Specifications
and
Contract Documents

CITY OF PITTSBURG, KS
WATER TOWER BLASTING & PAINTING

December 2017
OA Project No. 017-3775

550 St. Louis Street
Springfield, MO 65806
Phone: 417.890.8802 Fax: 417.890.8805
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INVITATION FOR BIDS
Date: Published in the The Morning Sun on December 27th, 2017.

Sealed bids for the construction of Water Tower Blasting & Painting – Pittsburg, Kansas will be received by City of Pittsburg, Kansas (Owner) at the office of the City Clerk, City Hall, 201 W. 4th St., P.O. Box 688, Pittsburg, Kansas 66762, until 2:00 p.m. local time on Tuesday, January 23rd, 2018, at which time the Bids received will be publicly opened and read aloud in the City Hall Conference Room. Bids received after the designated closing time will be returned unopened.

The project consists of a base bid of fully blasting and re-painting the interior and exterior of the South Tower as well as performing specified tank modifications; along with alternate bids for the South Tower staircase removal with ladder replacement, and surface preparation and re-coating the exterior of the Industrial Tower as well as performing specified tank modifications. Bids will be received on a lump sum basis.

A pre-bid conference is scheduled for 10:00 a.m., local time on Wednesday, January 10th, 2018, on-site of the South Tower located at the corner of Joplin and Madison Streets in Pittsburg, Kansas. Attendance at the pre-bid conference is mandatory for bids to be accepted.

Bid security shall be furnished in accordance with the Instruction to Bidders. The check(s) or bond(s) shall be made payable to City of Pittsburg, Kansas, as security that the bidder(s) to whom the award(s) are made will enter into contract to perform the work bid upon and furnish the required bonds and insurance.

Bids shall be addressed to the City Clerk, and the envelope containing bids shall be plainly marked, “BIDS: Water Tower Blasting & Painting”.

Contractors desiring Drawings and Specifications for use in preparing bids may obtain a set of such documents from Olsson Associates, 550 St. Louis Street, Springfield, MO 65806 upon payment of Ten Dollars ($10.00) for each set, which is non-refundable. Plans and Specifications have also been posted to the City of Pittsburg’s Procurement and Contracts Internet website and can be downloaded free of charge by going to https://www.pittks.org/city-government/bids-and-proposals/. If a contractor chooses to download the documents from the website, it shall be the contractor's responsibility to monitor this website on a regular basis for any changes/addenda.

Questions pertaining to the project should be directed to Jerry Jesky, PE with Olsson Associates, at 417-890-8802, or by email at jjesky@olssonassociates.com

The awarded bidder shall supply a Performance Bond and a Payment Bond executed by a corporate surety licensed in the State of Kansas in an amount equal to 100 percent of the contract price as part of his contract.

The City of Pittsburg reserves the right to accept any bid which it deems most advantageous to the City, and to reject any or all bids submitted and to hold as many bids as it desires for consideration for a period of sixty (60) days after the bids are open.

Owner: City of Pittsburg, Kansas

Water Tower Blasting & Painting
Pittsburg, Kansas
OA Project No. 017-3775
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.

ARTICLE 2 – COPIES OF BIDDING DOCUMENTS

2.01 Complete sets of the Bidding Documents may be obtained from Olsson Associates, 550 St. Louis Street, Springfield, MO 65806 (417-890-8802) upon payment of Ten Dollars ($10.00) for each set, which is non-refundable. Bidding documents have also been posted to the City of Pittsburg’s Procurement and Contracts Internet website and can be downloaded free of charge by going to https://www.pittks.org/city-government/bids-and-proposals/. If a contractor chooses to download the documents from the website, it shall be the contractor’s responsibility to monitor this website on a regular basis for any changes/addenda.

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 providing 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.

ARTICLE 3 – QUALIFICATIONS OF BIDDERS

3.01 To demonstrate Bidder’s qualifications to perform the Work, after submitting its Bid and within five (5) days of Owner’s request, Bidder shall submit (a) written evidence establishing its qualifications such as financial data, previous experience, and present commitments, and (b) the following additional information:

3.02 A Bidder’s failure to submit required qualification information within the times indicated may disqualify Bidder from receiving an award of the Contract.

3.03 No requirement in this Article 3 to submit information will prejudice the right of Owner to seek additional pertinent information regarding Bidder’s qualifications.

3.04 Bidder is advised to carefully review those portions of the Bid Form requiring Bidder’s representations and certifications.

ARTICLE 4 – SITE AND OTHER AREAS; EXISTING SITE CONDITIONS; EXAMINATION OF SITE; OWNER’S SAFETY PROGRAM; OTHER WORK AT THE SITE

4.01 Site and Other Areas

   A. The Site is identified in the Bidding Documents. By definition, the Site includes rights-of-way, easements, and other lands furnished by Owner for the use of the Contractor. Any additional lands required for temporary construction facilities, construction equipment, or storage of
Instructions to Bidders

materials and equipment, and any access needed for such additional lands, are to be obtained and paid for by Contractor.

4.02 Existing Site Conditions

A. Subsurface and Physical Conditions; Hazardous Environmental Conditions

1. The Supplementary Conditions identify:
   a. those reports known to Owner of explorations and tests of subsurface conditions at or adjacent to the Site.
   b. those drawings known to Owner of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities).
   c. reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site.
   d. Technical Data contained in such reports and drawings.

2. Owner will make copies of reports and drawings referenced above available to any Bidder on request. These reports and drawings are not part of the Contract Documents, but the Technical Data contained therein upon whose accuracy Bidder is entitled to rely, as provided in the General Conditions, has been identified and established in 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.

3. If the Supplementary Conditions do not identify Technical Data, the default definition of Technical Data set forth in Article 1 of the General Conditions will apply.

B. Underground Facilities: Information and data shown or indicated in the Bidding Documents with respect to existing Underground Facilities at or contiguous to the Site are set forth in the Contract Documents and are based upon information and data furnished to Owner and Engineer by owners of such Underground Facilities, including Owner, or others.

C. Adequacy of Data: 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 5.03, 5.04, and 5.05 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 5.06 of the General Conditions.

4.03 Site Visit and Testing by Bidders

A. Bidder may schedule a Site visit during normal working hours by appointment only, and shall not disturb any ongoing operations at the Site. Appointments should be made by contacting Matt Bacon, Director of Public Utilities, 620-240-5126.

B. Bidder is not required to conduct any subsurface testing, or exhaustive investigations of Site conditions.
Instructions to Bidders

C. On request, and to the extent Owner has control over the Site, and schedule permitting, the Owner will provide Bidder access to the Site to conduct such additional examinations, investigations, explorations, tests, and studies as Bidder deems necessary for preparing and submitting a successful Bid. Owner will not have any obligation to grant such access if doing so is not practical because of existing operations, security or safety concerns, or restraints on Owner’s authority regarding the Site.

D. Bidder shall comply with all applicable Laws and Regulations regarding excavation and location of utilities, obtain all permits, and comply with all terms and conditions established by Owner or by property owners or other entities controlling the Site with respect to schedule, access, existing operations, security, liability insurance, and applicable safety programs.

E. 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.

4.04 Owner’s Safety Program

A. Site visits and work at the Site may be governed by an Owner safety program. As the General Conditions indicate, if an Owner safety program exists, it will be noted in the Supplementary Conditions.

4.05 Other Work at the Site

A. Reference is made to Article 8 of the Supplementary Conditions for the identification of the general nature of other work of which Owner is aware (if any) that is to be performed at the Site by Owner or others (such as utilities and other prime contractors) and relates to the Work contemplated by these Bidding Documents. If Owner is party to a written contract for such other work, then on request, Owner will provide to each Bidder access to examine such contracts (other than portions thereof related to price and other confidential matters), if any.

ARTICLE 5 – BIDDER’S REPRESENTATIONS

5.01 It is the responsibility of each Bidder before submitting a Bid to:

A. examine and carefully study the Bidding Documents, and any data and reference items identified in the Bidding Documents;

B. visit the Site, conduct a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and satisfy itself as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work;

C. become familiar with and satisfy itself as to all 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 adjacent to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings, and (2) reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings;

E. consider the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained
Instructions to Bidders

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; and (3) Bidder’s safety precautions and programs;

F. agree, based on the information and observations referred to in the preceding paragraph, that at the time of submitting its Bid 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 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;

I. determine that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance and furnishing of the Work; and

J. agree that the submission of a Bid will constitute an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article, that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

ARTICLE 6 – PRE-BID CONFERENCE - MANDATORY

6.01 A mandatory pre-Bid conference will be held at the time and location stated in the invitation or advertisement to bid. Representatives of Owner and Engineer will be present to discuss the Project. Attendance at the pre-bid conference is mandatory for bids to be accepted. Engineer will transmit to all prospective Bidders of record such Addenda as Engineer considers necessary in response to questions arising at the conference. Oral statements may not be relied upon and will not be binding or legally effective.

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 delivered to all parties recorded as having received the Bidding Documents. Questions received less than seven 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, supplement, or change the Bidding Documents.

ARTICLE 8 – BID SECURITY

8.01 A Bid must be accompanied by Bid security made payable to Owner in an amount of 5% percent of Bidder’s maximum Bid price (determined by adding the base bid and all alternates) and in the form of a certified check, bank money order, or a Bid bond (on the form included in the Bidding
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Documents) issued by a surety meeting the requirements of Paragraphs 6.01 and 6.02 of the General Conditions.

8.02 The Bid security of the apparent Successful Bidder will be retained until Owner awards the contract to such Bidder, and 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 released. 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.

8.03 The Bid security of other Bidders that 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 Contract or 61 days after the Bid opening, whereupon Bid security furnished by such Bidders will be released.

8.04 Bid security of other Bidders that Owner believes do not have a reasonable chance of receiving the award will be released 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, for failure to timely attain a Milestone, Substantial Completion, or completion of the Work in readiness for final payment, are set forth in the Agreement.

ARTICLE 11 – SUBSTITUTE AND “OR-EQUAL” ITEMS

11.01 The Contract for the Work, as awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents without consideration during the bidding and Contract award process of possible substitute or “or-equal” items. In cases in which the Contract allows the Contractor to request that Engineer authorize the use of a substitute or “or-equal” item of material or equipment, application for such acceptance may not be made to and will not be considered by Engineer until after the Effective Date of the Contract.

11.02 All prices that Bidder sets forth in its Bid shall be based on the presumption that the Contractor will furnish the materials and equipment specified or described in the Bidding Documents, as supplemented by Addenda. Any assumptions regarding the possibility of post-Bid approvals of “or-equal” or substitution requests are made at Bidder’s sole risk.

ARTICLE 12 – SUBCONTRACTORS, SUPPLIERS, AND OTHERS

12.01 A Bidder shall be prepared to retain specific Subcontractors, Suppliers, or other individuals or entities for the performance of the Work if required by the Bidding Documents (most commonly in the Specifications) to do so. If a prospective Bidder objects to retaining any such Subcontractor, Supplier, or other individual or entity, and the concern is not relieved by an Addendum, then the prospective Bidder should refrain from submitting a Bid.
Instructions to Bidders

12.02 Subsequent to the submittal of the Bid, Owner may not require the Successful Bidder or Contractor to retain any Subcontractor, Supplier, or other individual or entity against which Contractor has reasonable objection.

12.03 The apparent Successful Bidder, and any other Bidder so requested, shall within five days after Bid opening, submit to Owner a list of the Subcontractors or Suppliers proposed. If requested by Owner, 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, or other individual or entity. 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 an acceptable substitute, in which case apparent Successful Bidder shall submit a 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.

12.04 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, or other individuals or entities. Declining to make requested substitutions will 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 subsequent revocation of such acceptance as provided in Paragraph 7.06 of the General Conditions.

ARTICLE 13 – PREPARATION OF BID

13.01 The Bid Form is included with the Bidding Documents.

A. 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 package, Bid item, alternate, adjustment unit price item, and unit price item listed therein.

B. If the Bid Form expressly indicates that submitting pricing on a specific alternate item is optional, and Bidder elects not to furnish pricing for such optional alternate item, then Bidder may enter the words “No Bid” or “Not Applicable.”

13.02 A Bid by a corporation shall be executed in the corporate name by a corporate officer (whose title must appear under the signature), accompanied by evidence of authority to sign. The corporate address and state of incorporation shall be shown.

13.03 A Bid by a limited liability company shall be executed in the name of the firm by a member or other authorized person 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.

13.04 A Bid by an individual shall show the Bidder’s name and official address.

13.05 A Bid by a joint venture shall be executed by an authorized representative of each joint venturer in the manner indicated on the Bid Form. The official address of the joint venture shall be shown.

13.06 All names shall be printed in ink below the signatures.

13.07 The Bid shall contain an acknowledgment of receipt of all Addenda, the numbers of which shall be filled in on the Bid Form.
Instructions to Bidders

13.08 Postal and e-mail addresses and telephone number for communications regarding the Bid shall be shown.

13.09 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

14.01 Lump Sum and Package Bids

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

B. Bidders may submit a Bid on any individual package or any combination of package, as set forth in the Bid Form.

C. Submission of a Bid on any package signifies Bidder’s willingness to enter into a Contract for that package alone at the price offered.

D. If Bidder submits Bids on individual packages and a Bid based on a combination of those packages, such combined Bid need not be the sum of the Bids on the individual packages.

E. Bidders offering a Bid on one or more packages shall be capable of completing the Work covered by those packages within the time period stated in the Agreement.

ARTICLE 15 – SUBMITTAL OF BID

15.01 A Bid shall be received no later than the date and time prescribed and at the place indicated in the advertisement or invitation to bid and shall be enclosed in a plainly marked package 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 package plainly marked on the outside with the notation “BID ENCLOSED.” A mailed Bid shall be addressed as stated in the Invitation for Bids.

15.02 Bids received after the date and time prescribed for the opening of bids, or not submitted at the correct location or in the designated manner, will not be accepted and will be returned to the Bidder unopened.

ARTICLE 16 – MODIFICATION AND WITHDRAWAL OF BID

16.01 A Bid may be withdrawn by 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. Upon receipt of such notice, the unopened Bid will be returned to the Bidder.

16.02 If a Bidder wishes to modify its Bid prior to Bid opening, Bidder must withdraw its initial Bid in the manner specified in Paragraph 16.01 and submit a new Bid prior to the date and time for the opening of Bids.

16.03 If within 24 hours after Bids are opened any Bidder files a duly signed written notice with Owner and promptly thereafter demonstrates to the reasonable satisfaction of Owner that there was a material and substantial mistake in the preparation of its Bid, that Bidder may withdraw its Bid.
Instructions to Bidders

and the Bid security will be returned. Thereafter, if the Work is rebid, that Bidder will be disqualified from further bidding on the Work.

ARTICLE 17 – OPENING OF BIDS

17.01 Bids will be opened at the time and place indicated in the advertisement or invitation to bid and, unless obviously non-responsive, read aloud publicly. 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 will reject the Bid of any Bidder that Owner finds, after reasonable inquiry and evaluation, to not be responsible. If Bidder purports to add terms or conditions to its Bid, takes exception to any provision of the Bidding Documents, or attempts to alter the contents of the Contract Documents for purposes of the Bid, then the Owner will reject the Bid as nonresponsive; provided that Owner also reserves the right to waive all minor informalities not involving price, time, or changes in the Work.

19.02 If Owner awards the contract for the Work, such award shall be to the responsible Bidder submitting the lowest responsive Bid.

19.03 Evaluation of Bids

A. 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.

B. In the comparison of Bids, alternates will be applied as listed in the Bid Form. For comparison purposes, alternates will be accepted, until doing so would cause the budget to be exceeded or until no longer advantageous to Owner. After determination of the Successful Bidder based on this comparative process and on the responsiveness, responsibility, and other factors set forth in these Instructions, the award may be made to said Successful Bidder on its base Bid and any combination of its additive alternate Bids for which Owner determines funds will be available at the time of award.

19.04 In evaluating whether a Bidder is responsible, Owner will consider the qualifications of the Bidder and may consider the qualifications and experience of Subcontractors and Suppliers proposed for those portions of the Work for which the identity of Subcontractors and Suppliers must be submitted as provided in the Bidding Documents.

19.05 Owner may conduct such investigations as Owner deems necessary to establish the responsibility, qualifications, and financial ability of Bidders and any proposed Subcontractors or Suppliers.
Instructions to Bidders

ARTICLE 20 – BONDS AND INSURANCE

20.01 Article 6 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 Agreement (executed by Successful Bidder) to Owner, it shall be accompanied by required bonds and insurance documentation.

ARTICLE 21 – SIGNING OF AGREEMENT

21.01 When Owner issues a Notice of Award to the Successful Bidder, it shall be accompanied by the unexecuted counterparts of the Agreement along with the other Contract Documents as identified in the Agreement. Within 15 days thereafter, Successful Bidder shall execute and deliver the required number of counterparts of the Agreement (and any bonds and insurance documentation required to be delivered by the Contract Documents) to Owner. Within ten days thereafter, Owner shall deliver one fully executed counterpart of the Agreement to Successful Bidder, together with printed and electronic copies of the Contract Documents as stated in Paragraph 2.02 of the General Conditions.

ARTICLE 22 – SALES AND USE TAXES

22.01 Owner is exempt from Kansas state sales and use taxes on materials and equipment to be incorporated in the Work. Said taxes shall not be included in the Bid. Refer to Paragraph SC-7.09 of the Supplementary Conditions for additional information.

ARTICLE 23 – RETAINAGE

23.01 Provisions concerning Contractor’s rights to deposit securities in lieu of retainage are set forth in the Agreement.

ARTICLE 24 – HOLD HARMLESS AGREEMENT

24.01 The work on this contract shall be completed in the time as specified on the proposal. If the work is not complete by that date, the Contractor shall indemnify and save harmless the Owner from all units, actions, or claims or such character, name and description brought for or on account of said failure to complete the work as stated.

ARTICLE 25 – HISTORICAL AND ARCHAEOLOGICAL

25.01 If during the course of construction, evidence of deposits of historical or archaeological interest is found, the Contractor shall cease operations affecting the find and shall notify the Owner who shall notify the State, c/o Cultural Resources Division, Kansas State Historical Society, 6425 SW Sixth Ave., Topeka, KS, 66615, Phone (785) 272-8681. No further disturbance of the deposits shall ensue until the Contractor has been notified by the Owner that he may proceed. The Owner will issue a Notice to Proceed only after the Kansas Department of Health and Environment (KDHE) and Owner. Compensation to the Contractor, if any, for lost time or changes in construction to avoid the find, shall be determined in accordance with changed conditions or change order provisions of the specifications.
BID FORM

Project Identification:
City of Pittsburg, Kansas Water Tower Blasting & Painting

Contract Identification and Number:
Olsson Project No. 017-3775

ARTICLE 1 – BID RECIPIENT

1.01 This Bid is submitted to:
Office of the City Clerk
City of Pittsburg
201 W. 4th Street
P.O. Box 688
Pittsburg, Kansas 66762

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

ARTICLE 2 – BIDDER’S 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.

ARTICLE 3 – BIDDER’S REPRESENTATIONS

3.01 In submitting this Bid, Bidder represents that:

A. Bidder has examined and carefully studied the Bidding Documents, and any data and reference items identified in the Bidding Documents, and hereby acknowledges receipt of the following Addenda:

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<tr>
<th>Addendum No.</th>
<th>Addendum Date</th>
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</table>

B. Bidder has visited the Site, conducted a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and satisfied itself as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

C. Bidder is familiar with and has satisfied itself as to all Laws and Regulations that may affect cost, progress, and performance of the Work.
D. There are no reports of explorations and tests of subsurface conditions at or adjacent to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site for this project.

E. Bidder has considered the information known to Bidder itself; 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 any 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; and (3) Bidder’s safety precautions and programs.

F. Bidder agrees, based on the information and observations referred to in the preceding paragraph, that no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price 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 confirms that 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 and furnishing of the Work.

J. The submission of this Bid constitutes an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article, and that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

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 Bidder will complete the Work in accordance with the Contract Documents for the following price(s) (contractor to circle “Add” or “Deduct” as applicable):

<table>
<thead>
<tr>
<th>Description</th>
<th>Lump Sum</th>
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<tbody>
<tr>
<td>Blast and Paint Interior and Exterior of South Tower and Perform Specified Tank Modifications</td>
<td>$</td>
</tr>
<tr>
<td>Remove and Dispose of South Tower Spiral Staircase and Replace with a Vertical Ladder with Safety Climb Equipment</td>
<td>$</td>
</tr>
<tr>
<td>Power Wash and Paint Exterior of Industrial Tower and Perform Specified Tank Modifications</td>
<td>$</td>
</tr>
<tr>
<td>Paint logo on one side of South Tower</td>
<td>$</td>
</tr>
<tr>
<td>Paint logo on two sides of South Tower</td>
<td>$</td>
</tr>
<tr>
<td>Paint logo on one side of Industrial Tower</td>
<td>$</td>
</tr>
</tbody>
</table>

Bidder to include in other Bid item(s) the other costs (if any) associated with accepting such assignment and administering the assigned contract.

Total of All Lump Sums $
ARTICLE 6 – TIME OF COMPLETION

6.01 Bidder agrees that the Work will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before July 31, 2018.

6.02 Bidder accepts the provisions of the Agreement as to liquidated damages.

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 a 5% Bid Bond and/or Cashier’s Check;
   B. List of Proposed Subcontractors;
   C. List of Proposed Suppliers;
   D. List of Project References;
   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. Contractor’s License No.: __________ 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. Required Bidder Qualification Statement with supporting data.

ARTICLE 8 – DEFINED TERMS

8.01 The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.
ARTICLE 9 – BID SUBMITTAL

BIDDER: [Indicate correct name of bidding entity]

By: 
[Signature] 
[Printed name] 
(If Bidder is a corporation, a limited liability company, a partnership, or a joint venture, attach evidence of authority to sign.) 

Attest: 
[Signature] 
[Printed name] 

Title: 

Submittal Date: 

Address for giving notices: 

Telephone Number: 

Fax Number: 

Contact Name and e-mail address: 

Bidder’s License No.: 
(Where applicable)
BID BOND (TEMPLATE)

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):

BID

Bid Due Date: __________

Description (Project Name—Include Location):

BOND

Bond Number: __________

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

Bidder’s Name and Corporate Seal

By: ______________________________

Signature

Print Name ______________________________

Title ______________________________

Attest: ______________________________

Signature ______________________________

Title ______________________________

SURETY

Surety’s Name and Corporate Seal

By: ______________________________

Signature (Attach Power of Attorney)

Print Name ______________________________

Title ______________________________

Attest: ______________________________

Signature ______________________________

Title ______________________________

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

Water Tower Blasting & Painting C430-1
Pittsburg, Kansas
OA Project No. 017-3775
Bid Bond – Penal Sum Form

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 the 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 the 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.
QUALIFICATIONS STATEMENT

THE INFORMATION SUPPLIED IN THIS DOCUMENT IS CONFIDENTIAL TO THE EXTENT PERMITTED BY LAWS AND REGULATIONS

1. SUBMITTED BY:

   Official Name of Firm: __________________________________________

   Address: ______________________________________________________
   _____________________________________________________________
   _____________________________________________________________

2. SUBMITTED TO:  City of Pittsburg, KS

3. SUBMITTED FOR:

   Owner:  City of Pittsburg, KS

   Project Name: Water Tower Blasting & Painting

   TYPE OF WORK: Water tower blasting and painting

4. CONTRACTOR'S CONTACT INFORMATION

   Contact Person: ________________________________________________

   Title: _________________________________________________________

   Phone: _________________________________________________________

   Email: _________________________________________________________

Pittsburg, Kansas
OA Project No. 017-3775
Qualifications Statement

5. AFFILIATED COMPANIES:
   Name: 
   Address: 

6. TYPE OF ORGANIZATION:
   - SOLE PROPRIETORSHIP
     Name of Owner: 
     Doing Business As: 
     Date of Organization: 
   - PARTNERSHIP
     Date of Organization: 
     Type of Partnership: 
     Name of General Partner(s): 
   - CORPORATION
     State of Organization: 
     Date of Organization: 
     Executive Officers:
       - President: 
       - Vice President(s): 
       - Treasurer: 
       - Secretary:
Qualifications Statement

☐ LIMITED LIABILITY COMPANY

State of Organization: 

Date of Organization: 

Members:

☐ JOINT VENTURE

State of Organization: 

Date of Organization: 

Form of Organization: 

Joint Venture Managing Partner
- Name: 
- Address: 

Joint Venture Managing Partner
- Name: 
- Address: 

Joint Venture Managing Partner
- Name: 
- Address: 

Water Tower Blasting & Painting
Pittsburg, Kansas
OA Project No. 017-3775
7. LICENSING

Jurisdiction: 
Type of License: 
License Number: 
Jurisdiction: 
Type of License: 
License Number: 

8. CERTIFICATIONS

Disadvantage Business Enterprise: 
Minority Business Enterprise: 
Woman Owned Enterprise: 
Small Business Enterprise: 
Other (______________________): 

CERTIFIED BY:

9. BONDING INFORMATION

Bonding Company: 
Address: 

Bonding Agent: 
Address: 

Contact Name: 
Phone: 
Aggregate Bonding Capacity: 
Available Bonding Capacity as of date of this submittal: 
10. FINANCIAL INFORMATION

Financial Institution: ________________________________

Address: _________________________________________

Account Manager: _________________________________

Phone: __________________________________________

INCLUDE AS AN ATTACHMENT AN AUDITED BALANCE SHEET FOR EACH OF THE LAST 3 YEARS

11. CONSTRUCTION EXPERIENCE:

Current Experience:

List on Schedule A all uncompleted projects currently under contract (If Joint Venture list each participant’s projects separately).

Previous Experience:

List on Schedule B all projects completed within the last 5 Years (If Joint Venture list each participant's projects separately).

Has firm listed in Section 1 ever failed to complete a construction contract awarded to it?

☐ YES  ☐ NO

If YES, attach as an Attachment details including Project Owner's contact information.

Has any Corporate Officer, Partner, Joint Venture participant or Proprietor ever failed to complete a construction contract awarded to them in their name or when acting as a principal of another entity?

☐ YES  ☐ NO

If YES, attach as an Attachment details including Project Owner's contact information.

Are there any judgments, claims, disputes or litigation pending or outstanding involving the firm listed in Section 1 or any of its officers (or any of its partners if a partnership or any of the individual entities if a joint venture)?

☐ YES  ☐ NO

If YES, attach as an Attachment details including Project Owner's contact information.
Qualifications Statement

12. SAFETY PROGRAM:

Name of Contractor's Safety Officer: ________________________________

Include the following as attachments:

Provide as an Attachment Contractor's (and Contractor's proposed Subcontractors and Suppliers furnishing or performing Work having a value in excess of 10 percent of the total amount of the Bid) OSHA No. 500- Log & Summary of Occupational Injuries & Illnesses for the past 5 years.

Provide as an Attachment Contractor's (and Contractor's proposed Subcontractors and Suppliers furnishing or performing Work having a value in excess of 10 percent of the total amount of the Bid) list of all OSHA Citations & Notifications of Penalty (monetary or other) received within the last 5 years (indicate disposition as applicable) - IF NONE SO STATE.

Provide as an Attachment Contractor's (and Contractor's proposed Subcontractors and Suppliers furnishing or performing Work having a value in excess of 10 percent of the total amount of the Bid) list of all safety citations or violations under any state all received within the last 5 years (indicate disposition as applicable) - IF NONE SO STATE.

Provide the following for the firm listed in Section V (and for each proposed Subcontractor furnishing or performing Work having a value in excess of 10 percent of the total amount of the Bid) the following (attach additional sheets as necessary):

- Workers' compensation Experience Modification Rate (EMR) for the last 5 years:

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<thead>
<tr>
<th>YEAR</th>
<th>EMR</th>
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<tbody>
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<td>YEAR</td>
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<td>EMR</td>
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- Total Recordable Frequency Rate (TRFR) for the last 5 years:

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<th>YEAR</th>
<th>TRFR</th>
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- Total number of man-hours worked for the last 5 Years:

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<tr>
<th>YEAR</th>
<th>TOTAL NUMBER OF MAN-HOURS</th>
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<td>YEAR</td>
<td>TOTAL NUMBER OF MAN-HOURS</td>
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</tbody>
</table>
Qualifications Statement

Provide Contractor's (and Contractor's proposed Subcontractors and Suppliers furnishing or performing Work having a value in excess of 10 percent of the total amount of the Bid) Days Away From Work, Days of Restricted Work Activity or Job Transfer (DART) incidence rate for the particular industry or type of Work to be performed by Contractor and each of Contractor's proposed Subcontractors and Suppliers) for the last 5 years:

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<th>YEAR</th>
<th>DART</th>
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13. EQUIPMENT:

MAJOR EQUIPMENT:

List on Schedule C all pieces of major equipment available for use on Owner’s Project.
Qualifications Statement

I HEREBY CERTIFY THAT THE INFORMATION SUBMITTED HEREWITH, INCLUDING ANY ATTACHMENTS, IS TRUE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

NAME OF ORGANIZATION: ________________________________

BY: ________________________________

TITLE: ________________________________

DATED: ________________________________

NOTARY ATTEST:

SUBSCRIBED AND SWORN TO BEFORE ME

THIS _________ DAY OF __________, 20___

NOTARY PUBLIC - STATE OF ________________________________

MY COMMISSION EXPIRES: ________________________________

REQUIRED ATTACHMENTS

1. Schedule A (Current Experience).
2. Schedule B (Previous Experience).
3. Schedule C (Major Equipment).
4. Audited balance sheet for each of the last 3 years for firm named in Section 1.
5. Evidence of authority for individuals listed in Section 7 to bind organization to an agreement.
6. Resumes of officers and key individuals (including Safety Officer) of firm named in Section 1.
7. Required safety program submittals listed in Section 13.
8. Additional items as pertinent.
<table>
<thead>
<tr>
<th>Project Name</th>
<th>Owner's Contact Person</th>
<th>Design Engineer</th>
<th>Contract Date</th>
<th>Type of Work</th>
<th>Status</th>
<th>Cost of Work</th>
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## SCHEDULE B

### PREVIOUS EXPERIENCE (Include ALL Projects Completed within last 5 years)

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<tr>
<th>Project Name</th>
<th>Owner's Contact Person</th>
<th>Design Engineer</th>
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**PREVIOUS EXPERIENCE (Include ALL Projects Completed within last 5 years)**

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AGREEMENT
BETWEEN OWNER AND CONTRACTOR
FOR CONSTRUCTION CONTRACT (TEMPLATE)

THIS AGREEMENT is by and between

City of Pittsburg, Kansas

("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:

ARTICLE 2 – THE PROJECT

2.01 The Project, of which the Work under the Contract Documents is a part, is generally described as follows: Water Tower Blasting & Painting, Pittsburg, Kansas.

ARTICLE 3 – ENGINEER

3.01 The Project has been designed by Olsson Associates.

3.02 The Owner has retained Olsson Associates ("Engineer") 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 Contract Times: Dates

A. The Work will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before July 31, 2018.

4.03 Liquidated Damages

A. Contractor and Owner recognize that time is of the essence of this Agreement and that Owner will suffer financial loss if the Work is not completed within the times specified in Paragraph 4.02 above, plus any extensions thereof allowed in accordance with Article 11 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 Five Hundred Dollars ($500.00) for each day that expires
after the time specified in paragraph 3.02 for completion and readiness for final payment until the Work is completed and ready for final payment.

4.04 **Special Damages**

A. In addition to the amount provided for liquidated damages, Contractor shall reimburse Owner (1) for any fines or penalties imposed on Owner as a direct result of the Contractor’s failure to attain Substantial Completion according to the Contract Times, and (2) for the actual costs reasonably incurred by Owner for engineering, construction observation, inspection, and administrative services needed after the time specified in Paragraph 4.02 for Substantial Completion (as duly adjusted pursuant to the Contract), until the Work is substantially complete.

B. After Contractor achieves Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Times, Contractor shall reimburse Owner for the actual costs reasonably incurred by Owner for engineering, construction observation, inspection, and administrative services needed after the time specified in Paragraph 4.02 for Work to be completed and ready for final payment (as duly adjusted pursuant to the Contract), until the Work is completed and ready for final payment.

**ARTICLE 5 – CONTRACT PRICE**

5.01 Owner shall pay Contractor for completion of the Work in accordance with the Contract Documents the amounts that follow, subject to adjustment under the Contract:

A. For all Work other than Unit Price Work, a lump sum of: $___________.

   ________________________________________($__________)  
   (Write-Out-in-Words) (Figures)

   All specific cash allowances are included in the above price in accordance with Paragraph 13.02 of the General Conditions.

B. For all Work, at the prices stated in Contractor’s Bid, attached hereto as an exhibit.

**ARTICLE 6 – PAYMENT PROCEDURES**

6.01 **Submittal and Processing of Payments**

A. Contractor shall submit Applications for Payment in accordance with Article 15 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 a monthly basis during performance of the Work as provided in Paragraph 6.02.A.1 below, provided that such Applications for Payment have been submitted in a timely manner and otherwise meet the requirements of the Contract. All such payments will be measured by the Schedule of Values established as provided in 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 elsewhere in the Contract.
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 Owner may withhold, including but not
limited to liquidated damages, in accordance with the Contract
   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 a 5 percent 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 95 percent of the Work completed, less such amounts set off by
Owner pursuant to Paragraph 15.01.E of the General Conditions, and less 125 percent of
Engineer’s estimate of the value of Work to be completed or corrected as shown on the
punch list of items to be completed or corrected prior to final payment.

6.03 Final Payment
   A. Upon final completion and acceptance of the Work in accordance with Paragraph 15.06 of
the General Conditions, Owner shall pay the remainder of the Contract Price as
recommended by Engineer as provided in said Paragraph 15.06.

ARTICLE 7 – INTEREST

7.01 All amounts not paid when due as provided in Article 15 of the General Conditions shall bear
interest at the maximum legal rate.

