 3. CONSTRUCTION DRAWINGS

3.1 The Work shall conform to the following construction drawings:

| Sheet No. | Title |
|------------|----------------------------|
| - | Title Sheet |
| 1 | General Construction Notes |
| 2 | Overall Project Map |
| E-0 – E-18 | Electrical |

PART 4. COMMENCEMENT AND COMPLETION OF WORK

4.1 The Contractor shall commence work within 10 days after Notice to Proceed is issued. All work shall be completed within the contract times as defined in Article 4.02 of the Agreement.

4.2 If the Contractor fails to prosecute the work with such diligence as will insure the completion of each portion of the work within the time shown on the above schedule, plus any extensions made in accordance with Article 12 of the General Conditions; and, if the

Owner does not exercise his reservations as set forth in Article 13, the Contractor shall continue the work in which event liquidated damages for the delay will be impossible to determine. In lieu thereof, liquidated damages in the amount of \$ 500.00 per each day of delay of the work until the work is completed.

PART 5. SUBSTITUTIONS OR "OR EQUAL"

5.1 Substitutes may be offered in lieu of the major equipment manufacturers listed in the Technical Specifications. Submittals on "Or Equal" substitutes must be received by the Engineer within 48 hours after the Bid Opening.

- A. Submittals for each type of equipment proposed shall include illustrative drawings; specifications, descriptive brochures, installation lists, weights, metal thickness of principal components; drive arrangements; torques; power requirements; performance curves; installation requirements; availability of spare parts; local service capability and other items necessary for the Engineers to determine that the intent of these Specifications is to be met.

- B. The price bid for substitute equipment shall not be used in the base bid but shall be bid as a deductible or additive alternate and listed on the forms provided in the Proposal.

- C. Unless otherwise waived by the Owner, a five (5) year warranty shall be required on all substitute equipment/materials/systems in the form of a bond or other equivalent surety. Such warranty/surety shall be in the amount of the Contractor's purchase order, including installation and service for the substitute. Should the substitute fail to perform satisfactorily, either in mechanical integrity or in performance, the Owner can require modification or replacement or if the supplier/manufacturer fails to remedy the defects/performance the Owner may use any or all of the bond/surety to modify or replace the system or portions thereof including modifications to another process.

- D. The Contractor shall be responsible for the substitute supplier/manufacturer's action and performance until satisfactory performance is obtained and thereafter during the one (1) year warranty period as specified in the Contract Documents. After this to cover the remaining period of the two (2) years, the Owner can take action on the system supplier's bond/surety. The bond/surety must be tendered prior to approval of the substitute.

- E. The Owner reserves the right to accept or reject any and all substitutes that may be offered.

- F. The contract will be awarded on the basis of the lowest qualified base bid including any substitute selected by the Owner.

- G. The adjustment in price bid for the substitute equipment shall include the cost of all re-design, the cost of structural, mechanical and electrical changes when the

considered item will not fit the design, as determined by the Engineer.

PART 6. REPORTS AND DRAWINGS USED BY THE ENGINEER

6.1 In the preparation of Drawings and Specifications, ENGINEER has relied upon:

- A. The following reports of explorations and tests of subsurface conditions at the site of the Work:

None

- B. The following drawings of physical conditions in or relating to existing surface and sub-surface structures (except Underground Facilities) which are contiguous to the site of the Work:

None

PART 7. INSURANCE

7.1 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:

- A. Workers' Compensation, etc. under Paragraphs 5.04.A.1 and 5.04.A.2 of the General Conditions:

- | | |
|---|-----------|
| 1. State: | Statutory |
| 2. Applicable Federal (e.g. Longshoreman's): | Statutory |
| 3. Employer's Liability: | \$200,000 |
| 4. Contractor shall show Owner as additional insured. | |

- B. Comprehensive General Liability (under Paragraphs 5.04.A.3 through 5.04.A.5 of the General Conditions):

Combined single limit for Bodily Injury and Property Damage:
\$1,000,000 Each Occurrence
or combined single limit \$2,000,000

General Aggregate \$2,000,000
Operations Aggregate \$2,000,000

Property Damage liability insurance will provide Explosion, Collapse and Underground coverages where applicable.

Personal Injury, with employment exclusion deleted
\$1,000,000 Annual Aggregate
\$1,000,000 Each Occurrence

Excess / Umbrella Policy

| | |
|-------------------|-------------|
| General Aggregate | \$2,000,000 |
| Each Occurrence | \$1,000,000 |

- C. Comprehensive Automobile Liability (under Paragraph 5.04.A.6 of the General Conditions):

Bodily Injury:

| | |
|-------------|-----------------|
| \$1,000,000 | Each Person |
| \$2,000,000 | Each Occurrence |

Property Damage:

| | |
|-----------------------------|-----------------|
| \$100,000 | Each Occurrence |
| or combined single limit of | \$200,000 |

- 7.2 Builders Risk Insurance (**Installation Coverage**):

100% completed value based on the insurable portion of the project.

- 7.3 Contractual Endorsement:

- A. The Contractual Liability required by Paragraph 5.04.B.3 of the General Conditions shall provide coverage for not less than the following amounts:

Bodily Injury:

| | |
|-----------|-----------------|
| \$500,000 | Each Occurrence |
|-----------|-----------------|

Property Damage:

| | |
|-----------|------------------|
| \$100,000 | Each Occurrence |
| \$N/A | Annual Aggregate |

PART 8. CERTIFICATES OF INSURANCE

- 8.1 Certificates acceptable to the Owner shall be attached to the signed Contract Documents when they are transmitted to the Owner for execution. These certificates shall contain the statement that "Coverages afforded under the policies will not be cancelled unless at least thirty (30) days prior to cancellation written notice has been given to the Owner, as evidenced by receipts of registered or certified mail".

- 8.2 In addition to the requirements of Paragraph 5.04 to the General Conditions, the Owner and Engineer shall be listed as Additional Insured on the Contractor's General Liability Policy and Builder's Risk in the same amounts as required by the Contractor.

PART 9. BUILDER'S RISK

9.1 The Contractor shall procure and shall maintain during the life of the Contract Agreement, Builder's Risk Insurance to protect the interests of the Owner, Contractor, Sub-Contractors, Engineer and Engineer's consultants against loss by fire, vandalism, malicious mischief, and all hazards included in a standard "All Risk" Coverage endorsement. The amount of the insurance shall be at all times equal or exceed the full amount of the Contract. The policies shall be in the name of the Owner and the Contractor.

PART 10. ACCIDENTS

10.1 The Contractor shall provide, at the site, such equipment and medical facilities as are necessary to supply first-aid service to anyone who may be injured in connection with the work. The Contractor must report in writing to the Engineer all accidents whatsoever arising out of, or in connection with, the performance of the work, whether on or adjacent to the site, which causes death, personal injury or property damages, giving full details and statement of witnesses. In addition, if death or serious injuries or serious damages are caused, the accident shall be reported immediately by telephone or messenger to both the Contractor or any subcontractor on account of any accident, the Contractor shall promptly report the facts to the Engineer, giving full details in writing of the claim. The Contractor shall advise his superintendent and foreman, who are on the site of the work, the name of the hospital and phone number and the name and phone number of the doctor he proposes to use in case of an accident.

PART 11. HOLD HARMLESS CLAUSE

11.1 The Contractor agrees to hold harmless, indemnify and defend the Owner and his agents, architects, engineers and employees from and against any and all claims, losses, damages, demands, causes of action and any and all related costs and expenses, of every kind and character, growing out of, incidental to, or resulting directly or indirectly from the Contractor's performance of the work described herein, whether such loss, damage, injury, or liability is contributed to by the negligence of the Owner, its agents, architects, engineers, or employees, except that the Contractor shall have no liability for damages or the costs incidental thereto caused by the sole negligence of the Owner, his agents, architects, engineers, or employees. The Contractor will require any and all subcontractors to conform with the provisions of this clause prior to commencing any work and agrees to ensure that this clause is in conformity with the insurance provisions of the contract.

PART 12. CONTRACTOR'S STATUS

12.1 It is agreed that the Contractor shall occupy the status of an Independent Contractor and the Contractor's employees are not employees of the Owner.

PART 13. CONTRACTOR'S AFFIDAVIT

13.1 Upon completion of the work and prior to final payment and settlement of all sums due

hereunder, Contractor will furnish to Owner, a Contractor's Affidavit in the usual form submitted by Contractor under the laws of the State of Georgia to the effect that all bills for labor, materials and services in connection with said contract have been paid in full, acknowledging receipt of the contract price and averring that there are not outstanding claims under said contract which could become a lien on the real estate arising out of said contract.

PART 14. RESIDENT PROJECT ENGINEER

14.1 The Owner reserves the right to furnish a Resident Project Engineer as deemed necessary to insure the Project quality control and conformance to Plans and Specifications, who will act as the Owner's Representative on the Project and will have the authority of the Engineer as set forth in the Contract Documents.

PART 15. ACCESS FOR INSPECTION

15.1 Access for inspection shall be provided for representatives of the Georgia Department of Natural Resources, Environmental Protection Division and the Georgia Department of Highways and Public Transportation.

PART 16. UTILITIES

16.1 Utilities such as sewer, water and electric lines encountered in the work shall be protected from injury and maintained in service until moved or replaced as required under this Contract or by others as the case may be, or abandoned as may be necessary for the proper construction and use of the new work.

PART 17. ADJUSTMENT OF DISCREPANCIES

17.1 In all cases of discrepancies between the various dimensions and details shown on drawings, or between the drawings and these specifications, the more expensive construction shall be estimated before construction is started, the matter shall be submitted to the ENGINEER for clarification. Without such a decision, discrepancies shall be adjusted by the CONTRACTOR at his own risk and in settlement of any complications arising from such adjustment; the CONTRACTOR shall bear all of the extra expense involved.

PART 18. MEASUREMENT AND PAYMENT

18.1 Measurement and payment shall be made for the units and at the lump sum contract prices shown on the Bid Schedule. Direct payment shall only be made for those items or work specifically listed in the proposal and the cost of any other work must be included in the contract price for the applicable items to which it relates.

PART 19. MODIFICATION OF QUANTITIES

19.1 The itemized quantities shall be considered by the Contractor as the quantities required to

complete the work for the purpose of bidding. Should actual quantities required in the construction of the work be greater or less than the quantities shown on the items, an amount equal to the difference in quantities at the unit prices for the item will be added to or deducted from the contract price.

- 19.2 When itemized quantities are not given in the Proposal, the work shown on the plans or specified shall be considered by the Contractor to be included in his contract for the lump sum price bid.

PART 20. SAFETY AND HEALTH REGULATIONS

- 20.1 The Contractor shall comply with the Department of Labor Safety and Health Regulations for Construction promulgated under the Occupational Safety and Health Act of 1970 (PL 91-596) and under Section 107 of the contract Work and Safety Standards Act (PL 91-54). The regulations are administered by the Department of Labor and the Contractor shall allow access to the project to personnel from that Department.

PART 21. SANITARY CONVENIENCES

- 21.1 The CONTRACTOR shall provide adequate sanitary conveniences for use of those employed on the work and their use shall be strictly enforced. Such conveniences shall be made available when the first employees arrive on the site and shall be removed after the departure of the last employees from the job.

PART 22. UTILITY SERVICES

- 22.1 The CONTRACTOR will arrange for water service and temporary electrical service through the local agencies at his own expense.

PART 23. ENVIRONMENTAL IMPACT

- 23.1 The CONTRACTOR shall conduct all operations so as to minimize, to the greatest extent possible, adverse environmental impact.

- A. Noise: All equipment and machinery shall be provided with exhaust mufflers maintained in good working order so as to reduce operating noise to minimum levels.
- B. Dust/Smoke: All equipment movements shall be accompanied by a minimum of dust. Traveled surfaces and earthwork shall be maintained in a moist condition to avoid the generation of dust or the airborne movement of particulate matter under all prevailing atmospheric conditions.

Burning operations will be conducted only with written permission of the OWNER and/or appropriate regulatory agency. The CONTRACTOR shall be responsible for obtaining all permits and comply with all codes, ordinances and

regulations pertaining to the burning.

- C. Traffic: Trucks shall be routed over roads which will result in the least effect on traffic and nuisance to the public. All material shall be loaded in a manner which will preclude the loss of any portion of the load in transit, including covering, if necessary.
- D. Sedimentation: All points of concentrated runoff from rainfall shall be visually monitored to determine that no eroded material from the construction site is being deposited offsite. Measures shall be taken to promptly eliminate such a deposition if occurring, including the installation of detention basins. Soil Erosion and sediment control measures shall include all temporary and permanent means of protection and trapping soils of the construction site during land disturbing activity. Activity covered in this contract is exempt from the Georgia Erosion and Sediment Control Act, and NPDES General Permit for Construction Activity.

PART 24. CONSTRUCTION STAKEOUT

- 24.1 The CONTRACTOR shall be responsible for construction stakeout.
- 24.2 From the dimensions and benchmarks shown on the plans the CONTRACTOR shall complete the layout of the work and shall be responsible for all measurements that may be required for the execution of the work prescribed in the specifications or on the Drawings, subject to such modifications as may be required to meet changed conditions or as a result of necessary modifications to the Work.
- 24.3 The CONTRACTOR shall furnish, at his own expense, all such stakes, spikes, steel pins, templates, platforms, equipment, instruments, tools and material and all labor as may be required in laying out any part of the Work from the baselines and benchmarks.
- 24.4 It shall be the responsibility of the CONTRACTOR to maintain and preserve all benchmarks shown on the plans.
- 24.5 All survey data shall be recorded in accordance with standard and approved methods. All field notes, sketches, records and computations made by the CONTRACTOR in laying out the work shall be available at all times during the progress of the work for the ready examination by the ENGINEER or his duly authorized representative.
- 24.6 The CONTRACTOR shall make such surveys and computations as are necessary to determine the quantities of work performed or placed during each period for which a progress payment is to be made.
- 24.7 The ENGINEER may make checks as the work progresses to verify lines and grades established by the CONTRACTOR and to determine the conformance of the completed work as it progresses with the requirements of Contract Documents and Drawings. Such checking by the ENGINEER or his representative shall not relieve the CONTRACTOR of

his responsibility to perform all work in accordance with the Contract Documents and Drawings and the lines and grades given therein. In the event that location marks as established by the CONTRACTOR are found to be inaccurate or inadequate, work shall be suspended until corrections have been made.

- 24.8 No separate payment will be made for the costs involved in the survey work, layout work or staking performed by the CONTRACTOR. All such costs will be considered as incidental to the Work.

PART 25. EQUIPMENT ADJUSTMENT AND CALIBRATION

25.1 All mechanical and electrical equipment, including related control systems, shall be subjected to preliminary operation and testing by the CONTRACTOR before the individual facilities and systems are put into operation. Tests shall be made to determine whether the equipment has been properly assembled, aligned, adjusted, wired and connected. Any changes, adjustments, or replacement or equipment which are due to errors or omissions on the part of the CONTRACTOR or which may be otherwise necessary to comply with the requirements of this Contract, shall be done without additional cost to the OWNER. Upon completion of the checking and adjustment, the CONTRACTOR shall demonstrate that each separate piece of equipment in each system of related items of mechanical equipment and the related instrumentation and control equipment operate in accordance with the requirements of the Contract Documents. Where no specific performance requirements are stated, the test shall show that the equipment operates in accordance with normal application practice of the equipment. The demonstration test shall show that the equipment operates smoothly and without excessive noise or vibration, that the equipment is responsive to manual and automatic controls, that control and protective devices are properly set, that the equipment will run continuously when continuous operation is intended, and that the equipment will run on a controlled or intermittent basis when this operation is intended. The demonstration test for each piece or equipment shall include check out from each remote control point. All alarm systems and safety lockout systems shall also be demonstrated for proper function along with all process instrumentation and controls.

- 25.2 The demonstration test shall be arranged by the CONTRACTOR who shall notify the ENGINEER not less than 3 days in advance of the date of the test. The CONTRACTOR shall provide personnel from the various trades involved to operate and demonstrate the equipment.

