

ADVERTISEMENT FOR BID

The City of Craig is requesting proposals for the **Glen Erie South Water Storage Tank Rehabilitation Project**. Proposals will be due at the Craig City Clerk's Office at City Hall, 300 West Fourth Street, Craig, Colorado 81625, at **11:00 a.m., Tuesday, July 29, 2025**, at which time they will be opened and read aloud. Electronic submissions will also be accepted at kcarmony@ci.craig.co.us. Bids received after this time will not be accepted and will be returned unopened.

Electronic bidding documents will be available on July 2, 2025, and may be obtained by emailing theresa@westwtrsoln.com.


A mandatory pre-bid meeting will be held on Tuesday, July 22, 2025, at 10:00 onsite, located at the southwest corner of East 11th Street and Bryan Way in Craig, CO 81625 (nearby address, 1500 East 11th Street).

The bids must be completely filled out on the bid form provided. Bids shall be addressed to the City of Craig and shall have the name of the bidder and "**Glen Erie South Water Storage Tank Rehabilitation Project**" written thereon.

No bid shall be withdrawn after opening the bid without the consent of the City of Craig, for a period of at least 30 days after the scheduled time for opening bids.

All bids must be submitted in accordance with the Instructions to Bidders. Bids will only be accepted from qualified contractors that have demonstrated relevant experience. A Bid Bond in the amount of 5% will be required and must accompany the bid. Performance and Payment Bonds will be required upon contract award.

Attest:


Katie Carmody, City Clerk




Chris Nichols, Mayor

Published: July 2nd, July 9th, and July 16th, 2025

BIDDING DOCUMENTS

GLEN ERIE SOUTH WATER STORAGE TANK REHABILITATION PROJECT



ISSUED FOR BIDDING

PREPARED FOR:

CITY OF CRAIG

PREPARED BY:



JULY 2025

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PROCUREMENT AND CONTRACTS

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INSTRUCTIONS TO BIDDERS FOR CONSTRUCTION CONTRACT

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ARTICLE 1—DEFINED TERMS

- 1.01 Terms used in these Instructions to Bidders have the meanings indicated in the General Conditions and Supplementary Conditions. Additional terms used in these Instructions to Bidders have the meanings indicated below:
- A. *Issuing Office*—The office from which the Bidding Documents are to be issued, and which registers plan holders.

ARTICLE 2—BIDDING DOCUMENTS

- 2.01 Bidder shall obtain a complete set of Bidding Requirements and proposed Contract Documents (together, the Bidding Documents). See the Agreement for a list of the Contract Documents. It is Bidder's responsibility to determine that it is using a complete set of documents in the preparation of a Bid. Bidder assumes sole responsibility for errors or misinterpretations resulting from the use of incomplete documents, by Bidder itself or by its prospective Subcontractors and Suppliers.
- 2.02 Bidding Documents are made available for the sole purpose of obtaining Bids for completion of the Project and permission to download or distribution of the Bidding Documents does not confer a license or grant permission or authorization for any other use. Authorization to download documents, or other distribution, includes the right for plan holders to print documents solely for their use, and the use of their prospective Subcontractors and Suppliers, provided the plan holder pays all costs associated with printing or reproduction. Printed documents may not be re-sold under any circumstances.
- 2.03 Plan rooms (including construction information subscription services, and electronic and virtual plan rooms) may not distribute the Bidding Documents, or make them available for examination. Those prospective bidders that obtain an electronic (digital) copy of the Bidding Documents from a plan room are encouraged to register as plan holders from the Bidding Documents Website or Issuing Office. Owner is not responsible for omissions in Bidding Documents or other documents obtained from plan rooms, or for a Bidder's failure to obtain Addenda from a plan room.
- 2.04 *Electronic Documents*
- A. When the Bidding Requirements indicate that electronic (digital) copies of the Bidding Documents are available, such documents will be made available to the Bidders as Electronic Documents in the manner specified.
1. Bidding Documents will be provided in Adobe PDF (Portable Document Format) (.pdf) that is readable by Adobe Acrobat Reader Version V19 or later. It is the intent of the Engineer and Owner that such Electronic Documents are to be exactly representative of the paper copies of the documents. However, because the Owner and Engineer cannot totally control the transmission and receipt of Electronic Documents nor the Contractor's means of reproduction of such documents, the Owner and Engineer cannot and do not guarantee that Electronic Documents and reproductions prepared from those versions are identical in every manner to the paper copies.
- B. Unless otherwise stated in the Bidding Documents, the Bidder may use and rely upon complete sets of Electronic Documents of the Bidding Documents, described in Paragraph 2.05.A above. However, Bidder assumes all risks associated with differences arising from transmission/receipt of Electronic Documents versions of Bidding Documents

and reproductions prepared from those versions and, further, assumes all risks, costs, and responsibility associated with use of the Electronic Documents versions to derive information that is not explicitly contained in printed paper versions of the documents, and for Bidder's reliance upon such derived information.