ARTICLE 8 – CONTRACTOR’S REPRESENTATIONS

8.01 In order to induce Owner to enter into this Contract, Contractor makes the following
representations:
   A. Contractor has examined and carefully studied the Contract Documents, and any data and
reference items identified in the Contract Documents.
   B. Contractor has visited the Site, conducted a thorough, alert visual examination of the Site
and adjacent areas, 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 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 adjacent to the Site and all drawings of physical conditions relating to existing
surface or subsurface structures at the Site that have been identified in the Supplementary
Conditions, especially with respect to Technical Data in such reports and drawings, and (2)
reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent
to the Site that have been identified in the Supplementary Conditions, especially with respect
to Technical Data in such reports and drawings.
E. Contractor has considered the information known to Contractor itself; 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; and (3) Contractor’s safety precautions and programs.

F. Based on the information and observations referred to in the preceding paragraph, Contractor agrees that no 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.

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.

J. Contractor’s entry into this Contract constitutes an incontrovertible representation by Contractor that without exception all prices in the Agreement are premised upon performing and furnishing the Work required by the Contract Documents.

ARTICLE 9 – CONTRACT DOCUMENTS

9.01 Contents

A. The Contract Documents consist of the following:

1. This Agreement (pages C520-1 to C520-7, inclusive).
3. Payment bond (pages C615-1 to C615-3, inclusive).
4. Other bonds.
   a. ___ (pages ___ to ___, inclusive).
5. General Conditions (pages C700-1 to C700-65, inclusive).
6. Supplementary Conditions (pages SC700-1 to SC700-11, inclusive).
7. Specifications as listed in the table of contents of the Project Manual.
8. Drawings (not attached but incorporated by reference) consisting of N/A sheets with each sheet bearing the following general title: N/A.
9. Addenda (numbers ___ to ___, inclusive).
10. Exhibits to this Agreement (enumerated as follows):
    a. Contractor’s Bid (pages C410-1 to C410-5, inclusive).
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 Contract and are not attached hereto:
   a. Notice to Proceed.
   b. Work Change Directives.
   c. Change Orders.
   d. Field 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 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. Unless expressly agreed to elsewhere in the Contract, no assignment by a party hereto of any rights under or interests in the Contract will be binding on another party hereto without the written consent of the party sought to be bound; and, specifically but without limitation, money that may become due and money that is 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 successors, assigns, and legal representatives to the other party hereto, its 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 any thing 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.

10.06  **Other Provisions**

A. Owner stipulates that if the General Conditions that are made a part of this Contract are based on EJCDC® C-700, Standard General Conditions for the Construction Contract, published by the Engineers Joint Contract Documents Committee®, and if Owner is the party that has furnished said General Conditions, then Owner has plainly shown all modifications to the standard wording of such published document to the Contractor, through a process such as highlighting or “track changes” (redline/strikeout), or in the Supplementary Conditions.
Agreement Between Owner and Contractor for Construction Contract

IN WITNESS WHEREOF, Owner and Contractor have signed this Agreement.

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

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:

__________________________________________  ____________________________________

__________________________________________  ____________________________________

__________________________________________  ____________________________________

License No.:                                                                                   (where applicable)

NOTE TO USER: Use in those states or other jurisdictions where applicable or required.
Documentation of Authority to Sign

Complete Section A or B, as applicable:

Section A.

I ___________________________ certify that I am the Secretary of the corporation named as Contractor herein; that ________________________ who signed this contract on behalf of the Contractor was then ____________ (Title) of said corporation; that said contract was duly signed for and on behalf of the said corporation by authority of its governing body and is within the scope of its corporate powers.

IN WITNESS WHEREOF, I have hereunto affixed my hand and the seal of said corporation this day of ________________, __________.  

(Corporate Seal) _____________________________

Corporate Secretary

Section B.

We hereby certify that the undersigned are the sole owners of the company named as Contractor herein; and hereby attest that ________________________ who signed this Agreement on behalf of said Contractor, is authorized to legally bind the Contractor to the obligations of this Agreement.

By ____________________________  

______________________________

NOTARIZATION

STATE OF KANSAS  
COUNTY OF ______________________

The foregoing was acknowledged before me this _______ day of __________, ______,  
by _______________.

______________________________
Notary Public
PERFORMANCE BOND

CONTRACTOR (name and address): SURETY (name and address of principal place of business):

OWNER (name and address):

CONSTRUCTION CONTRACT
   Effective Date of the Agreement: Amount: Description (name and location):

BOND
   Bond Number: Date (not earlier than the Effective Date of the Agreement of the Construction Contract): Amount:
   Modifications to this Bond Form: None See Paragraph 16

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

(seal)
Contractor’s Name and Corporate Seal

By:
Signature

Print Name
Title
Attest: Signature

Surety

By: Signature (attach power of attorney)

Print Name
Title
Attest: Signature

Title

Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party shall be considered plural where applicable.

Water Tower Blasting & Painting C610-1
Pittsburg, Kansas OA Project No. 017-3775
Performance Bond

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

2. If the Contractor performs the Construction Contract, the Surety and the Contractor shall have no obligation under this Bond, except when applicable to participate in a conference as provided in Paragraph 3.

3. If there is no Owner Default under the Construction Contract, the Surety’s obligation under this Bond shall arise after:

   3.1 The Owner first provides notice to the Contractor and the Surety that the Owner is considering declaring a Contractor Default. Such notice shall indicate whether the Owner is requesting a conference among the Owner, Contractor, and Surety to discuss the Contractor’s performance. If the Owner does not request a conference, the Surety may, within five (5) business days after receipt of the Owner’s notice, request such a conference. If the Surety timely requests a conference, the Owner shall attend. Unless the Owner agrees otherwise, any conference requested under this Paragraph 3.1 shall be held within ten (10) business days of the Surety’s receipt of the Owner’s notice. If the Owner, the Contractor, and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an agreement shall not waive the Owner’s right, if any, subsequently to declare a Contractor Default;

   3.2 The Owner declares a Contractor Default, terminates the Construction Contract and notifies the Surety; and

   3.3 The Owner has agreed to pay the Balance of the Contract Price in accordance with the terms of the Construction Contract to the Surety or to a contractor selected to perform the Construction Contract.

4. Failure on the part of the Owner to comply with the notice requirement in Paragraph 3.1 shall not constitute a failure to comply with a condition precedent to the Surety’s obligations, or release the Surety from its obligations, except to the extent the Surety demonstrates actual prejudice.

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

   5.1 Arrange for the Contractor, with the consent of the Owner, to perform and complete the Construction Contract;

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

   5.3 Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Construction Contract, arrange for a contract to be prepared for execution by the Owner and a contractor selected with the Owners concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract, and pay to the Owner the amount of damages as described in Paragraph 7 in excess of the Balance of the Contract Price incurred by the Owner as a result of the Contractor Default; or

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

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

   5.4.2 Deny liability in whole or in part and notify the Owner, citing the reasons for denial.

6. If the Surety does not proceed as provided in Paragraph 5 with reasonable promptness, the Surety shall be deemed to be in default on this Bond seven days after receipt of an additional written notice from the Owner to the Surety demanding that the Surety perform its obligations under this Bond, and the Owner shall be entitled to enforce any remedy available to the Owner. If the Surety proceeds as provided in Paragraph 5.4, and the Owner refuses the payment or the Surety has denied liability, in whole or in part, without further notice the Owner shall be entitled to enforce any remedy available to the Owner.

7. If the Surety elects to act under Paragraph 5.1, 5.2, or 5.3, then the responsibilities of the Surety to the Owner shall not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety shall not be greater than those of the Owner under the Construction Contract. Subject to the commitment by the Owner to pay the Balance of the Contract Price, the Surety is obligated, without duplication for:

   7.1 the responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;

   7.2 additional legal, design professional, and delay costs resulting from the Contractor’s Default, and resulting from the actions or failure to act of the Surety under Paragraph 5; and

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

8. If the Surety elects to act under Paragraph 5.1, 5.3, or 5.4, the Surety’s liability is limited to the amount of this Bond.

9. The Surety shall not be liable to the Owner or others for obligations of the Contractor that are unrelated to the Construction 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 the Owner or its heirs, executors, administrators, successors, and assigns.
10. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.

11. 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 a declaration of Contractor Default or within two years after the Contractor ceased working or within two years after the 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 periods of limitations available to sureties as a defense in the jurisdiction of the suit shall be applicable.

12. Notice to the Surety, the Owner, or the Contractor shall be mailed or delivered to the address shown on the page on which their signature appears.

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

14. Definitions

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

14.2 Construction Contract: The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and changes made to the agreement and the Contract Documents.

14.3 Contractor Default: Failure of the Contractor, which has not been remedied or waived, to perform or otherwise to comply with a material term of the Construction Contract.

14.4 Owner Default: Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

14.5 Contract Documents: All the documents that comprise the agreement between the Owner and Contractor.

15. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

16. Modifications to this Bond are as follows:
PAYMENT BOND

CONTRACTOR (name and address):

SURETY (name and address of principal place of business):

OWNER (name and address):

CONSTRUCTION CONTRACT

   Effective Date of the Agreement:
   Amount:
   Description (name and location):

BOND

   Bond Number:
   Date (not earlier than the Effective Date of the Agreement of the Construction Contract):
   Amount:
   Modifications to this Bond Form:  None  See Paragraph 18

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

______________________________  (seal)
Contractor's Name and Corporate Seal

By: ____________________________
   Signature

__________________________
Print Name

__________________________
Title

Attest: _________________________
   Signature

__________________________
Print Name

__________________________
Title

SURETY

______________________________  (seal)
Surety’s Name and Corporate Seal

By: ____________________________
   Signature (attach power of attorney)

__________________________
Print Name

__________________________
Title

Attest: _________________________
   Signature

__________________________
Print Name

__________________________
Title

Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party shall be considered plural where applicable.

1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner to pay for labor, materials, and equipment furnished for use in the Water Tower Blasting & Painting
Pittsburg, Kansas
OA Project No. 017-3775
Payment Bond

performance of the Construction Contract, which is incorporated herein by reference, subject to the following terms.

2. If the Contractor promptly makes payment of all sums due to Claimants, and defends, indemnifies, and holds harmless the Owner from claims, demands, liens, or suits by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, then the Surety and the Contractor shall have no obligation under this Bond.

3. If there is no Owner Default under the Construction Contract, the Surety’s obligation to the Owner under this Bond shall arise after the Owner has promptly notified the Contractor and the Surety (at the address described in Paragraph 13) of claims, demands, liens, or suits against the Owner or the Owner’s property by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, and tendered defense of such claims, demands, liens, or suits to the Contractor and the Surety.

4. When the Owner has satisfied the conditions in Paragraph 3, the Surety shall promptly and at the Surety’s expense defend, indemnify, and hold harmless the Owner against a duly tendered claim, demand, lien, or suit.

5. The Surety’s obligations to a Claimant under this Bond shall arise after the following:

5.1 Claimants who do not have a direct contract with the Contractor,

5.1.1 have furnished a written notice of non-payment to the Contractor, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were, or equipment was, furnished or supplied or for whom the labor was done or performed, within ninety (90) days after having last performed labor or last furnished materials or equipment included in the Claim; and

5.1.2 have sent a Claim to the Surety (at the address described in Paragraph 13).

5.2 Claimants who are employed by or have a direct contract with the Contractor have sent a Claim to the Surety (at the address described in Paragraph 13).

6. If a notice of non-payment required by Paragraph 5.1.1 is given by the Owner to the Contractor, that is sufficient to satisfy a Claimant’s obligation to furnish a written notice of non-payment under Paragraph 5.1.1.

7. When a Claimant has satisfied the conditions of Paragraph 5.1 or 5.2, whichever is applicable, the Surety shall promptly and at the Surety’s expense take the following actions:

7.1 Send an answer to the Claimant, with a copy to the Owner, within sixty (60) days after receipt of the Claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed; and

7.2 Pay or arrange for payment of any undisputed amounts.

7.3 The Surety’s failure to discharge its obligations under Paragraph 7.1 or 7.2 shall not be deemed to constitute a waiver of defenses the Surety or Contractor may have or acquire as to a Claim, except as to undisputed amounts for which the Surety and Claimant have reached agreement. If, however, the Surety fails to discharge its obligations under Paragraph 7.1 or 7.2, the Surety shall indemnify the Claimant for the reasonable attorney’s fees the Claimant incurs thereafter to recover any sums found to be due and owing to the Claimant.

8. The Surety’s total obligation shall not exceed the amount of this Bond, plus the amount of reasonable attorney’s fees provided under Paragraph 7.3, and the amount of this Bond shall be credited for any payments made in good faith by the Surety.

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

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

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

12. No suit or action shall be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in

Water Tower Blasting & Painting
Pittsburg, Kansas
OA Project No. 017-3775
the state in which the project that is the subject of the Construction Contract is located or after the expiration of one year from the date (1) on which the Claimant sent a Claim to the Surety pursuant to Paragraph 5.1.2 or 5.2, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

13. Notice and Claims to the Surety, the Owner, or the Contractor shall be mailed or delivered to the address shown on the page on which their signature appears. Actual receipt of notice or Claims, however accomplished, shall be sufficient compliance as of the date received.

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

15. Upon requests by any person or entity appearing to be a potential beneficiary of this Bond, the Contractor and Owner shall promptly furnish a copy of this Bond or shall permit a copy to be made.

16. Definitions

16.1 Claim: A written statement by the Claimant including at a minimum:

1. The name of the Claimant;
2. The name of the person for whom the labor was done, or materials or equipment furnished;
3. A copy of the agreement or purchase order pursuant to which labor, materials, or equipment was furnished for use in the performance of the Construction Contract;
4. A brief description of the labor, materials, or equipment furnished;
5. The date on which the Claimant last performed labor or last furnished materials or equipment for use in the performance of the Construction Contract;
6. The total amount earned by the Claimant for labor, materials, or equipment furnished as of the date of the Claim;
7. The total amount of previous payments received by the Claimant; and
8. The total amount due and unpaid to the Claimant for labor, materials, or equipment furnished as of the date of the Claim.

16.2 Claimant: An individual or entity having a direct contract with the Contractor or with a subcontractor of the Contractor to furnish labor, materials, or equipment for use in the performance of the Construction Contract. The term Claimant also includes any individual or entity that has rightfully asserted a claim under an applicable mechanic’s lien or similar statute against the real property upon which the Project is located. The intent of this Bond shall be to include without limitation in the terms of “labor, materials, or equipment” that part of the water, gas, power, light, heat, oil, gasoline, telephone service, or rental equipment used in the Construction Contract, architectural and engineering services required for performance of the work of the Contractor and the 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.

16.3 Construction Contract: The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and all changes made to the agreement and the Contract Documents.

16.4 Owner Default: Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

16.5 Contract Documents: All the documents that comprise the agreement between the Owner and Contractor.

17. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

18. Modifications to this Bond are as follows:
NOTICE OF AWARD (TEMPLATE)

Date of Issuance: [__________]    Engineer: Olsson Associates
Owner: City of Pittsburg, KS    Owner’s Contract No.: [if applicable]
Project: Water Tower Blasting & Painting
Contract: [Packages Awarded]    Engineer’s Project No.: 017-3775

TO BIDDER:

You are notified that Owner has accepted your Bid dated [__________] for the above Contract, and that you are the Successful Bidder and are awarded a Contract for:

[DESCRIBE WORK, ALTERNATES, OR SECTIONS OF WORK AWARDED]

The Contract Price of the awarded Contract is:

__________________________________________________________________________($______________)

[INSERT TOTAL DOLLAR AMOUNT OF ALL SECTIONS AWARDED]

➢ [____] unexecuted counterparts of the Agreement will follow this Notice of Award.
   [Typically 4, Owner, Contractor, Bonding Company, and OA]

➢ Up to [____] sets of the Drawings will be delivered separately from the other Contract Documents.
   [Ask Contractor (via Call/Email) and Deliver at Pre-Con Meeting or Mail – Per the Supplementary Conditions]

You must comply with the following conditions precedent within 15 days of the date of receipt of this Notice of Award:

1. Deliver to Engineer [____] [same # as above] counterparts of the Agreement, fully executed by Bidder.
2. Deliver with the executed Agreement(s) the Contract security (e.g., performance and payment bonds) and insurance documentation as specified in the Instruction to Bidders, General Conditions and Supplementary Conditions.
3. Other conditions precedent: None [typically none]

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

Engineer will return to you one fully executed counterpart of the Agreement, together with any additional copies of the Contract Documents as indicated in the General Conditions.

Owner:

By: ______________________________ Title: ______________________________
   Authorized Signature

cc: Owner, Contractor, & Engineer

Water Tower Blasting & Painting C510-1
Pittsburg, Kansas
OA Project No. 017-3775
NOTICE TO PROCEED (TEMPLATE)

Date of Issuance: ____________________________  Engineer: Olsson Associates

Owner: City of Pittsburg  Owner’s Project No.: [If applicable]

Project: Water Tower Blasting & Painting  Engineer’s Project No.: 017-3775

Contract: [Packages Awarded]  Effective Date of Contract: ____________________________

Bidder & Address: ____________________________

TO CONTRACTOR:

The Work will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before July 31, 2018.

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.

Also, before you may start any Work at the Site, you must: attend a preconstruction meeting.

Owner:

By: ____________________________  Title: ____________________________

Authorized Signature

cc: Owner, Contractor & Engineer

Water Tower Blasting & Painting  C550-1
Pittsburg, Kansas
OA Project No. 017-3775
# STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

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ARTICLE 1 – DEFINITIONS AND TERMINOLOGY

1.01 Defined Terms

A. Wherever used in the Bidding Requirements or Contract Documents, a term printed with initial capital letters, including the term’s singular and plural forms, will have the meaning indicated in the definitions below. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.

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

2. Agreement—The written instrument, executed by Owner and Contractor, that sets forth the Contract Price and Contract Times, identifies the parties and the Engineer, and designates the specific items that are Contract Documents.

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

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

5. Bidder—An individual or entity that submits a Bid to Owner.

6. Bidding Documents—The Bidding Requirements, the proposed Contract Documents, and all Addenda.

7. Bidding Requirements—The advertisement or invitation to bid, Instructions to Bidders, Bid Bond or other Bid security, if any, the Bid Form, and the Bid with any attachments.

8. Change Order—A document 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, or other revision to the Contract, issued on or after the Effective Date of the Contract.

9. Change Proposal—A written request by Contractor, duly submitted in compliance with the procedural requirements set forth herein, seeking an adjustment in Contract Price or Contract Times, or both; contesting an initial decision by Engineer concerning the requirements of the Contract Documents or the acceptability of Work under the Contract Documents; challenging a set-off against payments due; or seeking other relief with respect to the terms of the Contract.

10. Claim—(a) A demand or assertion by Owner directly to Contractor, duly submitted in compliance with the procedural requirements set forth herein: seeking an adjustment in Contract Price or Contract Times, or both; contesting an initial decision by Engineer concerning the requirements of the Contract Documents or the acceptability of Work under the Contract Documents; contesting Engineer’s decision regarding a Change Proposal; seeking resolution of a contractual issue that Engineer has declined to address; or seeking other relief with respect to the terms of the Contract; or (b) a demand or assertion by Contractor directly to Owner, duly submitted in compliance with the procedural requirements set forth herein, contesting Engineer’s decision
regarding a Change Proposal; or seeking resolution of a contractual issue that Engineer has declined to address. A demand for money or services by a third party is not a Claim.

11. **Constituent of Concern**—Asbestos, petroleum, radioactive materials, polychlorinated biphenyls (PCBs), hazardous waste, and any substance, product, waste, or other material of any nature whatsoever that is or becomes listed, regulated, or addressed pursuant to (a) the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. §§9601 et seq. (“CERCLA”); (b) the Hazardous Materials Transportation Act, 49 U.S.C. §§5501 et seq.; (c) the Resource Conservation and Recovery Act, 42 U.S.C. §§6901 et seq. (“RCRA”); (d) the Toxic Substances Control Act, 15 U.S.C. §§2601 et seq.; (e) the Clean Water Act, 33 U.S.C. §§1251 et seq.; (f) the Clean Air Act, 42 U.S.C. §§7401 et seq.; or (g) any other federal, state, or local statute, law, rule, regulation, ordinance, resolution, code, order, or decree regulating, relating to, or imposing liability or standards of conduct concerning, any hazardous, toxic, or dangerous waste, substance, or material.

12. **Contract**—The entire and integrated written contract between the Owner and Contractor concerning the Work.

13. **Contract Documents**—Those items so designated in the Agreement, and which together comprise the Contract.

14. **Contract Price**—The money that Owner has agreed to pay Contractor for completion of the Work in accordance with the Contract Documents.

15. **Contract Times**—The number of days or the dates by which Contractor shall: (a) achieve Milestones, if any; (b) achieve Substantial Completion; and (c) complete the Work.

16. **Contractor**—The individual or entity with which Owner has contracted for performance of the Work.

17. **Cost of the Work**—See Paragraph 13.01 for definition.

18. **Drawings**—The part of the Contract that graphically shows the scope, extent, and character of the Work to be performed by Contractor.

19. **Effective Date of the Contract**—The date, indicated in the Agreement, on which the Contract becomes effective.

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 does not change the Contract Price or the Contract Times.

22. **Hazardous Environmental Condition**—The presence at the Site of Constituents of Concern in such quantities or circumstances that may present a danger to persons or property exposed thereto. The presence at the Site of materials that are necessary for the execution of the Work, or that are to be incorporated in the Work, and that are controlled and contained pursuant to industry practices, Laws and Regulations, and the requirements of the Contract, does not establish a Hazardous Environmental Condition.

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

24. **Liens**—Charges, security interests, or encumbrances upon Contract-related funds, real property, or personal property.
25. **Milestone**—A principal event in the performance of the Work that the Contract requires Contractor to achieve by an intermediate completion date or by a time prior to Substantial Completion of all the Work.

26. **Notice of Award**—The written notice by Owner to a Bidder of Owner’s acceptance of the Bid.

27. **Notice to Proceed**—A written notice 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.

28. **Owner**—The individual or entity with which Contractor has contracted regarding the Work, and which has agreed to pay Contractor for the performance of the Work, pursuant to the terms of the Contract.

29. **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.

30. **Project**—The total undertaking to be accomplished for Owner by engineers, contractors, and others, including planning, study, design, construction, testing, commissioning, and start-up, and of which the Work to be performed under the Contract Documents is a part.

31. **Project Manual**—The written documents prepared for, or made available for, procuring and constructing the Work, including but not limited to the Bidding Documents or other construction procurement documents, geotechnical and existing conditions information, the Agreement, bond forms, General Conditions, Supplementary Conditions, and Specifications. The contents of the Project Manual may be bound in one or more volumes.

32. **Resident Project Representative**—The authorized representative of Engineer assigned to assist Engineer at the Site. As used herein, the term Resident Project Representative or “RPR” includes any assistants or field staff of Resident Project Representative.

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

34. **Schedule of Submittals**—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements for Engineer’s review of the submittals and the performance of related construction activities.

35. **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.

36. **Shop Drawings**—All drawings, diagrams, illustrations, schedules, and other data or information that are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work. Shop Drawings, whether approved or not, are not Drawings and are not Contract Documents.

37. **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, and such other lands furnished by Owner which are designated for the use of Contractor.
38. **Specifications**—The part of the Contract that consists of written requirements for materials, equipment, systems, standards, and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable to the Work.

39. **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.

40. **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.

41. **Successful Bidder**—The Bidder whose Bid the Owner accepts, and to which the Owner makes an award of contract, subject to stated conditions.

42. **Supplementary Conditions**—The part of the Contract that amends or supplements these General Conditions.

43. **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 a Subcontractor.

44. **Technical Data**—Those items expressly identified as Technical Data in the Supplementary Conditions, with respect to either (a) subsurface conditions at the Site, or physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities) or (b) Hazardous Environmental Conditions at the Site. If no such express identifications of Technical Data have been made with respect to conditions at the Site, then the data contained in boring logs, recorded measurements of subsurface water levels, laboratory test results, and other factual, objective information regarding conditions at the Site that are set forth in any geotechnical or environmental report prepared for the Project and made available to Contractor are hereby defined as Technical Data with respect to conditions at the Site under Paragraphs 5.03, 5.04, and 5.06.

45. **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 but not limited to those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, fiber optic transmissions, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.

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

47. **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; furnishing, installing, and incorporating all materials and equipment into such construction; and may include related services such as testing, start-up, and commissioning, all as required by the Contract Documents.
48. **Work Change Directive**—A written directive to Contractor issued on or after the Effective Date of the Contract, signed by Owner and recommended by Engineer, ordering an addition, deletion, or revision in the Work.

1.02 **Terminology**

A. The words and terms discussed in the following paragraphs 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 Article 10 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 15.03 or 15.04).

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. If the Contract Documents establish an obligation of Contractor with respect to specific services, materials, or equipment, but do not expressly use any of the four words “furnish,” “install,” “perform,” or “provide,” then Contractor shall furnish and install said services, materials, or equipment complete and ready for intended use.

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. Bonds: 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 Contractor’s Insurance: When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner, with copies to each named insured and additional insured (as identified in the Supplementary Conditions or elsewhere in the Contract), the certificates and other evidence of insurance required to be provided by Contractor in accordance with Article 6.

C. Evidence of Owner’s Insurance: After receipt of the executed counterparts of the Agreement and all required bonds and insurance documentation, Owner shall promptly deliver to Contractor, with copies to each named insured and additional insured (as identified in the Supplementary Conditions or otherwise), the certificates and other evidence of insurance required to be provided by Owner under Article 6.

2.02 Copies of Documents

A. Owner shall furnish to Contractor four printed copies of the Contract (including one fully executed counterpart of the Agreement), and one copy in electronic portable document format (PDF). Additional printed copies will be furnished upon request at the cost of reproduction.

B. Owner shall maintain and safeguard at least one original printed record version of the Contract, including Drawings and Specifications signed and sealed by Engineer and other design professionals. Owner shall make such original printed record version of the Contract available to Contractor for review. Owner may delegate the responsibilities under this provision to Engineer.

2.03 Before Starting Construction

A. Preliminary Schedules: Within 10 days after the Effective Date of the Contract (or as otherwise specifically required by the Contract Documents), 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;

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.

2.04 Preconstruction Conference; Designation of Authorized Representatives

A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Engineer, and others as appropriate will be held to establish a working understanding among the parties as to the Work and to discuss the schedules referred to in Paragraph 2.03.A, procedures for handling Shop Drawings, Samples, and other submittals, processing Applications for Payment, electronic or digital transmittals, 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 and receive information, render decisions relative to the Contract, and otherwise act on behalf of each respective party.

2.05 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 2.03.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 the component parts of the Work.

2.06 Electronic Transmittals

A. Except as otherwise stated elsewhere in the Contract, the Owner, Engineer, and Contractor may transmit, and shall accept, Project-related correspondence, text, data, documents, drawings, information, and graphics, including but not limited to Shop Drawings and other submittals, in electronic media or digital format, either directly, or through access to a secure Project website.

B. If the Contract does not establish protocols for electronic or digital transmittals, then Owner, Engineer, and Contractor shall jointly develop such protocols.

C. When transmitting items in electronic media or digital format, the transmitting party makes no representations as to long term compatibility, usability, or readability of the items resulting from the recipient’s use of software application packages, operating systems, or computer hardware differing from those used in the drafting or transmittal of the items, or from those established in applicable transmittal protocols.
ARTICLE 3 – DOCUMENTS: INTENT, REQUIREMENTS, 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.
   C. Unless otherwise stated in the Contract Documents, if there is a discrepancy between the electronic or digital versions of the Contract Documents (including any printed copies derived from such electronic or digital versions) and the printed record version, the printed record version shall govern.
   D. The Contract supersedes prior negotiations, representations, and agreements, whether written or oral.
   E. Engineer will issue clarifications and interpretations of the Contract Documents as provided herein.

3.02 Reference Standards
   A. Standards Specifications, Codes, Laws and Regulations
      1. Reference in the Contract Documents to standard specifications, manuals, reference standards, 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, reference standard, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Contract 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, reference standard, 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 part of the Contract Documents prepared by or for Engineer. 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 part of the Contract Documents prepared by or for Engineer.

3.03 Reporting and Resolving Discrepancies
   A. Reporting Discrepancies:
      1. Contractor’s Verification of Figures and Field Measurements: Before undertaking each part of the Work, Contractor shall carefully study the Contract Documents, and check and verify pertinent figures and dimensions therein, particularly with respect to applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy that Contractor discovers, or has actual knowledge of, and shall not proceed with any Work affected thereby until the conflict, error, ambiguity, or discrepancy is resolved, by a clarification or interpretation by
Engineer, or by an amendment or supplement to the Contract Documents issued pursuant to Paragraph 11.01.

2. **Contractor’s Review of Contract Documents:** If, before or 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) actual field conditions, (c) any standard specification, manual, reference standard, or code, or (d) 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 7.15) until the conflict, error, ambiguity, or discrepancy is resolved, by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract Documents issued pursuant to Paragraph 11.01.

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 part of the Contract Documents prepared by or for Engineer shall take precedence in resolving any conflict, error, ambiguity, or discrepancy between such provisions of the Contract Documents and:
   
   a. the provisions of any standard specification, manual, reference standard, or code, or the instruction of any Supplier (whether or not specifically incorporated by reference as a Contract Document); 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 **Requirements of the Contract Documents**

A. During the performance of the Work and until final payment, Contractor and Owner shall submit to the Engineer all matters in question concerning the requirements of the Contract Documents (sometimes referred to as requests for information or interpretation—RFIs), or relating to the acceptability of the Work under the Contract Documents, as soon as possible after such matters arise. Engineer will be the initial interpreter of the requirements of the Contract Documents, and judge of the acceptability of the Work thereunder.

B. Engineer will, with reasonable promptness, render a written clarification, interpretation, or decision on the issue submitted, or initiate an amendment or supplement to the Contract Documents. Engineer’s written clarification, interpretation, or decision will be final and binding on Contractor, unless it appeals by submitting a Change Proposal, and on Owner, unless it appeals by filing a Claim.

C. If a submitted matter in question concerns terms and conditions of the Contract Documents that do not involve (1) the performance or acceptability of the Work under the Contract Documents, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, then Engineer will promptly give written notice to Owner and Contractor that Engineer is unable to provide a decision or interpretation. If Owner and Contractor are unable to agree on resolution of such a matter in question, either party may pursue resolution as provided in Article 12.
3.05 **Reuse of Documents**

A. Contractor and its Subcontractors and Suppliers 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 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; or

2. have or acquire any title or ownership rights in any other Contract Documents, reuse any such Contract Documents for any purpose without Owner’s express written consent, or violate any copyrights pertaining to such Contract Documents.

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.

**ARTICLE 4 – COMMENCEMENT AND PROGRESS OF THE WORK**

4.01 **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 Contract 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 Contract. 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 Contract, whichever date is earlier.

4.02 **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 such date.

4.03 **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.

4.04 **Progress Schedule**

A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.05 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 2.05) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times.
2. Proposed adjustments in the Progress Schedule that will change the Contract Times shall be submitted in accordance with the requirements of Article 11.

B. 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, or during any appeal process, except as permitted by Paragraph 16.04, or as Owner and Contractor may otherwise agree in writing.

4.05 Delays in Contractor’s Progress

A. If Owner, Engineer, 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 Times and Contract Price. 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.

B. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delay, disruption, or interference caused by or within the control of Contractor. Delay, disruption, and interference attributable to and within the control of a Subcontractor or Supplier shall be deemed to be within the control of Contractor.

C. If Contractor’s performance or progress is delayed, disrupted, or interfered with by unanticipated causes not the fault of and beyond the control of Owner, Contractor, and those for which they are responsible, then Contractor shall be entitled to an equitable adjustment in Contract Times. 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. Such an adjustment shall be Contractor’s sole and exclusive remedy for the delays, disruption, and interference described in this paragraph. Causes of delay, disruption, or interference that may give rise to an adjustment in Contract Times under this paragraph include but are not limited to the following:

1. severe and unavoidable natural catastrophes such as fires, floods, epidemics, and earthquakes;
2. abnormal weather conditions;
3. acts or failures to act of utility owners (other than those performing other work at or adjacent to the Site by arrangement with the Owner, as contemplated in Article 8); and
4. acts of war or terrorism.

D. Delays, disruption, and interference to the performance or progress of the Work resulting from the existence of a differing subsurface or physical condition, an Underground Facility that was not shown or indicated by the Contract Documents, or not shown or indicated with reasonable accuracy, and those resulting from Hazardous Environmental Conditions, are governed by Article 5.

E. Paragraph 8.03 governs delays, disruption, and interference to the performance or progress of the Work resulting from the performance of certain other work at or adjacent to the Site.

F. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for any delay, disruption, or interference if such delay is concurrent with a delay, disruption, or interference caused by or within the control of Contractor.

G. Contractor must submit any Change Proposal seeking an adjustment in Contract Price or Contract Times under this paragraph within 30 days of the commencement of the delaying, disrupting, or interfering event.
ARTICLE 5 – AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS

5.01 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.

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 permanent improvements are to be made 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.

5.02 Use of Site and Other Areas

A. Limitation on Use of Site and Other Areas:

1. Contractor shall confine construction equipment, temporary construction facilities, the storage of materials and equipment, and the operations of workers to the Site, adjacent areas that Contractor has arranged to use through construction easements or otherwise, and other adjacent areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and such other adjacent areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for (a) damage to the Site; (b) damage to any such other adjacent areas used for Contractor’s operations; (c) damage to any other adjacent land or areas; and (d) for injuries and losses sustained by the owners or occupants of any such land or areas; provided that such damage or injuries result from the performance of the Work or from other actions or conduct of the Contractor or those for which Contractor is responsible.

2. If a damage or injury claim is made by the owner or occupant of any such land or area because of the performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible, Contractor shall (a) take immediate corrective or remedial action as required by Paragraph 7.12, or otherwise; (b) promptly attempt to settle the claim as to all parties through negotiations with such owner or occupant, or otherwise resolve the claim by arbitration or other dispute resolution proceeding, or at law; and (c) to the fullest extent permitted by Laws and Regulations, 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 any such claim, and against all 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 directly or indirectly, in whole or in part by, or based upon, Contractor’s performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible.

B. Removal of Debris During Performance of the Work: During the progress of the Work the Contractor shall keep the Site and other adjacent areas free from accumulations of waste.
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 and adjacent areas 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 of 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 structures or land to stresses or pressures that will endanger them.

5.03 **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 adjacent to the Site;
2. those drawings known to Owner of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities); and
3. Technical Data contained in such reports and drawings.