PART 26. SYSTEM START-UP

- 26.1 The CONTRACTOR shall place the various items of equipment into operation, along with the related piping and metering systems, and shall notify the ENGINEER at least 3 days in advance of the date of start-up.
- 26.2 Schedule for such start-up of the majority of the equipment and pumping systems will occur during the duration of the Contract Time and prior to final completion and acceptance of the overall project. After satisfactory start-up of these individual systems, including all of the

related equipment, they will remain in continuous or intermittent operation as required.

- 26.3 All equipment and accessories shall be adjusted and calibrated prior to any start-up as specified under these Supplementary General Conditions. Any equipment placed into temporary operation prior to final completion of the total project shall be re-adjusted and/or calibrated.
- 26.4 The CONTRACTOR shall supervise, control, and be responsible for the operation and maintenance of the new equipment and/or system during a period of at least 10 days after each individual item is placed into operation. The CONTRACTOR shall furnish an adequate number of competent start-up personnel to provide supervision during these phases, however providing a State Certified Operator is not required. The CONTRACTOR shall remain responsible for making any required changes, repairs or replacements to the new installation during this period.

PART 27. INSTRUCTION OF OWNER'S EMPLOYEES

- 27.1 The CONTRACTOR shall provide competent personnel who fully understand the operation of the equipment to instruct the OWNER's employees in the operation and maintenance of each item and system. Such instruction shall take place prior to acceptance of the installation by the OWNER at such a time or times that are acceptable to the OWNER. The CONTRACTOR shall include the cost of this training in the bid price for this Contract. Training shall be of the on-the-job type, and shall cover all areas of operation and equipment maintenance.
- 27.2 Scheduling of instruction of the OWNER's employees will be mutually agreed upon between the OWNER, CONTRACTOR and the ENGINEER.

PART 28. OPERATION AND MAINTENANCE (O & M) INSTRUCTION MANUALS.

- 28.1 See Section 01730 – Operation and Maintenance Data

PART 29. RECORD DATA AND DRAWINGS

- 29.1 The Contractor shall keep accurate, legible records of the locations, types, and sizes of sanitary lines, service laterals, manholes, cleanouts, water lines, fittings, valves, hydrants, drainage pipes, drainage structures and other related work performed under this project. On a set of project prints provided by the Owner, the Contractor shall prepare a set of “record” drawings from the data stated above. The horizontal locations of all portions of items installed on this project shall be accurately tied down to features that are physical and visible, such as property corner markers and/or permanent type structures. Invert elevations of all manholes, storm sewers and structures, sanitary sewers and lift stations shall be clearly indicated. These “record” drawings shall be kept clean and dry and maintained in a current state with the progress of the work. If at any time, a copy of this plan or portion of it is requested by the Owner, such copy shall be made available within 24 hours after the request is made.

29.2 The Contractor shall provide the Owner with one set of red-lined prints indicating record drawing information.

PART 30. PROPERTY CORNERS

30.1 The Contractor shall be responsible for restoring any property corners or monuments disturbed during construction. They shall be restored by a professional surveyor registered in the State of Georgia.

PART 31. RESTORATION

31.1 The CONTRACTOR shall conduct his operations so that restoration of roadways, driveways, curb and gutter, ditches and easement progresses along with the pipe laying.

31.2 Reasonable care shall be taken during construction to avoid damage to vegetation. Ornamental shrubbery and tree branches shall be temporarily tied back, where appropriate, to minimize damage. Trees which receive damage to branches shall be trimmed to those branches to improve the appearance of the tree. Tree trunks receiving damage from equipment shall be treated with a tree dressing.

PART 32. MAINTENANCE DURING CONSTRUCTION

32.1 The CONTRACTOR shall maintain the Work from the beginning of construction operations until final acceptance. This maintenance shall constitute continuous and effective work prosecuted day by day with adequate equipment and forces to the end that the site and structures thereon are kept in satisfactory condition at all times, including satisfactory signing or marking as appropriate and control of traffic where required by use of traffic control devices as required by the State in which this project is located.

32.2 Upon completion of the Work, the CONTRACTOR shall remove all construction signs and barriers before final acceptance.

32.3 While undergoing improvements, the roads shall be kept open to all traffic by the CONTRACTOR. The CONTRACTOR shall keep the portion of the site being used by public traffic, whether it be through or local traffic, in such condition that traffic will be adequately accommodated. The CONTRACTOR shall bear all cost of signs and markings as required and other maintenance work during construction and before the Work is accepted and of constructing and maintaining such approaches, crossing, intersections, and other features as may be necessary without direct compensation.

PART 33. BARRICADES, DANGER, WARNING AND DETOUR SIGNS

33.1 The CONTRACTOR shall provide, erect, and maintain all necessary barricades, suitable and sufficient lights, danger signals, signs and other traffic control devices, and shall take all necessary precautions for the protection of the work and safety of the public. Highways and streets closed to traffic shall be protected by effective barricades, and obstructions shall be

lighted during hours of darkness. Suitable warning signs shall be provided to properly control and direct traffic.

- 33.2 The CONTRACTOR shall furnish, install, and maintain all necessary barricades, warning signs, and other protection devices in accordance with the State requirements in which the project is located. Temporary signs may be reused, provided they are in good condition and legible. All protective devices shall be kept in a good, legible condition while in use.
- 33.3 As soon as construction advances to the extent that temporary barricades, and signs are no longer needed to inform the traveling public, such signs shall be promptly removed.
- 33.4 The cost of furnishing, erecting, maintaining, and removing protective devices will not be paid for as a separate Bid Item. Where the CONTRACTOR is required to perform any of these functions, the cost thereof shall be included in the overall Bid submitted. Ownership of the temporary warning devices shall remain with the CONTRACTOR.

PART 34. HIGH VOLTAGE ACT

- 34.1 The CONTRACTOR acknowledges the requirement of the High Voltage Act of the General Assembly of Georgia by execution of this Contract.

PART 35. SIGNS

- 35.1 No signs are required to be constructed for this project.

PART 36. BUY AMERICAN

- 36.1 By submitting this bid, the Contractor agrees that preference will be given to domestic construction material by the Contractor, sub-contractors, material men and suppliers in the performance of this Contract; however, "Buy American" is not required by the Contract.

END OF SECTION

**SECTION 00840
ADMINISTRATIVE AND PROCEDURAL ITEMS AND FORMS**

PART 1. GENERAL 2

PART 2. MATERIALS..... 2

PART 3. EXECUTION 2

SECTION 00840
ADMINISTRATIVE AND PROCEDURAL ITEMS AND FORMS

PART 1. GENERAL

1.1 This section of the CONTRACT DOCUMENTS references the various forms and other documents that will become a part of these CONTRACT DOCUMENTS during the course of the WORK.

PART 2. MATERIALS

2.1 FORMS AND DOCUMENTS

- A. Application for Payment
- B. Certificate of Substantial Completion
- C. Work Change Directive
- D. Change Order
- E. Field Order
- F. Contractor's Wage and Hour Payroll Form (WH-347/1-68)
- G. Utility Damage Report

PART 3. EXECUTION

3.1 ENGINEER shall provide CONTRACTOR with sufficient copies of the above listed forms and/or documents where applicable for submittal by CONTRACTOR during course of the WORK. (Examples of the listed forms are included in this Section. CONTRACTOR may use these and/or Xerox copies of same for submittal).

3.2 ENGINEER shall use these forms for administrative and procedural duties. (Examples of the listed forms are included in this section).

APPLICATION FOR PAYMENT

INSTRUCTIONS

A. GENERAL INFORMATION

This standard form is intended as a guide only. Many projects require a much more extensive form with space for numerous items, descriptions of Change Orders, identification of variable quantity adjustments, summary of materials and equipment stored at the site and other information. It is expected that a separate form will be developed by Engineer or Contractor at the time Contractor's Schedule of Values is finalized. Note also that the format for retainage must be changed if the Agreement permits (or the Law provides), and Contractor elects, the deposit of securities in lieu of retainage. Refer to Article 14 of the General Conditions for provisions concerning payments of Contractor.

B. COMPLETING THE FORM

The Schedule of Values, submitted and approved as provided in paragraphs 2.05A and 2.07A of the General Conditions should be copied in the space indicated on the Application For Payment form. Note that the cost of materials and equipment is often listed separately from the cost of their installation. All Change Orders affecting the Contract Price should be identified and include such supplemental Schedules of Values as required for progress payments.

The form is suitable for use in the final Application for Payment as well as for Progress Payments; however, the required accompanying documentation is usually more extensive for final payment. All accompanying documentation should be identified in the space provided on the form.

C. ENGINEER'S REVIEW

Engineer must review all Applications for Payment with care to avoid recommending any payments not yet earned by Contractor. All accompanying documentation of legal nature, such as lien waivers, should be reviewed by Owner's attorney, and Engineer should so advise Owner.

Contractor's Application

Progress Estimate

| A | | B | | C | | D | | E | | F | | G | | |
|------------------------------|-------------|-----------------|--|------------------------------------|--|-------------------------------|--|---|--|--|--|--------------|--|--|
| Item | | Scheduled Value | | From Previous Application (C+D) | | Work Completed This Period | | Materials Presently Stored (not in C or D) | | Total Completed and Stored to Date (C + D + E) | | % (F) / B | | |
| Specification Section No. | Description | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| Totals | | | | | | | | | | | | | | |

STATEMENT* OF SUBSTANTIAL COMPLETION

Project _____

Engineer's Project No. _____

Contractor: _____

Contract For: _____ Contract Date: _____

This Statement* of Substantial Completion applies to all Work under the Contract Documents and executed Change Orders:

To: _____
City of Stockbridge
OWNER

And To: _____
CONTRACTOR

The Work to which this Statement* applies has been observed by authorized representatives of OWNER, CONTRACTOR, and ENGINEER, and that Work is hereby declared to be substantially complete in accordance with the Contract Documents on,

All work under original contract agreement _____
Date of Substantial Completion

Executed by ENGINEER on _____.

ENGINEER

By: Martin C. Boyd, P.E./Carter & Sloope, Inc.

SECTION 00840-9
ADMINISTRATIVE AND PROCEDURAL ITEMS AND FORMS

The CONTRACTOR accepts this Statement* of Substantial Completion on
_____, 20____.

CONTRACTOR

By: _____

The OWNER accepts the Work or designated portion thereof as substantially complete and will
assume full possession thereof on _____, 20____.

OWNER

By: _____

* A professional engineer's statement of conditions comprises a declaration of his professional judgment. It does not constitute a warranty or guarantee, express or implied, nor does it relieve any party of his responsibility to abide by Contract Documents, applicable codes, standards, regulations, and ordinances.

Work Change Directive

No. _____

Date of Issuance: _____ Effective Date: _____

| | | |
|-------------|--------|-------------------------|
| Project | Owner: | Owner's Contract No.: |
| Contract: | | Date of Contract: |
| Contractor: | | Engineer's Project No.: |

Contractor is 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 _____ (increase/decrease)
days

| | |
|---|-------|
| Recommended for Approval by Engineer: | Date |
| Authorized for Owner by: | Date |
| Received for Contractor by: | Date |
| Received by Funding Agency (if applicable): | Date: |

CONTRACT CHANGE ORDER

SECTION 00840-11
ADMINISTRATIVE AND PROCEDURAL ITEMS AND FORMS

| | | |
|-----------------------|------------------|----------------|
| Contract No. | Order No. | Date: |
| Project Title: | | State: |
| Owner: | | County: |

TO: _____
(Contractor)

You are hereby requested to comply with the following changes from the contract plans and specifications.

| ITEM NO. | DESCRIPTION | QTY | UNIT | UNIT PRICE | Decrease in Contract Price | Increase in Contract Price |
|-------------------------------------|-------------|-----|------|------------|----------------------------|----------------------------|
| 1 | | | | | | |
| 2 | | | | | | |
| 3 | | | | | | |
| 4 | | | | | | |
| 5 | | | | | | |
| 6 | | | | | | |
| 7 | | | | | | |
| 8 | | | | | | |
| 9 | | | | | | |
| 10 | | | | | | |
| 11 | | | | | | |
| 12 | | | | | | |
| 13 | | | | | | |
| 14 | | | | | | |
| TOTALS | | | | | | |
| NET CHANGE IN CONTRACT PRICE | | | | | | |

Justification:

| | |
|---|------|
| Origin Original Contract Amount (Contract Dated _____) | \$ |
| Amount of Change Order No. 1 | + \$ |
| Current Contract Amount | \$ |

| | | |
|--------------------------------|------------|------------|
| Previous Contract Time | Days _____ | Date _____ |
| Change in Contract Time | Days _____ | |
| Current Contract Time | Days _____ | Date _____ |

REQUESTED: _____
(Owner) (Date)

RECOMMENDED: _____
(Carter & Sloope) (Date)

ACCEPTED: _____
(Contractor) (Date)

This document will be used as a record of any changes to the original construction contract.

Field Order

No. _____

Date of Issuance: _____ Effective Date: _____

| | | |
|-------------|--------|-------------------------|
| Project: | Owner: | Owner's Contract No.: |
| Contract: | | Date of Contract: |
| Contractor: | | Engineer's Project No.: |

Attention:

You are hereby directed to promptly execute this Field Order issued in accordance with General Conditions Paragraph 9.04.A, for minor changes in the Work without changes in Contract Price or Contract Times. If you consider that a change in Contract Price or Contract Times is required, please notify the Engineer immediately and before proceeding with this Work.

Reference: _____ (Specification Section(s)) _____ (Drawing(s) / Detail(s))

Description:

Attachments:

| |
|-----------|
| Engineer: |
|-----------|

| | |
|--|-------|
| Receipt Acknowledged by Contractor: | Date: |
|--|-------|

**CITY OF STOCKBRIDGE
UTILITY DAMAGE REPORT**

JOB/TRABAJO: _____

DATE/FECHA: _____ **TIME/HORA:** _____

LOCATION & STATION OF DAMAGE/DIRECCIÓN Y ESTACION DEL DAÑO: _____

UTILITY AFFECTED/SERVICIO DAÑADO
 Water/Agua: _____ Sewer/Alcantarilla: _____

Size & Material/Tamaño y el material: _____

REPORTED TO OWNER/ REPORTADO A LA PROPIETARIO
 Yes/Si: ____ No: ____ Date/Fecha: _____ Time/Hora: _____

REPORTED TO ENGINEER/REPORTADO A LO INGENIERO:
 Yes/Si: ____ No: ____ Date/Fecha: _____ Time/Hora: _____

**WAS THE UTILTY MARKED WITHIN TOLERANCE ZONE?
 ESTABA EL SERVICIO MARCADO DENTRO DE LA ZONA DE TOLERANCIA?**

Yes/Si: ____ No: ____ Please make any notes below/favor haga comentarios en la espacio abajo: _____

UTILITY REPAIR INFORMATION/ INFORMACION DE RAPARACION

Date/Fecha: _____ **Time/Hora:** _____

Company that completed repair/Compania que hizo la reparacion: _____

Costs, other than labor: Gastos, distintos de trabajo: _____

DOWNTIME OR LABOR FOR CONTRACTOR - El tiempo de inactividad o mano de obra para contratista:
 Circle one and note below: *Círculo uno y la nota siguiente*

| Position or Title/posición o título: | <u>Man Hours</u> | <u>Equip. Type</u> | <u>Equip. Hours</u> |
|---|-------------------------|---------------------------|----------------------------|
| | | | |
| | | | |
| | | | |

LABOR FOR CITY (if any):

| Position or Title/posición o título: | <u>Man Hours</u> | <u>Equip. Type</u> | <u>Equip. Hours</u> |
|---|-------------------------|---------------------------|----------------------------|
| | | | |
| | | | |
| | | | |

Foreman Signature: _____

Utility Rep. Signature: _____

Owner's Rep. Signature: _____

**SECTION 01020
ALLOWANCES
INDEX**

PART 1. GENERAL2

PART 2. PRODUCTS2

PART 3. EXECUTION2

**SECTION 01020
ALLOWANCES**

PART 1. GENERAL

- A. The Contractor shall include in his lump sum Bid the Allowances stated herein subject to the provisions of paragraph 11.02 of the General Conditions. These allowances shall cover manufactured equipment or services that will be provided to the Contractor by others. The Contractor shall cause the work covered by these Cash Allowances to be provided by such suppliers as the Owner may select. The Contractor's cost for receiving, unloading, handling, coordinating and any other costs that are necessary to complete these items, but not specifically covered in the Allowance shall be included in the Contractor's lump sum bid. The Contractor will not receive any additional compensation for work provided under Allowances. The final amount of any Allowance item listed herein shall be adjusted accordingly and any unused portion will be deducted from the contract price at the completion of the Project by change order to reflect actual cost.

PART 2. PRODUCTS

- A. Supplemental Work (Contingency) Allowance
1. The Contractor shall allow the sum of \$50,000 for Supplemental Work Additions (SWA's) and also known as Contingencies. SWA shall be utilized to incorporate cost changes for any additional authorized work into the Base Bid scope of work up to the amount budgeted above. Contract change orders shall be enforced for contract changes over and above this amount. These SWA's shall authorize the Contractor to perform addition work, but the Contractor shall perform no work until written authorization has been delivered to the Contractor by the Owner. Contractor should not expect that any allowance will be issued; SWA's shall be issued at the discretion of the Owner only. Any unused portion of the Supplemental Work Allowance will be deducted from the contract price at the completion of the project by Change Order.

PART 3. EXECUTION

- A. Supplemental Work Allowance
1. The value of any additional work covered by a SWA shall be determined in one of the following ways as stated in Article 11 of the General Conditions:
 - a. Where the work involved is covered by unit prices contained in the Contract Documents, by application of unit prices to the quantities of the item involved (subject to the provisions of General Conditions, paragraph 11.03.

- b. By mutual acceptance of a lump sum by Contractor and the Owner.
- c. On the basis of the cost of the work determined as provided in paragraph 11.01 of the General Conditions plus a Contractor's fee as provided in paragraph 12.01.C and 11.7 of the General Conditions.

END OF SECTION

**SECTION 01025
MEASUREMENT AND PAYMENT
INDEX**

| | |
|---------------------------------------|---|
| PART 1. GENERAL..... | 2 |
| 1.1 SCOPE OF WORK..... | 2 |
| 1.2 MEASUREMENT OF WORK..... | 2 |
| 1.3 ESTIMATED QUANTITIES | 3 |
| 1.4 MEASUREMENT OF QUANTITIES | 3 |
| 1.5 PROGRESS PAYMENTS..... | 3 |
| | |
| PART 2. PRODUCTS | 4 |
| 2.1 STORED MATERIALS | 4 |
| | |
| PART 3. EXECUTION | 4 |
| 3.1 LUMP SUM ITEMS | 4 |
| 3.1 DESCRIPTION OF IMPROVEMENTS | 4 |

SECTION 01025
MEASUREMENT AND PAYMENT

PART 1. GENERAL

1.1 SCOPE OF WORK

- A. This Section describes the methods by which measurement will be made of the quantities for which payment will be made for the Project. Note that the Contractor will be required to coordinate his work and schedule with GDOT's road contractor. No separate payment will be made for project coordination. All costs associated with project meetings, and project coordination shall be included in the unit prices listed on the Bid Form.
- B. The project is to be bid as **one (1) contract**.
- C. Defect assessment and non-payment for rejected work.

1.2 MEASUREMENT OF WORK

- A. Measurement methods delineated in the individual specification sections complement the criteria of this section. In the event of conflict, the requirements of the individual specification section govern.
- B. Work shall be measured by the **Engineer or his representative** with assistance from the Contractor prior to preparation of a payment request by the Contractor.
- C. Unit quantities that are measured in place shall be measured monthly. The Contractor shall give the Engineer a minimum of two days notice for making all required measurements.
- D. Materials that must be measured as delivered shall be measured at the time of delivery by the Engineer or his representative; the Contractor shall provide sufficient advance notice so that such measurements can be made.
- E. Work completed shall be measured for completion against the schedule of values provided by the Contractor in accordance with the General Conditions. Related work necessary for a complete and operational job, such as relocation of mail boxes, abandonment of water mains, landscape restoration, stabilizing power poles, relocation of utilities, graveling / maintaining driveways, field engineering, traffic control, etc., not specifically identified as a pay item shall be included in the unit price bid for which the work pertains. No additional payments will be made for such activities.

1.3 ESTIMATED QUANTITIES

- A. All estimated quantities for unit price items, stipulated in the BID FORM, or other Contract Documents, are approximate and are to be used as a basis for comparing the bids submitted for the Project. The actual amounts of work done and materials furnished under unit price items may differ from the estimated quantities. The basis of payment for work and materials will be the actual amount of work done and materials furnished. The Contractor agrees to make no claim for damages, anticipated profits or otherwise on account of any difference between the amounts of work actually furnished and the estimated amounts included in the BID FORM. The Contractor will not be paid for any work which exceeds the quantity set forth in the BID FORM without a change order issued before the work is performed unless specifically ordered in writing by the Engineer. The Contractor will provide assistance to the Engineer to check quantities and elevations when so requested.

1.4 MEASUREMENT OF QUANTITIES

- A. Measurement by Weight – Concrete reinforcing steel, ductile iron fittings, or other metal shapes will be measured by handbook weights. Welded assemblies will be measured by handbook or scale weight.
- B. Measurement by Volume – Measured by cubic dimension using mean length, width and height or thickness.
- C. Measurement by Area – Measured by square dimension using mean length and width or radius.
- D. Linear Measurement – Measured by linear dimension, at the item centerline or mean chord.
- E. Stipulated Sum/Price Measurement – Items measured by weight, volume, area, or linear means or combination, as appropriate, as a completed item or unit of the Work.

1.5 PROGRESS PAYMENTS

- A. Progress payments shall be based on the quantity of units installed.
- B. All items of Work not specifically listed in the Bid Schedule shall be considered incidental to the construction, and the cost of all such work and material shall be included in the prices bid for various items listed.
- C. All items listed for measurement and payment shall include all machinery, plant, materials and labor, etc., to successfully and satisfactorily complete Work specified.
- D. Payment – The Contractor will receive payment only for the items listed in the Bid Schedule of his contract, and no separate payments will be made for the work under

any section of the Contract Documents except as provided for in the Bid Form. Where measurements are required to be made by the Engineer, for the payment of a pay item, the failure of the Contractor to give the adequate notification or failure of the Contractor to give the engineer assistance for the measurement shall result in the forfeiture of payment for the work or item which was not measured.

- E. Work to be paid for as a “Lump Sum” shall be measured for completion against the “Schedule of Values” provided by the Contractor. The “Schedule of Values” shall be submitted at the Preconstruction conference and shall include quantities and prices of items aggregating the total “Lump Sum” and will subdivide the work into component parts in sufficient detail to serve as the basis for progress payments during construction.

PART 2. PRODUCTS

2.1 STORED MATERIALS

- A. Partial payment shall be made for approved materials stored at the project site, provided invoices for said materials are furnished in accordance with payment request submittal and shop drawings for said materials have been approved. . All costs associated with covering and protecting equipment and materials shall be bore by the contractor.

PART 3. EXECUTION

3.1 LUMP SUM ITEMS

3.1 DESCRIPTION OF IMPROVEMENTS

- A. Item 1 – Water System Improvements:

Bidder agrees to furnish all labor, equipment and materials necessary to construct the mechanical, electrical and SCADA system improvements to the water system as shown on the Drawings and as specified here, including, but not limited to, mobilization/demobilization, bonds, insurance, demolition, restoration, piping, 8” butterfly valve and actuator, flow transmitters and meters, painting, computers, seven (7) RTU’s, programming, modifying pump control panels, modifying a chemical pump controller, power and controls, antennas, concrete pads and other appurtenances necessary to provide a complete and working installation.

- B. Item 2 – Sewerage System Improvements

Bidder agrees to furnish all labor, equipment and materials necessary to construct the electrical and SCADA system improvements to the sewer system as shown on the Drawings and as specified here, including, but not limited to, mobilization/demobilization, bonds, insurance, demolition, restoration, electrical,

work necessary to install seven (7) cellular based RTU's and antennas and other appurtenances necessary to provide a complete and working installation.

C. Item 8 – Allowances

1. Supplemental Work (Contingency) Allowance

- a. The Contractor shall allow the sum as stated in Section 01020 for cash allowance for Supplemental Work Additions (SWA's) and also known as Contingencies. SWA shall be utilized to incorporate cost changes for any additional authorized work into the Base Bid scope of work up to the amount budgeted above. Contract change orders shall be enforced for contract changes over and above this amount. These SWA's shall authorize the Contractor to perform addition work, but the Contractor shall perform no work until written authorization has been delivered to the Contractor by the Owner. Contractor should not expect that any allowance will be issued; SWA's shall be issued at the discretion of the Owner only. Any unused portion of the Supplemental Work Allowance will be deducted from the contract price at the completion of the project by Change Order.
- b. The value of any additional work covered by a SWA shall be determined in one of the following ways as stated in Article 11 of the General Conditions:
 - i. Where the work involved is covered by unit prices contained in the Contract Documents, by application of unit prices to the quantities of the item involved (subject to the provisions of General Conditions, paragraph 11.03.
 - ii. By mutual acceptance of a lump sum by Contractor and the Owner.
 - iii. On the basis of the cost of the work determined as provided in paragraph 11.01 of the General Conditions plus a Contractor's fee as provided in paragraph 12.01.C and 11.7 of the General Conditions

END OF SECTION

**SECTION 01070
ABBREVIATIONS
INDEX**

PART 1. GENERAL 2
 1.1 ABBREVIATIONS 2

PART 2. PRODUCTS (Not Used)..... 4

PART 3. EXECUTION (Not Used)..... 4

SECTION 1070
ABBREVIATIONS

PART 1. GENERAL

Wherever in these Specifications and Contract Documents the abbreviations, or pronouns in place of them are used, the intent and meaning shall be interpreted as specified herein.

1.1 ABBREVIATIONS

| | |
|----------|---|
| AA | Aluminum Association Incorporated |
| AAMA | American Architectural Manufacturers Association |
| AASHTO | American Association of State Highway and Transportation Officials |
| ACI | American Concrete Institute |
| ACPA | American Concrete Pipe Association |
| AEIC | Association of Edison Illuminating Companies |
| AFBMA | Anti-Friction Bearing Manufacturer's association |
| AGA | American Gas Association |
| AGMA | American Gear Manufacturer's association |
| AISC | American Institute of Steel Construction |
| AISI | American Iron and Steel Institute |
| AITC | American Institute of Timber Construction |
| AMCA | Air Movement and Control Association, Inc. |
| ANSI | American National Standards Institute, Inc. |
| APA | American Plywood Association |
| APHA | American Public Health Association |
| API | American Petroleum Institute |
| ARI | Air-Conditioning and Refrigeration Institute |
| ASA | American Standards Association |
| ASCE | American Society of Civil Engineers |
| ASCII | American Standard Code for Information Interchange United States of America Standards Institute |
| ASE CODE | American Standard Safety Code for Elevators, Dumbwaiters and Escalators American National Standards Institute |
| ASHRAE | American Society of Heating, Refrigeration and Air Conditioning Engineers |
| ASME | American Society of Mechanical Engineers |
| ASTM | American Society for Testing and Materials |
| AWPA | American Wood Preservers Association |
| AWS | American Welding Society |
| AWWA | American Water Works Association |
| BOCA | Building Officials and Code Administrators |
| CBM | Certified Ballast Manufacturers |
| CFR | Code of Federal Regulations |
| CMAA | Crane Manufacturers Association of America, Inc. (Formerly called: Overhead Electrical Crane Institute [OECI]) |

SECTION 01070-3
ABBREVIATIONS

| | |
|---------|---|
| CRSI | Concrete Reinforcing Steel Institute |
| DEMA | Diesel Engine Manufacturer's Association |
| DHEC | Department of Health and Environmental Control |
| DHI | Door Hardware Institute |
| EI | Edison Electric Institute |
| EIA | Electronic Industries Association |
| EJMA | Expansion Joint Manufacturer's Association |
| EPA | Environmental Protection Agency |
| EPD | Environmental Protection Division |
| FEDSPEC | Federal Specifications General Services Administration Specification and Consumer Information Distribution Branch |
| FEDSTDS | Federal Standards (see FEDSPECS) |
| FM | Factory Mutual Research |
| GDOT | State of Georgia Department of Transportation Standard Specifications Construction of Roads and Bridges |
| GDR | State of Georgia Department of Natural Resources |
| HEI | Heat Exchange Institute |
| HI | Hydraulic Institute |
| IAPMO | International Association of Plumbing and Mechanical Officials |
| ICBO | International Conference of Building Officials |
| ICEA | Insulated Cable Engineers Association |
| IEEE | Institute of Electrical and Electronics Engineers, Inc. |
| IES | Illuminating Engineering Society |
| ISA | Instrument Society of America |
| JIC | Joint Industrial Council |
| MILSPEC | Military Specifications |
| MSS | Manufacturers Standardization Society of the Valve and Fittings Industry, Inc. |
| NAAMM | National Association of Architectural Metal Manufacturers |
| NACE | National Association of Corrosion Engineers |
| NEC | National Electric Code National Fire Protection Association |
| NBS | National Bureau of Standards |
| NEMA | National Electrical Manufacturer's Association |
| NESC | National Electric Safety Code American National Standards Institute |
| NFPA | National Forest Products Association (formerly National Lumber Manufacturer's Association) |
| NFPA | National Fire Protection Association |
| NSF | National Sanitation Foundation |
| OSHA | Occupational Safety and Health Act U.S. Department of Labor Occupational and Health Administration |
| PCI | Prestressed Concrete Institute |
| SAE | Society of Automotive Engineers |
| SAMA | Scientific Apparatus Makers Association |
| SBC | Standard Building Code Published by SBCCI |
| SBCCI | Southern Building Code Congress International |

SECTION 01070-4
ABBREVIATIONS

| | |
|--------|---|
| SCDOT | South Carolina Department of Transportation |
| SDI | Steel Door Institute |
| SFPA | Southern Forest Products Association |
| SFPC | Standard Fire Prevention Code Published by SBCCI |
| SGC | Standard Gas Code Published by SBCCI |
| SMACNA | Sheet Metal and Air Conditioning Contractors National Association, Inc. |
| SMC | Standard Mechanical Code Published by SBCCI |
| SPC | Standard plumbing Code Published by SBCCI |
| SSPC | Steel Structures Painting Council |
| SSPWC | Standard Specifications for Public Works Construction Building News, Inc. |
| TEMA | Tubular Exchanger Manufacturer's Association |
| UBC | Uniform Building Code Published by ICBO |
| UL | Underwriters Laboratories, Inc. |
| UMC | Uniform Mechanical Code Published by ICBO |
| UPC | Uniform Plumbing Code Published by IAPMO |
| USBR | Bureau of Reclamation U.S. Department of Interior Engineering and Research Center |
| WEF | Water Environment Federation (formerly Water Pollution Control Federation) |

PART 2. PRODUCTS (Not Used)

PART 3. EXECUTION (Not Used)

END OF SECTION

SECTION 01200
PROJECT MEETINGS
INDEX

| | | |
|---------|---------------------------|---|
| PART 1. | GENERAL | 2 |
| 1.1 | LOCATION & PURPOSE | 2 |
| PART 2. | PRODUCTS (Not Used)..... | 2 |
| PART 3. | EXECUTION (Not Used)..... | 2 |

SECTION 01200
PROJECT MEETINGS

PART 1. GENERAL

1.1 LOCATION & PURPOSE

- A. Project meetings will be held on site as often as deemed necessary by the Owner, Engineer or his representative throughout the construction period. Meetings will normally be held monthly. Contractor's representatives shall attend.
- B. The purpose of the meetings will be to discuss schedule, progress, coordination, submittals, and job-related problems.