B. **Reliance by Contractor on Technical Data Authorized:** Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely upon the accuracy of the Technical Data (as defined in Article 1) contained in any geotechnical or environmental report prepared for the Project and made available to Contractor. Except for such reliance on 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.

5.04 **Differing Subsurface or Physical Conditions**

A. **Notice by Contractor:** If Contractor believes that any subsurface or physical condition that is uncovered or revealed at the Site 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 5.03 is materially inaccurate; or
2. is of such a nature as to require a change in the Drawings or Specifications; or
3. differs materially from that shown or indicated in the Contract Documents; or
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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 7.15), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except with respect to an emergency) until receipt of a written statement permitting Contractor to do so.

B. Engineer’s Review: After receipt of written notice as required by the preceding paragraph, Engineer will promptly review the subsurface or physical condition in question; determine the necessity of Owner’s obtaining additional exploration or tests with respect to the condition; conclude whether the condition falls within any one or more of the differing site condition categories in Paragraph 5.04.A above; obtain any pertinent cost or schedule information from Contractor; prepare recommendations to Owner regarding the Contractor’s resumption of Work in connection with the subsurface or physical condition in question and the need for any change in the Drawings or Specifications; and advise Owner in writing of Engineer’s findings, conclusions, and recommendations.

C. Owner’s Statement to Contractor Regarding Site Condition: After receipt of Engineer’s written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the subsurface or physical condition in question, addressing the resumption of Work in connection with such condition, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer’s written findings, conclusions, and recommendations, in whole or in part.

D. Possible Price and Times Adjustments:

1. Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times, or both, to the extent that the existence of a differing subsurface or physical condition, or any related delay, disruption, or interference, 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 fall within any one or more of the categories described in Paragraph 5.04.A;
   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 Paragraph 13.03; and,
   c. 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.

2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times with respect to a subsurface or physical condition if:
   a. Contractor knew of the existence of such condition at the time Contractor made a 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 otherwise; or
   b. the existence of such condition reasonably could have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site.
and contiguous areas expressly required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor’s making such commitment; or

c. Contractor failed to give the written notice as required by Paragraph 5.04.A.

3. If Owner and Contractor agree regarding Contractor’s entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, or both, then any such adjustment shall be set forth in a Change Order.

4. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, or both, no later than 30 days after Owner’s issuance of the Owner’s written statement to Contractor regarding the subsurface or physical condition in question.

5.05 Underground Facilities

A. Contractor’s Responsibilities: The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or adjacent 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 do not warrant or guarantee 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 information and data regarding existing Underground Facilities at the Site;

   b. locating all Underground Facilities shown or indicated in the Contract Documents as being at the Site;

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

   d. the safety and protection of all existing Underground Facilities at the Site, and repairing any damage thereto resulting from the Work.

B. Notice by Contractor: If Contractor believes that an Underground Facility that is uncovered or revealed at the Site was not shown or indicated in the Contract Documents, or was not shown or indicated with reasonable accuracy, then 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 7.15), identify the owner of such Underground Facility and give written notice to that owner and to Owner and Engineer.

C. Engineer’s Review: Engineer will promptly review the Underground Facility and conclude whether such Underground Facility was not shown or indicated in the Contract Documents, or was not shown or indicated with reasonable accuracy; obtain any pertinent cost or schedule information from Contractor; prepare recommendations to Owner regarding the Contractor’s resumption of Work in connection with the Underground Facility in question; determine the extent, if any, to which a change is required in the Drawings or Specifications to reflect and document the consequences of the existence or location of the Underground Facility; and advise Owner in writing of Engineer’s findings, conclusions, and...
recommendations. During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.

D. **Owner’s Statement to Contractor Regarding Underground Facility:** After receipt of Engineer’s written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the Underground Facility in question, addressing the resumption of Work in connection with such Underground Facility, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer’s written findings, conclusions, and recommendations in whole or in part.

E. **Possible Price and Times Adjustments:**

1. Contractor shall be entitled to an equitable adjustment in the Contract Price or Contract Times, or both, to the extent that any existing Underground Facility at the Site that was not shown or indicated in the Contract Documents, or was not shown or indicated with reasonable accuracy, or any related delay, disruption, or interference, causes an increase or decrease in Contractor’s cost of, or time required for, performance of the Work; subject, however, to the following:
   a. Contractor did not know of and could not reasonably have been expected to be aware of or to have anticipated the existence or actual location of the Underground Facility in question;
   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 Paragraph 13.03;
   c. 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; and
   d. Contractor gave the notice required in Paragraph 5.05.B.

2. If Owner and Contractor agree regarding Contractor’s entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, or both, then any such adjustment shall be set forth in a Change Order.

3. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, or both, no later than 30 days after Owner’s issuance of the Owner’s written statement to Contractor regarding the Underground Facility in question.

5.06 **Hazardous Environmental Conditions at Site**

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

1. those reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site; and

2. Technical Data contained in such reports and drawings.

B. **Reliance by Contractor on Technical Data Authorized:** Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely on the accuracy of the Technical Data (as defined in Article 1) contained in any geotechnical or environmental report prepared for the Project and made available to Contractor. Except for such reliance on 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 removing or remediating any Hazardous Environmental Condition encountered, uncovered, or revealed at the Site unless such removal or remediation is expressly identified in the Contract Documents to be within the scope of the Work.

D. Contractor shall be responsible for controlling, containing, and duly removing all Constituents of Concern brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible, and for any associated costs; and for the costs of removing and remediating any Hazardous Environmental Condition created by the presence of any such Constituents of Concern.

E. If Contractor encounters, uncovers, or reveals a Hazardous Environmental Condition whose removal or remediation is not expressly identified in the Contract Documents as being within the scope of the Work, or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, then Contractor shall immediately: (1) secure or otherwise isolate such condition; (2) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 7.15); and (3) 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 5.06.F. If Contractor or anyone for whom Contractor is responsible created the Hazardous Environmental Condition in question, then Owner may remove and remediate the Hazardous Environmental Condition, and impose a set-off against payments to account for the associated costs.

F. Contractor shall not resume Work in connection with such Hazardous Environmental Condition or in any affected area until after Owner has obtained any required permits related thereto, and delivered written notice to Contractor either (1) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work, or (2) specifying any special conditions under which such Work may be resumed safely.

G. 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, then within 30 days of Owner’s written notice regarding the resumption of Work, Contractor may submit a Change Proposal, or Owner may impose a set-off.

H. 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, Owner may remove and remediate the Hazardous Environmental Condition, and impose a set-off against payments to account for the associated costs.
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, following the contractual change procedures in Article 11. Owner may have such deleted portion of the Work performed by Owner’s own forces or others in accordance with Article 8.

I. 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 (1) was not shown or indicated in the Drawings, Specifications, or other Contract Documents, identified as Technical Data entitled to limited reliance pursuant to Paragraph 5.06.B, or identified in the Contract Documents to be included within the scope of the Work, and (2) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.H shall obligate Owner to indemnify any individual or entity from and against the consequences of that individual’s or entity’s own negligence.

J. 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 failure to control, contain, or remove a Constituent of Concern brought to the Site by Contractor or by anyone for whom Contractor is responsible, or to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.J shall obligate Contractor to indemnify any individual or entity from and against the consequences of that individual’s or entity’s own negligence.

K. The provisions of Paragraphs 5.03, 5.04, and 5.05 do not apply to the presence of Constituents of Concern or to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 6 – BONDS AND INSURANCE

6.01 Performance, Payment, and Other Bonds

A. Contractor shall furnish a performance bond and a payment bond, 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. 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 15.08, whichever is later, except as provided otherwise by Laws or Regulations, the Supplementary Conditions, or other specific provisions of the Contract. Contractor shall also furnish such other bonds as are required by the Supplementary Conditions or other specific provisions of the Contract.

B. All bonds shall be in the form prescribed by the Contract except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in “Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies” as published in Circular 570 (as amended and supplemented) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. A bond...
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 the accompanying bond.

C. Contractor shall obtain the required bonds from surety companies that are duly licensed or authorized in the jurisdiction in which the Project is located to issue bonds in the required amounts.

D. If the surety on a bond furnished by Contractor is declared bankrupt or becomes insolvent, or its right to do business is terminated in any state or jurisdiction where any part of the Project is located, or the surety ceases to meet the requirements above, then 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 bond and surety requirements above.

E. If Contractor has failed to obtain a required bond, Owner may exclude the Contractor from the Site and exercise Owner’s termination rights under Article 16.

F. Upon request, Owner shall provide a copy of the payment bond to any Subcontractor, Supplier, or other person or entity claiming to have furnished labor or materials used in the performance of the Work.

6.02 Insurance—General Provisions

A. Owner and Contractor shall obtain and maintain insurance as required in this Article and in the Supplementary Conditions.

B. All insurance required by the Contract to be purchased and maintained by Owner or Contractor shall be obtained from insurance companies that are duly licensed or authorized, in the state or jurisdiction in which the Project is located, to issue insurance policies for the required limits and coverages. Unless a different standard is indicated in the Supplementary Conditions, all companies that provide insurance policies required under this Contract shall have an A.M. Best rating of A-VII or better.

C. Contractor shall deliver to Owner, with copies to each named insured and additional insured (as identified in this Article, in the Supplementary Conditions, or elsewhere in the Contract), certificates of insurance establishing that Contractor has obtained and is maintaining the policies, coverages, and endorsements required by the Contract. Upon request by Owner or any other insured, Contractor shall also furnish other evidence of such required insurance, including but not limited to copies of policies and endorsements, and documentation of applicable self-insured retentions and deductibles. Contractor may block out (redact) any confidential premium or pricing information contained in any policy or endorsement furnished under this provision.

D. Owner shall deliver to Contractor, with copies to each named insured and additional insured (as identified in this Article, the Supplementary Conditions, or elsewhere in the Contract), certificates of insurance establishing that Owner has obtained and is maintaining the policies, coverages, and endorsements required of Owner by the Contract (if any). Upon request by Contractor or any other insured, Owner shall also provide other evidence of such required insurance (if any), including but not limited to copies of policies and endorsements, and documentation of applicable self-insured retentions and deductibles. Owner may block out (redact) any confidential premium or pricing information contained in any policy or endorsement furnished under this provision.
E. Failure of Owner or Contractor to demand such certificates or other evidence of the other party’s full compliance with these insurance requirements, or failure of Owner or Contractor to identify a deficiency in compliance from the evidence provided, shall not be construed as a waiver of the other party’s obligation to obtain and maintain such insurance.

F. If either party does not purchase or maintain all of the insurance required of such party by the Contract, 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.

G. If Contractor has failed to obtain and maintain required insurance, Owner may exclude the Contractor from the Site, impose an appropriate set-off against payment, and exercise Owner’s termination rights under Article 16.

H. Without prejudice to any other right or remedy, if a party has failed to obtain required insurance, the other party may elect to obtain equivalent insurance to protect such other party’s interests at the expense of the party who was required to provide such coverage, and the Contract Price shall be adjusted accordingly.

I. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor or Contractor’s interests.

J. The insurance and insurance limits required herein shall not be deemed as a limitation on Contractor’s liability under the indemnities granted to Owner and other individuals and entities in the Contract.

6.03 Contractor’s Insurance

A. Workers’ Compensation: Contractor shall purchase and maintain workers’ compensation and employer’s liability insurance for:

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

2. United States Longshoreman and Harbor Workers’ Compensation Act and Jones Act coverage (if applicable).

3. claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor’s employees (by stop-gap endorsement in monopolist worker’s compensation states).

4. Foreign voluntary worker compensation (if applicable).

B. Commercial General Liability—Claims Covered: Contractor shall purchase and maintain commercial general liability insurance, covering all operations by or on behalf of Contractor, on an occurrence basis, against:

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

2. claims for damages insured by reasonably available personal injury liability coverage.

3. 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.

C. Commercial General Liability—Form and Content: Contractor’s commercial liability policy shall be written on a 1996 (or later) ISO commercial general liability form (occurrence form) and include the following coverages and endorsements:
1. Products and completed operations coverage:
   a. Such insurance shall be maintained for three years after final payment.
   b. Contractor shall furnish Owner and each other additional insured (as identified in the Supplementary Conditions or elsewhere in the Contract) evidence of continuation of such insurance at final payment and three years thereafter.

2. Blanket contractual liability coverage, to the extent permitted by law, including but not limited to coverage of Contractor’s contractual indemnity obligations in Paragraph 7.18.

3. Broad form property damage coverage.

4. Severability of interest.

5. Underground, explosion, and collapse coverage.

6. Personal injury coverage.

7. Additional insured endorsements that include both ongoing operations and products and completed operations coverage through ISO Endorsements CG 20 10 01 and CG 20 37 01 (together); or CG 20 10 07 04 and CG 20 37 07 04 (together); or their equivalent.

8. For design professional additional insureds, ISO Endorsement CG 20 32 07 04, “Additional Insured—Engineers, Architects or Surveyors Not Engaged by the Named Insured” or its equivalent.

D. Automobile liability: Contractor shall purchase and maintain automobile liability insurance against 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. The automobile liability policy shall be written on an occurrence basis.

E. Umbrella or excess liability: Contractor shall purchase and maintain umbrella or excess liability insurance written over the underlying employer’s liability, commercial general liability, and automobile liability insurance described in the paragraphs above. Subject to industry-standard exclusions, the coverage afforded shall follow form as to each and every one of the underlying policies.

F. Contractor’s pollution liability insurance: Contractor shall purchase and maintain a policy covering third-party injury and property damage claims, including clean-up costs, as a result of pollution conditions arising from Contractor’s operations and completed operations. This insurance shall be maintained for no less than three years after final completion.

G. Additional insureds: The Contractor’s commercial general liability, automobile liability, umbrella or excess, and pollution liability policies shall include and list as additional insureds Owner and Engineer, and any individuals or entities identified in the Supplementary Conditions; 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 (including as applicable those arising from both ongoing and completed operations) on a non-contributory basis. Contractor shall obtain all necessary endorsements to support these requirements.

H. Contractor’s professional liability insurance: If Contractor will provide or furnish professional services under this Contract, through a delegation of professional design services or otherwise, then Contractor shall be responsible for purchasing and maintaining applicable
professional liability insurance. This insurance shall provide protection against claims arising out of performance of professional design or related services, and caused by a negligent error, omission, or act for which the insured party is legally liable. It shall be maintained throughout the duration of the Contract and for a minimum of two years after Substantial Completion. If such professional design services are performed by a Subcontractor, and not by Contractor itself, then the requirements of this paragraph may be satisfied through the purchasing and maintenance of such insurance by such Subcontractor.

I. General provisions: The policies of insurance required by this Paragraph 6.03 shall:

1. include at least the specific coverages provided in this Article.
2. be written for not less than the limits of liability provided in this Article and in the Supplementary Conditions, or required by Laws or Regulations, whichever is greater.
3. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed, or renewal refused until at least 10 days prior written notice has been given to Contractor. Within three days of receipt of any such written notice, Contractor shall provide a copy of the notice to Owner, Engineer, and each other insured under the policy.
4. remain in effect at least until final payment (and longer if expressly required in this Article) and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work as a warranty or correction obligation, or otherwise, or returning to the Site to conduct other tasks arising from the Contract Documents.
5. be appropriate for the Work being performed and provide protection from claims that 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.

J. The coverage requirements for specific policies of insurance must be met by such policies, and not by reference to excess or umbrella insurance provided in other policies.

6.04 Owner’s Liability Insurance

A. In addition to the insurance required to be provided by Contractor under Paragraph 6.03, 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.

B. Owner’s liability policies, if any, operate separately and independently from policies required to be provided by Contractor, and Contractor cannot rely upon Owner’s liability policies for any of Contractor’s obligations to the Owner, Engineer, or third parties.

6.05 Property Insurance

A. Builder’s Risk: Unless otherwise provided in the Supplementary Conditions, Contractor shall purchase and maintain builder’s risk insurance upon the Work on a completed value basis, in the amount of the full insurable 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 Owner and Contractor as named insureds, and all Subcontractors, and any individuals or entities required by the Supplementary Conditions to be insured under
such builder’s risk policy, as insureds or named insureds. For purposes of the remainder of this Paragraph 6.05, Paragraphs 6.06 and 6.07, and any corresponding Supplementary Conditions, the parties required to be insured shall collectively be referred to as “insureds.”

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; windstorm; riot; civil commotion; terrorism; vehicle impact; aircraft; smoke; theft; vandalism and malicious mischief; mechanical breakdown, boiler explosion, and artificially generated electric current; earthquake; volcanic activity, and other earth movement; flood; collapse; explosion; 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. If insurance against mechanical breakdown, boiler explosion, and artificially generated electric current; earthquake; volcanic activity, and other earth movement; or flood, are not commercially available under builder’s risk policies, by endorsement or otherwise, such insurance may be provided through other insurance policies acceptable to Owner and Contractor.

3. cover, as insured property, at least the following: (a) the Work and all materials, supplies, machinery, apparatus, equipment, fixtures, and other property of a similar nature that are to be incorporated into or used in the preparation, fabrication, construction, erection, or completion of the Work, including Owner-furnished or assigned property; (b) spare parts inventory required within the scope of the Contract; and (c) temporary works which are not intended to form part of the permanent constructed Work but which are intended to provide working access to the Site, or to the Work under construction, or which are intended to provide temporary support for the Work under construction, including scaffolding, form work, fences, shoring, falsework, and temporary structures.

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

5. extend to cover damage or loss to insured property while in temporary storage at the Site or in a storage location outside the Site (but not including property stored at the premises of a manufacturer or Supplier).

6. extend to cover damage or loss to insured property while in transit.

7. allow for partial occupation or use of the Work by Owner, such that those portions of the Work that are not yet occupied or used by Owner shall remain covered by the builder’s risk insurance.

8. allow for the waiver of the insurer’s subrogation rights, as set forth below.

9. provide primary coverage for all losses and damages caused by the perils or causes of loss covered.

10. not include a co-insurance clause.

11. include an exception for ensuing losses from physical damage or loss with respect to any defective workmanship, design, or materials exclusions.

12. include performance/hot testing and start-up.
13. be maintained in effect, subject to the provisions herein regarding Substantial Completion and partial occupancy or use of the Work by Owner, until the Work is complete.

B. Notice of Cancellation or Change: All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with this Paragraph 6.05 will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least 10 days prior written notice has been given to the purchasing policyholder. Within three days of receipt of any such written notice, the purchasing policyholder shall provide a copy of the notice to each other insured.

C. Deductibles: The purchaser of any required builder’s risk or property insurance shall pay for costs not covered because of the application of a policy deductible.

D. Partial Occupancy or Use by Owner: If Owner will occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work as provided in Paragraph 15.04, then Owner (directly, if it is the purchaser of the builder’s risk policy, or through Contractor) will provide notice of such occupancy or use to the builder’s risk insurer. The builder’s risk insurance shall not be canceled or permitted to lapse on account of any such partial use or occupancy; rather, those portions of the Work that are occupied or used by Owner may come off the builder’s risk policy, while those portions of the Work not yet occupied or used by Owner shall remain covered by the builder’s risk insurance.

E. Additional Insurance: If Contractor elects to obtain other special insurance to be included in or supplement the builder’s risk or property insurance policies provided under this Paragraph 6.05, it may do so at Contractor’s expense.

F. Insurance of Other Property: If the express insurance provisions of the Contract do not require or address the insurance of a property item or interest, such as tools, construction equipment, or other personal property owned by Contractor, a Subcontractor, or an employee of Contractor or a Subcontractor, then the entity or individual owning such property item will be responsible for deciding whether to insure it, and if so in what amount.

6.06 Waiver of Rights

A. All policies purchased in accordance with Paragraph 6.05, expressly including the builder’s risk policy, 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 insureds thereunder, or against Engineer or its consultants, or their officers, directors, members, partners, employees, agents, consultants, or subcontractors. Owner and Contractor waive all rights against each other and the 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 Engineer, its consultants, all Subcontractors, all individuals or entities identified in the Supplementary Conditions as insureds, 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 or Contractor as trustee or fiduciary, or otherwise payable under any policy so issued.
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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 occupancy or use pursuant to Paragraph 15.04, after Substantial Completion pursuant to Paragraph 15.03, or after final payment pursuant to Paragraph 15.06.

C. Any insurance policy maintained by Owner covering any loss, damage or consequential loss referred to in Paragraph 6.06.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, or the officers, directors, members, partners, employees, agents, consultants, or subcontractors of each and any of them.

D. Contractor shall be responsible for assuring that the agreement under which a Subcontractor performs a portion of the Work contains provisions whereby the Subcontractor waives all rights against Owner, Contractor, all individuals or entities identified in the Supplementary Conditions as insureds, the Engineer and its consultants, 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 builder’s risk insurance and any other property insurance applicable to the Work.

6.07 Receipt and Application of Property Insurance Proceeds

A. Any insured loss under the builder’s risk and other policies of insurance required by Paragraph 6.05 will be adjusted and settled with the named insured that purchased the policy. Such named insured shall act as fiduciary for the other insureds, and give notice to such other insureds that adjustment and settlement of a claim is in progress. Any other insured may state its position regarding a claim for insured loss in writing within 15 days after notice of such claim.

B. Proceeds for such insured losses may be made payable by the insurer either jointly to multiple insureds, or to the named insured that purchased the policy in its own right and as fiduciary for other insureds, subject to the requirements of any applicable mortgage clause. A named insured receiving insurance proceeds under the builder’s risk and other policies of insurance required by Paragraph 6.05 shall distribute such proceeds in accordance with such agreement as the parties in interest may reach, or as otherwise required under the dispute resolution provisions of this Contract or applicable Laws and Regulations.

C. If no other special agreement is reached, the damaged Work shall be repaired or replaced, the money so received applied on account thereof, and the Work and the cost thereof covered by Change Order, if needed.
ARTICLE 7 – CONTRACTOR’S RESPONSIBILITIES

7.01 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.

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.

7.02 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, Monday through Friday. Contractor will not perform Work on a Saturday, Sunday, or any legal holiday. Contractor may perform Work outside regular working hours or on Saturdays, Sundays, or legal holidays only with Owner’s written consent, which will not be unreasonably withheld.

7.03 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, whether or not such items are specifically called for in the Contract Documents.

B. All materials and equipment incorporated into the Work 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.

7.04 “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 Contract Price has been based upon Contractor furnishing such item as specified. The specification or description of such an item 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 is permitted, Contractor may request that Engineer authorize the use of other items of material or equipment, or items from other proposed suppliers under the circumstances described below.
1. If Engineer in its sole discretion determines that 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, Engineer shall deem it an “or equal” item. For the purposes of this paragraph, a proposed item of material or equipment will be considered functionally equal to an item so named if:

   a. in the exercise of reasonable judgment Engineer determines that:
      
      1) it is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;
      
      2) it will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole;
      
      3) it has a proven record of performance and availability of responsive service; and
      
      4) it is not objectionable to Owner.

   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.

B. Contractor’s Expense: Contractor shall provide all data in support of any proposed “or equal” item at Contractor’s expense.

C. Engineer’s Evaluation and Determination: Engineer will be allowed a reasonable time to evaluate each “or-equal” request. Engineer may require Contractor to furnish additional data about the proposed “or-equal” item. Engineer will be the sole judge of acceptability. No “or-equal” item will be ordered, furnished, installed, or utilized until Engineer’s review is complete and Engineer determines that the proposed item is an “or-equal”, which will be evidenced by an approved Shop Drawing or other written communication. Engineer will advise Contractor in writing of any negative determination.

D. Effect of Engineer’s Determination: Neither approval nor denial of an “or-equal” request shall result in any change in Contract Price. The Engineer’s denial of an “or-equal” request shall be final and binding, and may not be reversed through an appeal under any provision of the Contract Documents.

E. Treatment as a Substitution Request: If Engineer determines that an item of material or equipment proposed by Contractor does not qualify as an “or-equal” item, Contractor may request that Engineer considered the proposed item as a substitute pursuant to Paragraph 7.05.

7.05 Substitutes

A. Unless the specification or description of an item of material or equipment required to be furnished under the Contract Documents contains or is followed by words reading that no substitution is permitted, Contractor may request that Engineer authorize the use of other items of material or equipment under the circumstances described below. To the extent possible such requests shall be made before commencement of related construction at the Site.
1. Contractor shall submit sufficient information as provided below to allow Engineer to determine if the item of material or equipment proposed is functionally equivalent to that named and an acceptable substitute therefor. Engineer will not accept requests for review of proposed substitute items of material or equipment from anyone other than Contractor.

2. The requirements for review by Engineer will be as set forth in Paragraph 7.05.B, as supplemented by the Specifications, and as Engineer may decide is appropriate under the circumstances.

3. 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:
   a. shall certify that the proposed substitute item will:
      1) perform adequately the functions and achieve the results called for by the general design,
      2) be similar in substance to that specified, and
      3) be suited to the same use as that specified.
   b. will state:
      1) the extent, if any, to which the use of the proposed substitute item will necessitate a change in Contract Times,
      2) 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
      3) whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty.
   c. will identify:
      1) all variations of the proposed substitute item from that specified, and
      2) available engineering, sales, maintenance, repair, and replacement services.
   d. shall contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including but not limited to changes in Contract Price, shared savings, costs of redesign, and claims of other contractors affected by any resulting change.

B. **Engineer’s Evaluation and Determination:** Engineer will be allowed a reasonable time to evaluate each substitute request, and to obtain comments and direction from Owner. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No substitute will be ordered, furnished, installed, or utilized until Engineer’s review is complete and Engineer determines that the proposed item is an acceptable substitute. Engineer’s determination will be evidenced by a Field Order or a proposed Change Order accounting for the substitution itself and all related impacts, including changes in Contract Price or Contract Times. Engineer will advise Contractor in writing of any negative determination.
C. **Special Guarantee**: Owner may require Contractor to furnish at Contractor’s expense a special performance guarantee or other surety with respect to any substitute.

D. **Reimbursement of Engineer’s Cost**: Engineer will record Engineer’s costs in evaluating a substitute proposed or submitted by Contractor. 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.

E. **Contractor’s Expense**: Contractor shall provide all data in support of any proposed substitute at Contractor’s expense.

F. **Effect of Engineer’s Determination**: If Engineer approves the substitution request, Contractor shall execute the proposed Change Order and proceed with the substitution. The Engineer’s denial of a substitution request shall be final and binding, and may not be reversed through an appeal under any provision of the Contract Documents. Contractor may challenge the scope of reimbursement costs imposed under Paragraph 7.05.D, by timely submittal of a Change Proposal.

7.06 **Concerning Subcontractors, Suppliers, and Others**

A. Contractor may retain Subcontractors and Suppliers for the performance of parts of the Work. Such Subcontractors and Suppliers must be acceptable to Owner.

B. Contractor shall retain specific Subcontractors, Suppliers, or other individuals or entities for the performance of designated parts of the Work if required by the Contract to do so.

C. Subsequent to the submittal of Contractor’s Bid or final negotiation of the terms of the Contract, Owner may not require Contractor to retain any Subcontractor, Supplier, or other individual or entity to furnish or perform any of the Work against which Contractor has reasonable objection.

D. Prior to entry into any binding subcontract or purchase order, Contractor shall submit to Owner the identity of the proposed Subcontractor or Supplier (unless Owner has already deemed such proposed Subcontractor or Supplier acceptable, during the bidding process or otherwise). Such proposed Subcontractor or Supplier shall be deemed acceptable to Owner unless Owner raises a substantive, reasonable objection within five days.

E. Owner may require the replacement of any Subcontractor, Supplier, or other individual or entity retained by Contractor to perform any part of the Work. Owner also may require Contractor to retain specific replacements; provided, however, that Owner may not require a replacement to which Contractor has a reasonable objection. If Contractor has submitted the identity of certain Subcontractors, Suppliers, or other individuals or entities for acceptance by Owner, and Owner has accepted it (either in writing or by failing to make written objection thereto), then Owner may subsequently revoke the acceptance of any such Subcontractor, Supplier, or other individual or entity so identified solely on the basis of substantive, reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor, Supplier, or other individual or entity.

F. If Owner requires the replacement of any Subcontractor, Supplier, or other individual or entity retained by Contractor to perform any part of the Work, then Contractor shall be entitled to an adjustment in Contract Price or Contract Times, or both, with respect to the
replacement; and Contractor shall initiate a Change Proposal for such adjustment within 30 days of Owner’s requirement of replacement.

G. 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 the right of Owner to the completion of the Work in accordance with the Contract Documents.

H. On a monthly basis Contractor shall submit to Engineer a complete list of all Subcontractors and Suppliers having a direct contract with Contractor, and of all other Subcontractors and Suppliers known to Contractor at the time of submittal.

I. 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.

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

K. Contractor shall restrict all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work from communicating with Engineer or Owner, except through Contractor or in case of an emergency, or as otherwise expressly allowed herein.

L. 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.

M. All Work performed for Contractor by a Subcontractor or Supplier shall be pursuant to an appropriate contractual agreement that specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of Owner and Engineer.

N. Owner may furnish to any Subcontractor or Supplier, to the extent practicable, information about amounts paid to Contractor on account of Work performed for Contractor by the particular Subcontractor or Supplier.

O. 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 money due any such Subcontractor, Supplier, or other individual or entity except as may otherwise be required by Laws and Regulations.

7.07 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.
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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.

7.08 Permits

A. Unless otherwise provided in the Contract Documents, 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 the submission of Contractor’s Bid (or when Contractor became bound under a negotiated contract). Owner shall pay all charges of utility owners for connections for providing permanent service to the Work.

7.09 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.

7.10 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 or takes any other action knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all resulting costs and losses, and 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 such Work or other action. It shall not be Contractor’s responsibility to make certain that the Work described in the Contract Documents is in accordance with Laws and Regulations, but this shall not relieve Contractor of Contractor’s obligations under Paragraph 3.03.
C. Owner or Contractor may give notice to the other party of any changes after the submission of Contractor’s Bid (or after the date when Contractor became bound under a negotiated contract) in Laws or Regulations having an effect on the cost or time of performance of the Work, including but not limited to changes in Laws or Regulations having an effect on procuring permits and on sales, use, value-added, consumption, and other similar taxes. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times resulting from such changes, then within 30 days of such notice Contractor may submit a Change Proposal, or Owner may initiate a Claim.

7.11 Record Documents

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

7.12 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, other work in progress, 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 Owner; the owners of adjacent property, Underground Facilities, and other utilities; and other contractors and utility owners performing work at or adjacent to the Site, when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property or work in progress.

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 7.12.A.2 or 7.12.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 at its expense (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 protection 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 15.06.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).

G. Contractor’s duties and responsibilities for safety and protection shall resume whenever Contractor or any Subcontractor or Supplier returns to the Site to fulfill warranty or correction obligations, or to conduct other tasks arising from the Contract Documents.

7.13 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.

7.14 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.

7.15 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.

7.16 Shop Drawings, Samples, and Other Submittals

A. Shop Drawing and Sample Submittal Requirements:

1. Before submitting a Shop Drawing or Sample, Contractor shall have:
   a. reviewed and coordinated the 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 and equipment 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 of that submittal, and that Contractor approves the 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 set forth in a written communication separate from the Shop Drawings or Sample submittal; and, in addition, in the case of Shop Drawings by a specific notation made on each Shop Drawing submitted to Engineer for review and approval of each such variation.

B. Submittal Procedures for Shop Drawings and Samples: Contractor shall submit Shop Drawings and Samples to Engineer for review and approval in accordance with the accepted Schedule of Submittals. Each submittal will be identified as Engineer may require.

1. Shop Drawings:
   a. Contractor shall submit the number of copies required in the Specifications.
   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 7.16.D.

2. Samples:
   a. Contractor shall submit the number of Samples required in the Specifications.
   b. Contractor shall 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 7.16.D.

3. 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. Other Submittals: Contractor shall submit other submittals to Engineer in accordance with the accepted Schedule of Submittals, and pursuant to the applicable terms of the Specifications.

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 or to safety precautions or programs incident thereto.

3. Engineer’s review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.

4. Engineer’s review and approval of a Shop Drawing or Sample 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 7.16.A.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 will document any such approved variation from the requirements of the Contract Documents in a Field Order.

5. Engineer’s review and approval of a Shop Drawing or Sample shall not relieve Contractor from responsibility for complying with the requirements of Paragraph 7.16.A and B.

6. Engineer’s review and approval of a Shop Drawing or Sample, or of a variation from the requirements of the Contract Documents, shall not, under any circumstances, change the Contract Times or Contract Price, unless such changes are included in a Change Order.

7. Neither Engineer’s receipt, review, acceptance or approval of a Shop Drawing, Sample, or other submittal shall result in such item becoming a Contract Document.

8. Contractor shall perform the Work in compliance with the requirements and commitments set forth in approved Shop Drawings and Samples, subject to the provisions of Paragraph 7.16.D.4.

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.

2. Contractor shall furnish required submittals with sufficient information and accuracy to obtain required approval of an item with no more than three submittals. Engineer will record Engineer’s time for reviewing a fourth or subsequent submittal of a Shop Drawings, sample, or other item requiring approval, and Contractor shall be responsible for Engineer’s charges to Owner for such time. Owner may impose a set-off against payments due to Contractor to secure reimbursement for such charges.

3. If Contractor requests a change of a previously approved submittal item, Contractor shall be responsible for Engineer’s charges to Owner for its review time, and Owner may impose a set-off against payments due to Contractor to secure reimbursement for such charges, unless the need for such change is beyond the control of Contractor.

7.17 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 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;

6. the issuance of a notice of acceptability by Engineer;

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

8. any correction of defective Work by Owner.

D. If the Contract requires the Contractor to accept the assignment of a contract entered into by Owner, then the specific warranties, guarantees, and correction obligations contained in the assigned contract shall govern with respect to Contractor’s performance obligations to Owner for the Work described in the assigned contract.

7.18 Indemnification

A. To the fullest extent permitted by Laws and Regulations, and in addition to any other obligations of Contractor under the Contract or otherwise, 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 7.18.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 7.18.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.

7.19 **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 Laws and Regulations.

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, 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, 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 7.16.D.1.

E. Contractor shall not be responsible for the adequacy of the performance or design criteria specified by Owner or Engineer.