PART 2. PRODUCTS (Not Used)

PART 3. EXECUTION (Not Used)

END OF SECTION

**SECTION 01300
SUBMITTALS
INDEX**

| | | |
|---------|--|---|
| PART 1. | GENERAL..... | 2 |
| 1.1 | SECTION INCLUDES..... | 2 |
| 1.2 | RELATED SECTIONS..... | 2 |
| 1.3 | PRE-BID SUBMITTAL FOR EQUIPMENT AND MATERIALS..... | 2 |
| 1.4 | SUBMITTAL PROCEDURES..... | 3 |
| 1.5 | CONSTRUCTION PROGRESS SCHEDULES..... | 3 |
| 1.6 | PRODUCT DATA..... | 4 |
| 1.7 | SHOP DRAWINGS..... | 4 |
| 1.8 | SAMPLES..... | 5 |
| 1.9 | DESIGN DATA..... | 6 |
| 1.10 | TEST REPORTS..... | 6 |
| 1.11 | CERTIFICATES..... | 6 |
| 1.12 | MANUFACTURER’S INSTRUCTION..... | 6 |
| 1.13 | MANUFACTURER’S FIELD REPORTS..... | 7 |
| 1.14 | ERECTION DRAWINGS..... | 7 |
| 1.15 | REVIEWED SHOP DRAWINGS..... | 7 |
| PART 2. | PRODUCTS (Not Used)..... | 8 |
| PART 3. | EXECUTION (Not Used)..... | 8 |

**SECTION 01300
SUBMITTALS**

PART 1. GENERAL

1.1 SECTION INCLUDES

- A. Pre-Bid Submittal for Equipment and Materials
- B. Submittal Procedures
- C. Construction Progress Schedules
- D. Product Data
- E. Shop Drawings
- F. Samples
- G. Design Data
- H. Test Reports
- I. Certificates
- J. Manufacturer's Instructions
- K. Manufacturer's Field Reports
- L. Erection Drawings

1.2 RELATED SECTIONS

- A. Section 01400 – Quality Control – Manufacturers' field services and reports.
- B. Section 01701 – Contract Closeout – Contract warranties, bonds, manufacturers' certificates, and closeout submittals.

1.3 PRE-BID SUBMITTAL FOR EQUIPMENT AND MATERIALS

- A. Equipment model numbers or catalog numbers are listed in the specifications to identify a standard or quality required in this project. Alternate equipment or materials may be utilized by and furnished by the Contractor when such equipment or material has been approved by the Owner. Pre-bid submittals shall be submitted to the Engineer at least fifteen (15) calendar days prior to the bid opening. A list of submittals for substitute equipment will be issued by addendum. Submittals made less than fifteen (15) calendar days prior to the bid opening will not allow adequate time for evaluation, and will not be listed in the addendum.
- B. Listing above of substitute equipment does not constitute approval. Final approval will be made after bids are received if a substitute equipment affects the low bids and if the substitute equipment is determined to be equal to the specifications based on the pre-submittal received 15 days prior to the bid date. Alternate equipment bids shall include the cost of all changes in the structure, mechanical, electrical work, and other appurtenances, including engineering costs from redesign, for the accommodation of such equipment, as determined by the Engineer, at the expense of the Contractor.

- C. THE PRE-BID SUBMITTALS SHALL LIST ANY AND ALL DEVIATIONS FROM ITEMS SPECIFIED, AND THE ADVANTAGES TO BE DERIVED IF THE DEVIATION IS APPROVED. IF NO DEVIATIONS ARE NOTED, IT WILL BE ASSUMED THAT NO SUCH DEVIATIONS EXIST, AND THE FINAL SUBMITTALS WILL ALLOW NO DEVIATIONS.

1.4 SUBMITTAL PROCEDURES

- A. Deliver submittals to Engineer in acceptable form.
- B. Sequentially number the transmittal form. Revise submittals with original number and a sequential alphabetic suffix. Resubmit as specified for initial submittal. Indicate on revised drawings all changes which have been made other than those requested by the Engineer.
- C. Identify Project, Contractor, Subcontractor or supplier; pertinent drawing and detail number, and specification section number, as appropriate.
- D. Apply Contractor's stamp, signed or initialed certifying that review, approval, verification of Products required, field dimensions, adjacent construction work and coordination of information is in accordance with the requirements of the work and Contract Documents. Submittal without the Contractor's stamp will be returned to Contractor without Engineer's review.
- E. Make all submittals far enough in advance of scheduled dates for installation to provide all required time for reviews, for securing necessary approvals, for possible revision and resubmittal, and for placing orders and securing delivery. In scheduling, allow sufficient time for the Engineer's review following the receipt of the submittal. Coordinate submission of related items. For each submittal for review, allow 15 days excluding delivery time to and from the Contractor.
- F. Identify variations from Contract Documents and Product or system limitations which may be detrimental to successful performance of the completed work.
- G. Provide space for Contractor and Architect/Engineer review stamps.
- H. When revised for resubmission, identify all changes made since previous submission.
- I. Distribute copies of reviewed submittals to concerned. Instruct recipients to promptly report any inability to comply with requirements.

1.5 CONSTRUCTION PROGRESS SCHEDULES

- A. Submit initial schedule in triplicate within 15 days after date Established in Notice to Proceed.

- B. After reviewed by the Engineer, revise and resubmit as required.
- C. Submit revised schedules with each Application for Payment, identifying changes since previous version.
- D. Submit a computer generated or horizontal bar chart with separate line for each major portion of work or operation section of work, identifying first workday of each week.
- E. Show complete sequence of construction by activity, identifying work of separate stages and other logically grouped activities. Indicate the early and late start, early and late finish, float dates, and duration.
- F. Indicate estimated percentage of completion for each item of work at each submission.
- G. Indicate submittal dates required for shop drawings, product data, samples, and product delivery dates, including those furnished by Owner and required by Allowances.

1.6 PRODUCT DATA

- A. Product Data for Review:
 - 1. Submitted to Engineer for review for the limited purpose of checking for conformance with information given and the design concept expressed in the contract documents.
 - 2. After review, provide copies and distribute in accordance with Submittal Procedures article above.
- B. Submit the number of copies which the Contractor requires, plus three (3) copies which will be retained by the Engineer.
- C. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information specific to this Project.
- D. Indicate Product utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.
- E. After review, distribute in accordance with the Submittal Procedures article above.

1.7 SHOP DRAWINGS

- A. Contractor shall submit the number of copies which the contractor requires, plus three (3) copies of each shop drawing to the Engineer for review. Three (3) copies

will be retained by the Engineer and all remaining copies will be returned to the contractor.

- B. Submitted to Engineer for review for the limited purpose of checking for conformance with information given and the design concept expressed in the contract documents. Review of shop drawings by Engineer shall not relieve Contractor of his responsibility for the accuracy of the shop drawings for the furnishing of all materials and equipment required by the contract even though such items may not be indicated on the shop drawings reviewed by Engineer.
- C. Shop drawings shall include applicable technical information, drawings, diagrams, performance curves, schedules, templates, calculations, instructions, measurements and similar information as applicable to the specific item for which the shop drawing is prepared.
- D. Do not use Engineer's Drawings for shop or erection purposes.
- E. Each shop drawing copy shall bear a Contractor's stamp showing they have been checked. Shop drawings submitted to the Engineer without the Contractor's stamp may be returned to the Contractor without review.
- F. No review will be given to partial submittals of shop drawings for items which interconnect and/or are interdependent. It is the Contractor's responsibility to assemble the shop drawings for all such interconnecting and/or interdependent items, check them and then make one submittal to the Engineer.
- G. Schedule of Submittals – Within 30 days of Contract award and prior to any shop drawing submittal, the Contractor shall submit a schedule showing the estimated submittal date and the desired approval date for each shop drawing anticipated. Time lost due to unacceptable submittals shall be the Contractor's responsibility.

1.8 SAMPLES

- A. Samples for Review -
 - 1. Submitted to Engineer for review for the limited purpose of checking for conformance with information given and the design concept expressed in the contract documents.
 - 2. After review, produce duplicates and distribute in accordance with SUBMITTAL PROCEDURES article above.
- B. Samples for Information –
 - 1. Submitted for the Engineer's knowledge as contract administrator or for the Owner.

- C. Include identification on each sample, with full Product information.
- D. Submit the number of samples specified in individual specification sections; one of which will be retained by Engineer.
- E. Review samples which may be used in the Work are indicated in individual specification sections.
- F. Samples will not be used for testing purposes unless specifically stated in the specification section.

1.9 DESIGN DATA

- A. Submit for the Engineer's knowledge as contract administrator or for the Owner.
- B. Submit for information for the limited purpose of assessing conformance with information given and the design concept expressed in the contract documents.

1.10 TEST REPORTS

- A. Submit for the Engineer's knowledge as contract administrator or for the owner.
- B. Submit test reports for information for the limited purpose of assessing conformance with information given and the design concept expressed in the contract documents.

1.11 CERTIFICATES

- A. When specified in individual specification sections, submit certification by the manufacturer, installation/application subcontractor, or the Contractor to Engineer, in quantities specified for product Data.
- B. Indicate material or product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.
- C. Certificates may be recent or previous test results on material or Product, but must be acceptable to Engineer.

1.12 MANUFACTURER'S INSTRUCTION

- A. When specified in individual specification sections, submit printed instructions for delivery, storage, assembly, installation, start-up. adjusting, and finishing, to Engineer for delivery to Owner in quantities specified for Product Data.
- B. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation.

- C. Refer to Section 01400 – Quality Control, Manufacturers’ Field Services article.

1.13 MANUFACTURER’S FIELD REPORTS

- A. Submit reports for the Engineer’s benefit as contract administrator or for the Owner.
- B. Submit report in duplicate within 30 days of observation to Engineer for information.
- C. Submit for information for the limited purpose of assessing conformance with information given and the design concept expressed in the contract documents.

1.14 ERECTION DRAWINGS

- A. Submit drawings for the Engineer’s benefit as contract administrator or for the Owner.
- B. Submit for information for the limited purpose of assessing conformance with information given and the design concept expressed in the contract documents.
- C. Data indicating inappropriate or unacceptable work may be subject to action by the Engineer or Owner.

1.15 REVIEWED SHOP DRAWINGS

- A. Engineer Review –
 1. Acceptable submittals will be marked “Approved.” A minimum of three (3) copies will be retained by the Engineer for Engineer’s and the Owner’s use and the remaining copies will be returned to the Contractor.
 2. Submittals requiring minor corrections before the product is acceptable will be marked “Furnish as Corrected.” The Contractor may order, fabricate and ship the items included in the submittals provided the indicated corrections are made.
 3. Submittals marked “Revise and Submit” must be revised to reflect required changes and the initial review procedure repeated.
 4. The “Rejected” notation is used to indicate products which are not acceptable. Upon return of a submittal so marked, the Contractor shall repeat the initial review procedure utilizing acceptable products.
 5. Only two copies of items marked “Revise and Submit” and “Rejected” will be reviewed and marked. One copy will be retained by the Engineer and the other copy with all remaining unmarked copies will be returned to the

Contractor for resubmittal.

- B. No work or products shall be installed without a drawing or submittal bearing the “Approved” or “Furnish as Corrected” notation. The Contractor shall maintain at the job site a complete set of shop drawings bearing the Engineer’s stamp.
- C. Substitutions – In the event the Contractor obtains the Engineer’s approval for the use of products other than those which are listed first in the Contract Documents, the Contractor shall, at the Contractor’s own expense and using methods approved by the Engineer, make any changes to structures, piping and electrical work that may be necessary to accommodate these products.
- D. Use of the “Approved” or “Furnish as Corrected” notation on shop drawings or other submittals is general and shall not relieve the Contractor of the responsibility of furnishing products of the proper dimension, size, quality, quantity, materials and all performance characteristics, to efficiently perform the requirements and intent of the Contract Documents. The Engineer’s review shall not relieve the Contractor of the responsibility of errors of any kind on the shop drawings. Review is intended only to assure conformance with the design concept of the Project and compliance with the information given in the Contract Documents.

PART 2. PRODUCTS (Not Used)

PART 3. EXECUTION (Not Used)

END OF SECTION

**SECTION 01370
SCHEDULES OF VALUES
INDEX**

PART 1. GENERAL 2
 1.1 REQUIREMENTS INCLUDED 2
 1.2 RELATED REQUIREMENTS 2
 1.3 FORM AND CONTENT OF SCHEDULE OF VALUES 2
 1.4 SUBSCHEDULE OF UNIT MATERIAL VALUES 3

PART 2. PRODUCTS (Not Used) 3

PART 3. EXECUTION (Not Used) 3

SECTION 01370
SCHEDULE OF VALUES

PART 1. GENERAL

1.1 REQUIREMENTS INCLUDED

- A. Submit to the Engineer a Schedule of Values allocated to the various portions of the Work, within 21 days after the effective date of the Agreement.
- B. Upon request of the Engineer, support the values with data which will substantiate their correctness.
- C. The Schedule of Values, unless objected to by the Engineer, shall be used only as the basis for the Contractor's Applications for Payment.

1.2 RELATED REQUIREMENTS

- A. Conditions of the Contract

1.3 FORM AND CONTENT OF SCHEDULE OF VALUES

- A. Type schedule on an 8-1/2 inch x 11 inch or 8-1/2 inch x 17 inch white paper; Contractor's standard forms and automated printout will be considered for approval by the Engineer upon Contractor's request. Identify schedule with:
 - 1. Title of Project and location
 - 2. Engineer and Project number
 - 3. Name and Address of Contractor
 - 4. Contract designation
 - 5. Date of submission
- B. Schedule shall list the installed value of the component parts of the Work in Sufficient detail to serve as a basis for computing values for progress payments during construction.
- C. Identify each line item with the number and title of the respective major section of the specifications.
- D. For each major line item list sub-values of major products or operations under the item.
- E. For the various portions of the Work:
 - 1. Each item shall include a directly proportional amount of the Contractor's

overhead and profit.

2. For items on which progress payments will be requested for stored materials, break down the value into:
 - a. The cost of the materials, delivered and unloaded, with taxes paid. Paid invoices are required for materials upon request by the Engineer.
 - b. The total installed value.

F. The sum of all values listed in the schedule shall equal the total Contract Sum.

1.4 SUBSCHEDULE OF UNIT MATERIAL VALUES

A. Submit a sub-schedule of unit costs and quantities for:

1. Products on which progress payments will be requested for stored products.

B. The form of submittal shall parallel that of the Schedule of Values, with each item identified the same as the line item in the Schedule of Values.

C. The unit quantity for bulk materials shall include an allowance for normal waste.

D. The unit values for the materials shall be broken down into:

1. Cost of the material, delivered and unloaded at the site, with taxes paid.

2. Copies of invoices for component material shall be included with the payment request in which the material first appears.

3. Paid invoices shall be provided with the second payment request in which the material appears or no payment shall be allowed and/or may be deleted from the request.

E. The installed unit value multiplied by the quantity listed shall equal the cost of that item in the Schedule of Values.

PART 2. PRODUCTS (Not Used)

PART 3. EXECUTION (Not Used)

END OF SECTION

**SECTION 01400
QUALITY CONTROL
INDEX**

| | | |
|---------|--|---|
| PART 1. | GENERAL | 2 |
| 1.1 | SECTION INCLUDES | 2 |
| 1.2 | RELATED SECTIONS | 2 |
| 1.3 | QUALITY ASSURANCE – CONTROL OF INSTALLATION..... | 2 |
| 1.4 | TOLERANCES..... | 3 |
| 1.5 | REFERENCES AND STANDARDS..... | 3 |
| 1.6 | TESTING SERVICES – NOT USED | 3 |
| 1.7 | MANUFACTURER’S FIELD SERVICES..... | 3 |
| PART 2. | PRODUCTS (Not Used)..... | 4 |
| PART 3. | EXECUTION..... | 4 |
| 3.1 | EXAMINATION | 4 |

SECTION 01400
QUALITY CONTROL

PART 1. GENERAL

1.1 SECTION INCLUDES

- A. Quality assurance – control of installation
- B. Tolerances
- C. References and standards
- D. Testing laboratory services
- E. Manufacturer’s field services

1.2 RELATED SECTIONS

- A. Section 01300 – Submittals – Submission of manufacturers’ instructions and certificates.

1.3 QUALITY ASSURANCE – CONTROL OF INSTALLATION

- A. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce work of specified quality.
- B. Comply with manufacturers’ instructions, including each step in sequence.
- C. Should manufacturers’ instruction conflict with Contract Documents, request clarification from Engineer before proceeding.
- D. Comply with specified standards as minimum quality for the work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
- E. Perform work by persons qualified to produce required and specified quality.
- F. Verify that field measurements are as indicated on shop drawings or as instructed by the manufacturer.
- G. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, or disfigurement.

1.4 TOLERANCES

- A. Monitor fabrication and installation tolerance control of products to produce acceptable work. Do not permit tolerances to accumulate.
- B. Comply with manufacturer's tolerances. Should manufacturers' tolerances conflict with Contract Documents, request clarification from Architect/Engineer before proceeding.
- C. Adjust products to appropriate dimensions; position before securing products in place.

1.5 REFERENCES AND STANDARDS

- A. For products or workmanship specified by association, trade, or other consensus standards, comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.
- B. Conform to reference standard by date of issue current on date of Contract Documents, date for receiving bids, date of Owner-Contractor Agreement when there are no Bids, date specified in the individual specification sections, except where a specific date is established by code.
- C. Obtain copies of standards where required by product specification sections.
- D. Neither the contractual relationships, duties, or responsibilities of the parties in Contract nor those of the Engineer shall be altered from the Contract Documents by mention or inference otherwise in any reference document.

1.6 TESTING SERVICES – NOT USED

1.7 MANUFACTURER'S FIELD SERVICES

- A. When specified on the Drawing in individual specification sections, require material or product suppliers or manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, quality of workmanship, start-up of equipment, test, adjust equipment as applicable, and to initiate instructions when necessary.
- B. Submit qualifications of manufacturer's field service technician to Engineer 30 days in advance of required observations. Technician subject to approval of Engineer.
- C. Report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturers' written instructions.
- D. Refer to Section 01300 – SUBMITTALS, MANUFACTURER'S FIELD

REPORTS article.

PART 2. PRODUCTS (Not Used)

PART 3. EXECUTION

3.1 EXAMINATION

- A. Verify that existing site conditions and substrate surfaces are acceptable for subsequent work. Beginning new work means acceptance of existing conditions.
- B. Verify that existing substrate is capable of structural support or attachment of new work being applied or attached.
- C. Examine and verify specific conditions described in individual specification sections.
- D. Verify that utility services are available, of the correct characteristics, and in the correct locations.

END OF SECTION

SECTION 01510
TEMPORARY UTILITIES
INDEX

PART 1. GENERAL..... 2
 1.1 REQUIREMENTS INCLUDED 2
 1.2 REQUIREMENTS OF REGULATORY AGENCIES..... 2

PART 2. PRODUCTS 2
 2.1 GENERAL..... 2
 2.2 TEMPORARY ELECTRICITY 2
 2.3 TEMPORARY WATER..... 2
 2.4 TEMPORARY SANITARY FACILITIES 3

PART 3. EXECUTION 3
 3.1 GENERAL..... 3
 3.2 REMOVAL..... 3

**SECTION 01510
TEMPORARY UTILITIES**

PART 1. GENERAL

1.1 REQUIREMENTS INCLUDED

- A. Furnish, install and maintain temporary utilities required for construction, remove on completion of work.

1.2 REQUIREMENTS OF REGULATORY AGENCIES

- A. Comply with National Electric Code.
- B. Comply with Federal, State and local codes and regulations and with utility company requirements.
- C. Comply with City of Cornelia Regulations and Ordinances, and Habersham County Health Department Regulations.

PART 2. PRODUCTS

2.1 GENERAL

- A. Materials may be new or used, but must be adequate in capacity for the required usage, must not create unsafe conditions, and must not violate requirements of applicable codes and standards.

2.2 TEMPORARY ELECTRICITY

- A. The Owner's permanent electrical distribution system may be used for temporary electrical service with Owner's permission.
- B. The Contractor shall be responsible for the costs of all items necessary for installation, distribution and maintenance of temporary power. The cost of these items shall be factored into the project unit prices. Obtain and pay for all permits and inspections.

2.3 TEMPORARY WATER

- A. Contractor may use the Owner's hose bib at the pump station site for obtaining water, and shall furnish and install all equipment, pipe, valves and accessories as required for use of that water.
- B. Install at each and every connection to the Owner water supply a backflow preventer meeting the requirements of ASSE Standard 1015 and AWWA C510, latest revision. Protect piping and fittings against freezing as applicable to the work site.

- C. The first 10,000 gal. of water per month will be furnished to Contractor at no cost; however, excessive water use over 10,000 gal. per month will be billed to the Contractor at current water rates.
- D. Restore existing and permanent facilities used for temporary purposes to original condition.

2.4 TEMPORARY SANITARY FACILITIES

- A. Contractor shall provide temporary sanitary facilities at such places as approved by the Owner and in compliance with applicable laws and regulations.
- B. Contractor shall pay all costs for installation, maintenance, and removal of temporary sanitary facilities. Contractor will not be allowed to use plant facilities.
- C. Provide facilities at time of site mobilization and modify and extend service as work progresses. Toilet facilities shall be enclosed, portable, self-contained units or temporary water closets and urinals, secluded from public view. Clean areas of facilities weekly and maintain in a sanitary condition. Provide toilet paper, paper towels, and soap in suitable dispensers.

PART 3. EXECUTION

3.1 GENERAL

- A. Comply with applicable requirements specified in Division 15 - Mechanical, and in Division 16 - Electrical.
- B. Maintain and operate systems to assure continuous service.
- C. Modify and extend systems as work progress requires.

3.2 REMOVAL

- A. Completely remove temporary materials and equipment when their use is no longer required.
- B. Clean and repair damage caused by temporary installations or use of temporary facilities.
- C. Restore permanent facilities used for temporary services to specified condition.

END OF SECTION

**SECTION 01560
ENVIRONMENTAL CONTROLS
INDEX**

| | | |
|---------|-----------------------------|---|
| PART 1. | GENERAL..... | 2 |
| 1.1 | SCOPE OF WORK..... | 2 |
| 1.2 | SITE MAINTENANCE..... | 2 |
| 1.3 | AIR POLLUTION CONTROL | 2 |
| 1.4 | NOISE CONTROL..... | 2 |
| PART 2. | PRODUCTS (Not Used)..... | 2 |
| PART 3. | EXECUTION (Not Used)..... | 2 |

SECTION 01560
ENVIRONMENTAL CONTROLS

PART 1. GENERAL

1.1 SCOPE OF WORK

- A. Contractor shall furnish all material and labor for the installation and maintenance of the environmental control measurements throughout the project.

1.2 SITE MAINTENANCE

- A. The Contractor shall keep the work site clean and free from rubbish and debris. Materials and equipment shall be removed from the site when they are no longer necessary. Upon completion of the work and before final acceptance, the work site shall be cleared of equipment, unused materials, and rubbish to present a clean and neat appearance.

1.3 AIR POLLUTION CONTROL

- A. The Contractor shall not burn or discharge smoke, dust, and other contaminants into the atmosphere that violate the regulations of any legally constituted authority.

1.4 NOISE CONTROL

- A. Between 7:30 PM and 7:00 AM, noise from Contractor's operations shall not exceed limits established by applicable laws or regulations and in no event shall exceed 86 dBA at a distance of 50 feet from the noise source.

PART 2. PRODUCTS (Not Used)

PART 3. EXECUTION (Not Used)

END OF SECTION

SECTION 01605
SHIPMENT, PROTECTION, AND STORAGE
INDEX

| | | |
|---------|-----------------|---|
| PART 1. | GENERAL..... | 2 |
| PART 2. | PRODUCTS..... | 2 |
| 2.1 | PIPE | 2 |
| PART 3. | EXECUTION..... | 2 |
| 3.1 | EQUIPMENT | 2 |

SECTION 01605
SHIPMENT, PROTECTION, AND STORAGE

PART 1. GENERAL

- A. Equipment, products and materials shall be shipped, handled, stored, and installed in ways which will prevent damage to the items. Damaged items will not be permitted as part of the work except in cases of minor damage that have been satisfactorily repaired and are acceptable to the Engineer.

PART 2. PRODUCTS

2.1 PIPE & VALVES

- A. Pipe, valves and appurtenances shall be handled, stored, and installed as recommended by the manufacturer. Pipes and valves with paint, tape coatings, linings or the like shall be stored to protect the coating or lining from physical damage or other deterioration. Pipes and valves shipped with interior bracing shall have the bracing removed only when recommended by the pipe manufacturer.

PART 3. EXECUTION

3.1 EQUIPMENT

A. Package and Marking

1. All equipment shall be protected against damage from moisture, dust, handling, or other cause during transport from manufacturer's premises to site. Each item or package shall be marked with the number unique to the specification reference covering the item.
2. Stiffeners shall be used where necessary to maintain shapes and to give rigidity. Parts of equipment shall be delivered in assembled or subassembled units where possible.

B. Identification

1. Each item of equipment and valve shall have permanently affixed to it a label or tag with its equipment or valve number designated in this contract. Marker shall be of stainless steel. Location of label will be easily visible.

C. Shipping

1. Bearing housings, vents and other types of openings shall be wrapped or otherwise sealed to prevent contamination by grit and dirt.
2. Damage shall be corrected to conform to the requirements of the Contract before the assembly is incorporated into the work. The Contractor shall bear

the costs arising out of dismantling, inspection, repair, and reassembly.

D. Factory Applied Coatings

1. Unless otherwise specified, each item of equipment shall be shipped to the site of the work with the manufacturer's shop applied epoxy prime coating as specified in Section 09900. The prime coating shall be applied over clean dry surfaces in accordance with the coating manufacturer's recommendations. The prime coating will serve as a base for field-applied finish coats. Electrical equipment and materials shall be painted by manufacturer.

E. Storage

1. During the interval between the delivery of equipment to the site and installation, all equipment, unless otherwise specified, shall be stored in an enclosed space affording protection from weather, dust and mechanical damage and providing favorable temperature, humidity and ventilation conditions to ensure against equipment deterioration. Manufacturer's recommendations shall be adhered to in addition to these requirements.
2. Equipment and materials to be located outdoors may be stored outdoors if protected against moisture condensation. Equipment shall be stored at least 6 inches above ground. Temporary power shall be provided to energize space heaters or other heat sources for control of moisture condensation. Space heaters or other heat sources shall be energized without disturbing the sealed enclosure.

F. Protection of Equipment after Installation

1. After installation, all equipment shall be protected from damage from, including but not limited to, dust, abrasive particles, debris and dirt generated by the placement, chipping, sandblasting, cutting, finishing and grinding of new or existing concrete, terrazzo and metal; and from the fumes, particulate matter, and splatter from welding, brazing and painting of new or existing piping and equipment. As a minimum, vacuum cleaning, blowers with filters, protective shieldings, and other dust suppression methods will be required at all times to adequately protect all equipment. During concreting, including finishing, all equipment that may be affected by cement dust must be completely covered. During painting operations, all grease fittings and similar openings shall be covered to prevent the entry of paint. Electrical switchgear, unit substation, and motor load centers shall not be installed until after all concrete work and sandblasting in those areas have been completed and accepted and the ventilation systems installed.

END OF SECTION

**SECTION 01701
CONTRACT CLOSEOUT PROCEDURES
INDEX**

PART 1. GENERAL 2

 1.1 REQUIREMENTS INCLUDED 2

 1.2 RELATED REQUIREMENTS 2

 1.3 SUBSTANTIAL COMPLETION 2

 1.4 FINAL COMPLETION 2

 1.5 REINSPECTION FEES 3

 1.6 CLOSEOUT SUBMITTALS 3

 1.7 APPLICATION FOR FINAL PAYMENT 4

PART 2. PRODUCTS (Not Used) 4

PART 3. EXECUTION (Not Used) 4

SECTION 01701
CONTRACT CLOSEOUT PROCEDURES

PART 1. GENERAL

1.1 REQUIREMENTS INCLUDED

- A. Administrative provisions for Substantial Completion and for final acceptance.

1.2 RELATED REQUIREMENTS

- A. Section 01300 – Submittal
- B. Section 01720 – Project Record Documents
- C. Section 01730 – Operation and Maintenance Data
- D. Section 01740 – Warranties and Bonds

1.3 SUBSTANTIAL COMPLETION

- A. When the Contractor considers the work substantially complete, he shall prepare a punch list of uncompleted items and send to the Engineer for review. At the same time, the Contractor shall request in writing that the Engineer schedules a pre-final inspection.
- B. The Engineer will review the punch list submitted by the Contractor and determine if the project is substantially complete.
- C. If the Engineer determines that the project is not substantially complete, he will notify the Contractor in writing which items need to be finished before the project can be considered substantially complete. The Contractor shall continue working to complete all punch list items and resubmit a revised punch list when he considers the work is substantially complete.
- D. When the Engineer determines that the work is substantially complete, he will schedule a pre-final inspection with the Owner, Contractor and Engineer. A final punch list will be prepared at this time.
- E. After all punch list items have been completed, the Contractor shall send a request in writing to the Engineer to schedule a final inspection. When all punch list items are complete, the Engineer will issue a certificate of substantial completion.

1.4 FINAL COMPLETION

- A. When the Contractor considers that all of the work is complete, he shall submit the

following certificates:

1. All work has been completed and inspected for compliance with the Contract Documents and all deficiencies listed with the certificate of substantial completion have been corrected.
 2. All equipment and systems have been tested, adjusted and are fully operational.
 3. Owner's personnel have been fully instructed in the operation of all equipment (include sign off for each system).
 4. Work is complete and ready for final inspection.
- B. Should Engineer's inspection find work incomplete, he will promptly notify Contractor in writing listing observed deficiencies.
- C. Contractor shall remedy deficiencies and send a request for another final inspection.
- D. When Engineer finds work is complete, he will process final pay request documents.

1.5 REINSPECTION FEES

- A. Should status of completion of work require reinspection by Engineer due to failure of work to comply with Contractor's claims on pre-final or final inspection, the Owner will back charge the Contractor for each extra reinspection required of the Engineer. The Contractor shall reimburse the Owner by certified check prior to final payment of retainage.

1.6 CLOSEOUT SUBMITTALS

- A. Evidence of Compliance with Requirements of Governing Authorities –
1. Certificates of Inspection approvals required for plumbing, mechanical and electrical systems as required by local codes if applicable.
 2. Completed "Project Close Out" form as presented at the end of this section.
- B. Project Record Documents – Under provisions of Section 01720.
- C. Operation and Maintenance Data – Under provisions of Section 01730.
- D. Warranties and Bonds – Under provisions of Section 01740.
- E. Keys and Keying Schedule.

SECTION 01701-4
CONTRACT CLOSEOUT PROCEDURES

- F. Evidence of Payment and Release of Liens – In accordance with Conditions of the Contract.
- G. Consent of Surety to Final Payment – Consent of Surety is to be sent by Surety directly to Carter and Sloope to the attention of the Project Engineer.

1.7 APPLICATION FOR FINAL PAYMENT

- A. Prior to application for final payment, the Contractor shall give the Engineer a list of all additions or deletions not previously approved by change order.
- B. The Engineer will review this list and prepare a final closeout change order for the items that are justified by the terms of the contract or approved by field order.
- C. After approval of the final closeout change order the Contractor may submit his application for final payment.