**ARTICLE 8 – OTHER WORK AT THE SITE**

8.01 **Other Work**

A. In addition to and apart from the Work under the Contract Documents, the Owner may perform other work at or adjacent to the Site. Such other work may be performed by Owner’s employees, or through contracts between the Owner and third parties. Owner may also
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arrange to have third-party utility owners perform work on their utilities and facilities at or adjacent to the Site.

B. If Owner performs other work at or adjacent to the Site with Owner’s employees, or through contracts for such other work, then Owner shall give Contractor written notice thereof prior to starting any such other work. If Owner has advance information regarding the start of any utility work at or adjacent to the Site, Owner shall provide such information to Contractor.

C. Contractor shall afford each other contractor that performs such other work, each utility owner performing other work, and Owner, if Owner is performing other work with Owner’s employees, proper and safe access to the Site, and provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work. 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.

D. If the proper execution or results of any part of Contractor’s Work depends upon work performed by others under this Article 8, 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.

8.02 Coordination

A. If Owner intends to contract with others for the performance of other work at or adjacent to the Site, to perform other work at or adjacent to the Site with Owner’s employees, or to arrange to have utility owners perform work at or adjacent to the Site, the following will be set forth in the Supplementary Conditions or provided to Contractor prior to the start of any such other work:

1. the identity of the individual or entity that will have authority and responsibility for coordination of the activities among the various contractors;

2. an itemization of the specific matters to be covered by such authority and responsibility;

3. the extent of such authority and responsibilities.

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

8.03 Legal Relationships

A. If, in the course of performing other work at or adjacent to the Site for Owner, the Owner’s employees, any other contractor working for Owner, or any utility owner causes damage to the Work or to the property of Contractor or its Subcontractors, or delays, disrupts, interferes with, or increases the scope or cost of the performance of the Work, through actions or inaction, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times, or both. Contractor must submit any Change Proposal seeking an equitable adjustment in the Contract Price or the Contract Times under this paragraph within 30 days of the damaging, delaying, disrupting, or interfering event. The entitlement to, and
extent of, any such equitable adjustment shall take into account information (if any) regarding such other work that was provided to Contractor in the Contract Documents prior to the submittal of the Bid or the final negotiation of the terms of the Contract. When applicable, any such equitable adjustment in Contract Price shall be conditioned on Contractor assigning to Owner all Contractor’s rights against such other contractor or utility owner with respect to the damage, delay, disruption, or interference that is the subject of the adjustment. Contractor’s entitlement to an adjustment in Contract Times is conditioned on such adjustment being essential to Contractor’s ability to complete the Work within the Contract Times.

B. Contractor shall take reasonable and customary measures to avoid damaging, delaying, disrupting, or interfering with the work of Owner, any other contractor, or any utility owner performing other work at or adjacent to the Site. If Contractor fails to take such measures and as a result damages, delays, disrupts, or interferes with the work of any such other contractor or utility owner, then Owner may impose a set-off against payments due to Contractor, and assign to such other contractor or utility owner the Owner’s contractual rights against Contractor with respect to the breach of the obligations set forth in this paragraph.

C. When Owner is performing other work at or adjacent to the Site with Owner’s employees, Contractor shall be liable to Owner for damage to such other work, and for the reasonable direct delay, disruption, and interference costs incurred by Owner as a result of Contractor’s failure to take reasonable and customary measures with respect to Owner’s other work. In response to such damage, delay, disruption, or interference, Owner may impose a set-off against payments due to Contractor.

D. If Contractor damages, delays, disrupts, or interferes with the work of any other contractor, or any utility owner performing other work at or adjacent to the Site, through Contractor’s failure to take reasonable and customary measures to avoid such impacts, or if any claim arising out of Contractor’s actions, inactions, or negligence in performance of the Work at or adjacent to the Site is made by any such other contractor or utility owner against Contractor, Owner, or Engineer, then Contractor shall (1) promptly attempt to settle the claim as to all parties through negotiations with such other contractor or utility owner, or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law, and (2) 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 any such claims, and against all 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 damage, delay, disruption, or interference.

ARTICLE 9 – OWNER’S RESPONSIBILITIES

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

9.02 Replacement of Engineer
A. Owner may at its discretion appoint an engineer to replace Engineer, provided Contractor makes no reasonable objection to the replacement engineer. The replacement engineer’s status under the Contract Documents shall be that of the former Engineer.
9.03 **Furnish Data**
A. Owner shall promptly furnish the data required of Owner under the Contract Documents.

9.04 **Pay When Due**
A. Owner shall make payments to Contractor when they are due as provided in the Agreement.

9.05 **Lands and Easements; Reports, Tests, and Drawings**
A. Owner’s duties with respect to providing lands and easements are set forth in Paragraph 5.01.
B. Owner’s duties with respect to providing engineering surveys to establish reference points are set forth in Paragraph 4.03.
C. Article 5 refers to Owner’s identifying and making available to Contractor copies of reports of explorations and tests of conditions at the Site, and drawings of physical conditions relating to existing surface or subsurface structures at the Site.

9.06 **Insurance**
A. Owner’s responsibilities, if any, with respect to purchasing and maintaining liability and property insurance are set forth in Article 6.

9.07 **Change Orders**
A. Owner’s responsibilities with respect to Change Orders are set forth in Article 11.

9.08 **Inspections, Tests, and Approvals**
A. Owner’s responsibility with respect to certain inspections, tests, and approvals is set forth in Paragraph 14.02.B.

9.09 **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.

9.10 **Undisclosed Hazardous Environmental Condition**
A. Owner’s responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 5.06.

9.11 **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 (including obligations under proposed changes in the Work).

9.12 **Safety Programs**
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.
B. Owner shall furnish copies of any applicable Owner safety programs to Contractor.
ARTICLE 10 – ENGINEER’S STATUS DURING CONSTRUCTION

10.01 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.

10.02 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 10.08. 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.

10.03 Project Representative

A. If Owner and Engineer have agreed that Engineer will furnish a Resident Project Representative to represent Engineer at the Site and assist Engineer in observing the progress and quality of the Work, then the authority and responsibilities of any such Resident Project Representative will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in Paragraph 10.08. 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.

10.04 Rejecting Defective Work

A. Engineer has the authority to reject Work in accordance with Article 14.

10.05 Shop Drawings, Change Orders and Payments

A. Engineer’s authority, and limitations thereof, as to Shop Drawings and Samples, are set forth in Paragraph 7.16.

B. 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, are set forth in Paragraph 7.19.

C. Engineer’s authority as to Change Orders is set forth in Article 11.

D. Engineer’s authority as to Applications for Payment is set forth in Article 15.
10.06 **Determinations for Unit Price Work**

A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor as set forth in Paragraph 13.03.

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

A. Engineer will render decisions regarding the requirements of the Contract Documents, and judge the acceptability of the Work, pursuant to the specific procedures set forth herein for initial interpretations, Change Proposals, and acceptance of the Work. In rendering such decisions and judgments, Engineer will not show partiality to Owner or Contractor, and will not be liable to Owner, Contractor, or others in connection with any proceedings, interpretations, decisions, or judgments conducted or rendered in good faith.

10.08 **Limitations on Engineer’s Authority and Responsibilities**

A. Neither Engineer’s authority or responsibility under this Article 10 or under any other provision of the Contract, 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 15.06.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 10.08 shall also apply to the Resident Project Representative, if any.

10.09 **Compliance with Safety Program**

A. While at the Site, Engineer’s employees and representatives will comply with the specific applicable requirements of Owner’s and Contractor’s safety programs (if any) of which Engineer has been informed.

**ARTICLE 11 – AMENDING THE CONTRACT DOCUMENTS; CHANGES IN THE WORK**

11.01 **Amending and Supplementing Contract Documents**

A. The Contract Documents may be amended or supplemented by a Change Order, a Work Change Directive, or a Field Order.
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1. Change Orders:
   a. If an amendment or supplement to the Contract Documents includes a change in
      the Contract Price or the Contract Times, such amendment or supplement must be
      set forth in a Change Order. A Change Order also may be used to establish
      amendments and supplements of the Contract Documents that do not affect the
      Contract Price or Contract Times.
   b. Owner and Contractor may amend those terms and conditions of the Contract
      Documents that do not involve (1) the performance or acceptability of the Work,
      (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3)
      other engineering or technical matters, without the recommendation of the
      Engineer. Such an amendment shall be set forth in a Change Order.

2. Work Change Directives: A Work Change Directive will not change the Contract Price or
   the Contract Times but is evidence that the parties expect that the modification ordered
   or documented by a Work Change Directive will be incorporated in a subsequently
   issued Change Order, following negotiations by the parties as to the Work Change
   Directive’s effect, if any, on the Contract Price and Contract Times; or, if negotiations
   are unsuccessful, by a determination under the terms of the Contract Documents
   governing adjustments, expressly including Paragraph 11.04 regarding change of
   Contract Price. Contractor must submit any Change Proposal seeking an adjustment of
   the Contract Price or the Contract Times, or both, no later than 30 days after the
   completion of the Work set out in the Work Change Directive. Owner must submit any
   Claim seeking an adjustment of the Contract Price or the Contract Times, or both, no
   later than 60 days after issuance of the Work Change Directive.

3. Field Orders: Engineer may authorize minor changes in the Work if the changes 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. Such changes will be accomplished by a Field Order and will
   be binding on Owner and also on Contractor, which shall perform the Work involved
   promptly. If Contractor believes that a Field Order justifies an adjustment in the
   Contract Price or Contract Times, or both, then before proceeding with the Work at
   issue, Contractor shall submit a Change Proposal as provided herein.

11.02 Owner-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. Such changes shall
      be supported by Engineer’s recommendation, to the extent the change involves the design
      (as set forth in the Drawings, Specifications, or otherwise), or other engineering or technical
      matters. Such changes may be accomplished by a Change Order, if Owner and Contractor
      have agreed as to the effect, if any, of the changes on Contract Times or Contract Price; or
      by a Work Change Directive. Upon receipt of any such document, Contractor shall promptly
      proceed with the Work involved; or, in the case of a deletion in the Work, promptly cease
      construction activities with respect to such deleted Work. Added or revised Work shall be
      performed under the applicable conditions of the Contract Documents. Nothing in this
      paragraph shall obligate Contractor to undertake work that Contractor reasonably concludes
      cannot be performed in a manner consistent with Contractor’s safety obligations under the
      Contract Documents or Laws and Regulations.
11.03 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, except in the case of an emergency as provided in Paragraph 7.15 or in the case of uncovering Work as provided in Paragraph 14.05.

11.04 Change of Contract Price

A. The Contract Price may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Price shall comply with the provisions of Paragraph 11.06. Any Claim for an adjustment of Contract Price shall comply with the provisions of Article 12.

B. 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, then by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 13.03); or

2. where the Work involved is not covered by unit prices contained in the Contract Documents, then by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 11.04.C.2); or

3. where the Work involved is not covered by unit prices contained in the Contract Documents and the parties do not reach mutual agreement to a lump sum, then on the basis of the Cost of the Work (determined as provided in Paragraph 13.01) plus a Contractor’s fee for overhead and profit (determined as provided in Paragraph 11.04.C).

C. Contractor’s Fee: When applicable, 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 13.01.B.1 and 13.01.B.2, the Contractor’s fee shall be 15 percent;

   b. for costs incurred under Paragraph 13.01.B.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 11.01.C.2.a and 11.01.C.2.b is that the Contractor’s fee shall be based on: (1) a fee of 15 percent of the costs incurred under Paragraphs 13.01.A.1 and 13.01.A.2 by the Subcontractor that actually performs the Work, at whatever tier, and (2) with respect to Contractor itself and to any Subcontractors of a tier higher than that of the Subcontractor that actually performs the Work, a fee of five percent of the amount (fee plus underlying costs incurred) attributable to the next lower tier Subcontractor; provided, however, that for any such subcontracted work the maximum total fee to be paid by Owner shall be no greater than 27 percent of the costs incurred by the Subcontractor that actually performs the work;

   d. no fee shall be payable on the basis of costs itemized under Paragraphs 13.01.B.4, 13.01.B.5, and 13.01.C;
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11.04. C.2.3 Change of Contract Times

A. The Contract Times may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Times shall comply with the provisions of Paragraph 11.06. Any Claim for an adjustment in the Contract Times shall comply with the provisions of Article 12.

B. An adjustment of the Contract Times shall be subject to the limitations set forth in Paragraph 4.05, concerning delays in Contractor’s progress.

11.06 Change Proposals

A. Contractor shall submit a Change Proposal to Engineer to request an adjustment in the Contract Times or Contract Price; appeal an initial decision by Engineer concerning the requirements of the Contract Documents or relating to the acceptability of the Work under the Contract Documents; contest a set-off against payment due; or seek other relief under the Contract. The Change Proposal shall specify any proposed change in Contract Times or Contract Price, or both, or other proposed relief, and explain the reason for the proposed change, with citations to any governing or applicable provisions of the Contract Documents.

1. Procedures: Contractor shall submit each Change Proposal to Engineer promptly (but in no event later than 30 days) after the start of the event giving rise thereto, or after such initial decision. The Contractor shall submit supporting data, including the proposed change in Contract Price or Contract Time (if any), to the Engineer and Owner within 15 days after the submittal of the Change Proposal. The supporting data shall be accompanied by a written statement that the supporting data are accurate and complete, and that any requested time or price adjustment is the entire adjustment to which Contractor believes it is entitled as a result of said event. Engineer will advise Owner regarding the Change Proposal, and consider any comments or response from Owner regarding the Change Proposal.

2. Engineer’s Action: Engineer will review each Change Proposal and, within 30 days after receipt of the Contractor’s supporting data, either deny the Change Proposal in whole, approve it in whole, or deny it in part and approve it in part. Such actions shall be in writing, with a copy provided to Owner and Contractor. If Engineer does not take action on the Change Proposal within 30 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of Engineer’s inaction the Change Proposal is deemed denied, thereby commencing the time for appeal of the denial under Article 12.

3. Binding Decision: Engineer’s decision will be final and binding upon Owner and Contractor, unless Owner or Contractor appeals the decision by filing a Claim under Article 12.

B. Resolution of Certain Change Proposals: If the Change Proposal does not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters, then Engineer will notify the parties that the Engineer
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is unable to resolve the Change Proposal. For purposes of further resolution of such a Change Proposal, such notice shall be deemed a denial, and Contractor may choose to seek resolution under the terms of Article 12.

11.07 **Execution of Change Orders**

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

1. 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;

2. changes in Contract Price resulting from an Owner set-off, unless Contractor has duly contested such set-off;

3. changes in the Work which are: (a) ordered by Owner pursuant to Paragraph 11.02, (b) required because of Owner’s acceptance of defective Work under Paragraph 14.04 or Owner’s correction of defective Work under Paragraph 14.07, or (c) agreed to by the parties, subject to the need for Engineer’s recommendation if the change in the Work involves the design (as set forth in the Drawings, Specifications, or otherwise), or other engineering or technical matters; and

4. changes in the Contract Price or Contract Times, or other changes, which embody the substance of any final and binding results under Paragraph 11.06, or Article 12.

B. If Owner or Contractor refuses to execute a Change Order that is required to be executed under the terms of this Paragraph 11.07, it shall be deemed to be of full force and effect, as if fully executed.

11.08 **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.

**ARTICLE 12 – CLAIMS**

12.01 **Claims**

A. **Claims Process:** The following disputes between Owner and Contractor shall be submitted to the Claims process set forth in this Article:

1. Appeals by Owner or Contractor of Engineer’s decisions regarding Change Proposals;

2. Owner demands for adjustments in the Contract Price or Contract Times, or other relief under the Contract Documents; and

3. Disputes that Engineer has been unable to address because they do not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters.

B. **Submittal of Claim:** The party submitting a Claim shall deliver it directly to the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto; in the case of appeals regarding Change Proposals within 30 days of the decision under appeal. The party submitting the Claim shall also furnish a copy to the Engineer, for its information only. The responsibility to substantiate a Claim shall rest with the party making
the Claim. In the case of a Claim by Contractor seeking an increase in the Contract Times or Contract Price, or both, Contractor shall certify that the Claim is made in good faith, that the supporting data are accurate and complete, and that to the best of Contractor’s knowledge and belief the amount of time or money requested accurately reflects the full amount to which Contractor is entitled.

C. **Review and Resolution:** The party receiving a Claim shall review it thoroughly, giving full consideration to its merits. The two parties shall seek to resolve the Claim through the exchange of information and direct negotiations. The parties may extend the time for resolving the Claim by mutual agreement. All actions taken on a Claim shall be stated in writing and submitted to the other party, with a copy to Engineer.

D. **Mediation:**

1. At any time after initiation of a Claim, Owner and Contractor may mutually agree to mediation of the underlying dispute. The agreement to mediate shall stay the Claim submittal and response process.

2. If Owner and Contractor agree to mediation, then after 60 days from such agreement, either Owner or Contractor may unilaterally terminate the mediation process, and the Claim submittal and decision process shall resume as of the date of the termination. If the mediation proceeds but is unsuccessful in resolving the dispute, the Claim submittal and decision process shall resume as of the date of the conclusion of the mediation, as determined by the mediator.

3. Owner and Contractor shall each pay one-half of the mediator’s fees and costs.

E. **Partial Approval:** If the party receiving a Claim approves the Claim in part and denies it in part, such action shall be final and binding unless within 30 days of such action the other party invokes the procedure set forth in Article 17 for final resolution of disputes.

F. **Denial of Claim:** If efforts to resolve a Claim are not successful, the party receiving the Claim may deny it by giving written notice of denial to the other party. If the receiving party does not take action on the Claim within 90 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of the inaction, the Claim is deemed denied, thereby commencing the time for appeal of the denial. A denial of the Claim shall be final and binding unless within 30 days of the denial the other party invokes the procedure set forth in Article 17 for the final resolution of disputes.

G. **Final and Binding Results:** If the parties reach a mutual agreement regarding a Claim, whether through approval of the Claim, direct negotiations, mediation, or otherwise; or if a Claim is approved in part and denied in part, or denied in full, and such actions become final and binding; then the results of the agreement or action on the Claim shall be incorporated in a Change Order to the extent they affect the Contract, including the Work, the Contract Times, or the Contract Price.

**ARTICLE 13 – COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK**

13.01 **Cost of the Work**

A. **Purposes for Determination of Cost of the Work:** The term Cost of the Work means the sum of all costs necessary for the proper performance of the Work at issue, as further defined below. The provisions of this Paragraph 13.01 are used for two distinct purposes:
1. To determine Cost of the Work when Cost of the Work is a component of the Contract Price, under cost-plus-fee, time-and-materials, or other cost-based terms; or

2. To determine the value of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price. When the value of any such adjustment is determined on the basis of Cost of the Work, Contractor is entitled only to those additional or incremental costs required because of the change in the Work or because of the event giving rise to the adjustment.

B. *Costs Included:* Except as otherwise may be agreed to in writing by Owner, costs included in the Cost of the Work 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 13.01.C, 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, and 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 13.01.

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 6.05), 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 communication 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 that Contractor is required by the Contract Documents to purchase and maintain.

C. 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, expediers, 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 13.01.B.1 or specifically covered by Paragraph 13.01.B.4. The payroll costs and other compensation excluded here 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 Paragraph 13.01.B.

D. ** Contractor’s Fee:** When the Work as a whole 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, Change Proposal, Claim, set-off, or other 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 11.04.C.

E. **Documentation:** Whenever the Cost of the Work for any purpose is to be determined pursuant to this Article 13, 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.

13.02 **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:** Contractor agrees that:

1. 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

2. 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:** 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.

13.03 **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. Payments to Contractor for Unit Price Work will be based on actual quantities.

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. 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 the following paragraph.

E. Within 30 days of Engineer’s written decision under the preceding paragraph, Contractor may submit a Change Proposal, or Owner may file a Claim, seeking an adjustment in the Contract Price 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;
2. there is no corresponding adjustment with respect to any other item of Work; and
3. Contractor believes that it 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 14 – TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

14.01 Access to Work

A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and authorities having jurisdiction 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.

14.02 Tests, Inspections, and Approvals

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

B. Owner shall retain and pay for the services of an independent inspector, testing laboratory, or other qualified individual or entity to perform all inspections and tests expressly required by the Contract Documents to be furnished and paid for by Owner, except that costs incurred in connection with tests or inspections of covered Work shall be governed by the provisions of Paragraph 14.05.

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, obtaining, and paying for all inspections and tests required:

1. by the Contract Documents, unless the Contract Documents expressly allocate responsibility for a specific inspection or test to Owner;
2. to attain Owner’s and Engineer’s acceptance of materials or equipment to be incorporated in the Work;
3. by manufacturers of equipment furnished under the Contract Documents;
4. for testing, adjusting, and balancing of mechanical, electrical, and other equipment to be incorporated into the Work; and
5. for acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor’s purchase thereof for incorporation in the Work.

Such inspections and tests shall be performed by independent inspectors, testing laboratories, or other qualified individuals or entities acceptable to Owner and Engineer.

E. If the Contract Documents require the Work (or part thereof) to be approved by Owner, Engineer, or another designated individual or entity, then Contractor shall assume full responsibility for arranging and obtaining such approvals.

F. 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. Such uncovering shall be at Contractor’s expense unless Contractor had given Engineer timely notice of Contractor’s intention to cover the same and Engineer had not acted with reasonable promptness in response to such notice.

14.03 Defective Work

A. Contractor’s Obligation: It is Contractor’s obligation to assure that the Work is not defective.

B. Engineer’s Authority: Engineer has the authority to determine whether Work is defective, and to reject defective Work.

C. Notice of Defects: Prompt notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor.

D. Correction, or Removal and Replacement: Promptly after receipt of written notice of defective Work, Contractor shall correct all such defective Work, whether or not fabricated, installed, or completed, or, if Engineer has rejected the defective Work, remove it from the Project and replace it with Work that is not defective.

E. Preservation of Warranties: When correcting defective Work, Contractor shall take no action that would void or otherwise impair Owner’s special warranty and guarantee, if any, on said Work.

F. Costs and Damages: In addition to its correction, removal, and replacement obligations with respect to defective Work, Contractor shall pay all claims, costs, losses, and damages arising out of or relating to defective Work, including but not limited to the cost of the inspection, testing, correction, removal, replacement, or reconstruction of such defective Work, fines levied against Owner by governmental authorities because the Work is defective, and the costs of repair or replacement of work of others resulting from defective Work. Prior to final payment, if Owner and Contractor are unable to agree as to the measure of such claims, costs, losses, and damages resulting from defective Work, then Owner may impose a reasonable set-off against payments due under Article 15.

14.04 Acceptance of Defective Work

A. If, instead of requiring correction or removal and replacement of defective Work, Owner prefers to accept it, Owner may do so (subject, if such acceptance occurs prior to final
payment, to Engineer’s confirmation that such acceptance is in general accord with the design intent and applicable engineering principles, and will not endanger public safety). Contractor shall pay all claims, costs, losses, and damages 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. If any such acceptance occurs prior to final payment, the necessary revisions in the Contract Documents with respect to the Work shall be incorporated in a Change Order. If the parties are unable to agree as to the decrease in the Contract Price, reflecting the diminished value of Work so accepted, then Owner may impose a reasonable set-off against payments due under Article 15. If the acceptance of defective Work occurs after final payment, Contractor shall pay an appropriate amount to Owner.

14.05 Uncovering Work

A. Engineer has the authority to require special inspection or testing of the Work, whether or not the Work is fabricated, installed, or completed.

B. If any Work is covered contrary to the written request of Engineer, then Contractor shall, if requested by Engineer, uncover such Work for Engineer’s observation, and then replace the covering, all at Contractor’s expense.

C. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, then 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, and provide all necessary labor, material, and equipment.

1. If it is found that the uncovered Work is defective, Contractor shall be responsible for all claims, costs, losses, and damages 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 pending Contractor’s full discharge of this responsibility the Owner shall be entitled to impose a reasonable set-off against payments due under Article 15.

2. 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, then Contractor may submit a Change Proposal within 30 days of the determination that the Work is not defective.

14.06 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, then 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.

14.07 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, 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, then 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 14.07, 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, 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 incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 14.07 will be charged against Contractor as set-offs against payments due under Article 15. 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 14.07.

ARTICLE 15 – PAYMENTS TO CONTRACTOR; SET-OFFS; COMPLETION; CORRECTION PERIOD

15.01 Progress Payments

A. Basis for Progress Payments: The Schedule of Values established as provided in Article 2 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 during the pay period, as determined under the provisions of Paragraph 13.03. Progress payments for cost-based Work will be based on Cost of the Work completed by Contractor during the pay period.

B. 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, a warehouse bond, 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.

C. Review of Applications:

1. Engineer will, within 10 days after receipt of each Application for Payment, including each resubmittal, 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 13.03, 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; 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 money 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 15.01.C.2.

6. Engineer will recommend reductions in payment (set-offs) necessary in Engineer’s opinion to protect Owner from loss because:
   a. the Work is defective, requiring correction or replacement;
   b. the Contract Price has been reduced by Change Orders;
   c. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;
   d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible; or
   e. Engineer has actual knowledge of the occurrence of any of the events that would constitute a default by Contractor and therefore justify termination for cause under the Contract Documents.

D. **Payment Becomes Due**:

1. Ten days after presentation of the Application for Payment to Owner with Engineer’s recommendation, the amount recommended (subject to any Owner set-offs) will become due, and when due will be paid by Owner to Contractor.

E. **Reductions in Payment by Owner**:

1. In addition to any reductions in payment (set-offs) recommended by Engineer, Owner is entitled to impose a set-off against payment based on any of the following:
   a. claims have been made against Owner on account of Contractor’s conduct in the performance or furnishing of the Work, or Owner has incurred costs, losses, or damages on account of Contractor’s conduct in the performance or furnishing of the Work, including but not limited to claims, costs, losses, or damages from workplace injuries, adjacent property damage, non-compliance with Laws and Regulations, and patent infringement;
   b. Contractor has failed to take reasonable and customary measures to avoid damage, delay, disruption, and interference with other work at or adjacent to the Site;
   c. Contractor has failed to provide and maintain required bonds or insurance;
   d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible;
   e. Owner has incurred extra charges or engineering costs related to submittal reviews, evaluations of proposed substitutes, tests and inspections, or return visits to manufacturing or assembly facilities;
   f. the Work is defective, requiring correction or replacement;
   g. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;
   h. the Contract Price has been reduced by Change Orders;
   i. an event that would constitute a default by Contractor and therefore justify a termination for cause has occurred;
j. liquidated damages have accrued as a result of Contractor’s failure to achieve Milestones, Substantial Completion, or final completion of the Work;

k. 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;

l. there are other items entitling Owner to a set off against the amount recommended.

2. If Owner imposes any set-off against payment, whether based on its own knowledge or on the written recommendations of Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and the specific amount of the reduction, 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, if Contractor remedies the reasons for such action. The reduction imposed shall be binding on Contractor unless it duly submits a Change Proposal contesting the reduction.

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 15.01.C.1 and subject to interest as provided in the Agreement.

15.02 Contractor’s Warranty of Title

A. Contractor warrants and guarantees that title to all Work, materials, and equipment furnished under the Contract will pass to Owner free and clear of (1) all Liens and other title defects, and (2) all patent, licensing, copyright, or royalty obligations, no later than seven days after the time of payment by Owner.

15.03 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 and request that Engineer issue a certificate of Substantial Completion. Contractor shall at the same time submit to Owner and Engineer an initial draft of punch list items to be completed or corrected before final payment.

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 preliminary certificate of Substantial Completion which shall fix the date of Substantial Completion. Engineer shall attach to the certificate a punch list of items to be completed or corrected before final payment. Owner shall have seven days after receipt of the preliminary certificate during which to make written objection to Engineer as to any provisions of the certificate or attached punch list. If, after considering the objections to the provisions of the preliminary certificate, Engineer concludes that the Work is not substantially complete, Engineer will, within 14 days after submission of the preliminary certificate to Owner, notify Contractor in writing giving the reasons therefor. If Owner does not object to the provisions of the certificate, or if despite consideration of Owner’s objections Engineer concludes that the Work is substantially
complete, then Engineer will, within said 14 days, execute and deliver to Owner and Contractor a final certificate of Substantial Completion (with a revised punch list of items to be completed or corrected) reflecting such changes from the preliminary certificate as Engineer believes justified after consideration of any objections from Owner.

D. At the time of receipt of the preliminary certificate of Substantial Completion, Owner and Contractor will confer regarding Owner’s use or occupancy of the Work following Substantial Completion, review the builder’s risk insurance policy with respect to the end of the builder’s risk coverage, and confirm the transition to coverage of the Work under a permanent property insurance policy held by Owner. Unless Owner and Contractor agree otherwise in writing, Owner shall bear responsibility for security, operation, protection of the Work, property insurance, maintenance, heat, and utilities upon Owner’s use or occupancy of the Work.

E. After Substantial Completion the Contractor shall promptly begin work on the punch list of items to be completed or corrected prior to final payment. In appropriate cases Contractor may submit monthly Applications for Payment for completed punch list items, following the progress payment procedures set forth above.

F. 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 punch list.

15.04  Partial Use or Occupancy

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. At any time Owner may request in writing that Contractor permit Owner to use or occupy any such part of the Work that Owner believes to be 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 15.03.A through E for that part of the Work.

2. At any time Contractor may notify Owner and Engineer in writing that Contractor considers any such part of the Work 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 15.03 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 6.05 regarding builder’s risk or other property insurance.
15.05 **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, or agreed portion thereof, is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

15.06 **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, annotated record documents (as provided in Paragraph 7.11), and other documents, Contractor may make application for final payment.

2. The final Application for Payment shall be accompanied (except as previously delivered) by:
   a. all documentation called for in the Contract Documents;
   b. consent of the surety, if any, to final payment;
   c. satisfactory evidence that all title issues have been resolved such that title to all Work, materials, and equipment has passed to Owner free and clear of any Liens or other title defects, or will so pass upon final payment.
   d. a list of all disputes that Contractor believes are unsettled; and
   e. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of the Work, and of Liens filed in connection with the Work.

3. In lieu of the releases or waivers of Liens specified in Paragraph 15.06.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (a) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (b) 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, or Owner at its option may issue joint checks payable to Contractor and specified Subcontractors and Suppliers.

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 have been fulfilled, Engineer will, within ten days after receipt of the final Application for Payment, indicate in writing Engineer’s recommendation of final payment and present the Application for Payment to Owner for payment. Such recommendation shall account for any set-offs against payment that are necessary in
Engineer’s opinion to protect Owner from loss for the reasons stated above with respect to progress payments. 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 15.07. 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. Completion of Work: The Work is complete (subject to surviving obligations) when it is ready for final payment as established by the Engineer’s written recommendation of final payment.

D. Payment Becomes Due: Thirty days after the presentation to Owner of the final Application for Payment and accompanying documentation, the amount recommended by Engineer (less any further sum Owner is entitled to set off against Engineer’s recommendation, including but not limited to set-offs for liquidated damages and set-offs allowed under the provisions above with respect to progress payments) will become due and shall be paid by Owner to Contractor.

15.07 Waiver of Claims

A. The making of final payment will not constitute a waiver by Owner of claims or rights against Contractor. Owner expressly reserves claims and rights arising from unsettled Liens, from defective Work appearing after final inspection pursuant to Paragraph 15.05, from Contractor’s failure to comply with the Contract Documents or the terms of any special guarantees specified therein, from outstanding Claims by Owner, or from Contractor’s continuing obligations under the Contract Documents.

B. The acceptance of final payment by Contractor will constitute a waiver by Contractor of all claims and rights against Owner other than those pending matters that have been duly submitted or appealed under the provisions of Article 17.

15.08 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 Site, adjacent areas that Contractor has arranged to use through construction easements or otherwise, and other adjacent areas used by Contractor as permitted by Laws and Regulations, is found to be defective, then Contractor shall promptly, without cost to Owner and in accordance with Owner’s written instructions:

1. correct the defective repairs to the Site or such other adjacent areas;
2. correct such defective Work;
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 to 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. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all
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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).

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, 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 are in addition to all other obligations and warranties. The provisions of this paragraph shall not be construed as a substitute for, or a waiver of, the provisions of any applicable statute of limitation or repose.

ARTICLE 16 – SUSPENSION OF WORK AND TERMINATION

16.01 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 written notice to Contractor and Engineer. Such notice will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be entitled to an adjustment in the Contract Price or an extension of the Contract Times, or both, directly attributable to any such suspension. Any Change Proposal seeking such adjustments shall be submitted no later than 30 days after the date fixed for resumption of Work.

16.02 Owner May Terminate for Cause

A. The occurrence of any one or more of the following events will constitute a default by Contractor and 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);

2. Failure of Contractor to perform or otherwise to comply with a material term of the Contract Documents;

3. Contractor’s disregard of Laws or Regulations of any public body having jurisdiction; or

4. Contractor’s repeated disregard of the authority of Owner or Engineer.

B. If one or more of the events identified in Paragraph 16.02.A occurs, then after giving Contractor (and any surety) ten days written notice that Owner is considering a declaration that Contractor is in default and termination of the contract, Owner may proceed to:

1. declare Contractor to be in default, and give Contractor (and any surety) notice that the Contract is terminated; and

2. enforce the rights available to Owner under any applicable performance bond.

C. Subject to the terms and operation of any applicable performance bond, if Owner has terminated the Contract for cause, Owner may exclude Contractor from the Site, take
possession of the Work, 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 complete the Work as Owner may deem expedient.

D. Owner may not proceed with termination of the Contract under Paragraph 16.02.B if Contractor within seven days of receipt of notice of intent to terminate begins to correct its failure to perform and proceeds diligently to cure such failure.

E. If Owner proceeds as provided in Paragraph 16.02.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 the cost to complete the Work, including all related claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals) sustained by Owner, such excess will be paid to Contractor. If the cost to complete the Work including such related claims, costs, losses, and damages exceeds 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.

F. 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, or any rights or remedies of Owner against Contractor or any surety under any payment bond or performance bond. Any retention or payment of money due Contractor by Owner will not release Contractor from liability.

G. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 6.01.A, the provisions of that bond shall govern over any inconsistent provisions of Paragraphs 16.02.B and 16.02.D.

16.03 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; and

3. other reasonable expenses directly attributable to termination, including costs incurred to prepare a termination for convenience cost proposal.