PART 2. PRODUCTS (Not Used)

PART 3. EXECUTION (Not Used)

END OF SECTION

PROJECT CLOSE OUT FORM
CHECK-OFF LIST

| Document Received** | Number of Copies | Date |
|---|------------------|------|
| Contractor's Warranty | 2 Originals | |
| Statutory Affidavit | 2 Originals | |
| Non-Influence Affidavit | 2 Originals | |
| Daily Observation Reports | 2 Copies | |
| Consent of Surety to Final Payment | 2 Copies | |
| Maintenance Manuals and Equipment Brochures | 1 Copy | |

**SECTION 01710
FINAL CLEANUP
INDEX**

| | | |
|---------|------------------------------|---|
| PART 1. | GENERAL | 2 |
| 1.1 | REQUIREMENTS INCLUDED | 2 |
| 1.2 | DESCRIPTION..... | 2 |
| 1.3 | DISPOSAL REQUIREMENTS | 2 |
| PART 2. | PRODUCTS..... | 2 |
| 2.1 | CLEANING MATERIALS | 2 |
| PART 3. | EXECUTION..... | 2 |
| 3.1 | PERIODIC CLEANING..... | 2 |
| 3.2 | DUST CONTROL – NOT USED..... | 3 |
| 3.3 | INSPECTION | 3 |

**SECTION 01710
FINAL CLEANUP**

PART 1. GENERAL

1.1 REQUIREMENTS INCLUDED

- A. Final cleanup of site.

1.2 DESCRIPTION

- A. Execute clean-up prior to inspection for Substantial Completion of the Work.

1.3 DISPOSAL REQUIREMENTS

- A. Remove and dispose of waste materials, rubbish, debris and trash in compliance with provisions of governing laws, codes, ordinances and regulations.
 - 1. Do not burn or bury rubbish, trash, debris and waste materials on Project site.

PART 2. PRODUCTS

2.1 CLEANING MATERIALS

- A. Use materials which will not create hazards to health or property, and which will not damage surfaces.
- B. Use only materials and methods recommended by manufacturer of material being cleaned.

PART 3. EXECUTION

3.1 PERIODIC CLEANING

- A. On a regular and frequent basis during progress of work, perform cleaning necessary to keep Project site and adjacent properties free from unsightly and unsafe accumulation of scrap and waste materials, debris, rubbish and trash resulting from construction operations.
 - 1. Provide sufficient trash bins and containers for collection of scrap and waste material, debris, rubbish and trash.
 - 2. Provide separate, closeable top metal containers for collection of oil and paint soaked rags; empty volatile substance cans and other waste products subject to spontaneous combustion.

3. Designate approved eating areas and provide covered containers conforming to local health codes for collection of waste paper and leftover foodstuffs. Enforce usage of containers by workmen.
- B. Dispose of scrap and waste materials, debris, rubbish and trash by one of the following optional methods:
1. Provide services of company regularly engaged in refuse disposal operations, including usage of large metal dump-type trash containers.
 2. Use own forces and equipment for loading, hauling and disposal.
- C. Remove accumulations of scrap and waste materials as bins and containers are filled and not less than once per week.
1. Remove containers containing products subject to spontaneous combustion daily.
 2. Remove containers containing waste paper and leftover foodstuff daily.
 3. Legally dispose of all waste materials, rubbish, volatile materials and cleaning materials off Project site.
 4. Dispose of no materials in waterways.

3.2 DUST CONTROL – NOT USED

3.3 INSPECTION

- A. Prior to acceptance by Owner of any designated portion of Work, conduct inspection in presence of Owner to verify work is properly clean and ready for acceptance by Owner.

END OF SECTION

SECTION 01720
PROJECT RECORD DOCUMENTS
INDEX

| | | |
|---------|---|---|
| PART 1. | GENERAL..... | 2 |
| 1.1 | REQUIREMENTS INCLUDED | 2 |
| 1.2 | MAINTENANCE OF DOCUMENTS AND SAMPLES..... | 2 |
| 1.3 | RECORDING | 3 |
| PART 2. | PRODUCTS (Not Used)..... | 4 |
| PART 3. | EXECUTION (Not Used)..... | 4 |

**SECTION 01720
PROJECT DOCUMENTS**

PART 1. GENERAL

1.1 REQUIREMENTS INCLUDED

- A. Maintenance of Record Documents and Samples.
- B. Submittal of Record Documents and Samples.

1.2 MAINTENANCE OF DOCUMENTS AND SAMPLES

- A. In addition to requirements in General Conditions, Maintain at the site for Owner, two record copies of:
 - 1. Contract Drawings
 - 2. Specifications
 - 3. Addenda
 - 4. Approved Change Orders, field orders or other modifications to the Contract
 - 5. Approved shop drawings, product data, and samples
 - 6. Field test records
 - 7. Inspection Certificates
 - 8. Manufacturer's certificates
- B. Store Record Documents and samples in Field Office apart from documents used for construction. Provide files, racks, and secure storage for Record Documents and samples. Records should be stored in a clean dry area with easy access.
- C. Document Files –
 - 1. Contract Drawings shall be maintained in a hanging stickfile.
 - 2. Specifications, addenda and Change Orders shall be filed in a "Banker Box" type file with hanging file folders.
 - 3. Shop drawings shall be filed in "Banker Box" hanging file with a separate file folder for each item. The Contractor shall maintain an index of shop drawings in the first folder. Each folder shall be labeled with the name of the

item and the specifications and/or drawing number.

4. Field tests and inspection certificates shall be maintained in separate file folders.
 5. All labels or indexes shall be typed or printed.
- D. Maintain Record Documents in a clean, dry and legible condition. Do not use Record Documents for construction purposes.
- E. Keep Record Documents and samples available for inspection by Engineer.

1.3 RECORDING

- A. Record information on clean sets of blue line opaque drawings and contract specifications. Label each sheet of the Project Record Drawings in the lower right corner with the neatly printed words "PROJECT RECORD DRAWINGS."
1. Two (2) sets of Contract Documents and Drawings will remain clean without mark-up for record purposes. Contractor shall use an additional set for marking measurements, on-site changes, items of construction that are actually used, and other conditions as they are encountered during the course of the Work. This marked-up set of Contract Documents and Drawings shall consist of red-lined copies of plans and shop drawings, shall indicate actual field dimensions, shall represent the work as actually constructed, and shall be recorded on a daily basis. Failure to produce these records on request of Engineer or Owner shall constitute grounds to halt construction with no time extension until steps are taken to see that these records are being properly made.
- B. Provide colored pens or pencils for marking each description of work.
1. The Contractor shall provide colored pencils for marking record copies of Contract Drawings and Specifications.
 2. Establish a color code denoting what trade will use what color, and show this on a schedule on the front sheet of the "PROJECT RECORD DOCUMENTS".
- C. Record information concurrently with construction progress. **DO NOT CONCEAL ANY WORK UNTIL REQUIRED INFORMATION IS RECORDED.**
- D. Contract Drawings and Shop Drawings – Legibly mark each item to record actual construction, including:
1. Measured horizontal and vertical locations of proposed improvements

utilities and appurtenances, referenced to permanent locations. Use stations and offsets or coordinates.

2. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of construction.
 3. Field changes of dimension and detail.
 4. Changes made by Modifications.
 5. Details not on original Contract Drawings.
 6. References to related shop drawings and Modifications.
- E. Prior to final construction observation, Contractor shall furnish to Engineer two (2) neatly marked sets of construction plans which accurately depict the conditions and records all changes made during construction. Engineer shall promptly notify Contractor in writing if additional information is required.
- F. Other Documents – Maintain manufacturer’s certifications, inspection certifications, and field test records, required by individual Specification sections.

PART 2. PRODUCTS (Not Used)

PART 3. EXECUTION (Not Used)

END OF SECTION

**SECTION 01730
OPERATIONS AND MAINTENANCE DATA
INDEX**

| | | |
|---------|---|---|
| PART 1. | GENERAL | 2 |
| 1.1 | SECTION INCLUDES | 2 |
| 1.2 | RELATED SECTIONS | 2 |
| 1.3 | QUALITY ASSURANCE | 2 |
| 1.4 | FORMAT | 2 |
| 1.5 | PROJECT CLOSEOUT NOTEBOOK | 3 |
| 1.6 | MANUAL FOR MATERIALS AND FINISHES | 3 |
| 1.7 | MANUAL FOR EQUIPMENT AND SYSTEMS | 4 |
| 1.8 | INSTRUCTION OF OWNER PERSONNEL | 5 |
| 1.9 | SUBMITTALS | 5 |
| PART 2. | PRODUCTS (Not Used)..... | 5 |
| PART 3. | EXECUTION (Not Used)..... | 5 |

SECTION 01730
OPERATIONS AND MAINTENANCE DATA

PART 1. GENERAL

1.1 SECTION INCLUDES

- A. Format and content of manuals.
- B. Instruction of Owner's personnel.
- C. Schedule of submittals.

1.2 RELATED SECTIONS

- A. Section 01300 – Submittals.
- B. Section 01400 – Quality Control.
- C. Section 01701 – Contract Closeout Procedures.
- D. Section 01740 – Warranties and Bonds.
- E. Individual Specifications Sections: Specific requirements for operation and maintenance data.

1.3 QUALITY ASSURANCE

- A. Prepare instructions and data by personnel experienced in maintenance and operation of described products.

1.4 FORMAT

- A. Compile product data and related information appropriate for Owner's maintenance and operation of products furnished under work of this contract.
- B. Binders – Commercial quality, 8-1/2 x 11 inch - three D side ring binders with durable plastic/cloth covers; 2” maximum ring size. When multiple binders are used, correlate data into related consistent groupings.
- C. Cover – Identify each binder with typed or printed title OPERATION AND MAINTENANCE INSTRUCTIONS; identify title of Project, identify subject matter of contents.
- D. Provide tabbed dividers for each separate product and system, with typed description of product and major component parts of equipment.

- E. Test – Manufacturer’s printed data, or typewritten data on 24-pound paper.
- F. Drawings – Provide with reinforced punched binder tab. Bind in with test; fold larger drawings to size of text pages.
- G. Arrange content by systems/process flow under section numbers and sequence of Table of Contents of this Project Manual.
- H. Provide three (3) sets of O & M Manuals.
- I. Manuals are to be delivered to the Engineer in complete sets as soon as they are available from the vendors. **DO NOT WAIT UNTIL END OF JOB TO DELIVER MANUALS.**

1.5 PROJECT CLOSEOUT NOTEBOOK

The Contractor shall provide two (2) project closeout notebooks which shall include the following:

- A. Table of Contents.
- B. Project Description.
 - 1. Project Title.
 - 2. Name, Address and Telephone number of Engineer.
 - 3. Name, Address and Telephone number of Engineer’s subcontractor.
 - 4. Name, Address and Telephone number of General Contractor.
 - 5. Name, Address and Telephone number of all subcontractors.
- C. List the name of each major item of equipment with the name, address and telephone number of each supplier. Make reference to O & M file folder.
- D. List of all shop drawings and name, address and telephone number of each supplier (make reference to file folder).
- E. List all warranties, guarantees and bonds. Include a copy of each. Also, include name, address and telephone number of surety providing Performance Bond.

1.6 MANUAL FOR MATERIALS AND FINISHES

- A. Building Products, Applied Materials, and Finishes – Include product data, with

- catalog number, size, composition, and color and texture designations. Provide information for re-ordering custom manufactured products.
- B. Instructions for Care and Maintenance – Include manufacturer’s recommendations for cleaning agents and methods, precautions against detrimental agents and methods, and recommended schedule for cleaning and maintenance.
- C. Moisture Protection and Weather Exposed Products – Include product data listing applicable reference standards, chemical composition, and details of installation. Provide recommendations for inspections, maintenance, and repair.
- D. Additional Requirements – As specified in individual product specification Sections.

1.7 MANUAL FOR EQUIPMENT AND SYSTEMS

- A. Each Item of Equipment and Each System – Include description of unit or system, and component parts. Identify function, normal operating characteristics, and limiting conditions. Include performance curves, with engineering data and tests, and complete nomenclature and commercial number of replaceable parts.
- B. Panelboard Circuit Directories – Provide electrical service characteristics, controls and communications.
- C. Include color-coded wiring diagrams as installed.
- D. Operating Procedures – Include start-up, break-in, and routine normal operating instructions and sequences. Include regulation, control, stopping, shutdown, and emergency instructions. Include summer, winter, and any special operating instructions.
- E. Maintenance Requirements – Include routine procedures and guide for troubleshooting; disassembly, repair, and reassembly instructions; and alignment, adjusting, balancing, and checking instructions.
- F. Provide servicing and lubrication schedule, and list of lubricants required.
- G. Include manufacturer’s printed operation and maintenance instructions.
- H. Include sequence of operation by controls manufacturer.
- I. Provide original manufacturer’s parts list, illustrations, assembly drawings, and diagrams required for maintenance.
- J. Provide control diagrams by controls manufacturer as installed.
- K. Provide Contractor’s coordination drawings, with color-coded piping diagrams as installed.

- L. Provide list of original manufacturer's spare parts, current prices, and recommended quantities to be maintained in storage.
- M. Additional requirements – As specified in individual product specification Sections.

1.8 INSTRUCTION OF OWNER PERSONNEL

- A. Before final inspection, provide necessary instruction to Owner's designated personnel in operation, adjustment, and maintenance of products, equipment, and systems, at agreed upon times.
- B. For equipment requiring seasonal operation, perform instructions for other seasons.
- C. Use operation and maintenance manuals as basis for instruction. Review contents of manual with personnel in detail to explain all aspects of operations and maintenance.
- D. Prepare and insert additional data in Operation and Maintenance Manual when need for such data becomes apparent during instruction.

1.9 SUBMITTALS

- A. Submit two copies of preliminary draft or proposed formats and outlines of contents before start of Work. Engineer will review draft and return one copy with comments.
- B. For equipment, or component parts of equipment, put into service during construction and operated by owner, submit documents within ten (10) days after acceptance.
- C. Submit one copy of completed volumes in final form fifteen (15) days prior to final inspection. Copy will be returned after final inspection, with Engineer's comments. Review content of documents as required prior to final submittal.
- D. Submit four (4) copies of revised volumes of data in final form within ten (10) days after final inspection.

PART 2. PRODUCTS (Not Used)

PART 3. EXECUTION (Not Used)

END OF SECTION

SECTION 01740
WARRANTIES AND BONDS
INDEX

PART 1. GENERAL 2
 1.1 SECTION INCLUDES 2
 1.2 RELATED SECTIONS 2
 1.3 FORM OF SUBMITTALS 2
 1.4 PREPARATION OF SUBMITTALS 3
 1.5 TIME OF SUBMITTALS 3

PART 2. PRODUCTS (Not Used) 3

PART 3. EXECUTION (Not Used) 3

SECTION 01740
WARRANTIES AND BONDS

PART 1. GENERAL

1.1 SECTION INCLUDES

- A. Preparation and submittal.
- B. Time and schedule of submittals.

1.2 RELATED SECTIONS

- A. Section 00700 – General Conditions – Warranties and correction of work.
- B. Section 01701 – Contract Closeout – Contract closeout procedures.
- C. Section 01730 – Operation and Maintenance Data.
- D. Individual Specifications Sections – Warranties required for specific Products or Work.

1.3 FORM OF SUBMITTALS

- A. Bind in commercial quality, 8-1/2 x 11 inch three-ring side binders with hardback, cleanable, plastic covers.
- B. Label cover of each binder with typed or printed title WARRANTIES AND BONDS, with title of Project; name, address and telephone number of Contractor and equipment supplier; and name of responsible principal.
- C. Table of Contents – Neatly typed, in the sequence of the Table of Contents of the Project Manual, with each item identified with the number and title of the specification Section in which specified, and the name of the product or work item.
- D. Separate each warranty or bond with index tab sheets keyed to the Table of Contents listing. Provide full information, using separate typed sheets as necessary. List Subcontractor, supplier, and manufacturer, with name, address, and telephone number of responsible principal.
- E. Provide plastic cardholder sleeve and insert business cards from all subcontractors and general contractors' personnel including on-site representative, project manager and owner of company. Insert into manual this "card file" after table of contents.