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

16.04 Contractor May Stop Work or Terminate

A. If, through no act or fault of Contractor, (1) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (2) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or
(3) 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 16.03.

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 are not intended to preclude Contractor from submitting a Change Proposal 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 17 – FINAL RESOLUTION OF DISPUTES

17.01 Methods and Procedures

A. Disputes Subject to Final Resolution: The following disputed matters are subject to final resolution under the provisions of this Article:

1. A timely appeal of an approval in part and denial in part of a Claim, or of a denial in full; and
2. Disputes between Owner and Contractor concerning the Work or obligations under the Contract Documents, and arising after final payment has been made.

B. Final Resolution of Disputes: For any dispute subject to resolution under this Article, Owner or Contractor may:

1. elect in writing to invoke the dispute resolution process provided for in the Supplementary Conditions; or
2. agree with the other party to submit the dispute to another dispute resolution process; or
3. if no dispute resolution process is provided for in the Supplementary Conditions or mutually agreed to, give written notice to the other party of the intent to submit the dispute to a court of competent jurisdiction.

ARTICLE 18 – MISCELLANEOUS

18.01 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, by a commercial courier service or otherwise, to the individual or to a member of the firm or to an officer of the corporation for which it is intended; or
2. delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the sender of the notice.
18.02 Computation of Times

A. When any period of time is referred to in the Contract 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.

18.03 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. 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.

18.04 Limitation of Damages

A. With respect to any and all Change Proposals, Claims, disputes subject to final resolution, and other matters at issue, neither Owner nor Engineer, nor any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, shall be liable to Contractor for any claims, costs, losses, or damages sustained by Contractor on or in connection with any other project or anticipated project.

18.05 No Waiver

A. A party’s non-enforcement of any provision shall not constitute a waiver of that provision, nor shall it affect the enforceability of that provision or of the remainder of this Contract.

18.06 Survival of Obligations

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

18.07 Controlling Law

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

18.08 Headings

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

These Supplementary Conditions amend or supplement the Standard General Conditions of the Construction Contract, EJCDC C-700 (2013 Edition). All provisions which are not so amended or supplemented remain in full force and effect.

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

The address system used in these Supplementary Conditions is the same as the address system used in the General Conditions, with the prefix "SC" added thereto.

SC-1. ARTICLE 1. DEFINITIONS AND TERMINOLOGY.

SC-1.01. Defined Terms. Delete the following definition in its entirety and replace with the following definition in Paragraph 1.01.A:

41. Successful Bidder – The Bidder submitting a responsive Bid to whom Owner makes an award. The Successful Bidder becomes the Contractor.

Add the following definition in Paragraph 1.01.A immediately after definition Number 48.

49. Clarification and Interpretation – Synonymous with Request for Information (RFI), which is the procedure used to receive written interpretation from the Engineer regarding construction details, specifications, intended end product uses, or notes contained on the contract documents, which the Contractor requires additional information in order to proceed with the work.

SC-2. ARTICLE 2. PRELIMINARY MATTERS.

SC-2.02. Copies of Documents. Delete Paragraph 2.02.A in its entirety and insert the following in its place:

A. Engineer shall furnish to Contractor up to five printed copies of the Drawings and Specifications, as requested. Additional copies will be furnished upon request at the cost of reproduction. Engineer will provide fully executed contracts to Owner, Contractor, and any other parties as deemed necessary.

SC-2.05. Initial Acceptance of Schedules. Add the following Paragraph B immediately after Paragraph 2.05.A:

B. A meeting specifically to review Contractor’s schedules as referred to in Paragraph 2.05 will not be held unless deemed necessary by Engineer after receipt of the Contractor’s schedules required by Paragraph 2.03.A.

SC-2.07. Counterparts of the Agreement.

A. Contractor shall execute the Agreement, insert executed copies of the required bonds and power of attorney, and submit all copies to the Engineer. The date of contract on the Agreement and Bond Form shall be left blank for filling in by Owner. The certification date on the Power of Attorney also shall be left blank for filling in by Owner.

B. Owner shall execute all copies, insert the date of contract on the Agreement, Bonds, and Power of Attorney, and return all copies to Engineer for review and distribution.
Supplemental Conditions

Distribution of signed copies shall be one each to Owner, Contractor, Surety, and Engineer.

**SC-3. ARTICLE 3. CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE – No Alterations or additions have been made.**

**SC-4. ARTICLE 4. COMMENCEMENT AND PROGRESS OF THE WORK.**

SC-4.03. **Reference Points.** Add the following paragraph immediately after Paragraph 4.03.A:

B. Reference Points

Reference points from which Contractor shall be responsible for laying out the Work are included on the project drawings.

**SC-5. ARTICLE 5. AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS.**

SC-5.03. **Subsurface and Physical Conditions.** Delete Paragraphs 5.03.A and 5.03.B in their entirety and insert the following:

A. No reports of explorations or tests of subsurface conditions at or contiguous to the Site, or drawings of physical conditions relating to existing surface or subsurface structures at the Site, are known to Owner or Engineer.

SC-5.05. **Underground Facilities.**

A. Delete Paragraph 5.05.A.1 in its entirety and insert the following in its place:

1. Owner and Engineer shall not be responsible for the accuracy or completeness of any such information or data. All responsibility for the accuracy and completeness thereof is expressly disclaimed; and

B. Delete Paragraph 5.05.A.2.b in its entirety and insert the following:

b. locating all existing Underground Facilities shown or indicated in the Contract Documents in advance of excavating or trenching, by contacting the Owners thereof and prospecting;

C. Add the following paragraphs immediately after Paragraph 5.05.A.2.d:

   e. The Contractor shall use his own information and shall not rely solely upon information shown on the drawings concerning existing underground installations.
   
   f. Any delay, additional work, or extra cost to the Contractor caused by locating existing underground facilities not shown on the plans shall not constitute a claim for extra work, additional payment, or damages.

SC-5.06. **Hazardous Environmental Condition at Site.** Delete Paragraphs 5.06.A, 5.06.B, and 5.06.l in their entirety and insert the following:

A. No reports or drawings related to Hazardous Environmental Conditions at the Site are known to Owner or Engineer.

B. Not Used.

C. Not Used
SC-6. **ARTICLE 6. BONDS AND INSURANCE.**

SC-6.01. **Performance, Payment, and Other Bonds.** Amend Paragraph 6.01.A. by adding the following language at the end of the first sentence:

The Performance Bond and Payment Bond shall guarantee faithful performance and the payment of all bills and obligations arising from the performance of the contract. Such bonds shall be conditioned upon the faithful performance of all the terms and conditions of the Contract Documents, including the holding harmless of Owner, and including the making good of any and all guarantees which the Contract Documents may require; and such bonds shall be further conditioned upon the payment of all laborers and materialmen who provide labor, materials, etc., actually used or rented in the performance of the contract, including insurance premiums and interest. Such bonds shall be approved by Owner.

SC-6.02. **Insurance – General Provisions.** Add the following paragraphs immediately after Paragraph 6.02.J:

K. Contractor shall not commence work under this contract until all insurance required under this section has been obtained, nor shall Contractor allow any subcontractor to commence work on any subcontract until all similar insurance required of the subcontractor has been so obtained.

L. All certificates of insurance shall be filed with Owner on the standard ACORD CERTIFICATE OF INSURANCE form, or a similar form if acceptable to the Owner, showing the specific limits and provisions of insurance coverage required by the Contract Documents. In addition, Contractor shall provide Owner and Engineer prompt written notice should any required insurance be cancelled, non-renewed, materially changed or coverage or limits reduced for any reason. Owner will deliver to Contractor evidence of insurance required of Owner, but only if specifically requested in writing by Contractor.

SC-6.03. **Contractor’s Insurance.** Add the following subparagraph immediately after Paragraph 6.03.G:

1. There are no additional insureds or loss payees other than required by Article 6.03.G. Engineer shall be endorsed to Contractor's policy as an additional insured using ISO Form CG 2032 0704 or equivalent. Additional insured status shall be extended to include Completed Operations.

Add the following paragraph immediately after Paragraph 6.03.J:

K. The limits of liability for the insurance required by Paragraph 6.03 of the General Conditions shall provide coverage for not less than the following amounts or greater where required by Laws and Regulations:

1. Workers’ Compensation, and related coverages under Paragraphs 6.03.A.1 and 6.03.A.2 of the General Conditions:
   a. State Statutory
   b. Applicable Federal (e.g. Longshoreman’s): Statutory

2. Commercial General Liability Insurance, which shall be no less comprehensive and no more restrictive than coverage provided by a standard form Commercial General
Supplemental Conditions

Liability Policy (ISO CG0001) with minimum limits shown below covering bodily injury, property damage and personal injury.

a. General Aggregate Limit $1,000,000
b. Products Completed Operations Aggregate Limit $2,000,000
c. Personal and Advertising Injury Limit $1,000,000
d. Each Occurrence Limit $1,000,000

This insurance must include the following features:

a. Coverage shall be on an occurrence form and not claims made.
b. Coverage for all premises and operations. Policy shall be endorsed to provide the aggregate per project endorsement.
c. Personal and advertising injury.
d. Operations by independent Contractors.
e. If work to be performed by Contractor includes construction or demolition operations within 50 feet of any railroad property and affecting any railroad bridge or trestle, tracks, road beds, tunnel, underpass, or crossing, then such policy will include coverage for work done within 50 feet of a railroad right of way.
f. Coverage for demolition of any building or structure, collapse, explosion, blasting, excavation and damage to property below surface of ground (XCU coverage)
g. Any fellow employee exclusions shall be deleted as it applies to managerial and supervisory employees.
h. Policy shall not contain a total or absolute pollution exclusion. Coverage shall be provided for pollution exposures arising from products and completed operations.
i. Products and completed operations shall be maintained for duration of work, and shall be further maintained for a minimum period of 2 years after final acceptance and payment, unless modified in the Special Provisions.
j. Contractual liability coverage will also include contractually assumed defense costs in addition to policy limits.
k. Broad form blanket contractual liability to be included.
l. Policy shall include a waiver of subrogation in favor of Owner and Engineer.

3. Automobile Liability under Paragraph 6.03.D of the General Conditions:

Automobile liability insurance, which shall be at least as broad as and no less restrictive than ISO form CA 0001, covering all owned, non-owned, hired and leased vehicles with a minimum combined single limit for bodily injury and property damage of $1,000,000 per accident and $2,000,000 general aggregate. Insurance must include contractual liability coverage. Any fellow employee exclusion shall be deleted as it applies to managerial and supervisory employees. Policy shall provide auto cargo pollution endorsement (ISO CA 99 48, or equivalent), if requested in special provisions. If work to be performed by Contractor includes construction or demolition operations within 50 feet of any railroad property and affecting any railroad bridge or trestle, tracks, road beds, tunnel, underpass, or crossing, then such policy will include coverage for work done within 50 feet of a railroad right of way. Policy shall include a waiver of subrogation in favor of Owner and Engineer.
4. Excess Liability, Contractor shall also secure and maintain excess or Umbrella Liability which shall provide liability coverage in excess of the specified Workers Compensation/Employers Liability, Commercial General Liability and Automobile Liability. Policy shall include a waiver of subrogation in favor of Owner and Engineer.
   a. Bodily Injury and Property Damage: $1,000,000 combined single limit for each occurrence
      $2,000,000 general aggregate

5. Contractor’s Pollution Liability is not required for this project.

SC-6.05. Property Insurance. Delete Paragraph 6.05.A in its entirety and insert the following in its place:

   A. Contractor shall purchase and maintain property insurance upon the Work at the Site in the amount of the full replacement cost thereof. Contractor shall be responsible for any deductible or self-insured retention. This insurance shall:

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

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

   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; and

   8. Comply with the requirements of Paragraph 6.05.B of the General Conditions

SC-6.06. Waiver of Rights. Delete Paragraphs 6.06.A-C in their entirety and insert the following:
Supplemental Conditions

A. Not Used.
B. Not Used.
C. Not Used.

SC-7. **ARTICLE 7. CONTRACTOR’S RESPONSIBILITIES.**

SC-7.07. **Patent Fees and Royalties.** Delete Paragraph 7.07.B in its entirety and insert the following:

B. Not Used

SC-7.09. **Taxes.** Add the following paragraphs immediately after Paragraph 7.09.A:

1. It is the responsibility of the Contractor to understand the tax laws and pay taxes in accordance with these laws.
2. Refer to the Instruction to Bidders.

SC-7.16. **Shop Drawings and Samples.** Delete “, unless the need for such change is beyond the control of Contractor” from Paragraph 7.16.E.

SC-7.16. **Shop Drawings and Samples.** Add paragraphs immediately after Paragraph 7.16.E:

F. Contractor shall furnish required submittals with sufficient information and accuracy in order to obtain required approval of an item with no more than two submittals. Engineer will record Engineer’s time for reviewing subsequent submittals of Shop Drawings, samples, or other items requiring approval and Contractor shall reimburse Owner for Engineer’s charges for such time.

G. In the event that Contractor requests a change of a previously approved item, Contractor shall reimburse Owner for Engineer’s charges for its review time unless the need for such change is beyond the control of Contractor.

SC-7.18. **Indemnification.** Delete Paragraph 7.18.C.2 in its entirety.

SC-8. **ARTICLE 8. OTHER WORK AT THE SITE:**

SC-8.01 **Other Work.** Delete Paragraph 8.01.B. in its entirety. and insert the following:

B. Not Used.

SC-9. **ARTICLE 9. OWNER’S RESPONSIBILITIES.**

SC-9.01. **Communications to Contractor.** Add the following paragraph immediately after Paragraph 9.01.A:

B. Owner is acting through their duly authorized agents. All notices, letters, and other communication directed to Owner shall be addressed and delivered to:

    City of Pittsburg  
    Matt Bacon, Director of Public Utilities  
    201 W. 4th Street  
    Pittsburg, KS 66762

SC-10. **ARTICLE 10. ENGINEER’S STATUS DURING CONSTRUCTION.**
Supplemental Conditions

SC-10.01. **Owner’s Representative.** Add the following paragraph immediately after Paragraph 10.01.A:

B. All duties and responsibilities assigned to Engineer in the Contract Documents, with the corresponding rights and authority, will be assumed by Olsson Associates, 550 St. Louis Street, Springfield, MO, 65806, and their duly authorized agents.

SC-10.03. **Project Representative.** Delete Paragraph 10.03 in its entirety and insert the following paragraph in its place:

A. Engineer may furnish a Resident Project Representative and assistants to aid Engineer in carrying out his responsibilities at the site. The duties, responsibilities, and limitations of authority of the Resident Project Representative are set forth in Exhibit B attached to these Supplementary Conditions and limitations on the responsibilities thereof will be as provided in Paragraph 10.08.

SC-11. **ARTICLE 11. AMENDING THE CONTRACT DOCUMENTS; CHANGES IN THE WORK; CLAIMS.**

SC-11.07. **Execution of Change Orders.** Add the following paragraph immediately after Paragraph 11.07.B:

C. At the time of execution of a Change Order or Written Agreement, Owner and Contractor expressly acknowledge that said Change Order or Written Agreement provides for a fair and equitable adjustment in Contract Price and/or Contract Time for the additions, deletions, or revisions in the Work as authorized by said Change Order or Written Agreement. Owner and Contractor further expressly acknowledge that later claims for adjustments to the Contract Price and/or Contract Time associated with said Change Order or Written Agreement are not valid.

SC-12. **ARTICLE 12. CLAIMS – No Alterations or additions have been made.**

SC-13. **ARTICLE 13. COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK.**

SC-13.01. **Cost of Work.** Delete Paragraph 13.01.D in its entirety and insert the following:

D. Not Used.

SC-14. **ARTICLE 14. TESTS AND INSPECTIONS: CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK – No Alterations or additions have been made.**

SC-15. **ARTICLE 15. PAYMENTS TO CONTRACTOR; SET-OFFS; COMPLETION; CORRECTION PERIOD.**

SC-15.01. **Progress Payments.** Add the following paragraph immediately after Paragraph 15.01.B.3:

4. Contractor’s Applications for Payment shall be accompanied by the documentation specified herein.

a. If payment is requested for 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 Progress Payment shall be accompanied by such data, satisfactory to Owner, as will establish Owner’s title to the materials and equipment and protect his interest therein, including applicable insurance. Payments for such materials and equipment shall be based only upon the actual cost of the materials and equipment to Contractor and shall not include any overhead or profit to Contractor.
Supplemental Conditions

b. Each Application for Progress Payment shall be accompanied by Contractor's updated schedule of operations, or progress report, with such shop drawings schedules, procurement schedules, value of material on hand included in application, and other data or reasonably required by Engineer.

SC-15.03. Substantial Completion. Add the following subparagraph to Paragraph 15.03.B.

1. If some or all of the Work has been determined not to be at a point of Substantial Completion and will require re-inspection or re-testing by Engineer, the cost of such re-inspection or re-testing, including the cost of time, travel and living expenses, shall be paid by Contractor to Owner. If Contractor does not pay, or the parties are unable to agree as to the amount owed, then Owner may impose a reasonable set-off against payments due under Article 15.

Add the following paragraph immediately after Paragraph 15.03.F:

G. Portions of the Work, which can be completed without interruption of the intended operation, may be completed after the Work is accepted as substantially complete.

SC-15.04. Partial Use or Occupancy. Add the following paragraph immediately after Paragraph 15.04.A:

B. Owner has the right to take possession of or use any completed or substantially completed portions of the Work at any time, but such taking possession or use will not be deemed an acceptance of any Work not completed in accordance with the Contract Documents.

Owner’s use of any facilities so identified in the Contract Documents will not be grounds for extension of the Contract Time or change in the Contract Price.

Owner’s use of any facilities not specifically identified in the Contract Documents will be in accordance with conditions agreed to prior to such use, and any extra costs or delays in completion incurred and properly claimed by Contractor will be equitably adjusted with a Change Order.

Facilities substantially completed in accordance with the Contract Documents which are occupied or used by Owner prior to Substantial Completion of the entire Work will be defined by Engineer in a written notice to Owner and Contractor fixing the responsibility for insurance and maintenance on that part of the Work and including a tentative list of items to be completed or corrected before final acceptance.

Guarantee periods for accepted or substantially completed Work, including mechanical and electrical equipment, will commence upon the start of continuous use by Owner.

All tests and instruction of Owner's personnel must be satisfactorily completed, and Owner shall assume responsibility for and operation of all facilities occupied or used except as may arise through portions of the Work not yet completed by Contractor.

SC-15.08. Correction Period. Amend the first sentence of Paragraph 15.08.A to read as follows:

If within one (1) year after the date of Final 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 5.02.A is found to be defective, Contractor shall promptly, without cost to Owner and in accordance with Owner’s written instructions:

Add the following paragraph immediately after Paragraph 15.08.E:

F. Nothing in the General Conditions Article 14 concerning the correction period shall establish a period of limitation with respect to any other obligation which Contractor has under the Contract Documents. The establishment of time periods relates only to the specific obligations of Contractor to correct the Work, and has no relationship to the time within which his obligations under the Contract Documents may be sought to be enforced, nor to the time within which proceedings may be commenced to establish his liability with respect to his obligations other than to specifically correct the Work.

SC-16. ARTICLE 16. SUSPENSION OF WORK AND TERMINATION

SC-16.03 Owner May Terminate For Convenience. Delete Paragraphs 16.03.A.2 and 16.03.A.3 in their entirety and insert the following in their place:

2. Not Used.

SC-17. ARTICLE 17. FINAL RESOLUTION OF DISPUTES.

SC-17.01 Methods and Procedures. Delete Paragraph 17.01.B in its entirety and insert the following in its place:

B. Final Resolution of Disputes: For any dispute subject to resolution under this Article, the Owner shall have the right, within its sole discretion, to choose one of the following dispute resolution processes and Contractor shall submit to and be bound by the process chosen by the Owner:

2. elect in writing to invoke the dispute resolution process provided for in the Supplementary Conditions; or
3. submit the dispute to a court of competent jurisdiction Crawford County, Kansas; or
4. agree with the Contractor to submit the dispute to another dispute resolution process.
Supplemental Conditions

**SC-18. ARTICLE 18. MISCELLANEOUS.**

SC-18.09. Add the following paragraphs immediately after Paragraph 18.08.

SC-18.09. **Historical or Archaeological Deposits.**

A. If, during the course of construction, evidence of deposits of historical or archaeological interest is found, the Contractor shall cease operations affecting the find and shall notify the Owner who shall notify the State, c/o Cultural Resources Division, Kansas State Historical Society, 6425 SW Sixth Ave., Topeka, KS, 66615, Phone (785) 272-8681. No further disturbance of the deposits shall ensue until the Contractor has been notified by the Owner that he may proceed. The Owner will issue a notice to proceed only after the state official has surveyed the find and make a determination to the Kansas Department of Health and Environment and Owner. Compensation to the Contractor, if any, for lost time or change in construction to avoid the find, shall be determined in accordance with changed site conditions or change order provisions of the specifications.

SC-18.10. **Record Drawings.**

A. The Contractor shall keep one copy of all specifications, drawings, addenda, modifications, and shop drawings at the site in good order and annotated to show all changes made during the construction process. These shall be available to the Engineer and shall be delivered to him for the Owner upon completion of the Project with final Application for Payment.

SC-18.11. **Liquidated Damages.**

A. Should Contractor fail to achieve milestones, Substantial Completion or Final Completion of the Work within the periods of time stipulated in the Agreement, Contractor shall pay to Owner, as liquidated damages and not as a penalty, the amounts stipulated in the Agreement per day of delay unless Contract Time is extended by Owner. Owner shall deduct the liquidated damages from the Contractor’s Final Payment; rates shall be as stated in the Agreement.

SC-18.12. **Underground Installations.**

A. Existing underground installations such as water mains, sewers, telephone lines, power lines, and buried structures in the vicinity of the work to be done hereunder are indicated on the drawings only to the extent such information has been made available to or discovered by the Engineer in preparing the drawings. There is no guarantee as to the accuracy or completeness of such information, and all responsibility for the accuracy and completeness of such information, and all responsibility for the accuracy and completeness thereof is expressly disclaimed.

The Contractor shall be solely responsible for locating all existing underground installations in advance of excavating or trenching, by contacting the Owners thereof and prospecting.

The Contractor shall use his own information and shall not rely solely upon information shown on the drawing concerning existing underground installations.

Any delay, additional work, or extra cost to the Contractor caused by existing underground installations shall not constitute a claim for extra work, additional payment, or damages.
Supplemental Conditions

SC-18.13 **Compliance with the Migratory Bird Treaty Act**

A. This Federal Act (16 U.S.C. 703-712: Ch. 128 as amended) makes illegal those construction activities that kill (take) migratory birds or destroys eggs, young or active nests. The construction Contractor should make reasonable effort to avoid occupied bird nests with eggs or young during clearing and grubbing of trees or trenching and backfilling or other construction activities. If the construction may result in the taking of nesting migratory birds, U.S. Fish and Wildlife Service (USFWS) recommends that the construction Contractor arrange to have a qualified biologist conduct a field survey of the affected habitats. The USFWS’s Kansas Field Office should be contacted immediately for further guidance if a field survey identifies the existence of one or more active bird nests, which cannot be avoided by the planned construction activities. Adherence to these guidelines will help to avoid the unnecessary take of migratory birds and the possible need for law enforcement action.
A LISTING OF THE DUTIES, RESPONSIBILITIES
AND LIMITATIONS OF AUTHORITY OF THE
RESIDENT PROJECT REPRESENTATIVE

ENGINEER shall furnish a Resident Project Representative (RPR), assistants and other field staff to assist ENGINEER in observing performance of the work of CONTRACTOR.

Through more extensive on-site observations of the work in progress and field checks of materials and equipment by the RPR and assistants, ENGINEER shall endeavor to provide further protection for OWNER against defects and deficiencies in the work of CONTRACTOR; but, the furnishing of such services will not make ENGINEER responsible for or give ENGINEER control over construction means, methods, techniques, sequences or procedures or for safety precautions or programs, or responsibility for CONTRACTOR's failure to perform the Work in accordance with Contract Documents and in particular the specific limitations set forth in the Agreement as applicable.

The duties and responsibilities of the RPR are limited to those of ENGINEER in ENGINEER's agreement with the OWNER and in the construction Contract Documents, and are further limited and described as follows:

A. General
RPR is ENGINEER's agent at the site, will act as directed by and under the supervision of ENGINEER, and will confer with ENGINEER regarding RPR's actions. RPR's dealing in matters pertaining to the on-site work shall in general be with ENGINEER and CONTRACTOR keeping OWNER advised as necessary. RPR's dealing with subcontractor shall only be through or with the full knowledge and approval of CONTRACTOR. RPR shall generally communicate with OWNER with the knowledge of and under the direction of ENGINEER.

B. Duties and Responsibilities of RPR
1. Schedules: Review the progress schedule, schedule of Shop Drawing submittals and schedule of values prepared by CONTRACTOR and consult with ENGINEER concerning acceptability.
2. Conferences and Meetings: Attend meeting with CONTRACTOR, such as preconstruction conferences, progress meetings, job conferences and other project-related meetings, and prepare and circulate copies of minutes thereof.
3. Liaison:
   a. Serve as ENGINEER's liaison with CONTRACTOR, working principally through CONTRACTOR's superintendent and assist in understanding the intent of the Contract Documents; and assist the ENGINEER in serving as OWNER's liaison with CONTRACTOR when CONTRACTOR's operations affect OWNER's on-site operations.
4. Shop Drawings and Samples:
   a. Record date of receipt of Shop Drawings and samples.
   b. Receive samples which are furnished at the site by CONTRACTOR, and notify ENGINEER of availability of samples for examination.
   c. Advise ENGINEER and CONTRACTOR of the commencement of any Work requiring a Shop Drawing or sample if the submittal has not been approved by ENGINEER.
5. Review of Work, Rejection of Defective Work, Inspections and Tests:
   a. Conduct on-site observations of the Work in progress to assist ENGINEER in determining if the Work is in general proceeding in accordance with the Contract Documents.
   b. Report to ENGINEER whenever RPR believes that any Work is unsatisfactory, faulty or defective or does not conform to the Contract Documents, or has been damaged, or does not meet the requirements of any inspection, test or approval required to be made; and advise ENGINEER of Work that RPR believes should be corrected or rejected or should be uncovered for observation, or requires special testing, inspection or approval.
   c. Verify that tests, equipment and systems startups and operating and maintenance training are conducted in the presence of appropriate personnel, and that CONTRACTOR maintains adequate records thereof; and observe, record and report to ENGINEER appropriate details relative to the test procedures and startups.
   d. Accompany visiting inspectors representing public or other agencies having jurisdiction over the Project, record the results of these inspections and report to ENGINEER.

6. Interpretation of Contract Documents: Report to ENGINEER when clarifications and interpretations of the Contract Documents are needed and transmit to CONTRACTOR clarifications and interpretations as issued by ENGINEER.

7. Modifications: Consider and evaluate CONTRACTOR's suggestions for modifications in Drawings and Specifications and report with RPR's recommendations to ENGINEER. Transmit to CONTRACTOR decisions as issued by ENGINEER.

8. Records:
   a. Maintain at the job site orderly files for correspondence, reports of job conferences, Shop Drawings and samples, reproductions of original Contract documents including all Work Directive Changes, Addenda, Change Orders, Field Orders, additional Drawings issued subsequent to the execution of the Contract, ENGINEER's clarifications and interpretations of the Contract Documents, progress reports, and other Project related documents.
   b. Keep a diary or log book, recording CONTRACTOR hours on the job site, weather conditions, data relative to questions of Work Directive Changes, Change Orders or changed conditions, list of job site visitors, daily activities, decisions, observations in general, and specific observations in more detail as in the case of observing test procedures; and send copies to ENGINEER.

9. Reports:
   a. Furnish ENGINEER periodic reports as required of progress of the Work and of CONTRACTOR's compliance with the progress schedule and schedule of Shop Drawing and sample submittals.
   b. Consult with ENGINEER in advance of scheduled major tests, inspections or start of important phases of the Work.
   d. Report immediately to ENGINEER and OWNER upon the occurrence of any accident.

10. Payment Requests: Review applications for payment with CONTRACTOR for compliance with the established procedure for their submission and forward with recommendations to ENGINEER, noting particularly the relationship of the payment requested to the schedule of values, Work completed and materials and equipment delivered at the site but not incorporated in the Work.
Duties, Responsibilities, and Limitations of Authority of the Resident Project Representative

11. Certificates, Maintenance and Operation Manuals: During the course of the Work, verify that certificates, maintenance and operation manuals and other data required to be assembled and furnished by CONTRACTOR are applicable to the items actually installed and in accordance with the Contract Documents, and have this material delivered to ENGINEER for review and forwarding to OWNER prior to final payment for the Work.

12. Completion:
   a. Before ENGINEER issues a Certificate of Substantial Completion, submit to CONTRACTOR a list of observed items requiring completion or correction.
   b. Conduct final inspection in the company of ENGINEER, OWNER, and CONTRACTOR and prepare a final list of items to be completed or corrected.
   c. Observe that all items on final list have been completed or corrected and make recommendations to ENGINEER concerning acceptance.

C. Limitations of Authority
Resident Project Representative:

1. Shall not authorize any deviation from the Contract Documents or substitution of materials or equipment, unless authorized by ENGINEER.
2. Shall not exceed limitations of ENGINEER's authority as set forth in the Agreement or the Contract Documents.
3. Shall not undertake any of the responsibilities of CONTRACTOR, subcontractors or CONTRACTOR's superintendent.
4. Shall not advise on, issue directions relative to or assume control over any aspect of the means, methods, techniques, sequences or procedures of construction unless such advice or directions are specifically required by the Contract Documents.
5. Shall not advise on, issue directions regarding or assume control over safety precautions and programs in connection with the Work.
6. Shall not accept Shop Drawing or sample submittals from anyone other than CONTRACTOR.
7. Shall not authorize OWNER to occupy the Project in whole or in part.
8. Shall not participate in specialized field or laboratory tests or inspections conducted by others except as specifically authorized by ENGINEER.
PART 1 – GENERAL

1.01. SUMMARY: The work to be performed under the provisions of these contract documents consists of furnishing all materials, equipment, supplies, and appurtenances; providing all construction plant, equipment, and tools; performing all necessary labor and supervision; and the construction complete including all work appurtenant thereto, of Water Tower Blasting & Painting for the City of Pittsburg, Kansas.

PART 2 - PRODUCTS - Not Applicable.

PART 3 - EXECUTION

3.01. OFF-SITE STORAGE

A. Off-site storage arrangements shall be acceptable to Owner for all materials and equipment not incorporated into the Work but included in Applications for Payment. Such storage arrangements shall be presented in writing, and shall afford adequate and satisfactory security and protection. Storage facilities shall be accessible to the Owner and Engineer.

3.02. PREPARATION FOR SHIPMENT

A. All materials shall be suitably packaged to facilitate handling and protect against damage during transit and storage. Painted surfaces shall be protected against impact, abrasion, discoloration, and other damage. All painted surfaces which are damaged prior to acceptance of equipment shall be repainted to the satisfaction of Engineer.

B. Each item of material shall be tagged or marked as identified in the delivery schedule or on the Shop Drawings. Complete packing lists and bills of material shall be included with each shipment.

3.03. CONTRACTOR'S RESPONSIBILITY FOR MATERIALS

A. The Contractor shall be responsible for furnishing all material and condition thereof and shall replace at his own expense all such material found to be defective or damaged after delivery at any time prior to the correction period.

3.04. OPERATION OF EXISTING FACILITIES

A. Contractor shall provide temporary facilities as necessary to keep required existing facilities in operation during construction period.
3.05. NOTICES TO OWNERS AND AUTHORITIES

A. Contractor shall notify owners of adjacent property and utilities when prosecution of the Work may affect them.

B. When it is necessary to temporarily deny access by owners or tenants to their property or interruption of their utility services, Contractor must give adequate advance notice to enable affected persons to provide for their needs.

C. Applicable utilities and other concerned agencies shall be contacted at least 24 hours prior to excavating near underground utilities or pole lines.

3.06. SUBSTITUTES AND “OR-EQUAL” ITEMS:

A. Provisions for evaluation of substitutes and “or-equal” items of materials and equipment are covered in Paragraph 6.05 of the General Conditions. Requests for review of equivalency will not be accepted by the Engineer from anyone except the Contractor, and such requests will not be considered until after the Contract has been awarded.

3.07. LINES AND GRADES

A. All Work shall be done to the lines, grades, and elevations indicated on the drawings.

B. Basic horizontal and vertical control points will be established or designated by Engineer. These points shall be used as datum for the Work. All additional survey, layout, and measurement work shall be performed by Contractor as a part of the Work.

C. Contractor shall provide an experienced instrument man, competent assistants, and such instruments, tools, stakes, and other materials required to complete the survey, layout, and measurement work. In addition, Contractor shall furnish, without charge, competent men from his force and such tools, stakes, and other materials as Engineer may require in establishing or designating control points or in checking survey, layout, and measurement Work performed by Contractor.

D. Contractor shall keep Engineer informed, a reasonable time in advance, of the times and places at which he wishes to do the work, so that horizontal and vertical control points may be established, and any checking deemed necessary by Engineer may be done with minimum inconvenience to Engineer and minimum delay to Contractor.

E. Contractor shall remove and reconstruct Work which is improperly located.

3.08. CONNECTIONS TO EXISTING FACILITIES

A. Unless otherwise specified or indicated, Contractor shall make all necessary connections to existing facilities including structures, drain lines, and utilities such as water, sewer, gas, telephone, control, and electric. In each case, Contractor shall receive permission from Owner or the owning utility prior to undertaking connections. Contractor shall protect facilities against deleterious substances and damage.
B. Connections to existing facilities which are in service shall be thoroughly planned in advance, and all required equipment, materials, and labor shall be on hand at the time of undertaking the connections. Work shall proceed continuously (around the clock) if necessary to complete connections in the minimum time. Operation of valves or other appurtenances on existing utilities, when required, shall be by or under the direct supervision of the owning utility.

3.09. SALVAGE OF MATERIAL AND EQUIPMENT

A. Existing materials and equipment removed, and not reused as part of the Work, shall become the Contractor’s property, except the following items which shall remain the Owner’s property: All control cabinets and components within, and all pressure snubbers and pressure gauges located on the site. The Owner has the right to retain all additional equipment, piping, valves, fittings, and all other appurtenant items not specified herein.

B. Contractor shall remove all existing piping that will no longer be in use and that conflicts with new piping to be installed. Unless specified otherwise in the contract documents, existing piping that will no longer be in use that does not conflict with new piping to be installed may be abandoned in place.

C. Contractor shall carefully remove, in a manner to prevent damage, all materials and equipment specified or indicated to be salvaged by the Contractor and reused or to remain the property of the Owner. Contractor shall store and protect salvaged items specified or indicated to be reused in the Work. Any items damaged in removal, storage, or handling through carelessness or improper procedures shall be replaced by the Contractor in kind or with new items.

D. Contractor may furnish and install new items instead of those specified or indicated to be salvaged and reused, in which case such removed items will become the Contractor’s property. Existing materials and equipment removed by Contractor shall not be reused in the Work except where so specified or indicated.

3.10. LAND FOR CONSTRUCTION PURPOSES

A. Contractor will be permitted to use land belonging to Owner, on or near the site of Work, for construction purposes and for storage of materials and equipment. The Contractor shall limit construction activities and staging to the area inside the tank site perimeter fence.

B. Contractor shall immediately move stored materials or equipment if any occasion arises, as determined by the Owner, requiring access to the storage area. Materials or equipment shall not be placed on the property of Owner until Owner has agreed to the location to be used for storage.
3.11. UNFAVORABLE CONSTRUCTION CONDITIONS

A. During unfavorable weather, wet ground, or other unsuitable construction conditions, the Contractor shall confine his operations to work which will not be affected adversely by such conditions. No portion of the Work shall be constructed under conditions which would affect adversely the quality or efficiency thereof, unless special means or precautions are taken by Contractor to perform the work in a proper and satisfactory manner.

3.12. CUTTING AND PATCHING

A. As provided in General Conditions, Contractor shall perform all cutting and patching required for the Work, and as may be necessary in connection with uncovering Work for inspection or for the correction of defective Work.

B. Contractor shall perform all cutting and patching required for the installation of improperly timed Work and to remove samples of installed materials for testing. Contractor shall not undertake any cutting or demolition which may affect the structural stability of the Work without Engineer's concurrence.

C. Contractor shall provide all shoring, bracing, supports, and protective devices necessary to safeguard all Work during cutting and patching operations.

D. Materials shall be cut and removed to the extent indicated on the drawings or as required to complete the Work. Materials shall be removed in a careful manner with no damage to adjacent facilities or materials. Materials which are not salvageable shall be removed from the site by Contractor.

E. All Work and existing facilities affected by cutting operations shall be restored with new materials, or with salvaged materials acceptable to Engineer, to obtain a finished installation with the strength, appearance, and functional capacity required. If necessary, entire surfaces shall be patched and refinished.

3.13. CLEANING UP

A. Contractor shall keep the premises free at all times from accumulations of waste materials and rubbish. Contractor shall provide adequate trash receptacles about the site, and shall promptly empty the containers when filled.

B. Construction materials, such as concrete forms and scaffolding, shall be neatly stacked by Contractor when not in use. Contractor shall provide adequate trash receptacles about the site, and shall promptly remove splattered concrete, asphalt, oil, paint, corrosive liquids and cleaning solutions from surfaces to prevent marring or other damage.

C. Volatile wastes shall be properly stored in covered metal containers and removed daily.

D. Wastes shall not be buried or burned on the site nor disposed of into storm drain, sanitary sewers, streams, or waterways. All wastes shall be removed from the site and disposed of in a manner complying with local ordinances and antipollution laws.
E. Adequate cleanup will be a condition for recommendation of progress payment applications.

3.14. SITE ADMINISTRATION

A. Contractor shall be responsible for all areas of the site used by him and all Subcontractors in the performance of the Work. He will exert full control over the actions of all employees and other persons with respect to the use and preservation of property and existing facilities, except such controls as may be specifically reserved to Owner or others. Contractor has the right to exclude from the site all persons who have no purpose related to the Work or its inspection, and may require all persons on the site (except Owner’s employees) to observe the same regulations as he requires of his employees.

3.15. UNDERGROUND INSTALLATION

A. Existing underground installation such as water mains, gas mains, sewers, telephone lines, power lines, and buried structures in the vicinity of the work to be done hereunder are indicated on the drawings only to the extent such information has been made available to or discovered by the Engineer in preparing the drawings. There is no guarantee as to the accuracy or completeness of such information and all responsibility for the accuracy and completeness thereof is expressly disclaimed. Generally, service connections are not indicated on the Drawings.

B. The Contractor shall be solely responsible for locating all existing underground installations, including service connections, in advance of excavating or trenching, by contacting the owner thereof and prospecting. The Contractor shall use his own information and shall not rely upon any information shown on the drawings concerning existing underground installations.

C. Any delay, additional work, or extra costs to the Contractor caused by existing underground installations shall not constitute a claim for extra work, additional payment or damages.

3.16. PRECONSTRUCTION CONFERENCE

A. Prior to the commencement of work at the site, a preconstruction conference will be held at a mutually agreed time and place. The conference shall be attended by:

1. Contractor and his superintendent.
2. Principal Subcontractors.
3. Engineer.
4. Representatives of Owner.
5. Governmental representatives as appropriate.
6. Others as requested by Contractor, Owner, or Engineer.
B. Unless previously submitted to Engineer, Contractor shall bring to the conference a tentative work progress schedule, schedule of values and shop drawing submittal schedule.

C. The purpose of the conference is to designate responsible personnel and establish a working relationship. Matters requiring coordination will be discussed and procedures for handling such matters established. The agenda will include:

1. Contractor's tentative schedules.
2. Transmittal, review and distribution of Contractor's submittals.
3. Processing applications for payment.
5. Critical work sequencing.
6. Field decisions and Change Orders.
7. Use of premises, office and storage areas, security, housekeeping, and Owner's needs.
8. Contractor's assignments for safety and first aid.

D. Engineer will preside at the conference and will arrange for keeping the minutes and distributing the minutes to all persons in attendance.

3.17. PROGRESS MEETING

A. Contractor shall schedule and hold regular progress meetings every other month and at other times as requested by Engineer or required by progress of the work. Contractor, Engineer, and all Subcontractors active on the site shall be represented at each meeting. Contractor may at his discretion request attendance by representatives of his suppliers, manufacturers, and other Subcontractors.

B. Contractor shall preside at the meetings and provide for keeping and distribution of the minutes. The purpose of the meetings will be to review the progress of the work, maintain coordination of efforts, discuss changes in scheduling, and resolve other problems which may develop.

3.18. SEQUENCING AND COORDINATION

A. In order to keep existing facilities in operation, Contractor shall carefully plan and schedule the Work.
SECTION 01025
MEASUREMENT AND PAYMENT

PART 1 – GENERAL

1.01. SCOPE

A. This section covers methods of measurement and payment for items of work under this contract.

1.02. GENERAL

A. The total Bid Price for the Base Bid and Alternate Bids, if selected, shall cover all work required by the Contract Documents. All costs in connection with the proper and successful completion of the work, including furnishing all materials, equipment, supplies, excavation, backfill, fill and appurtenances; providing all construction plant, equipment, and tools; and performing all necessary labor and supervision to fully complete the work, shall be included in the lump sum price bid.

1.03. ESTIMATED QUANTITIES:

A. All estimated quantities stipulated in the Bid Form or other Contract Documents are approximate and are to be used only (a) as a basis for estimating the probable cost of the work and (b) for the purpose of comparing the bids submitted for the work. 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 performed and materials furnished. Contractor agrees that he will make no claim for damages, anticipated profits, or otherwise on account of any difference between the amounts of work actually performed and materials actually furnished and the estimated amounts therefore.

PART 2 – PRODUCTS – Not applicable.

PART 3 – EXECUTION – Not applicable.

END OF SECTION
SECTION 01300

SUBMITTALS

PART 1 – GENERAL

1.01. SECTION INCLUDES

   A. Submittal procedures
   B. Construction progress schedules
   C. Proposed Products list
   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

1.02. RELATED SECTIONS

   A. Section 01400 - Quality Control: Manufacturers’ field services and reports.
   B. Section 01700 - Contract Closeout: Contract warranties, bonds, manufacturers’
      certificates, and closeout submittals.

1.03. REFERENCES

   A. AGC (Associated General Contractors of America) publication "The Use of CPM in
      Construction - A Manual for General Contractors and the Construction Industry".

1.04. SUBMITTAL PROCEDURES

   A. Transmit each submittal with Engineer accepted form.
   B. Sequentially number the transmittal form. Revise submittals with original number
      and a sequential alphabetic suffix.
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.

E. Schedule submittals to expedite the Project, and deliver to Engineer at business address. Coordinate submission of related items.

F. For each submittal for review, allow 15 days excluding delivery time to and from the contractor.

G. Identify variations from Contract Documents and Product or system limitations which may be detrimental to successful performance of the completed Work.

H. Provide space for Contractor and Engineer review stamps.

I. When revised for resubmission, identify all changes made since previous submission.

J. Distribute copies of reviewed submittals as appropriate. Instruct parties to promptly report any inability to comply with requirements.

K. Submittals not requested will not be recognized or processed.

L. Contractor’s stamp of approval is a representation to Owner and Engineer that Contractor accepts full responsibility for determining and verifying all quantities, dimensions, field construction data, materials, catalog numbers, and similar data, and that he has reviewed and coordinated each submittal with the requirements of the Work and the Contract Documents.

M. For each section of the specifications, the initial submittal shall be complete for all items and components contained within the section of the specifications. Contractor shall accept full responsibility for the completeness of each submission. When an item consists of components from several sources, Contractor shall submit a complete initial submittal including all components.

N. Contractor shall reimburse Owner for charges of Engineer for review of substitutes, review of more than one “or-equal” per specification section, and additional review effort due to incompleteness or submittals or failure of Contractor to coordinate and complete submittals.

O. If more than one resubmission is required because of lack of previously requested data or additional information, Contractor shall reimburse Owner for the charges of Engineer for review of resubmissions. This would not include submittal data for slump tests, field tests, and other submittal requirements for placing equipment into service.
1.05. CONSTRUCTION PROGRESS SCHEDULES

A. Submit initial schedule in duplicate within 15 days after date of Owner-Contractor Agreement.

B. Revise and resubmit as required.

C. Submit revised schedules with each Application for Payment, identifying changes since previous version.

D. Submit a chart with separate line for each major portion of Work or operation identifying first work day of each week.

1.06. PROPOSED PRODUCTS LIST

A. Within 15 days after date of Owner-Contractor Agreement, submit list of major products proposed for use, with name of manufacturer, trade name, and model number of each product.

B. For products specified only by reference standards, give manufacturer, trade name, model or catalog designation, and reference standards.

1.07. 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 and for record documents purposes described in Section 01700 – Contract Closeout.

B. Product Data for Information:
   1. Submitted for the Engineer's knowledge as contract administrator or for the Owner.

C. Product Data for Project Close-out:
   1. Submitted for the Owner's benefit during and after project completion.

D. Submit the number of copies which the Contractor requires, plus three copies which will be retained by the Engineer.

E. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers’ standard data to provide information specific to this Project.
F. Indicate Product utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.

G. After review distribute in accordance with the Submittal Procedures article above and provide copies for record documents described in Section 01700 - Contract Closeout.

1.08. SHOP DRAWINGS

A. Shop Drawings 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 copies and distribute in accordance with SUBMITTAL PROCEDURES article above and for record documents purposes described in Section 01700 - Contract Closeout.

B. Shop Drawings for Information:
   1. Submitted for the Engineer's knowledge as contract administrator for the Owner.

C. Shop Drawings for Project Close-out:
   1. Submitted for the Owner's benefit during and after project completion.
   2. Indicate special utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.
   3. Submit the number of opaque reproductions which Contractor requires, plus three copies which will be retained by Engineer.

1.09. 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 and for record documents purposes described in Section 01700 - Contract Closeout.

B. Samples for Information:
   1. Submitted for the Engineer's knowledge as contract administrator for the Owner.

C. Samples for Selection:
1. Submitted to Engineer for aesthetic, color, or finish selection.

2. Submit samples of finishes from the full range of manufacturers’ standard colors, textures, and patterns for Engineer selection.

3. After review, produce duplicates and distribute in accordance with SUBMITTAL PROCEDURES article above and for record documents purposes described in Section 01700 - Contract Closeout.

4. Submit samples to illustrate functional and aesthetic characteristics of the Product, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.

5. Include identification on each sample, with full Project information.

6. Submit the number of samples specified in individual specification sections; one of which will be retained by Engineer.

7. Reviewed samples which may be used in the Work are indicated in individual specification sections.

8. Samples will not be used for testing purposes unless specifically stated in the specification section.

1.10. DESIGN DATA

A. Submit for the Engineer's knowledge as contract administrator 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.

1.11. TEST REPORTS

A. Submit for the Engineer's knowledge as contract administrator 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.

1.12. 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.

1.13. MANUFACTURER’S INSTRUCTIONS

Water Tower Blasting & Painting 01300-5
Pittsburg, Kansas
OA Project No. 017-3775
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.

1.14. 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.

PART 2 – PRODUCTS – Not applicable.

PART 3 – EXECUTION – Not applicable.

END OF SECTION
PART 1 – GENERAL

1.01. TESTING LABORATORY SERVICES

A. In accordance with General Conditions, all tests which require the services of a laboratory to determine compliance with the Contract Documents shall be performed by an independent commercial testing laboratory technician, properly equipped, and fully qualified to perform the tests in accordance with the specified standards.

B. Testing Laboratory Services Furnished by Contractor. Contractor shall be responsible for all testing laboratory services in connection with concrete materials and mix designs, gradation tests for embedment, fill, and backfill materials, and all other tests and engineering data required for Engineer's review of materials and equipment proposed to be used in the Work. Contractor shall obtain Engineer's acceptance of the testing laboratory before having services performed, and shall pay all costs for services.

C. Testing Services Furnished by Owner. Quality assurance observation and testing by NACE-certified inspectors following Contractor's own quality control measurements. Owner-furnished services shall pertain to environmental oversight and inspection of lead-based paint abatement work, surface preparation, coating dry film thickness, and holiday testing. Field reports summarizing the observations and results of testing performed will be provided to Owner.

D. Transmittal of Test Reports. Written reports of tests and engineering data furnished by Contractor for Engineer's review of materials and equipment proposed to be used in the Work shall be submitted as specified for Shop Drawings.

E. The testing laboratory retained by Contractor during execution of the Work shall furnish three copies of a written report of each test performed by laboratory personnel in the field or laboratory. Two copies of each test report will be transmitted to the Engineer and one copy to the Contractor within three days after each test is completed.

PART 2 – PRODUCTS – Not applicable.

PART 3 – EXECUTION – Not applicable.

END OF SECTION
SECTION 01500
TEMPORARY FACILITIES

PART 1 – GENERAL

1.01. SUMMARY: This section includes requirements of a temporary nature not normally incorporated into final work.

PART 2 – PRODUCTS – Not Applicable.

PART 3 - EXECUTION

3.01. OFFICES AT SITE OF WORK

A. During the performance of these contracts, the Contractor shall maintain a suitable office at or near the site of the Work which shall be the headquarters of his representative authorized to receive drawings, instructions or other communication or articles. Any communication given to the said representative or delivered at Contractor’s office at the site of the Work shall be deemed to have been delivered to Contractor.

B. Copies of drawings, specifications and other contract documents shall be kept at Contractor’s office at the site of the work and available for use at all times.

3.02. WATER

A. All water required for and in connection with the Work to be performed shall be furnished by the Contractor.

3.03. POWER

A. Each Contractor shall be responsible for providing all power for heating, lighting, and operation of Contractor’s plant or equipment, or for any other use by Contractor. Temporary heat and lighting shall be maintained until the Work is accepted.

3.04. TELEPHONE SERVICE

A. Contractor will be required to provide telephone service at the site. Cellular telephone service is acceptable.

3.05. SANITARY FACILITIES

A. Contractor shall furnish temporary sanitary facilities at the site, as provided herein, for the needs of all construction workers and others performing work or furnishing services on the Project.

B. Sanitary facilities shall be of reasonable capacity, properly maintained throughout the construction period, and obscured from public view to the greatest practical extent. If toilets of the chemically treated type are used, at least one toilet will be furnished for each 20 people. Contractor shall enforce the use of such sanitary facilities by all personnel at the site.
3.06. MAINTENANCE OF TRAFFIC

A. Contractor shall conduct his work to interfere as little as possible with public travel, whether vehicular or pedestrian. Whenever it is necessary to cross, obstruct, or close roads, driveways and walks, whether public or private, Contractor shall provide and maintain suitable and safe bridges, detours, or other temporary expedients for the accommodation of public and private travel, and shall give reasonable notice to owners of private drives before interfering with them. Such maintenance of traffic will not be required when Contractor has obtained permission from the owner and tenant of private property, or from the authority having jurisdiction over public property involved, to obstruct traffic at the designated point.

B. All roadways shall be kept in service at all times with no more than one-half the travel way closed to traffic at any one time.

3.07. BARRICADES AND LIGHTS

A. All streets, roads, highways, and other public thoroughfares which are closed to traffic shall be protected by effective barricades on which shall be placed acceptable warning signs. Barricades shall be located at the nearest intersecting public highway or street on each side of the blocked section.

B. All open trenches and other excavations shall have suitable barricades, signs, and lights to provide adequate protection to the public. Obstructions such as material piles and equipment shall be provided with similar warning signs and lights.

C. All barricades and obstructions shall be illuminated with warning lights from sunset to sunrise. Material storage and conduct of the Work on or alongside public streets and highways shall cause the minimum obstruction and inconvenience to travelers.

3.08. FENCES

A. All existing fences affected by the Work shall be maintained by Contractor until completion of the Work. Fences which interfere with construction operations shall not be relocated or dismantled until written permission is obtained from the owner of the fence, and the period the fence may be left relocated or dismantled has been agreed upon. Where fences must be maintained across the construction area, adequate gates shall be installed. Gates shall be kept closed and locked at all times when not in use.

B. On completion of the Work across any tract of land, Contractor shall restore all fences to their original or to a better condition and to their original location.

3.09. DAMAGE TO EXISTING PROPERTY

A. Contractor will be held responsible for any damage to existing structures, Work, materials, or equipment because of his operations and shall repair or replace any damaged structures, Work, materials, or equipment to the satisfaction of, and at no additional cost to, Owner.

B. Contractor shall protect all existing structures and property from damage and shall provide bracing, shoring, or other work necessary for such protection.
C. Contractor shall be responsible for all damage to streets, roads, curbs, sidewalks, highways, shoulders, ditches, embankments, culverts, bridges, or other public or private property, which may be caused by transporting equipment, materials, or men to or from the Work. Contractor shall make satisfactory and acceptable arrangements with the agency having jurisdiction over the damaged property concerning its repair or replacement.

3.10. TREE AND PLANT PROTECTION

A. All trees and other vegetation which must be removed to perform the Work have been designated on the drawings and shall be removed and disposed of by Contractor; however, no trees or cultured plants shall be unnecessarily removed unless their removal is indicated on the drawings. All trees and plants not removed shall be protected against injury from construction operations.

B. Trees considered by Engineer to have any significant effect on construction operations are indicated on the drawings and those that are no indicated to be removed shall be preserved.

C. Contractor shall take extra measures to protect trees designated to be preserved, such as erecting barricades, trimming to prevent damage from construction equipment, and installing pipe and other Work by means of hand excavation or tunneling methods. Such trees shall not be endangered by stockpiling excavated material or storing equipment against the trunk.

D. When the injury or removal of trees designated to be preserved cannot be avoided, or when removal and replacement is indicated on the drawings, each tree injured beyond repair or removed shall be replaced with a similar tree of the nearest size possible.

E. All trimming, repair, and replacement of trees and plants shall be performed by qualified nurserymen or horticulturists.

3.11. ACCESS ROADS

A. Following proper coordination with Owner, Contractor shall establish and maintain temporary access roads to various parts of the site as required to complete the Project. Such roads shall be available for the use of all others performing work or furnishing services in connection with the Project.

3.12. PARKING

A. Contractor shall provide and maintain suitable parking areas for the use of all construction workers and others performing work or furnishing services in connection with the Project, as required to avoid any need for parking personal vehicles where they may interfere with public traffic, Owner's operations, or construction activities.

3.13. NOISE CONTROL
A. Contractor shall take reasonable measures to avoid unnecessary noise. Such measures shall be appropriate for the normal ambient sound levels in the area during working hours. All construction machinery and vehicles shall be equipped with practical sound muffling devices, and operated in a manner to cause the least noise consistent with efficient performance of the Work.

B. During construction activities on or adjacent to occupied buildings, and when appropriate, Contractor shall erect screens or barriers effective in reducing noise in the building; and shall conduct his operations to avoid unnecessary noise which might interfere with the activities of building occupants.

3.14. DUST CONTROL

A. Contractor shall take reasonable measures to prevent unnecessary dust. Earth surfaces subject to dusting shall be kept moist with water or by application of a chemical dust suppressant. Dusty materials in piles or in transit shall be covered when practicable to prevent blowing.

B. Buildings or operating facilities which may be affected adversely by dust shall be adequately protected from dust. Existing or new machinery, motors, instrument panels or similar equipment, shall be protected by suitable dust screens. Proper ventilation shall be included with dust screens.

3.15. TEMPORARY DRAINAGE PROVISIONS

A. Contractor shall provide for the drainage of stormwater and such water as may be applied or discharged on the site in performance of the Work. Drainage facilities shall be adequate to prevent damage to the Work, the site, and adjacent property.

B. Existing drainage channels and conduits shall be cleaned, enlarged or supplemented as necessary to carry all increased runoff attributable to Contractor's operations. Dikes shall be constructed as necessary to divert increased runoff from entering adjacent property (except in natural channels), to protect Owner's facilities and the Work, and to direct water to drainage channels or conduits. Ponding shall be provided as necessary to prevent downstream flooding and silt migration.

3.16. EROSION CONTROL

A. Contractor shall prevent erosion of soil on the site and adjacent property resulting from his construction activities. Effective measures shall be initiated prior to the commencement of clearing, grading, excavation, or other operation that will disturb the natural protection.

B. Work shall be scheduled to expose areas subject to erosion for the shortest possible time, and natural vegetation preserved to the greatest extent practicable. Temporary storage and construction buildings shall be located, and construction traffic routed, to minimize erosion. Temporary fast-growing vegetation or other suitable ground cover shall be provided as necessary to control runoff.

3.17. POLLUTION CONTROL
A. Contractor shall prevent the pollution of drains and watercourses by sanitary wastes, sediment, debris and other substances resulting from construction activities. No sanitary wastes will be permitted to enter any drain or watercourse other than sanitary sewers. No sediment, debris or other substance will be permitted to enter sanitary sewers and reasonable measures will be taken to prevent such materials from entering any drain or watercourse.

3.18. PROTECTION OF PUBLIC AND PRIVATE PROPERTY

A. Contractor shall protect, shore, brace, support, and maintain all underground pipes, conduits, drains, and other underground construction uncovered or otherwise affected by his construction operations. All pavement, surfacing, driveways, curbs, walks, buildings, utility poles, guy wires, fences, and other surface structures affected by construction operations, together with all sod and shrubs in yards and parks, shall be restored to their original condition, whether within or outside the easement. All replacements shall be made with new materials.

B. Contractor shall be responsible for all damage to streets, roads, highways, shoulders, ditches, embankments, culverts, bridges, and other public or private property, regardless of location or character, which may be caused by transporting equipment, materials, or men to or from the Work or any part or site thereof, whether by him or his Subcontractors. Contractor shall make satisfactory and acceptable arrangements with the owner of, or the agency or authority having jurisdiction over, the damaged property concerning its repair or replacement or payment of costs incurred in connection with the damage.

3.19. SECURITY

A. Contractor shall be responsible for protection of the site, and all Work, materials, equipment, and existing facilities thereon, against vandals and other unauthorized persons.

B. No claim shall be made against Owner by reason of any act of an employee or trespasser, and Contractor shall make good all damage to Owner's property resulting from his failure to provide security measures as specified.

C. Security measures shall be at least equal to those usually provided by Owner to protect his existing facilities during normal operation, but shall also include such additional security fencing, barricades, lighting, and other measures as required to protect the site.

END OF SECTION
SECTION 01570
TEMPORARY ENVIRONMENTAL CONTROLS

PART 1 – GENERAL

1.01. DESCRIPTION

A. This section specifies the control of environmental pollution and damage that the Contractor must consider for air, water, and land resources. It includes management of visual aesthetics, noise, solid waste, radiant energy, and radioactive materials, as well as other pollutants and resources encountered or generated by the Contractor. The Contractor is obligated to consider specified control measures with the costs included within the various contract items of work.

B. Environmental pollution and damage is defined as the presence of chemical, physical, or biological elements or agents which:

1. Adversely affect human health or welfare,

2. Unfavorably alter ecological balances of importance to human life,

3. Effect other species of importance to humankind, or;

4. Degrade the utility of the environment for aesthetic, cultural, and historical purposes.

C. Definitions of Pollutants:


2. Debris: Combustible and noncombustible wastes, such as leaves, tree trimmings, ashes, and waste materials resulting from construction or maintenance and repair work.

3. Sediment: Soil and other debris that has been eroded and transported by runoff water.

4. Solid Waste: Rubbish, debris, garbage, and other discarded solid materials resulting from industrial, commercial, and agricultural operations and from community activities.

5. Surface Discharge: The term "Surface Discharge" implies that the water is discharged with possible sheeting action and subsequent soil erosion may occur. Waters that are surface discharged may terminate in drainage ditches, storm sewers, creeks, and/or "water of the United States" and would require a permit to discharge water.

6. Rubbish: Combustible and noncombustible wastes such as paper, boxes, glass and crockery, metal and lumber scrap, tin cans, and bones.
7. Sanitary Wastes:
   a. Sewage: Domestic sanitary sewage and human and animal waste.
   b. Garbage: Refuse and scraps resulting from preparation, cooking, dispensing, and consumption of food.

1.02. QUALITY CONTROL
   A. Establish and maintain quality control for the environmental protection of all items set forth herein.
   B. Record on daily reports any problems in complying with laws, regulations, and ordinances. Note any corrective action taken.

1.03. REFERENCES
   A. The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.
   B. U.S. National Archives and Records Administration (NARA):
      33 CFR 328 ............... Definitions

1.04. SUBMITTALS
   A. Furnish the following:
      1. Environmental Protection Plan: After the contract is awarded and prior to the commencement of the work, the Contractor shall meet with the Engineer to discuss the proposed Environmental Protection Plan and to develop mutual understanding relative to details of environmental protection. Not more than 20 days after the meeting, the Contractor shall prepare and submit to the Engineer for approval, a written and/or graphic Environmental Protection Plan including, but not limited to, the following:
         a. Names of persons within the Contractor's organization who are responsible for ensuring adherence to the Environmental Protection Plan.
         b. Names and qualifications of persons responsible for manifesting hazardous waste to be removed from the site.
         c. Names and qualifications of persons responsible for training the Contractor's environmental protection personnel.
         d. Description of the Contractor's environmental protection personnel training program.
         e. A list of Federal, State, and local laws, regulations, and permits concerning environmental protection, pollution control, noise control and abatement that are applicable to the Contractor's
proposed operations and the requirements imposed by those laws, regulations, and permits.

f. Methods for protection of features to be preserved within authorized work areas including trees, shrubs, vines, grasses, ground cover, landscape features, air and water quality, fish and wildlife, soil, historical, and archeological and cultural resources.

g. Procedures to provide environmental protection that comply with the applicable laws and regulations. Describe the procedures to correct pollution of the environment due to accident, natural causes, or failure to follow the procedures as described in the Environmental Protection Plan.

h. Permits, licenses, and the location of the solid waste disposal area.

i. Drawings showing locations of any proposed temporary excavations or embankments for haul roads, stream crossings, material storage areas, structures, sanitary facilities, and stockpiles of excess or spoil materials.

j. Environmental Monitoring Plans for the job site including land, water, air, and noise.

k. Work Area Plan showing the proposed activity in each portion of the area and identifying the areas of limited use or nonuse. Plan should include measures for marking the limits of use areas. This plan may be incorporated within the Erosion Control Plan.

B. Approval of the Contractor's Environmental Protection Plan will not relieve the Contractor of responsibility for adequate and continued control of pollutants and other environmental protection measures.

1.05. PROTECTION OF ENVIRONMENTAL RESOURCES

A. Protect environmental resources within the project boundaries and those affected outside the limits of permanent work during the entire period of this contract. Confine activities to areas defined by the specifications and drawings.

B. Protection of Land Resources: Prior to construction, identify all land resources to be preserved within the work area. Do not remove, cut, deface, injure, or destroy land resources including trees, shrubs, vines, grasses, top soil, and land forms without permission from the COR. Do not fasten or attach ropes, cables, or guys to trees for anchorage unless specifically authorized, or where special emergency use is permitted.

1. Work Area Limits: Prior to any construction, mark the areas that require work to be performed under this contract. Mark or fence isolated areas within the general work area that are to be saved and protected. Protect monuments, works of art, and markers before construction operations begin. Convey to all personnel the purpose of marking and protecting all necessary objects.
2. Protection of Landscape: Protect trees, shrubs, vines, grasses, land forms, and other landscape features shown on the drawings to be preserved by marking, fencing, or using any other approved techniques.

   a. Box and protect from damage existing trees and shrubs to remain on the construction site.

   b. Immediately repair all damage to existing trees and shrubs by trimming, cleaning, and painting with antiseptic tree paint.

   c. Do not store building materials or perform construction activities closer to existing trees or shrubs than the farthest extension of their limbs.

3. Reduction of Exposure of Unprotected Erodible Soils: Plan and conduct earthwork to minimize the duration of exposure of unprotected soils. Clear areas in reasonably sized increments only as needed to use. Form earthwork to final grade as shown. Immediately protect side slopes and back slopes upon completion of rough grading.

4. Temporary Protection of Disturbed Areas: Construct diversion ditches, benches, and berms to retard and divert runoff from the construction site to protected drainage areas approved under paragraph 208 of the Clean Water Act.

   a. Sediment Basins: Trap sediment from construction areas in temporary or permanent sediment basins that accommodate the runoff from the storm. After each storm, pump the basins dry and remove the accumulated sediment. Control overflow/drainage with paved weirs or by vertical overflow pipes, draining from the surface.

   b. Reuse or conserve the collected topsoil sediment as directed by the Engineer.

   c. Institute effluent quality monitoring programs as required by Federal, State, and local environmental agencies.

5. Erosion and Sedimentation Control Devices: The erosion and sediment controls selected and maintained by the Contractor shall be such that water quality standards are not violated as a result of the Contractor’s activities. Construct or install all temporary and permanent erosion and sedimentation control features shown. Maintain temporary erosion and sediment control measures such as berms, dikes, drains, sedimentation basins, grassing, and mulching, until permanent drainage and erosion control facilities are completed and operative.

6. Manage borrow areas to minimize erosion and to prevent sediment from entering nearby water courses or lakes.

7. Manage and control spoil areas to prevent erosion of soil or sediment from entering nearby water courses or lakes.
8. Protect adjacent areas from despoilment by temporary excavations and embankments.

9. Handle and dispose of solid wastes in such a manner that will prevent contamination of the environment. Place solid wastes (excluding clearing debris) in containers that are emptied on a regular schedule. Transport all solid waste off Project Site and dispose of waste in compliance with Federal, State, and local requirements.

10. Store chemical waste away from the work areas in corrosion resistant containers and dispose of waste in accordance with Federal, State, and local regulations.

11. Handle discarded materials other than those included in the solid waste category as directed by the Engineer.

C. Protection of Water Resources: Keep construction activities under surveillance, management, and control to avoid pollution of surface and ground waters and sewer systems. Implement management techniques to control water pollution by the listed construction activities that are included in this contract.

1. Washing and Curing Water: Do not allow wastewater directly derived from construction activities to enter water areas. Collect and place wastewater in retention ponds allowing the suspended material to settle, the pollutants to separate, or the water to evaporate.

2. Control movement of materials and equipment at stream crossings during construction to prevent violation of water pollution control standards of the Federal, State, or local government.

3. Monitor water areas affected by construction.

D. Protection of Fish and Wildlife Resources: Keep construction activities under surveillance, management, and control to minimize interference with, disturbance of, or damage to fish and wildlife. Prior to beginning construction operations, list species that require specific attention along with measures for their protection.

E. Protection of Air Resources: Keep construction activities under surveillance, management, and control to minimize pollution of air resources. Burning is not permitted on the job site. Keep activities, equipment, processes, and work operated or performed, in strict accordance with KDHE regulations and Federal emission and performance laws and standards. Maintain ambient air quality standards set by the Environmental Protection Agency, for those construction operations and activities specified.

1. Particulates: Control dust particles, aerosols, and gaseous by-products from all construction activities, processing, and preparation of materials (such as from asphaltic batch plants) at all times, including weekends, holidays, and hours when work is not in progress.

2. Particulates Control: Maintain all excavations, stockpiles, haul roads,
permanent and temporary access roads, plant sites, spoil areas, borrow areas, and all other work areas within or outside the project boundaries free from particulates which would cause a hazard or a nuisance. Sprinklering, chemical treatment of an approved type, light bituminous treatment, baghouse, scrubbers, electrostatic precipitators, or other methods are permitted to control particulates in the work area.


4. Odors: Control odors of construction activities and prevent obnoxious odors from occurring.

5. Reduction of Noise: Minimize noise using every action possible. Perform noise-producing work in less sensitive hours of the day or week as directed by the Engineer. Perform construction activities involving repetitive, high-level impact noise only between 8:00 a.m. and 6:00 p.m. unless otherwise permitted by Engineer.

F. Restoration of Damaged Property: If any direct or indirect damage is done to public or private property resulting from any act, omission, neglect, or misconduct, the Contractor shall restore the damaged property to a condition equal to that existing before the damage at no additional cost to the Government. Repair, rebuild, or restore property as directed or make good such damage in an acceptable manner.