1.4 PREPARATION OF SUBMITTALS

- A. Obtain warranties and bonds, executed in duplicate by responsible Subcontractors, suppliers, and manufacturers, within ten (10) days after completion of the applicable item of work. Except for items put into use with Owner's permission, leave date of beginning of time of warranty until the Date of Substantial Completion is determined. Provide three complete notebooks to the Engineer for distribution. The Owner will receive two copies and the engineer will retain one copy.
- B. Verify that documents are in proper form, contain full information, and are notarized.
- C. Co-execute submittals when required.
- D. Retain warranties and bonds until time specified for submittal.

1.5 TIME OF SUBMITTALS

- A. For equipment or component parts of equipment put into service during construction with Owner's permission, submit documents within ten (10) days after acceptance.
- B. Make other submittals within ten (10) days after Date of Substantial Completion, prior to final Application for Payment.
- C. For items of Work when acceptance is delayed beyond Date of Substantial Completion, submit within ten (10) days after acceptance, listing the date of acceptance as the beginning of the warranty period.

PART 2. PRODUCTS (Not Used)

PART 3. EXECUTION (Not Used)

END OF SECTION

SECTION 09865
SURFACE PREPARATION AND SHOP PRIME PAINTING
INDEX

| | | |
|---------|--------------------|---|
| PART 1. | GENERAL | 2 |
| 1.1 | SCOPE OF WORK..... | 2 |
| 1.2 | RELATED WORK | 2 |
| 1.3 | SUBMITTALS | 2 |
| PART 2. | PRODUCTS..... | 2 |
| 2.1 | MATERIALS..... | 2 |
| PART 3. | EXECUTION..... | 3 |
| 3.1 | APPLICATION | 3 |

SECTION 09865
SURFACE PREPARATION AND SHOP PRIME PAINTING

PART 1. GENERAL

1.1 SCOPE OF WORK

- A. Furnish all labor, materials, equipment and incidentals required for the surface preparation and application of shop primers on ferrous metals, excluding stainless steels, as specified herein and as shown on the drawings.

1.2 RELATED WORK

- A. Field painting is included in Section 09900 and 09910.

1.3 SUBMITTALS

- A. Submit to the ENGINEER for review in accordance with Section 01300 complete shop drawings, MANUFACTURER'S specifications and data on the proposed primers and detailed surface preparation, application procedures and dry mil thickness.
- B. Submit to the ENGINEER for review in accordance with Section 01300 representative physical samples of the proposed primers.

PART 2. PRODUCTS

2.1 MATERIALS

- A. Nonprimed Surfaces:
 - 1. Gears, bearings surfaces, and other similar surfaces obviously not to be painted shall be given a heavy shop coat of grease or other suitable rust-resistant coating. This coating shall be maintained as necessary to prevent corrosion during all periods of storage and erection and shall be satisfactory to the ENGINEER up to the time of the final acceptance test.
- B. Compatibility of Coating Systems:
 - 1. Shop priming shall be done with primers that are guaranteed by the MANUFACTURER to be compatible with their corresponding primers and finish coats specified in Section 09900 for use in the field and which are recommended for use together. Tnemec Series 1 or Equal applies at 2.5 to 3.5 mils dry.

PART 3. EXECUTION

3.1 APPLICATION

A. Surface Preparation and Priming:

1. Nonsubmerged components scheduled for priming, as defined above, shall be sandblasted clean in accordance with SSPC-SP-6, "Commercial Grade," immediately prior to priming.
2. Submerged components scheduled for priming shall be sandblasted clean in accordance with SSPC-SP-IO "Near White," immediately prior to Priming.
3. Surfaces shall be dry and free of dust oil, grease dirt, rust, loose mill scale and other foreign material before priming.
4. Shop prime in accordance with approved paint Manufacturer's recommendations.

END OF SECTION

**SECTION 09900
PAINTING
INDEX**

| | | |
|---------|--|----|
| PART 1. | GENERAL | 2 |
| 1.1 | SCOPE OF WORK..... | 2 |
| 1.2 | RELATED WORK..... | 2 |
| 1.3 | REFERENCES | 3 |
| 1.4 | SUBMITTALS | 3 |
| 1.5 | PRE-PAINTING CONFERENCE..... | 3 |
| PART 2. | PRODUCTS..... | 4 |
| 2.1 | MANUFACTURER | 4 |
| 2.2 | MATERIALS..... | 4 |
| 2.3 | PAINTING SYSTEMS..... | 5 |
| 2.4 | COLOR CODING FOR PIPES AND EQUIPMENT | 8 |
| 2.5 | LETTERING OF TITLES | 9 |
| 2.6 | METAL TAGS | 10 |
| 2.7 | FABRICATED EQUIPMENT | 10 |
| PART 3. | EXECUTION..... | 11 |
| 3.1 | PREPARATION OF SURFACES..... | 11 |
| 3.2 | WORKMANSHIP | 12 |
| 3.3 | CLEANUP | 14 |
| 3.4 | ONE YEAR WARRANTY | 15 |

**SECTION 09900
PAINTING**

PART 1. GENERAL

1.1 SCOPE OF WORK

- A. The work of this section consists of furnishing all materials, labor, equipment and incidentals required and performing all the painting necessary to complete this Contract in its entirety.
- B. It is the intent of these Specifications to paint all exposed miscellaneous metal, pipe, fittings, supports, valves, equipment and all other work obviously required to be painted except as otherwise specified. Minor items omitted in the schedule of work shall be included in the work of this Section where they come within the general intent of the specifications as stated herein.
- C. The following surfaces or items are not required to be painted:
 - 1. Portions of metal, other than aluminum, embedded in concrete. This does not apply to the back face of items mounted to concrete or masonry surfaces which shall be painted before erection. Aluminum to be embedded in or in contact with concrete or masonry shall be coated to prevent electrolysis.
 - 2. Stainless steel.
 - 3. Fencing.
 - 4. Tile.
 - 5. Interior and exterior concrete, unless otherwise specified, and heavy duty concrete topping.
 - 6. Finish hardware, except door closers that are not stainless steel.
 - 7. Manhole frames and covers.
 - 8. Fiberglass other than piping.
 - 9. Packing glands and other adjustable parts and nameplates of mechanical equipment.
 - 10. Galvanized conduit.
 - 11. Copper pipe.
 - 12. Galvanized pipe.
 - 13. Aluminum Handrail
 - 14. Interior Exposed or Buried PVC Pipe and Tubing
 - 15. HDPE Pipe

1.2 RELATED WORK

- A. Temporary project sign is included in Division 1.
- B. Waterproofing is included in Division 7.

-
- C. Shop priming and surface preparation by ferrous metals are included in the respective Section with the item to be primed.

1.3 REFERENCES

- A. Steel Structures Painting Council (SSPC):
 - 1. SSFC-SP-1 Surface Preparation Specification - Solvent Cleaning
 - 2. SSPC-SP-2 Surface Preparation Specification - Hand Tool Cleaning
 - 3. SSPC-SP-3 Surface Preparation Specification - Power Tool Cleaning
- B. American Association of State Highway and Transportation Officials (AASHTO).
- C. Occupational Safety and Health Act (OSHA).
 - 1. Standards

1.4 SUBMITTALS

- A. Submit to the Engineer for review in accordance with Section 01300 shop drawings, working drawings, and product data including manufacturer's specifications and data on the proposed paint systems and detailed surface preparation, application procedures and dry film thickness.
- B. Submit to the Engineer for review in accordance with Section 01300 color cards, including standard and special colors, for initial color selections.
- C. Schedule of Painting Operations: Submit to the Engineer for review a complete Schedule of Painting Operations within 90 days after the Notice to Proceed. This Schedule is imperative so that the various fabricators may be notified of the proper Shop prime coat to apply. Properly notify and coordinate the fabricators' surface Preparation and painting operations with these Specifications. This Schedule shall include for each surface to be painted, the brand name, the percent volume of solids, the coverage and the number of coats the Contractor proposes to use in order to achieve the specified dry film thickness, and color charts. When the Schedule has been approved, apply all material in strict accordance with the approved Schedule and the manufacturer's instructions. Wet and dry paint film gauges shall be made available to the Engineer to verify the proper application while work is in progress.

1.5 PRE-PAINTING CONFERENCE

- A. Well in advance of commencement of painting operations, but after major equipment has been delivered, a pre-painting conference shall be held. All parties with an interest in the painting work shall attend including the Contractor, the Manufacturer, the Owner, the Engineer, and the painting subcontractor and his foreman the Contractor shall contact each party and arrange the meeting.

-
- B. The conference shall include an inspection of the areas to be painted by all parties and discussion of the conformance of each area with the specifications. Important issues such as environmental conditions climate control systems, original primer dry film thickness, and monitoring the number of coats that have been field applied shall be discussed and problems shall be resolved.
 - C. A written record of the meeting shall be submitted to the Engineer.

PART 2. PRODUCTS

2.1 MANUFACTURER

- A. All painting materials shall be fully equal to those manufactured by Tnemec Company, Inc., International / Devco Coatings, or Carboline.
- B. Materials specified are those that have been evaluated for the specific service. Products of Tnemec Company, Inc., are listed to establish a standard of quality. Equivalent materials of other manufacturers may be utilized. Shop Drawings shall include manufacturers literature for each product giving the name, product number, generic type, descriptive information, solids-by-volume, recommended dry film thickness, and certified test reports showing results to equal the performance of the specified products listed herein.

2.2 MATERIALS

- A. All painting materials shall be delivered to the mixing room in unbroken containers, bearing the manufacturer's brand, date of manufacture and name. They shall be used without adulteration and mixed, thinned, and applied in strict accordance with manufacturer's directions for the applicable materials and surface and with the Engineer's approval before using.
- B. Shop priming shall be done with primers that are guaranteed by the finish coat Manufacturer to be compatible with the finish paints to be used.
- C. No paint containing lead will be allowed. Oil shall be pure boiled linseed oil.
- D. Work areas will be designated by the Engineer for storage and mixing of all painting materials. Materials shall be in full compliance with the requirements of pertinent codes and fire regulations. Proper containers outside of the buildings shall be provided and used for painting wastes, and no plumbing fixture shall be used for this purpose.
- E. All recommendations of the paint manufacturer in regard to the health and safety of workmen shall be followed.

2.3 PAINTING SYSTEMS

All colors will be selected by the Engineer from color charts submitted by the Contractor.

The following surfaces shall have the types of paint scheduled below applied at the dry film thickness (DFT) in mils per coat noted. Some colors will require an additional coat from what is listed to get the proper color coverage.

A. Steel – Structural, Tanks, Pipe and Equipment

1. Exterior Exposed:

- Preparation - SSPC – SP6
- Primer - Series 1, DFT 2.0 to 3.0 mils
- Immediate Finish - Series N69 Hi-Build Epoxoline, DFT 2.0 to 3.0 mils
- Finish - Series 1075U Endurashield II, DFT 2.0 to 5.0 mils
- Total DFT - 6.0 to 11.0 mils

2. Interior Exposed:

- Preparation - SSPC – SP6
- Primer - Series N69 Hi-Build Epoxoline, DFT 3.0 to 5.0 mils
- Finish - Series N69 Hi-Build Epoxoline, DFT 3.0 to 5.0 mils
- Total DFT - 6.0 – 10.0 mils

3. Immersion:

- Preparation - SSPC – SP10
- Primer - Series N69 Hi-Build Epoxoline, DFT 3.0 to 5.0 mils
- Finish - Series N69 Hi-Build Epoxoline, DFT 4.0 to 6.0 mils
- Total DFT - 7.0 to 11.0 mils

4. Below Grade:

- Preparation - SSPC – SP10
- Finish - Series 46H – 413 Hi-Build Tnemec-Tar, DFT 14.0 to 20.0 mils

B. Factory Primed Steel – Doors, Frames & Miscellaneous Equipment

1. Exterior Exposed:

- Preparation - Clean and Dry
- Primer - Factory Primed
- Immediate Finish - Series 135 Chembuild, DFT 3.0 to 4.0 mils
- Finish - Series 1075U Endura-Shield II, DFT 2.0 to 3.0 mils
- Total DFT - 5.0 to 7.0 mils

2. Interior Exposed:

- Preparation - Clean and Dry
- Primer - Factory Primed
- Intermediate Finish - Series 135 Chembuild, DFT 3.0 to 4.0 mils

-
- Finish - Series N69 Hi-Build Epoxoline, DFT 2.0 to 3.0 mils
 - Total DFT - 5.0 to 7.0 mils

C. Galvanized Steel and Non-Ferrous Metal –Miscellaneous Fabrications

1. Exterior Exposed:

- Preparation - Per Manufacturer’s instructions
- Primer - Series N69 Hi-Build Epoxoline, DFT 2.0 to 3.0 mils
- Finish - Series 1075U Endura-Shield, DFT 2.0 to 3.0 mils
- Total DFT - 4.0 to 6.0 mils

2. Interior Exposed:

- Preparation - Per manufacturer’s instructions
- Primer - Series N69 Hi-Build Epoxoline, DFT 2.0 to 3.0 mils
- Finish - Series N69 Hi-Build Epoxoline, DFT 2.0 to 3.0 mils
- Total DFT - 4.0 to 6.0 mils

3. Immersion:

- Preparation - SSPC-SP1 followed by abrasive blast
- Primer - Series N69 Hi-Build Epoxoline, DFT 3.0 to 5.0 mils
- Finish - Series N69 Hi-Build Epoxoline, DFT 4.0 to 6.0 mils
- Total DFT - 7.0 to 11.0 Mils

D. Ductile or Cast Iron - Pipe, Pumps and Valves

1. Exterior Exposed:

- Preparation - Per manufacturer’s instructions
- Primer - Series N69 Hi-Build Epoxoline, DFT 3.0 to 5.0 mils
- Intermediate - Series N69 Hi-Build Epoxoline, DFT 4.0 to 6.0 mils
- Finish - Series 1075U Endura-Shield, DFT 2.0 to 3.0 mils
- Total DFT - 9.0 to 14.0 mils

4. Below Ground:

Refer to Section 02500 if applicable.

5. Interior Exposed and/or Immersion:

- Preparation: - Pre manufacturer’s instructions
- Primer - Series N69 Hi-Build Epoxoline, DFT 3.0 to 5.0 mils
- Finish - Series N69 Hi-Build Epoxoline, DFT 4.0 to 6.0 mils
- Total DFT - 7.0 to 11.0 mils

E. Masonry – CMU

1. Exterior Exposed:

- Preparation - Clean and Dry
- Primer - Series 130 Envirofill, DFT 60 – 80 sq ft./gal
- Intermediate - Series 156 Enviro-Crete, DFT 4.0 to 8.0 mils

-
- Finish - Series 156 Enviro-Crete, DFT 4.0 to 8.0 mils
 - Total DFT - 8.0 to 16.0 mils plus filler

2. Interior Exposed:

- Preparation - Clean and Dry
- Primer - Series 130 Envirofill, DFT 60 – 80 sq ft./gal
- Intermediate - Series N69 Hi-Build Epoxoline, DFT 3.0 to 4.0 mils
- Finish - Series N69 Hi-Build Epoxoline, DFT 3.0 to 4.0 mils
- Total DFT - 6.0 to 8.0 mils plus filler

F. Wood

1. Interior or Exterior Exposed:

- Preparation - Clean and Dry
- Primer - Series 10-99W Tnemec Primer, DFT 2.0 to 3.5 mils
- Finish - Series 1029 Tnemec-Cryl, DFT 2.0 to 3.0 mils
- Total DFT - DFT 4.0 to 6.5 mils

G. PVC – Pipe and Valves

1. Exterior Exposed

- Preparation - Scarify
- Primer - Series N69 Hi-Build Epoxoline, DFT 2.0 to 3.0 mils.
- Finish - Series 1075U Endura-Shield II, DFT 2.0 to 3.0 mils.
- Total DFT - 4.0 to 6.0 mils

H. Secondary Containment Areas

- 1. Preparation - Scarify concrete to a CSP 3-5 minimum standard. Prior to coating, the substrate must be clean, dry and free of all contaminants.
- Primer - Series 201 at 4.0 – 12.0 mils
- Base Coat - Series 239 SC (Resin) at 6.0 – 12.0 mils
- Fiberglass Reinforcement - ¾ oz. chopped strand fiberglass mat
- Saturant Coat - Series 239 SC (Resin) at 6.0 – 12.0 mils
- Topcoat - Series 282 at 4.0 – 8.0 mils
- Total DFT - 65 mils

I. Concrete Floors-

- 1. Preparation - Scarify concrete to a CSP 3-5 minimum standard. Prior to coatings, the substrate must be clean, dry and free of all contaminants.
- Primer - Series 281 at 10.0 – 12.0 mils
- Topcoat - Series 281 at 10.0 – 12.0 mils
- Total DFT - 20 – 24 mils

Any surfaces not specifically named in the Schedule and not specifically excepted shall be prepared, primed and painted in the manner and with materials consistent with these Specifications. The Engineer shall select which of the manufacturer's products, whether the type is indicated herein or not, shall be used for such unnamed surfaces. No extra payment shall be made for this painting.