G. Final Clean-up: On completion of project and after removal of all debris, rubbish, and temporary construction, Contractor shall leave the construction area in a clean condition satisfactory to the COR. Cleaning shall include off the station disposal of all items and materials not required to be salvaged, as well as all debris and rubbish resulting from demolition and new work operations.

PART 2 – PRODUCTS – Not applicable.

PART 3 – EXECUTION – Not applicable.

END OF SECTION
SECTION 01700
CONTRACT CLOSEOUT

PART 1 – GENERAL

1.01. SECTION INCLUDES:
   A. Closeout Procedures
   B. Final Cleaning
   C. Adjusting
   D. Project Record Documents
   E. Spare Parts and Maintenance Products
   F. Warranties and Bonds
   G. Operation and Maintenance Data

1.02. RELATED SECTIONS:
   A. General Conditions.
   B. Section 01500 Temporary Facilities

1.03. CLOSEOUT PROCEDURES:
   A. Submit written certification that Contract Documents have been reviewed, Work has been inspected, and that Work is complete in accordance with Contract Documents and ready for Engineer’s review.
   B. Provide submittals to Engineer that are required by governing or other authorities.
   C. Submit final Application for Payment identifying total adjusted Contract Sum, previous payments, and sum remaining due.

1.04. FINAL CLEANING:
   A. Execute final cleaning prior to final project assessment.
   B. Clean interior and exterior glass, surfaces exposed to view; remove temporary labels, stains and foreign substances, polish transparent and glossy surfaces.
C. Clean equipment and fixtures to a sanitary condition with cleaning materials appropriate to the surface and material being cleaned.

D. Clean debris from roofs, gutters, downspouts, and drainage systems.

E. Clean site; sweep paved areas, rake clean landscaped surfaces.

F. Remove waste and surplus materials, rubbish, and construction facilities from the site.

1.05. ADJUSTING:

A. Adjust operating Products and equipment to ensure smooth and unhindered operation.

1.06. PROJECT RECORD DOCUMENTS:

A. Maintain on site one set of the following record documents; record actual revisions to the Work:
   1. Drawings
   2. Specifications
   3. Addenda
   4. Change Orders and other modifications to the Contract
   5. Reviewed Shop Drawings, Product Data, and Samples
   6. Manufacturer's instruction for assembly, installation, and adjusting

B. Ensure entries are complete and accurate, enabling future reference by Owner.

C. Store record documents separate from documents used for construction.

D. Record information concurrent with construction progress.

E. Specifications: Legibly mark and record at each Product section description of actual Products installed, including the following:
   1. Manufacturer's name and product model and number.
   2. Product substitutions or alternates utilized.
   3. Changes made by Addenda and modifications.

F. Record Drawings and Shop Drawings: Legibly mark each item to record actual construction including:
   1. Measured depths of foundations in relation to finish floor datum.
2. Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.

3. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the Work.

4. Field changes of dimension and detail.

5. Details not on original Contract drawings.

G. Submit documents to Engineer with claim for final Application for Payment.

H. Contractor shall maintain his records for three (3) years following completion of the project. Records shall be available for review by the Missouri Department of Natural Resources, the EPA, the City, the Engineer, the Comptroller General of the United States or their duly noted assigns for the purposes of making audit, examination, excerpts or transcriptions related to the project.

1.07. SPARE PARTS AND MAINTENANCE PRODUCTS:

A. Provide spare parts, maintenance, and extra Products in quantities specified in individual specification sections.

B. Deliver to Project site and place in location as directed; obtain receipt prior to final payment.

C. Provide list of spare parts divided by spec section.

1.08. WARRANTIES AND BONDS:

A. Provide duplicate notarized copies.

B. Execute and assemble transferable warranty documents from Subcontractors, suppliers, and manufacturers.

C. Provide Table of Contents and assemble in three ring binder with durable plastic cover.

D. Submit prior to final Application for Payment.

E. For items of Work delayed beyond date of Substantial Completion, provide updated submittal within 10 days after acceptance, listing date of acceptance as start of warranty period.

1.09. OPERATION AND MAINTENANCE DATA AND MANUALS:

A. Adequate operation and maintenance information shall be supplied for all equipment requiring maintenance or other attention. The equipment Supplier shall prepare an operation and maintenance manual for each type of equipment indicated in the individual equipment sections or the equipment schedule. Parts lists and operating and maintenance instructions shall be furnished for other equipment not listed in the
individual equipment sections or the equipment schedule.

B. Parts lists and operating and maintenance instructions shall be furnished for other equipment not listed in the individual equipment sections or the equipment schedule.

C. Operation and maintenance manuals shall include the following:

1. Equipment function, normal operating characteristics, and limiting conditions.
2. Assembly, installation, alignment, adjustment, and checking instructions.
3. Operating instructions for startup, routine and normal operation, regulation and control, shutdown, and emergency conditions.
4. Lubrication and maintenance instructions.
5. Guide to troubleshooting.
6. Part lists and predicted life of parts subject to wear.
7. Outline, cross section, and assembly drawings engineering data, and wiring diagrams.
8. Test data and performance curves, where applicable.

D. The operation and maintenance manuals shall be in addition to any instructions or parts lists packed with or attached to the equipment when delivered, or which may be required by the Contractor.

E. Preliminary copies of operation and maintenance manuals shall be submitted to the Engineer before shipment of the equipment. Preliminary copies shall be in hardcopy format. Three preliminary copies of the manuals shall be submitted.

F. After review by the Engineer, final copies of the operation and maintenance manuals shall be delivered to the Engineer no later than 30 days prior to placing the equipment in operation. Three final hardcopies and three electronic copies shall be included.

1. Hardcopies for preliminary and final manuals shall be temporarily bound in heavy paper covers bearing suitable identification. All manuals shall contain standard 3-hole binding. Drawings and diagrams shall be reduced to 8-1/2 x 11 inches or 11 x 17 inches. Where reduction is not practicable, larger drawings shall be folded separately and placed in envelopes, which are bound into the manuals, each envelope shall be suitable identified on the outside. Each volume containing data for three or more items of equipment shall include a table of contents and index tabs. The final hardcopy of each manual shall be prepared and delivered in substantial, permanent, three-ring or three-post binders with a table of contents and suitable index tabs.

2. Each electronic copy shall be delivered on a unique CD-ROM in Adobe Acrobat’s Portable Document Format (PDF). The PDF file(S) shall be fully indexed using the Table of Contents, searchable with thumbnails generated.
a. File names shall use the “eight dot three” convention (XXXXX_YY.pdf), where X is the five digit number corresponding to the specification section, and YY is the two digit number set in sequential order when there are more than one PDF document (more than one O&M manual) per specification section. The initial filename for the OEM submittal will be provided with the request for final O&M manuals.

b. Scanned images must be at a readable resolution. For most documents, they should be scanned at 300 dots per inch (dpi). Optical Character Recognition (OCR) capture must be performed on these images. OCR settings shall be performed with the “original image with hidden text” option in Adobe Acrobat Exchange.

c. One PDF document (PDF file) shall be created for each equipment service manual. The entire manual shall be converted to a single .PDF file via scanning or other method of conversion. Drawings or other graphics shall also be converted to .PDF format and included into a single PDF document. Pages that must be viewed in landscape format shall be rotated to the appropriate position for easy reading on screen.

d. The PDF documents shall have a bookmark created in the navigation frame for each major entry (“Section” or “Chapter” in the Table of Contents. Thumbnails shall be generated for each page or graphic in the PDF file.

3. As a minimum, the following information shall be included on all final O&M manual materials, including CD-ROM disks and hardcopy manuals:
   Manufacturer’s Name
   a. Equipment name and/or O&M title spelled out in complete words
   b. Specification Section Number
   c. Project Name
   d. City Project/Contract Number
   e. File Name and Date

   G. Shipment of the equipment will not be considered complete until all required manuals and data have been received.

PART 2 – PRODUCTS – Not applicable.

PART 3 – EXECUTION – Not applicable.

END OF SECTION
SECTION 02067

LEAD-BASED PAINT REMOVAL AND DISPOSAL

PART 1 – GENERAL

1.01. DESCRIPTION

A. This section specifies abatement and disposal of lead-based paint (LBP) and controls needed to limit occupational and environmental exposure to lead hazards.

1.02. APPLICABLE PUBLICATIONS

A. The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

B. Code of Federal Regulations (CFR):

CFR 29 Part 1910.............Occupational Safety and Health Standards
CFR 29 Part 1926 ............Safety and Health Regulations for Construction
CFR 40 Part 148..............Hazardous Waste Injection Restrictions
CFR 40 Part 260 ............Hazardous Waste Management System: General
CFR 40 Part 261 ..............Identification and Listing of Hazardous Waste
CFR 40 Part 262 ..............Standards Applicable to Generators of Hazardous Waste
CRF 40 Part 263 .............Standards Applicable to Transporters of Hazardous Waste
CFR 40 Part 264 ..............Standards for Owners and Operations of Hazardous Waste Treatment, Storage, and Disposal Facilities
CFR 40 Part 265 .............Interim Status Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities
CFR 40 Part 268 .............Land Disposal Restrictions
CFR 49 Part 178 ..............Specifications for Packaging

C. National Fire Protection Association (NFPA):

NFPA 701-2004 .............Methods of Fire Test for Flame-Resistant Textiles and Films
D. National Institute for Occupational Safety And Health (NIOSH) NIOSH
OSHA Booklet 3142 ..........Lead inConstruction

E. Underwriters Laboratories (UL)
UL 586-1996 (Rev 2009 ........High-Efficiency, Particulate, Air Filter Units

F. American National Standards Institute
Z9.2-2006 .....................Fundamentals Governing the Design and Operation of Local
Exhaust Systems
Z88.6-2006 .....................Respiratory Protection

1.03. DEFINITIONS

A. Action Level: Employee exposure, without regard to use of respirators, to an
airborne concentration of lead of 30 micrograms per cubic meter of air averaged
over an 8-hour period. As used in this section,"30 micrograms per cubic meter of
air" refers to the action level.

B. Area Monitoring: Sampling of lead concentrations within the lead control area
and inside the physical boundaries which is representative of the airborne lead
concentrations which may reach the breathing zone of personnel potentially
exposed to lead.

C. Physical Boundary: Area physically roped or partitioned off around an enclosed
lead control area to limit unauthorized entry of personnel. As used in this
section, "inside boundary" shall mean the same as "outside lead control area."

D. Competent Person: A person capable of identifying lead hazards in the work
area and is authorized by the contractor to take corrective action.

E. Decontamination Room: Room for removal of contaminated personal
protective equipment (PPE).

F. Eight-Hour Time Weighted Average (TWA): Airborne concentration of lead
averaged over an 8-hour workday to which an employee is exposed.

G. High Efficiency Particulate Air (HEPA) Filter Equipment: HEPA filtered vacuuming
equipment with a UL 586 filter system capable of collecting and retaining lead-
contaminated paint dust. A high efficiency particulate filter means 99.97 percent
efficient against 0.3 micron size particles.

H. Lead: Metallic lead, inorganic lead compounds, and organic lead soaps.
Excluded from this definition are other organic lead compounds.

I. Lead Control Area: A designated, demarcated work area which is isolated by
physical boundaries to prevent unauthorized entry of personnel. The Lead
Control Area shall be constructed to adequately prevent dust and debris from
leaving the work area. At a minimum, the Lead Control Area would include lead
barrier tape, lead signage, critical isolation barriers and drop cloths below the work area. The Lead Control Area could be as extensive as an enclosed area or structure with full containment to prevent the spread of lead dust, paint chips, or debris of lead-containing paint removal operations.

J. Lead Permissible Exposure Limit (PEL): Fifty micrograms per cubic meter of air as an 8-hour time weighted average as determined by 29 CFR 1910.1025. If an employee is exposed for more than 8 hours in a work day, the PEL shall be determined by the following formula. PEL (micrograms/cubic meter of air) = 400/No. of hrs. worked per day.

K. Personnel Monitoring: Sampling of lead concentrations within the breathing zone of an employee to determine the 8-hour time weighted average concentration in accordance with 29 CFR 1910.1025. Samples shall be representative of the employee's work tasks. Breathing zone shall be considered an area within a hemisphere, forward of the shoulders, with a radius of 150 mm to 225 mm (6 to 9 inches) and the center at the nose or mouth of an employee.

1.04. QUALITY ASSURANCE

A. Before exposure to lead-contaminated dust, provide workers with a comprehensive medical examination as required by 29 CFR 1926.62 (l) (1)(i) & (ii). The examination shall not be required if adequate records show that employees have been examined as required by 29 CFR 1926.62 (l) within the last year.

B. Medical Records: Maintain complete and accurate medical records of employees in accordance with 29 CFR 1910.20.

C. Training: Train each employee performing paint removal, disposal, and air sampling operations prior to the time of initial job assignment, in accordance with 29 CFR 1926.62.

D. Training Certification: Submit certificates signed and dated by the contractor and by each employee stating that the employee has received training.

E. Respiratory Protection Program:

1. Furnish each employee required to wear a negative pressure respirator or other appropriate type with a respirator fit test at the time of initial fitting and at least every 6 months thereafter as required by 29 CFR 1926.62.


G. Safety and Health Compliance:

1. In addition to the detailed requirements of this specification, comply with laws, ordinances, rules, and regulations of federal, state, and local authorities regarding removing, handling, storing, transporting, and disposing of lead waste materials. Comply with the applicable requirements of the current issue of 29 CFR 1910.1025 and 29 CFR 1926.62. Submit matters regarding interpretation of standards to the Contracting Officer for resolution before starting work.

2. Where specification requirements and the referenced documents vary, the most stringent requirements shall apply.

H. Pre-Construction Conference: Contractor shall meet with the Engineer to discuss in detail the lead-containing paint removal work plan, including work procedures and precautions for the work plan.

1.05. SUBMITTALS

A. Submit the following materials.

B. Statements Certifications and Statements:

1. Lead-Containing Paint Removal Plan:

   a. Submit a detailed job-specific plan of the work procedures to be used in the removal of lead-containing paint. The plan shall include a sketch showing the location, size, and details of lead control areas, location and details of decontamination rooms, change rooms, shower facilities, and mechanical ventilation system.

   b. If requested by the Engineer, include in the plan eating, drinking, smoking and restroom procedures, interface of trades, sequencing of lead related work, collected wastewater and paint debris disposal plan, air sampling plan, respirators, protective equipment, and a detailed description of the method of containment of the operation to ensure that airborne lead concentrations of 30 micrograms per cubic meter of air are not exceeded outside of the lead control area.

   c. Include air sampling, training and strategy, sampling methodology, frequency, duration of sampling, and qualifications of air monitoring personnel in the air sampling portion on the plan.

2. Field Test Reports: Monitoring Results: Submit monitoring results to the Engineer within 3 working days, signed by the testing laboratory employee performing the air monitoring, and the employee that analyzed the sample.
3. Records:
   a. Completed and signed hazardous waste manifest from treatment or disposal facility.
   b. Certification of Medical Examinations.
   c. Employee training certification.
   d. Personnel air monitoring results

PART 2 – PRODUCTS

   A. Paint removal products: Submit applicable Material Safety Data Sheets for paint removal products used in paint removal work. Use the least toxic product, suitable for the job and acceptable to the Engineer.

PART 3 – EXECUTION

3.01. PROTECTION

   A. Notification: Notify the Engineer 10 days prior to the start of any paint removal work.

   B. Lead Control Area Requirements.

      1. Contractor shall comply with requirements of 29 CFR 1910.1025 and 29 CFR 1926.62. At a minimum a lead control area shall be established as outlined by the Definition section of this specification. Guidance for establishing a lead control area shall be found within EPA Publication 740-K-10-003 titled “Small Entity Compliance Guide to Renovate Right, EPA’s Lead-Based Paint Renovation, Repair, and Painting Program.

      2. As necessary for regulatory compliance, contain removal operations by the use of a negative pressure full containment system with at least one change room and with HEPA filtered exhaust.

   C. Protection of Existing Work to Remain: Perform removal work without damage or contamination of adjacent areas. Where existing work is damaged or contaminated, restore work to its original condition.

   D. Boundary Requirements: Provide physical boundaries around the lead control area by roping off the area or providing curtains, portable partitions or other enclosures to ensure that airborne concentrations of lead will not reach 30 micrograms per cubic meter of air outside of the lead control area.

   E. Heating, Ventilating and Air Conditioning (HVAC) Systems: Shutdown, lock out, and isolate HVAC systems that supply, exhaust, or pass through the lead control areas. Seal intake and exhaust vents in the lead control area with 6-mil plastic sheet and tape. Seal seams in HVAC components that pass through the lead control area.
F. Change Room and Shower Facilities: Provide clean change rooms and shower facilities within the physical boundary around the designated lead control area as necessary to comply with requirements of 29 CFR 1926.62.

G. Mechanical Ventilation System:

H. Personnel Protection: Personnel shall wear and use protective clothing and equipment as specified herein. Eating, smoking, or drinking is not permitted in the lead control area. No one will be permitted in the lead control area unless they have been given appropriate training and protective equipment.

I. Warning Signs: Provide warning signs at approaches to lead control areas. Locate signs at such a distance that personnel may read the sign and take the necessary precautions before entering the area. Signs shall comply with the requirements of 29 CFR 1926.62.

3.02. WORK PROCEDURES

A. Perform removal of lead-containing paint in accordance with approved lead-containing paint removal plan. Use procedures and equipment required to limit occupational and environmental exposure to lead when lead-containing paint is removed in accordance with 29 CFR 1926.62, except as specified herein. Dispose of removed paint chips and associated waste in compliance with Environmental Protection Agency (EPA), federal, state, and local requirements.

B. Personnel Exiting Procedures:
   1. Whenever personnel exit the lead-controlled area, they shall perform the following procedures and shall not leave the work place wearing any clothing or equipment worn during the work day:
      a. Vacuum themselves off.
      b. Remove protective clothing in the decontamination room, and place them in an approved impermeable disposal bag.
      c. Shower if required by 29 CFR 1926.62.
      d. Change to clean clothes prior to leaving the physical boundary designated around the lead-contaminated job site.

C. Monitoring: Monitoring of airborne concentrations of lead shall be in accordance with 29 CFR 1910.1025 and as specified herein. Air monitoring, testing, and reporting shall be the responsibility of the Contractor.
   1. The Contractor must ensure that the requirements of the Contract have been satisfied during the entire lead-containing paint removal operation.
2. The Contractor must take personal air monitoring samples on employees who are anticipated to have the greatest risk of exposure. In addition, take air monitoring samples on at least 25 percent of the work crew or a minimum of two employees, whichever is greater, during each work shift.

3. Submit results of air monitoring samples, within 24 hours after the air samples are taken. Notify the Engineer immediately of exposure to lead at or in excess of the action level of 30 micrograms per cubic meter of air outside of the lead control area.

D. Monitoring During Paint Removal Work:

1. Perform personal and area monitoring during the entire paint removal operation. Sufficient area monitoring shall be conducted at the physical boundary to ensure unprotected personnel are not exposed above 30 micrograms per cubic meter of air at all times. If the outside boundary lead levels are at or exceed 30 micrograms per cubic meter of air, work shall be stopped and the Contractor shall immediately correct the conditions causing the increased levels and notify the Engineer immediately.

2. The Contractor shall review the sampling data collected on that day to determine if conditions require any further change in work methods. Removal work shall resume when approval is given by the Engineer. The Contractor shall control the lead level outside of the work boundary to less than 30 micrograms per cubic meter of air at all times. As a minimum, conduct area monitoring daily on each shift in which lead paint removal operations are performed in areas immediately adjacent to the lead control area.

3. For outdoor operations, at least one sample on each shift shall be taken on the downwind side of the lead control area. If adjacent areas are contaminated, clean and visually inspect contaminated areas. The Contractor shall certify that the area has been cleaned of lead contamination.

3.03. LEAD-CONTAINING PAINT REMOVAL

A. Remove paint as necessary to allow for work completion. Paint which has been identified for removal is located on the Water Tower. Take whatever precautions are necessary to minimize damage to the underlying substrate.

B. Mechanical Paint Removal and Blast Cleaning: Perform mechanical paint removal and blast cleaning in lead control areas using negative pressure full containments with HEPA filtered exhaust. Collect paint residue and spent grit (used abrasive) from blasting operations for disposal in accordance with EPA, state and local requirements.
3.04. SURFACE PREPARATIONS

A. Avoid flash rusting or other deterioration of the substrate. Provide surface preparations for painting in accordance with Section 09970, Water Tank Coating Systems.

3.05 CLEANUP AND DISPOSAL

A. Cleanup: Maintain surfaces of the lead control area free of accumulations of paint chips and dust. Restrict the spread of dust and debris; keep waste from being distributed over the work area. Do not dry sweep or use compressed air to clean up the area. At the end of each shift and when the paint removal operation has been completed, clean the area of visible lead paint contamination by vacuuming with a HEPA filtered vacuum cleaner and wet mopping the area.

B. Certification: The Contractor shall certify in writing that the inside and outside the lead control area air monitoring samples are less than 30 micrograms per cubic meter of air, the respiratory protection for the employees was adequate, the work procedures were performed in accordance with 29 CFR 1926.62, and that there were no visible accumulations of lead-contaminated paint and dust on the worksite. Do not remove the lead control area or roped-off boundary and warning signs prior to the Engineer’s receipt of the Contractor’s certification. Reclean areas showing dust or residual paint chips.

C. Testing of Paint Waste and Used Abrasive: As required by regulation, test paint residue and used abrasive in accordance with 40 CFR 261 for hazardous waste. Testing shall be completed by a 3rd party independent laboratory using Toxicity Characteristic Leaching Procedure EPA Test Method 1311.

D. Disposal:

1. Collect lead-contaminated waste, scrap, debris, bags, containers, equipment, and lead-contaminated clothing, which may produce airborne concentrations of lead particles.

2. Store removed paint, lead-contaminated clothing and equipment, and lead-contaminated dust and cleaning debris into U.S. Department of Transportation (49 CFR 178) approved 55-gallon drums. Properly label each drum to identify the type of waste (49 CFR 172) and the date lead-contaminated wastes were first put into the drum. Obtain and complete the Uniform Hazardous Waste Manifest forms. Comply with land disposal restriction notification requirements as required by 40 CFR 268.

   a. Collect lead-contaminated waste, scrap, debris, bags, containers, equipment, and lead-contaminated clothing which may produce airborne concentrations of lead particles. Label the containers in accordance with 29 CFR 1926.62. Dispose of lead-contaminated waste material at an EPA or state approved hazardous waste treatment, storage, or disposal facility off Government property.

   b. Store waste materials in U.S. Department of Transportation (49 CFR 178)
approved 55-gallon drums. Properly label each drum to identify the type of waste (49 CFR 172) and the date the drum was filled. The Engineer or an authorized representative will assign an area for interim storage of waste-containing drums. Do not store hazardous waste drums in interim storage longer than 90 calendar days from the date affixed to each drum.


E. Disposal Documentation Submit written evidence that the hazardous waste treatment, storage, or disposal facility (TSD) is approved for lead disposal by the EPA and state or local regulatory agencies. Submit one copy of the completed manifest, signed and dated by the initial transporter in accordance with 40 CFR 262.

END OF SECTION
SECTION 03600

GROUT

PART 1 – GENERAL

1.01. SUMMARY: This section covers grouting of equipment baseplates or bedplates; column baseplates and miscellaneous baseplates; and other uses of grout as indicated on the drawings. Unless otherwise specified, all grouting shall be done with non-shrinking grout.

This section also covers epoxy grouting of anchor bolts, threaded rod anchors, and reinforcing bars to be installed in hardened concrete. Anchor bolts, adhesive anchors, and threaded rod anchors are covered in the anchor bolts and expansion anchors section.

PART 2 – PRODUCTS

2.01. MATERIALS.


Epoxy Grout for Reinforcing Bars and Threaded Rod Anchors

Adhesive Moisture-insensitive.

For Floors and Horizontal Surfaces

Low Viscosity Master Builders "Brutem AB (Parts A & B)" or Sika "Sikadur 35, Hi-Mod LV".

Medium Viscosity Master Builders "Concreseive Liquid LPL" or Sika "Sikadur 32, Hi-Mod".

For Vertical Surfaces and Overhead Applications Nonsag consistency; Master Builders "Concreseive 1441" or Sika "Sikadure 31, Hi-Mod Gel".

Epoxy Grout for Headed Anchor Bolts Adhesive Moisture-insensitive; Master Builders "Ceilcote 648CP".
Aggregate: As recommended by the epoxy grout manufacturer.

Water: Clean and free from deleterious substances.

Reinforcing Bars: ASTM A615, Grade 60, deformed.

PART 3 – EXECUTION

3.01. NON-SHRINKING GROUT. Non-shrinking grout shall be furnished factory premixed so that only water is added at the jobsite. Grout shall be mixed in a mechanical mixer. No more water shall be used than is necessary to produce a flowable grout.

A. Preparation: The concrete foundation to receive non-shrinking grout shall be saturated with water for at least 12 hours preceding grouting unless additional time is required by the grout manufacturer.

B. Placement: Unless otherwise specified or indicated on the drawings, grout under baseplates shall be 1-1/2 inches thick. Grout shall be placed in strict accordance with the directions of the manufacturer so that all spaces and cavities below the top of baseplates and bedplates are completely filled, without voids. Forms shall be provided where structural components of baseplates or bedplates will not confine the grout.

C. Edge Finishing: In all locations where the edge of the grout will be exposed to view, the grout shall be finished smooth after it has reached its initial set. Except where shown to be finished on a slope, the edges of grout shall be cut off flush at the baseplate, bedplate, member, or piece of equipment.

D. Curing: Non-shrinking grout shall be protected against rapid loss of moisture by covering with wet cloths or polyethylene sheets. After edge finishing is completed, the grout shall be wet cured for at least 3 days and then an acceptable membrane curing compound shall be applied.

3.02. EPOXY GROUT. Epoxy grout shall consist of a two-component liquid epoxy adhesive of viscosity appropriate to the location and application, and an inert aggregate filler component, if recommended by the adhesive manufacturer. Components shall be packaged separately at the factory and shall be mixed immediately before use. Proportioning and mixing of the components shall be done in accordance with the manufacturer's recommendations.

A. Preparation: Where indicated on the drawings, anchor bolts, threaded rod anchors, and reinforcing bars shall be epoxy grouted in holes drilled into hardened concrete. Diameters of holes shall be as follows:
<table>
<thead>
<tr>
<th>Item</th>
<th>Diameter of Hole</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reinforcing Bars and Threaded Rod Anchors</td>
<td>1/8 inch larger than the outside diameter of the bar or the rod</td>
</tr>
<tr>
<td>Headed Anchor Bolts</td>
<td>Bolt diameter plus 2 inches</td>
</tr>
</tbody>
</table>

The embedment depth for epoxy grouted anchor bolts, threaded rod anchors, and reinforcing bars shall be at least 15 bolt, rod, or bar diameters, unless otherwise indicated on the drawings.

Holes shall be prepared for grouting as recommended by the grout manufacturer.

B. Installation: Anchor bolts, threaded rod anchors, and reinforcing bars shall be clean, dry, and free of grease and other foreign matter when installed. The bolts, rods, and bars shall be set and positioned and the epoxy grout shall be placed and finished in accordance with the recommendations of the grout manufacturer. Care shall be taken to ensure that all spaces and cavities are filled with epoxy grout, without voids.

END OF SECTION
SECTION 05990

STRUCTURAL AND MISCELLANEOUS METALS

PART 1 – GENERAL

1.01. SCOPE

A. This section covers all items fabricated from metal shapes, plates, sheets, rods, bars, or castings and all other wrought or cast metal, except component parts of equipment and items covered by other sections.

B. Fabricated metal items which are indicated on the drawings but not mentioned specifically herein shall be fabricated in accordance with the applicable requirements of this section.

1.02. GENERAL

A. Structural and miscellaneous metal work shall be fabricated in conformity with dimensions, arrangements, sizes, and weights or thicknesses specified or indicated on the drawings.

B. All members and parts, as delivered and erected, shall be free of winds, warps, local deformations, and unauthorized bends. Holes and other provisions for field connections shall be accurately located and shop checked so that proper fit will result when the units are assembled in the field. Erection drawings shall be prepared, and each separate piece shall be marked as indicated thereon. All field connection materials shall be furnished.

C. Structural and miscellaneous metal work shall be stored on blocking so that no metal touches the ground and water cannot collect thereon. The material shall be protected against bending under its own weight or superimposed loads.

D. Before assembly, surfaces to be in contact with each other shall be thoroughly cleaned. All parts shall be assembled accurately as indicated on the drawings. Light drifting will be permitted to draw parts together, but drifting to match unfair holes will not be permitted. Any enlargement of holes necessary to make connections in the field shall be done by reaming with twist drills. Enlarging holes by burning will not be permitted.

E. Plant Certification. All fabricating plants providing structural steel under these specifications shall be certified in accordance with the AISC Quality Certification Program. Fabricating plants shall be certified in accordance with Category I, Conventional Steel Structures.

F. All shop drawings shall be prepared by or under the direct control of a Category I quality certified plant.

G. Submittals. Complete data, detailed drawings, and setting or erection drawings covering all structural and miscellaneous metal items shall be submitted in accordance with Section 01300.
H. All welds shall be properly identified on the detailed shop drawings.

PART 2 – PRODUCTS

2.01. MATERIALS

Steel

Shapes, Plates, and Bars
ASTM A36.

Sheets
ASTM A366 or A569.

Pipe
ASTM A53, Type E or S, Grade B; ASTM A500, Grade B, C, or D; or ASTM A501.

Square and Rectangular
ASTM A500, Grade B or C.

Structural Tubing

Bolts and Nuts

High Strength
ASTM A325, Type 1; tested in accordance with Article 9.2 thereof.

Unfinished
ASTM A307.

Nuts, Self-Locking
Prevailing torque type; IFI-100, Grade A.

Washers

Flat
ASTM F844.

Flat, Hardened
ASTM F436.

Lock
ANSI/ASME B18.21.1, helical spring type.

Cast Iron
ASTM A48, Class 35B or better.

Stainless Steel

Plates
ASTM A276, Type 316 L.

Bolts
ASTM F593, Alloy Group 1 or 2.

Nuts
ASTM F594, Alloy Group 1 or 2.

Washers

Flat
ANSI B18.22.1.

Lock
ANSI/ASME B18.21.1, helical spring type.
Aluminum

Sheet and Plate  

Rolled Sections  
ASTM B308, Alloy 6061-T6.

Rod and Bar  
ASTM B211, Alloy 6061-T6 or 2017-T4.

Extrusions  
ASTM B221, Alloy 6063-T5 or T6.

Pipe  
ASTM B429, Alloy 6061-T6 or 6063-T6.

Rivets  
ASTM B316, Alloy 6061-T6.

Bolts, Stainless Steel  
ASTM F593, Alloy Group 1 or 2.

Nuts, Stainless Steel  
ASTM F594, Alloy Group 1 or 2.

Bolts, Aluminum  
ASTM B211, Alloy 2024-T4.

Nuts, Aluminum  
ASTM B211, Alloy 6061-T6.

Washers

Flat  
ANSI B18.22.1.

Lock  
ANSI/ASME B18.21.1, helical spring type.

Castings  
ASTM B26 or B85.

Aluminum Grating  
ASTM B221, Alloy 6063-T6, mechanically locked; Klemp "I-Bar", Reliance "I-Lok", or Universal "Uni-Lok".

Chain  
Fed Spec RR-C-271, Type I, Grade C, Class 5, Style 2, AISI type 316; welded steel, twist-link style, short link pattern.

Handrail-Setting Cement  
Master Builders "Set 45" or Minwax "Super Por-Rok Cement".

Bird Screen  
2 mesh, brass or copper wire cloth, min wire dia 0.063 inch.

Body Solder  
Flux-core wire, ASTM B32, Alloy Grade 20B.
Shop Coatings

**Universal Primer**
Ameron "Amercoat 180 Synthetic Resin Coating", Carboline "888 Primer", or Tnemec "Series 37H Chem-Prime H.S."

**Epoxy Enamel**
Gray; Ameron "Amerlock 400 High-Solids Epoxy Coating", Carboline "Super Hi-Gard 891", or Tnemec "Series 140 Pota-Pox Plus"

**Asphalt Varnish**
Fed Spec TT-C-494.

2.02. STRUCTURAL AND MISCELLANEOUS STEEL

A. Except as otherwise specified or indicated on the drawings, all materials and work shall conform to the applicable provisions of the AISC "Manual of Steel Construction - Allowable Stress Design", Parts 1, 2, 3, and 4, and the "Specification for Structural Steel Buildings".

2.03. STRUCTURAL AND MISCELLANEOUS ALUMINUM

A. Unless otherwise noted, all materials and work shall conform to applicable provisions of the Aluminum Association "Standard for Aluminum Structures".

B. All members shall be Aluminum Association standard structural shapes. Fabrication work shall be in accordance with current industry practice.

2.04. ALUMINUM TRENCH COVERS

A. Aluminum trench covers shall be fabricated from 1/4" plate with a skid resistant surface and as indicated on the drawings. The skid resistant surface shall be "Aluminum Mebac 2", as manufactured by IKG Industries.

B. All members shall be Aluminum Association standard structural shapes. Fabrication work shall be in accordance with current industry practice.

C. The 1/4" plate shall be stiffened with aluminum angles as indicated on the drawings, except where trench covers are replacing existing bar grating panels. In such places, the 1/4" aluminum plate shall be welded to new aluminum bar grating having a depth that will result in the top surface of the trench cover being flush with the existing concrete adjacent to the trench.

D. All trench covers shall be provided with lifting holes to facilitate removal. Warped or bent trench covers shall be shop straightened so that they will lie perfectly flat.

E. Aluminum trench covers shall be secured to embedments using 3/8 inch stainless steel slotted flathead machine screws at 12 inch centers. Where plate is installed on grating by welding, suitable access holes shall be provided in the plate to allow access to the grating hold-down stud nuts.

F. Frames anchored to or cast in concrete to support trench covers shall be aluminum.
G. Manufactured Aluminum Trench Covers. As an alternative to the aluminum trench covers detailed on the drawings and described above, the covers may be as manufactured by the Hallsten Corporation or equal. The covers shall be substantial air-tight and shall be flush mounted. The design shall include all hinged access requirements indicated on the drawings.