2.4 COLOR CODING FOR PIPES AND EQUIPMENT

- A. When color coding is specified, it shall consist of color code painting and identification of all exposed conduits, trough items and pipelines for the transport of gases, liquid and semi-liquids including all accessories such as valves, insulated pipe coverings, fittings, junction boxes, bus bars, connectors and all operating accessories which are integral to be whole functional mechanical pipe and electrical conduit system. Colors shall be as noted in the Paint and Color Coding Schedules attached at the end of this Section.
- B. All hangers and pipe support floor stands shall be painted the same color and with the same paint as the pipe it supports. The system shall be painted up to but not including the flanges attached to the mechanical equipment nor the flexible conduit connected to electrical motors. When more than one pipe system is supported on the same bracket, the bracket shall be painted the same color as the adjacent wall or ceiling. Colors shall be as noted in the Paint and Color Coding Schedule.
- C. All systems which are an integral part of the equipment, that is originating from the equipment and returning to the same piece of equipment, shall be painted between and up to but not including, the fixed flanges or connections on the equipment.
- D. The color code establishes, defines and assigns a definite color for each category of pipe. Pipelines which are not listed on the Schedule of Color Code Paints shall be assigned a color by the Engineer and shall be treated as an integral part of the Contract.
- E. Banding for pipes shall be as specified in the Paint and Color Coding Schedule. Bands shall be 2 inches wide and spaced at 2 feet on center.
- F. Color Schedule

| Item | Color |
|----------------------------|--|
| Raw Water | 110GN Clover |
| Settled or Clarified Water | 10GN Aqua Sky |
| Finished or Potable Water | 11SF Safety Blue |
| Alum/Primary Coagulant | 04SF Safety Orange |
| Ammonia | 11WH White |
| Carbon Slurry | 35GR Black |
| Caustic | 02SF Safety Yellow with 09SF Safety Green band |
| Chlorine Gas | 02SF Safety Yellow |

| | |
|----------------------------|---|
| Fluoride | 25BLFountainbleu with 06SF Safety Red Band |
| Lime Slurry | 37GN Irish Spring |
| Ozone | 02SF Safety Yellow with 04SF Safety Orange band |
| Phosphate Compounds | 37GN Irish Spring with 06SF Safety Red band |
| Polymers or Coagulant Aids | 04SF Safety Orange with 09SF Safety Green band |
| Potassium Permanganate | 14SF Purple Rain/Safety |
| Soda Ash | 37GN Irish Spring with 04SF Safety Orange band |
| Sulfuric Acid | 02SF Safety Yellow with 06SF Safety Red band |
| Sulfur Dioxide | 37GN Irish Spring with 02SF Safety Yellow band |
| Compressed Air | 91GN Balsam |
| Gas | 28RD Monterrey Tile |
| Other Lines | 32GR Light Gray |
| Hoists/Trolleys | 02SF Safety Yellow |
| Fire Protection | 06SF Safety Red |
| Alum Sludge | 84BR Weathered Bark |
| Waste/Drain Lines | 68BR Twine |
| Other Lines | As Selected by Engineer |

2.5 LETTERING OF TITLES

- A. Each pipe system shall be labeled with the name of the materials in each pipeline and alongside this an arrow indicating the direction of flow of liquids. Titles shall be as so described in attached schedule. Titles shall not be located more than 20 linear feet apart and shall also appear directly adjacent to each side of any wall the pipeline breaches, adjacent to each side of the valve regulator, flowcheck, strainer cleanout, and all pieces of equipment.
- B. Titles shall identify the contents by complete name. Identification title locations shall be determined by the Engineer but in general they shall be placed where the view is unobstructed and on the two lower quarters of pipe or covering where they are overhead. Title should be clearly visible from operating positions especially those adjacent to control valves.
- C. Titles on equipment shall be applied at eye level on machines where possible or at the upper most broad vertical surface of low equipment. Where more than one piece of the equipment item to be titled exists, the items shall be numbered consecutively as indicated on the mechanical drawings or as directed by the Engineer; for example Pump No. 1, Pump No. 2, etc. Titles shall be composed and justified on the left hand side as follows: Pump No. 1
- D. Application of titles.
 - 1. The color of the titles shall be black or white as approved, to best contrast with the color of the pipes and equipment and shall be stencil applied.

2. Stencil text is to be in ALL CAPS worded exactly as shown in the Schedule. Titles are to be printed in a single line.
3. Letter sizes

| Outside Diameter of Pipe or Covering (inches) | Size of Legend Letters (inches) |
|---|---------------------------------|
| 3/4 to 1-1/4 | 1/2 |
| 1-1/2 to 2 | 3/4 |
| 2-1/2 to 6 | 1-1/4 |
| 8 to 10 | 2-1/2 |
| More than 10 | 3-1/2 |

Equipment titles are to be two inches high.

4. Arrow sizes. Where "a" is equal to 3/4 of outside diameter of pipe or covering, the arrow shaft shall be 2 "a" long by 3/8 "a" wide. The arrow head shall be an equilateral triangle with sides equal to "a." Maximum "a" dimension shall be 6 inches.
5. When using direction arrows, point arrowhead away from pipe markers and in direction of flow. If flow can be in both directions, use a double-headed directional flow.

2.6 METAL TAGS

- A. For pipelines smaller than 3/4-inch in diameter, securely fasten metal tags, 2-1/2-inches x 1/2-inches, of 17 Birmingham Stubs Gage Brass with lettering etched and filled with enamel. Tags shall be approved by the Engineer.

2.7 FABRICATED EQUIPMENT

- A. Unless otherwise indicated all fabricated equipment shall be shop primed and shop or field finished.
- B. All items to be shop primed shall be thoroughly cleaned of all loose material prior to priming. If, in the opinion of the Engineer, any prime coating shall have been improperly applied or if material contrary to these Specifications shall have been used, that coating shall be removed by sandblasting to white metal and reprimed in accordance with the Specifications.
- C. All shop prime coats shall be of the correct materials and applied in accordance with these Specifications. Remove any prime coats not in accordance with these Specifications by sandblasting and apply the specified prime coat at no additional cost to the Owner.

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- D. Shop primed surfaces shall be cleaned thoroughly and damaged or bare spots retouched with the specified primer before the application of successive paint coats in the field.
 - E. Be responsible for and take whatever steps are necessary to properly protect the shop prime and finish coats against damage from weather or any other cause.
 - F. A shop finish coat shall be equal in appearance and protection quality to a field applied finish coat. If, in the opinion of the Engineer, a shop finish coat does not give the appearance and protection quality of other work of similar nature, prepare the surfaces and apply the coat or coats of paint as directed by the Engineer to accomplish the desired appearance and protection quality. Submit to the Engineer substantial evidence that the standard finish is compatible with the specified finish coat.
 - G. Wherever fabricated equipment is required to be sandblasted, protect all motors, drives, bearings, gears, etc., from the entry of grit. Any equipment found to contain grit shall be promptly and thoroughly cleaned.

PART 3. EXECUTION

3.1 PREPARATION OF SURFACES

- A. All surfaces to be painted shall be prepared as specified herein or in Section 09865 and shall be dry and clean before painting. Special care shall be given to thoroughly clean interior concrete and concrete block surfaces of all marks before application of finish.
- B. All metal welds, blisters, etc., shall be ground and sanded smooth in accordance with SSPC-SP-3 or in difficult and otherwise inaccessible areas by hand cleaning in accordance with SSPC-SP-2. All pits and dents shall be filled and all imperfections shall be corrected so as to provide a smooth surface for painting. All rust, loose scale, oil, grease and dirt shall be removed by use of approved solvents, wire brushing or sanding.
- C. Concrete surfaces shall have been finished as specified in Division 3. Report unsatisfactory surfaces to the Engineer. Concrete shall be free of dust, oil, curing compounds, and other foreign matter.
- D. Concrete black surface shall be smooth and cleaned of all dust, efflorescence, chalk, loose mortar, dirt, grease, oil, tar and other foreign matter.
- E. All plastic pipe surfaces shall be lightly sanded before painting.
- F. Wood Surfaces shall be dry. Sand to obtain a smooth surface. All encrustations shall be removed.

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- G. Exposed Pipe: Bituminous coated pipe shall not be used in exposed locations. Pipe which shall be exposed after project completion shall be primed in accordance with the requirements herein. Any bituminous coated pipe which is inadvertently installed in exposed locations shall be sandblasted clean before priming and painting. After installation all exterior, exposed flanged joints shall have the gap between adjoining flanges sealed with a single component polysulfide sealant to prevent rust stains.
- H. Primed or Previously Painted Surfaces and Nonferrous Surfaces: All coated surfaces shall be cleaned prior to application of successive coats. All nonferrous metals not to be coated shall be cleaned. This cleaning shall be done in accordance with SSPC-SP-1, Solvent Cleaning.
- I. Shop-Finished Surfaces: All shop-coated surfaces shall be protected from damage and corrosion before and after installation by treating damaged areas immediately upon detection. Abraded or corroded spots on shop-coated surfaces shall be "Hand Cleaned" and then touched up with the same materials as the shop coat. All shop coated surfaces which are faded, discolored, or which require more than minor touch-up in the opinion of the Engineer shall receive new surface preparation before being repainted. Cut edges of galvanized sheets and exposed threads and cut ends of galvanized piping, electrical conduit, and metal pipe sleeves, that are not to be finished painted, shall be "Solvent Cleaned" and primed with zinc dust-zinc oxide metal primer.
- J. Galvanized and Zinc-Copper Alloy Surfaces: These surfaces to be painted shall be "Solvent Cleaned" and treated as hereinafter specified. Such surfaces not to be painted shall be "Solvent Cleaned."
- K. Aluminum embedded or in contact with concrete must be painted with one shop coat of zinc chromate followed by one heavy coat of aluminum pigmented asphalt paint.

3.2 WORKMANSHIP

- A. General:
1. Primer and paint used for a particular surface shall, in general, be as scheduled for that type of new surface. Confirm with the paint manufacturer that the paint proposed for a particular repaint condition will be compatible with existing painted surface. Sample repainted areas on the actual site will be required to insure this compatibility. Finished repainted areas shall be covered by the same guarantee specified for remainder of work.
 2. At the request of the Engineer, samples of the finished work prepared in strict accordance with these Specifications shall be furnished and all painting shall be equal in quality to the approved samples. Finished areas shall be adequate for the purpose of determining the quality of workmanship. Experimentation

with color tints shall be furnished to the satisfaction of the Engineer where standard chart colors are not satisfactory.

3. Protection of furniture and other movable objects, equipment, fittings and accessories shall be provided throughout the painting operations. Canopies of lighting fixtures shall be loosened and removed from contact with surface, covered and protected and reset upon completion. Remove all electric plates, surface hardware, etc., before painting, protect and replace when completed. Mask all machinery name plates and all machined parts not receiving a paint finish. Dripped or spattered paint shall be promptly removed. Lay drop cloths in all areas where painting is being done to adequately protect flooring and other work from all damage during the operation and until the finished job is accepted.
4. On metal surfaces apply each coat of paint at the rate specified by the manufacturer to achieve the minimum dry mil thickness required. If material has thickened or must be diluted for application by spray gun, the coating shall be built up to the same film thickness achieved with undiluted material. One gallon of paint as originally furnished by the manufacturer shall not cover a greater area when applied by spray gun than when applied unthinned by brush. Deficiencies in film thickness shall be corrected by the application of an additional coat(s). On masonry, application rates will vary according to surface texture, however, in no case shall the manufacturer's stated coverage rate be exceeded. On porous surfaces, it shall be the painter's responsibility to achieve a protective and decorative finish either by decreasing the coverage rate or by applying additional coats of paint.
5. Paints shall be mixed in proper containers of adequate capacity. All paints shall be thoroughly stirred before use and shall be kept stirred while using. No unauthorized thinners or other materials shall be added to any paint.
6. Only skill painters shall be used on the work and specialists shall be employed where required.

B. Field Priming:

1. Steel members, metal castings, mechanical and electrical equipment and other metals which are shop primed before delivery at the site will not require a prime coat on the job. All piping and other bare metals to be painted shall receive one coat of primer before exposure to the weather, and this prime coat shall be the first coat as specified in the painting schedule.
2. Equipment which is customarily shipped with a baked-on enamel finish or with a standard factory finish shall normally be field painted unless the prefinished equipment is specifically color selected and unless the finish has not been damaged in transit or during installation. Surfaces that have been

shop painted and have been damaged or where the shop coats or coats of paint have deteriorated, shall be properly cleaned and retouched before any successive painting is done on them in the field. All such field painting shall match as nearly as possible the original finish.

C. Field Painting:

1. All painting at the site shall be designated as Field Painting.
2. All paint shall be at room temperature before applying, and no painting shall be done when the temperature is below 50 degrees F, in dust-laden air, when rain or snow is falling, or until all traces of moisture have completely disappeared from the surface to be painted.
3. Successive coats of paint shall be tinted so as to make each coat easily distinguishable from each other with the final undercoat tinted to the approximate shade of the finished coat.
4. Finish surfaces shall not show brush marks or other irregularities. Undercoats shall be thoroughly and uniformly sanded with No. 00 sandpaper or equal to remove defects and provide a smooth even surface. Top and bottom edges of doors shall be painted and all exterior trim shall be back-primed before installation.
5. Painting shall be continuous and shall be accomplished in an orderly manner so as to facilitate inspection. All exterior concrete and masonry paint shall be performed at one continuous manner structure by structure. Materials subject to weathering shall be prime coated as quickly as possible. Surfaces of exposed members that will be inaccessible after erection shall be cleaned and painted before erection.
6. All materials shall be brush painted unless spray painting is specifically approved by the Engineer. The Contractor shall be responsible for all damage caused by overspray or drifting.
7. All surfaces to be painted as well as the atmosphere in which painting is to be done shall be kept warm and dry by heating and ventilation, if necessary, until each coat of paint has hardened. Any defective paint shall be scraped off and repainted in accordance with the Engineer's directions.
8. Before final acceptance of the work, all damaged surfaces of paint shall be cleaned and repainted as directed by the Engineer.

3.3 CLEANUP

- A. The premises shall at all times be kept free from accumulation of waste material and rubbish caused by employees or work. At the completion of the painting remove all

tools, scaffolding, surplus materials, and all rubbish from and about the buildings and leave work "broom clean" unless more exactly specified.

- B. Upon completion, remove all paint where it has been spilled, splashed or splattered on all surfaces, including floors, fixtures, equipment, furniture, etc., leaving the work ready for inspection.

3.4 ONE YEAR WARRANTY

- A. Owner will set date for one-year inspection of coating systems.
- B. Inspection shall be attended by Owner, Contractor, Engineer and manufacturer's representative.
- C. Repair deficiencies in coating systems as determined by Engineer in accordance with manufacturer's instructions.

END OF SECTION