H. The aluminum trench covers shall be fabricated using alloy 6061-T6. All structural components shall be designed to support the dead weight of the structure, plus a uniform live load of 50 pounds per square foot. The maximum deflection under the design loading shall not exceed 1/240 of the span of the component. The allowable design stresses shall be in accordance with the "Specifications for Aluminum Structures" for building-type structures by the Aluminum Association.

I. The covers shall possess an integral skid resistant surface. The skid resistance shall not be achieved by the use of coatings or adhesive tapes. The skid resistance of the cover surface shall be equal to or greater than that of Hallsten's "Deck Slat", which is an extruded ribbed surface.

J. All fasteners between aluminum components shall be stainless steel. Each panel shall be easily removable and shall not weigh more than 150 pounds. All piping penetrations shall be accommodated.

2.05. GRATING

A. All grating shall be aluminum unless designated as fiberglass reinforced plastic (FRP) on the drawings. Depth of bearing bars for grating shall be as indicated on the drawings.

B. Except as modified herein, the manufacture, fabrication, and installation of grating shall comply with recommendations in the "Metal Bar Grating Manual" of the National Association of Architectural Metal Manufacturers.

C. Aluminum Grating. Aluminum grating shall be the mechanically locked type, with cross bars deformed or swaged to prevent turning. Bearing bars shall be at least 3/16 inch thick flat stock or equivalent I-bars, with center-to-center spacing of 1-3/16 inches.

D. Fabrication. Grating panels shall be arranged so that openings are centered on a joint between panels. Ends of bearing bars in grating floor panels shall be provided with full-depth bands. Bands and toeplates shall be 3/16 inch thick. Toeplates shall be welded to each bearing bar. Bands shall be welded to the first, the last, and every fourth intermediate bar. Cross bars shall be cut off flush with the outside face of side bars.

E. All angular, circular, re-entrant, and other cuts in aluminum grating shall be sawed or sheared.

F. Grating shall be fabricated in panels that can be easily handled by plant personnel. Unless otherwise indicated on the drawings, the weight of individual panels shall not exceed 150 pounds. Panels shall be within ±3/16 inch of authorized length and ±1/8 inch of authorized width, and shall have a maximum difference in length of opposite diagonals of 1/4 inch. The spacing of bearing bars shall be within 1/32 inch.
of authorized spacing. Cross bars and edge bars of adjacent panels shall align. After installation, there shall be not more than 1/4 inch clearance between panels. All bearing bars shall be parallel. Bands and toeplates shall align within 1/8 inch tolerance, vertical and horizontal.

G. All grating shall lie flat, with no tendency to rock when installed. Poorly fitting or damaged grating will be rejected.

H. Frames anchored to or cast in concrete to support grating shall be aluminum.

2.06. STAIR NOSINGS

A. Aluminum stair nosings with nonslip safety treads shall be provided for all cast-in-place concrete stairs. Nosings for steel pan stairs shall be Wooster "WP3J" and for concrete stairs shall be Wooster "WP3C". Nosings shall be of a length 6 inches less than the width of cast-in-place concrete stairs, and shall be furnished complete with integral anchors.

2.07. DOOR FRAMES

A. Door frames indicated on the drawings to be constructed of structural steel shapes shall be fabricated in accordance with the indicated details. Corners of frames shall be fully welded and welds dressed smooth on exposed surfaces. Jamb anchors and sill clip angles for jamb members shall be provided for all frames set in masonry walls. Sill clip angles shall be anchored to concrete floors with 1/2 inch diameter bolts and expansion anchors unless otherwise indicated. Frames shall be sandblasted and finished by grinding until all exposed surfaces are smooth. Body solder may be used as necessary to fill joints and to provide a surface that can be finished.

2.08. SHOP COATING

A. All structural and miscellaneous metal items shall be shop coated as specified herein. The requirements for field painting are covered in the painting section.

B. Cleaning. Surfaces shall be dry and of proper temperature when coated, and shall be free of grease, oil, dirt, dust, grit, rust, loose mill scale, weld flux, slag, weld spatter, and other objectionable substances. Articles to be galvanized shall be pickled before galvanizing. All other ferrous metal surfaces shall be cleaned by high-speed power wire brushing or by blasting to the extent recommended by the paint manufacturer. Welds shall be scraped, chipped, and brushed to remove all weld spatter.

C. Edge Grinding. Sharp projections of cut or sheared edges of ferrous metals which will be submerged in operation, except for items specified to be hot-dip galvanized, shall be ground to a radius as required to ensure satisfactory paint adherence.

D. Galvanizing. All galvanizing shall be done by the hot-dip process after fabrication, in conformity with the requirements of ASTM A123, A153, and A385.

Where galvanized bolts are indicated on the drawings or specified, the use of zinc-plated bolts will not be acceptable.

E. Castings. Shop coating of miscellaneous iron castings will not be required.
F. Steel. Unless otherwise specified, all ungalvanized structural and miscellaneous steel shall be given a universal prime coat in the shop after fabrication. Steel surfaces shall be prime-coated as soon as practicable after cleaning. All painting shall be done in a heated structure if the outside air temperature is below 50°F. Steel shall not be moved or handled until the shop coat is dry and hard.

G. Aluminum. All surfaces of aluminum which will be in contact with concrete, mortar, or dissimilar metals shall be given a coat of epoxy enamel. The end of each aluminum railing post installed in concrete with handrail-setting cement shall be dipped in a container of coal tar paint to coat the interior and exterior surfaces of the rail up to the maximum depth of embedment before installation.

H. Stainless Steel. Unless otherwise specified or permitted, all items fabricated from stainless steel shall be thoroughly cleaned, degreased, and pickled after fabrication. Pickling shall produce a modest etch and shall remove all embedded iron and heat tint. Pickled surfaces shall be subjected to a 24 hour water test or a ferroxyl test to detect the presence of residual embedded iron and shall be repickled as required to remove all traces of iron contamination. Pickled surfaces shall be adequately protected during shipping, handling, and installation to prevent contact with iron or steel objects or surfaces. Blast cleaning of stainless steel will not be acceptable.

I. Other Surfaces. Shop coating of zinc coated steel, stainless steel, or bronze surfaces will not be required.

J. Film Thickness. The dry film thickness of the shop coating shall be at least 2.0 mils for universal primer and at least 5 mils for epoxy enamel.

PART 3 – EXECUTION

3.01. STRUCTURAL AND MISCELLANEOUS STEEL

A. Connections. Unless otherwise noted, all connections shall be made with unfinished bolts. All bolts shall be equipped with self-locking nuts or with unfinished nuts and lock washers. Where welding is required or permitted, all butt and miter welds shall be continuous and, where exposed to view, shall be ground smooth. Intermittent welds shall have an effective length of at least 2 inches and shall be spaced not more than 6 inches apart. Welding shall be in accordance with the Structural Welding Code, AWS D1.1, of the American Welding Society.

B. Welding. Welding and related operations shall conform to applicable provisions of the Structural Welding Code, AWS D1.1. All welding shall be performed in accordance with written procedures, using only those joint details which have prequalified status when performed in accordance with AWS D1.1. Welding processes shall be limited to those listed in AWS D1.1, Paragraph 1.3.1, except that the short circuiting transfer mode shall not be used. Filler metal shall be of the type listed in AWS D1.1, Section 4.1 and Table 4.1. Connections for structural steel and for stairs shall be made with filler metal having a minimum tensile strength of 70 ksi. Connections for miscellaneous steel fabrications not included in the AISC definition of structural steel, except stairs, shall be made with filler metal having a minimum tensile strength of 60 ksi or greater.
Welds not dimensioned on the drawings shall be sized to develop the full strength of the least strength component of the connection.

Where structural or miscellaneous steel connections are welded, all butt and miter welds shall be continuous and, where exposed to view, shall be ground smooth. Intermittent welds shall have an effective length of at least 2 inches and shall be spaced not more than 6 inches apart.

3.02. STRUCTURAL AND MISCELLANEOUS ALUMINUM

A. Connections. Connections not specifically detailed on the drawings shall develop the full strength of the least strength member of the connection.

Unless otherwise noted, connections shall be all-bolted bearing type, using 3/4 inch bolts and nuts equipped with a helical spring lock washer under the stationary element (bolt head or nut) and a flat washer under the turned element. Bolts and nuts for structural aluminum connections shall be stainless steel. Bolts and nuts for nonstructural miscellaneous aluminum assemblies shall be aluminum. A sufficient number of bolts shall be provided in each connection to develop the shear strength of the members. Unless otherwise noted, welded connections will not be acceptable.

B. Field Erection. Structural aluminum shall be erected so that individual pieces are plumb, level, and aligned within a tolerance of 1:500. The elevation of horizontal members shall be within 1/16 inch of the elevation indicated on the drawings.

Baseplates shall be set level in exact position and grouted in place.

3.03. GRATING

A. Grating shall not be damaged during handling and installation.

Grating covers for flumes, manholes, or pits may rest unanchored in recesses constructed for the purpose. To preclude excessive accumulation of tolerances, an extra-long panel shall be provided for each unanchored grating cover that exceeds 20 feet in length. The panel shall be field cut to the required dimension after the remainder of the grating panels have been installed. All other grating shall be securely anchored in place. Each grating panel shall be fastened in place with saddle-clips or flange blocks as illustrated in the NAAMM "Metal Bar Grating Manual". Clips or flange blocks for aluminum grating shall be aluminum or stainless steel.

END OF SECTION
SECTION 09970
WATER TANK COATING SYSTEMS

PART 1 – GENERAL

1.01. SUMMARY: This section covers the base bid of field painting, including surface preparation, paint application and other appurtenant work, of the interior and exterior of an existing multi-leg style, steel elevated water storage tank known as the South Tower. This section also covers the alternative bid of field painting, including surface preparation, paint application, and other appurtenant work, of the exterior of an existing multi-leg style, steel elevated water storage tank known as the Industrial Tower.

A. All field painting work shall be performed by an experienced painting contractor who has a minimum of five (5) years' experience and who is recommended and approved by the manufacturer of the paints used and who is acceptable to the Owner.

B. BASE BID:

1. Surface preparation and paint application of the interior and exterior of the South Tower.

C. ALTERNATE BIDS:

1. Paint logo on one side of South Tower.

2. Paint logo on both sides of South Tower.


4. Paint logo on one side of Industrial Tower.

1.02. REFERENCE STANDARDS: Except as modified or supplemented herein, all painting operations shall conform to the applicable requirements of the following standards.

A. American Society for Testing and Materials:


2. ASTM D3359 Test Method for Measuring Adhesion by Tape Test.

3. ASTM D4263 Test Method for Indicating Moisture in Concrete by the Plastic Sheet Method.


5. ASTM D1005 Test for determining dry film thickness.

6. ASTM D4417 Test for determining surface profile.
B. Society for Protective Coatings:

1. SSPC-SP1 Specification for Solvent Cleaning.
2. SSPC-SP2 Specification for Hand-Tool Cleaning.
3. SSPC-SP3 Specification for Power-Tool Cleaning.
4. SSPC-SP5 Specification for White Metal Blast Cleaning.
5. SSPC-SP6 Specification for Commercial Blast Cleaning.
6. SSPC-SP7 Specification for Brush-Off Blast Cleaning.
7. SSPC-SP10 Specification for Near-White Metal Blast Cleaning.
8. SSPC-SP11 Specification for Power Tool Cleaning to Bare Metal.
9. SSPC-PA1 Painting Application Specification.
10. SSPC-PA2 Measurement of Dry Paint Thickness with Magnetic Gages.
11. SSPC-SP12 Water Jetting

1.03. DEFINITIONS: The term PAINT shall in a general sense have reference to zinc primers, latex, polyurethane and epoxy type coatings and application of these materials. Dry film thickness (DFT) shall mean the thickness, measured in mils (1/1000 inch), of a coat of paint in cured state.

1.04. SUBMITTALS: The Contractor shall submit complete descriptive specifications for all brands of paints proposed for use together with color cards for paint system to the Owner in accordance with the Submittals section.

A. Product Data:

1. Submit manufacturer’s literature describing products to be provided, giving manufacturer’s name, product name, and product line number for each material.

2. Submit technical data sheets for each coating, giving descriptive data, curing times, mixing, thinning, and application requirements.

3. Submit color charts showing manufacturer’s full range of standard colors.

B. Quality Assurance Submittals

1. Certificates:

   a. Provide manufacturer’s certification that products to be used comply with specified requirements and are suitable for intended application.
b. Submit a listing of not less than 5 of applicator’s most recent applications representing similar scope and complexity to Project requirements. List shall include information as follows:

1. Project name and address;
2. Name of owner;
3. Name of contractor;
4. Name of engineer;
5. Date of completion.

2. Manufacturer’s Instructions:

a. Submit manufacturer’s installation procedures, if not on product data sheets, which shall be the basis for accepting or rejecting actual performance procedures.

1.05. QUALITY ASSURANCE:

A. Qualifications:

1. Provide products from a company specializing in manufacture of coatings with a minimum of 10 years’ experience.

2. Applicator shall be trained in application techniques and procedures of coating materials and shall demonstrate a minimum of 2 years successful experience in such application.

3. Maintain, throughout the duration of application, a crew of painters who are fully qualified.

4. Single Source Responsibility:

a. Materials shall be product of a single manufacturer.

b. Provide secondary materials, which are produced or are specifically recommended by coating system manufacturer to ensure compatibility of system.

1.06. MANUFACTURER’S SERVICE: A representative of the paint manufacturer shall be available to provide on-site technical assistance, and guidance for application of the paint system as needed.
1.07. DELIVERY, STORAGE AND HANDLING: All paint shall be delivered to the job in original unopened containers, shall be stored inside, and shall be protected against freezing. No adulterant, unauthorized thinner, or other material not included in the paint formulation shall be added to the paint for any purpose. Each paint container shall bear a label indicating manufacturer’s name and stock number, paint formulation, color, product name and number, and thinning and application instructions. All materials shall be opened and mixed in storage area. Store materials in a designated protected area, per manufacturer’s printed data sheet instructions.

1.08. PROJECT CONDITIONS:

A. Environmental Conditions:

1. Apply coating materials per manufacturer’s printed data sheet instructions:

a. Refer to specific product data sheets for minimum surface temperature requirements. Surface temperatures shall be at least 5 degrees F (15 degrees C) above the dew point and in a rising mode.

b. Provide for proper ventilation and lighting using explosion proof equipment. Allow ventilation system to run 72 hours after interior coating application. Atmosphere shall be free of airborne dust.

c. Provide proper containment for waste debris recovery and proper disposal.

B. Existing Conditions:

1. The Owner’s records on the existing elevated storage tanks will be made available to Contractor, but do not constitute a guarantee for accuracy. It shall be the responsibility of the Contractor to field verify all dimensions prior to the start of construction operations. Any extra expense to the Contractor due to encountering construction not shown on the figure shall not constitute a claim for extra work, additional payment or time extension.

PART 2 – PRODUCTS

2.01. ACCEPTABLE MANUFACTURERS:

A. This specification lists specific products manufactured by Tnemec Company, Inc. of Kansas City, Missouri. Materials specified herein are cited as a minimum standard of quality which will be acceptable.

B. Materials specified herein shall not preclude consideration of equivalent materials. Equivalent materials shall be submitted to the Owner for consideration at least ten (10) days prior to the date of the bid opening.

1. Requests for substitution shall include evidence of satisfactory past performance on water tanks.

2. Substitutions will not be considered that change the number of coats or do not meet specified total dry film thickness.
3. Requests for substitutions will only be accepted from prospective bidders.

4. Paints for interior wet applications must be listed by NSF International as certified for potable water contact in accordance with ANSI/NSF Std. 61, Section 5, Protective (Barrier) Materials.

2.02. MATERIALS:

A. All material furnished under this section shall be handled, mixed, applied, stored and disposed of in complete conformance with the manufacturer’s instructions. No deviations will be allowed. All surfaces must be adequately prepared in accordance with these specifications.

2.03. STEEL TANK FINISHES:

A. Surface Preparation (South Tower):

   Interior Wet: SSPC-SP10/ NACE 2 Near-White Metal Blast Cleaning
   Interior Dry (if applicable): SSPC-SP6/ NACE 3 Commercial Blast Cleaning
   Exterior: SSPC-SP6/NACE 3 Commercial Blast Cleaning
   Sandblasting Media shall be Reed Minerals “Black Beauty”.

B. Exterior Coating System (South Tower):

   System Type: Zinc/Acrylic Polyurethane/Fluoropolymer Polyurethane

   Shop and Field Prime Coat: DFT 2.5 – 3.5 mils, Tnemec “Series 91-H2O HydroZinc” or “Series 94-H2O HydroZinc”; or equal

   Intermediate Coat: DFT 2.0 – 3.0 mils, Tnemec “Series 1074/1075 Endura Shield II”; or equal. Color to be selected by coating manufacturer to ensure enough difference between intermediate coat and top coat.

   Finish Coat: DFT 2.0 – 3.0, Tnemec “Series 700 HydroFlon”; or equal. Color to be selected by Owner from manufacturer’s standard colors.

   Logo: DFT 4.0 – 6.0 mils, Tnemec “Series 700 HydroFlon”; or equal, minimum of two coats. Color to be selected by Owner from manufacturer’s standard colors.

   Total DFT of Exterior Coating System: 6.5 – 9.5 mils.

C. Interior Wet and Dry Coating System (South Tower):

   System Type: Zinc/Epoxy/Epoxy

   Shop and Field Prime Coat: DFT 2.5 – 3.5 mils, Tnemec “Series 91-H2O HydroZinc” or “Series 94-H2O HydroZinc”; or equal
Intermediate Coat: DFT 4.0 – 6.0 mils, Tnemec “Series 20 Pota-Pox”; or equal, 1255 Beige;

Finish Coat: DFT 4.0 – 6.0 mils, Tnemec “Series 20 Pota-Pox”; or equal, 15BL Tank White;

Total DFT of Interior Wet Coating System: 10.5 – 15.5 mils.

D. Surface Preparation (Industrial Tower):

Exterior Surface Preparation: High pressure water blast entire area with a minimum of 3500 psi at the tip at a rate of 3-5 gallons per minute, utilizing an orbital tip and TSP solution to remove chalk, mildew, loose paint and exterior contaminants. Follow with a high-pressure water rinse with a minimum of 3500 psi at the tip at a rate of 3-5 gallons per minute. The intent of this surface preparation is to remove all surface contaminants and loose paint on the area to be painted.

All rusted, abraded and exposed steel shall be hand tool cleaned in accordance with SSPS-SP2. All loose paint shall be removed with the same hand tools, but remaining intact primers can be left in place. Feather all edges.

E. Exterior Overcoat System (Industrial Tower):

System Type: Waterborne Acrylic/Polyurethane

Spot Prime: DFT 6.0 – 8.0 mils, Tnemec “Series 118”;

Intermediate Coat: DFT 6.0 – 8.0 mils, Tnemec “Series 118”;

Finish Coat: DFT 2.0 – 3.0, Tnemec “Series 1074U”. Color to be selected by Owner from manufacturer’s standard colors.

Total DFT of Exterior Overcoat System: 8.0 – 11.0 mils.

2.04. ACCESSORIES:

A. Coating Application Accessories:

1. Provide application accessories as indicated in coating manufacturer’s application instructions, including but not limited to cleaning agents, etching agents, cleaning cloths, sanding materials, and clean-up materials.

2. Materials not specifically identified, but needed for proper application, shall be of a quality not less than other specified products.

PART 3 - EXECUTION

3.01. MIXING AND THINNING: Paint shall be thoroughly mixed each time any is withdrawn from the container. Paint containers shall be kept tightly closed except while paint is being withdrawn. Unless otherwise authorized, all paint shall be factory mixed to proper
consistency and viscosity for hot weather application without thinning. Thinning of paint will be permitted only to obtain recommended coverage at lower application temperatures. In no case shall the wet film thickness of applied paint be reduced, by the addition of paint or otherwise, below that represented by the recommended coverage rate. The manufacturer’s thinning requirements shall be strictly adhered to.

3.02. EXAMINATION: Examine areas and conditions under which application of coating system will be performed for conditions that will adversely affect execution, permanence, or quality of coating system application. Correct conditions detrimental to timely and proper execution of Work. Do not proceed until unsatisfactory conditions have been corrected. Commencement of installation constitutes acceptance of conditions and responsibility for satisfactory performance.

3.03. SURFACE PREPARATION:

A. Prior to application of primer, surfaces shall be prepared to receive specified painting system in compliance with manufacturer’s recommendations and specifications of The Society of Protective Coatings.

B. Surfaces to be coated shall be clean, dry and free from dust and any foreign matter which might adversely affect adhesion or appearance.

3.04. APPLICATION:

A. Prior to coating application, apply seam sealer to unwelded interior joints in roof and interior joint between tank sidewalk and roof.

B. Apply coating systems in compliance with manufacturer’s instructions and using application methods best suited for obtaining full, uniform coverage and hide of surfaces to be coated. All work shall be implemented in compliance with applicable section of AWWA D102 and the latest revisions thereto.

C. Apply primer and finish coats to comply with wet and dry film thicknesses and spreading rates for each type of material as recommended by manufacturer and in accordance with SSPC-PA2.

D. Closely adhere to re-coat times recommended by manufacturer. Allow each coat to dry thoroughly before applying the next coat.

E. Employ only application equipment that is clean, properly adjusted, and in good working order, and of type recommended by coating manufacturer.

F. All paint shall be applied by skilled and experienced painters. All paint shall be applied in a neat manner, with finished surfaces free of runs, sags, ridges, laps, and brush marks. Each coat shall be hard and dry through the entire paint film before the next coat is applied. Each coat shall be applied in a manner that will produce an even film of uniform and proper thickness. In no case shall any paint be applied at a rate of coverage per gallon which is greater than the maximum rate recommended by its manufacturer. Dry film thickness shall be checked by an accurate dry film thickness gauge. Paint films which show sags, checks, blisters, teardrops, or fat
edges will not be accepted. Any paint which contains any of these defects shall be entirely removed and the surface repainted.

3.05. REPAIR AND RESTORATION:

A. At completion of Work, touch-up and restore finished where damaged.

B. When stain, dirt, or undercoats show through final coat, correct defects and cover with additional coats until coating is of uniform finish, color, appearance and coverage.

C. Touch-up of minor damage shall be acceptable where result is not visibly different from surrounding surfaces. Where result is visibly different, either in color, sheen, or texture, re-coat entire surface.

3.06. WEATHER CONDITIONS: Paint shall not be applied, except under shelter, during wet, damp, or foggy weather, or when windblown dust, dirt, debris, or insects will collect on freshly applied paint. All paint applied with spray equipment shall be protected, during application, from being deflected or carried away by wind. Paint shall not be applied at an air temperature below 50°F or to surfaces of metals which have a temperature above 110°F or below 50°F, regardless of air temperature, or when metal temperature and atmospheric conditions cause condensation on the surface of the metal (relative humidity is not higher than 85 percent and surface temperature is at least 5°F above dew point and rising). Spray-painting of exterior surfaces shall be permitted only when the wind velocity is less than 15 mph. Paint shall be applied to exterior surfaces only when the atmosphere is relatively free of airborne dust.

3.07. PROTECTION: Care shall be taken to prevent paint from being dropped, spilled, or windblown on concrete and masonry surfaces, buildings, structures, cars, or other property or facilities. All surfaces so damaged shall be cleaned, repaired, replaced, or painted to the satisfaction of the Owner at expense of the Contractor. Protect painted areas against damage until paint system is fully cured.

Contractor shall employ necessary procedures to prevent escape of blasting media and residue and coating systems from the tank site. Blasting media and residue and coating systems shall not affect adjoining property.

3.08. SAFETY: Contractor shall create and maintain a safe working environment at all times. Sufficient forced ventilation shall be provided while applying paint to interior surfaces to remove all solvent vapors as rapidly as produced and to insure that workmen applying the paint are adequately protected and that explosion hazards are eliminated.

3.09. CLEANLINESS: The Contractor shall conduct all operations in a clean and sanitary manner. No nuisance shall be committed in the tank. Workmen shall use proper waste receptacles. The sanitation of the inside of the tank shall not be compromised by actions associated with the Work.

3.10. POWER: All power for operation of the Contractor's plant or equipment, or for any other use by the Contractor, shall be provided by the Contractor at his own expense.
3.11. DISINFECTION:

A. Allow a minimum of seven days curing time after application of final interior coating before flushing, disinfecting or filling with water.

B. Disinfection procedures shall conform to AWWA C652, Method 2. Method 3 of Section 4.3 of AWWA C652 is not allowed.

C. After all other work, including testing and painting, has been completed, the Contractor shall thoroughly clean and disinfect the interior of the tank. A water solution containing 200 milligrams per liter of chlorine shall be sprayed or brushed on all interior surfaces of the tank.

D. The Contractor shall furnish all cleaning and disinfecting materials and all equipment and labor necessary for the cleaning and disinfecting operations.

E. Upon completion of the disinfection process the Owner or their representative shall arrange for bacteriological testing of water samples. Disposal of chlorinated water shall be in accordance with Appendix D of Kansas Department of Health and Environment minimum design standards for public water supplies. The tank shall not be put into service until safe test results are obtained.

3.12. WASTE MANAGEMENT:

A. Return solvent and oil soaked rags for laundering or for proper disposal.

B. Do not dispose of paints or solvents by pouring on ground. Place in designated containers for proper disposal.

3.13. ONE YEAR ANNIVERSARY INSPECTION:

A. An inspection shall be performed one year following acceptance of the painting of the Tank.

B. Inspection shall be attended by an Owner’s representative(s), and painting contractor.

C. Any deficiencies in the coating systems will be repaired by and at the contractor’s expense.

END OF SECTION
SECTION 13215
ELEVATED TANK REHABILITATION

PART 1 – GENERAL

1.01. SUMMARY:

A. This section includes base bid and alternate bid modifications/rehabilitation to the existing 750,000-gallon multi-leg, elevated water storage tank known as the South Tower, and to the existing 250,000-gallon multi-leg, elevated water storage tank known as the Industrial Tower. The work to be performed under these specifications includes furnishing all labor, materials, and equipment necessary for the modifications noted below.

B. BASE BID SOUTH TOWER: Tank modifications/rehabilitation of the South Tower base bid shall include the following:

1. Install rail-type safety climb equipment on existing access ladders, including all materials, safety harnesses, and lanyards.

2. Install three stainless steel safety chains with clips at ladder access to balcony.

3. Remove existing flap valve on the overflow pipe and, after blasting and painting tank exterior, install a TideFlex duckbill check valve on the overflow discharge.

4. Remove existing tank bowl vent and replace with a new frost-proof vent with insect screen per AWWA and Kansas Department of Health & Environment standards.

5. Remove existing cathodic protection system and patch cathodic protection opening in roof with welded steel plates. Painting of patches shall be in accordance with the requirements of Division 9.

6. Remove and dispose of existing manway gaskets and replace with new gaskets.

7. Remove and dispose of any stripped or corroded nuts and bolts on tank and replace with new galvanized or stainless steel hardware.

8. Tighten any loose turnbuckles on sway bars.

9. Remove all dirt, debris, and loose concrete from foundation pads. Apply an appropriate bonding agent and repair cracks and spalling with commercial non-shrinking grout. Seal exposed concrete foundation with a concrete sealant.

C. ALTERNATE BID SOUTH TOWER: Tank modifications/rehabilitation of the South Tower alternate bid, if accepted by Owner, shall include the following:

1. Remove and dispose of the tower’s existing spiral staircase.

2. Install a vertical ladder from ground level to the tank’s balcony, including rail-type safety climb equipment, including all materials, safety harnesses, and lanyards. Ladder should be equipped with rest platforms.
D. ALTERNATE BID INDUSTRIAL TOWER: Tank modifications/rehabilitation of the Industrial Tower alternate bid, if accepted by Owner, shall include the following:

1. Install rail-type safety climb equipment on all exterior access ladders, including all materials, safety harnesses and lanyards. Install additional rail for stable climber dismount where space allows.

2. Install three stainless steel safety chains with clips at ladder access to balcony.

3. Remove existing tank bowl vent and replace with a new frost-proof vent with insect screen per AWWA and Kansas Department of Health & Environment standards.

4. Ensure roof ladder is properly secured with welded standoffs and install rail-type safety climb equipment.

5. Remove and dispose of any stripped or corroded nuts and bolts on tank and replace with new galvanized or stainless steel hardware.

6. Tighten any loose turnbuckles on sway bars.

7. Remove all dirt, debris, and loose concrete from foundation pads. Apply an appropriate bonding agent and repair cracks and spalling with commercial non-shrinking grout. Seal exposed concrete foundation with a concrete sealant.

E. Related Sections:

1. Section 09970 – Water Tank Coating Systems
2. Section 01570 – Temporary Environmental Controls
3. Section 02067 – Disposal of Waste Material

1.02. REFERENCES:

A. General: Standards listed by reference, including revisions by issuing authority, form a part of this specification section to the extent indicated. Standards listed are identified by issuing authority, authority abbreviation, designation number, title or other designation established by the issuing authority. Standards subsequently referenced herein are identified by issuing authority abbreviation and standard designation.

B. American Water Works Association (AWWA):

1. AWWA D100 – Welded Steel Tanks for Water Storage
2. AWWA D102 – Painting Steel Water Storage Tanks
3. ANSI/AWWA C652 - Disinfection of Water-Storage Facilities
C. National Sanitation Foundation (NSF):

1. NSF 61 – Drinking Water System Components – Health Effects

D. American Welding Society (AWS)

PART 2 – PRODUCTS


2.02. Insect/Frost-Proof Vent: Shall be as manufactured by T.A.P. Company, or equal.

2.03. Safety Climb Equipment: A safety device, such as a “Saf-T-Climb Fall Prevention System” by North Safety, to protect workers shall be installed on all fixed ladders. This device shall comply with the Occupational Health and Safety Act (OSHA) in all respects. The device shall include two harnesses with integrated belt and fastening portion that connects a climber to the fixed safety device. All portable safety climb equipment shall be delivered to the Owner before completion of the contract. Safety device to be as follows:

The Saf-T-Notch Carrier Rail is the rigid notched rail on which the Saf-T-Lok Sleeve travels. Once installed, the rail becomes an integral part of the ladder. The Carrier Rail shall be capable of absorbing an impact load of 500 lbs. in an 18” free fall. The Carrier Rail shall be manufactured of 6061-T6 Aluminum and incorporate notches every 6 inches to provide a positive stop and lock point for the Saf-T-Lok Sleeve to engage, thus controlling the distance a climber can fall. Standard 20-foot lengths shall be utilized unless conditions warrant a custom length for proper fit. Ladder Rung Clamps (Mounting Brackets) shall attach the carrier rail to the ladder or tower cross members at the top and bottom of the full installation, as well as every 4 feet for aluminum carrier rail in between. The Clamps shall match the rail material.

The Saf-T-Lok Sleeve shall employ a locking pawl that provides automatic fall arrest by locking into a notch on the Saf-T-Notch carrier rail when the normal climbing position is interrupted. The housing shall be made of cast manganese bronze and fitted with roller bearings for maximum reliability and smooth movement as the sleeve travels on a straight or curved carrier rail. Provide two Saf-T-Lok Sleeves.

Two Saf-T-Climb Harnesses with Integrated Belt shall be provided which distribute the impact forces of a fall over the climber’s body. Owner shall specify harness sizing. Harnesses shall be equipped with a Saf-T-Climb ring for attachment to the Saf-T-Lok Sleeve.

Two double shock absorbing Saf-T-Lanyards shall be provided to allow workers to attach to the ladder or tank as well as aid in the rescuing of another climber.

Saf-T-Pivot Dismount Sections shall be installed at the top of carrier rails where a greater degree of freedom is needed for a climber to dismount from the Saf-T-Climb system at the top of a climb. Contractor shall show where Saf-T-Pivot Dismount Sections are to be installed on the shop drawings for Engineer to approve or recommend another strategy.
Note that no ladder, carrier rail or dismount section shall extend through the roof manway.

2.04. Ladders: Ladder side rails shall be a minimum 3/8-inch by 2-inches with a 16-inch clear spacing. Rungs shall be not less than ¾-inch, round or square, spaced at 12-inch centers. The surface of the rungs shall be knurled, dimpled or otherwise treated to minimize slipping.

At platforms or landings, the ladder shall extend a minimum 4 feet above the platform/landing to accommodate the fall-arrest system and a minimum 6-inch wide foot rest shall be provided on both sides of each platform opening. Ladders shall be secured to adjacent structures by brackets located at intervals not exceeding 10 feet. Brackets shall be of sufficient length to provide a minimum distance of 7 inches from the center of the rung to the nearest permanent object behind the ladder.

All means of supporting or connecting ladders to steel surfaces shall be done to facilitate painting and minimize corrosion potential at the connection. Ladder brackets located on the access tube exterior shall be reinforced at the access tube shell so that potential ice damage is confined to the ladder and bracket and not the access tube shell.

2.05. Rest Platforms: Rest platforms shall be provided at maximum 50-foot intervals along vertical ladders. Platforms shall be minimum 3'-0" by 5'-0" and complete with handrails, mid rails and toe plates in accordance with OSHA requirements. Grating shall be used for the walking surface and shall be suitably hinged at the ladder penetration. Platforms shall be arranged for straight run ladder and operable without removing fall prevention equipment. All components shall be galvanized steel.

PART 3 – EXECUTION

3.01. GENERAL:

A. All field welding shall conform to AWS and AWWA D100, Section 8 and 10. Before any welding is performed, the Contractor shall make certain that the welders or welding operators have their credentials for acceptance. Copies of said credentials shall be provided to the Owner. Surfaces to be welded shall be free from loose scale, slag, heavy rust, grease, oil, paint and any other foreign material.

B. All areas of tank affected by modification efforts shall be coated per Division 9.

C. Contractor shall establish appropriate sequencing of activities in order to perform water tank rehabilitation and modifications so as not to adversely affect application or performance of proposed coating systems.

3.02. LEAD-BASED PAINT:

A. Removal and disposal of lead-based paint shall follow the requirements outlined in Section 01570 – Temporary Environmental Controls and Section 02067 – Disposal of Waste Material.

END OF SECTION

Water Tower Blasting & Painting
Pittsburg, Kansas
OA Project No. 017-3775