ARTICLE 3—QUALIFICATIONS OF BIDDERS

- 3.01 Bidder is to submit the following information with its Bid to demonstrate Bidder's qualifications to perform the Work:
- A. Written evidence establishing its qualifications such as financial data, previous experience, and present commitments.
 - B. Written evidence establishing its qualifications of at least five projects in the last three years of similar scope, schedule, and evidence of work performed with similar climate.
 - C. A written statement that Bidder is authorized to do business in the state where the Project is located at the time Bids are due.
 - D. Bidder's state or other contractor license number, if applicable.
 - E. Subcontractor and Supplier qualification information.
 - F. Other required information regarding qualifications.
- 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.

ARTICLE 4—PRE-BID CONFERENCE

- 4.01 A mandatory pre-bid conference will be held at the time and location indicated in the Advertisement or invitation to bid. Representatives of Owner and Engineer will be present to discuss the Project. Proposals will not be accepted from Bidders who do not attend the conference. It is each Bidder's responsibility to sign in at the pre-bid conference to verify its participation. Bidders must sign in using the name of the organization that will be submitting a Bid. A list of qualified Bidders that attended the pre-bid conference and are eligible to submit a Bid for this Project will be issued in an Addendum.
- 4.02 Information presented at the pre-Bid conference does not alter the Contract Documents. Owner will issue Addenda to make any changes to the Contract Documents that result from discussions at the pre-Bid conference. Information presented, and statements made at the pre-bid conference will not be binding or legally effective unless incorporated in an Addendum.

ARTICLE 5—SITE AND OTHER AREAS; EXISTING SITE CONDITIONS; EXAMINATION OF SITE; OWNER'S SAFETY PROGRAM; OTHER WORK AT THE SITE

- 5.01 *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

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

5.02 *Existing Site Conditions*

A. *Subsurface and Physical Conditions; Hazardous Environmental Conditions*

1. The Supplementary Conditions identify the following regarding existing conditions at or adjacent to the Site:
 - a. Those reports of explorations and tests of subsurface conditions at or adjacent to the Site that contain Technical Data.
 - b. Those drawings known to Owner of existing physical conditions at or adjacent to the Site, including those drawings depicting existing surface or subsurface structures at or adjacent to the Site (except Underground Facilities), that contain Technical Data.
 - 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.
4. *Geotechnical Baseline Report/Geotechnical Data Report*: The Bidding Documents contain a Geotechnical Baseline Report (GBR) and Geotechnical Data Report (GDR).
 - a. As set forth in the Supplementary Conditions, the GBR describes certain select subsurface conditions that are anticipated to be encountered by Contractor during construction in specified locations ("Baseline Conditions"). The GBR is a Contract Document.
 - b. The Baseline Conditions in the GBR are intended to reduce uncertainty and the degree of contingency in submitted Bids. However, Bidders cannot rely solely on the Baseline Conditions. Bids should be based on a comprehensive approach that includes an independent review and analysis of the GBR, all other Contract Documents, Technical Data, other available information, and observable surface conditions. Not all potential subsurface conditions are baselined.
 - c. Nothing in the GBR is intended to relieve Bidders of the responsibility to make their own determinations regarding construction costs, bidding strategies, and Bid prices, nor of the responsibility to select and be responsible for the means, methods, techniques, sequences, and procedures of construction, and for safety precautions and programs incident thereto.

- d. As set forth in the Supplementary Conditions, the GDR is a Contract Document containing data prepared by or for the Owner in support of the GBR.
 - B. *Underground Facilities:* Underground Facilities are shown or indicated on the Drawings, pursuant to Paragraph 5.05 of the General Conditions, and not in the drawings referred to in Paragraph 5.02.A of these Instructions to Bidders. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data.
- 5.03 *Other Site-related Documents*
- A. In addition to the documents regarding existing Site conditions referred to in Paragraph 5.02.A, the following other documents relating to conditions at or adjacent to the Site are known to Owner and made available to Bidders for reference:
 - 1. N/A.
 - B. Owner has not verified the contents of these other Site-related documents, and Bidder may not rely on the accuracy of any data or information in such documents. Bidder is responsible for any interpretation or conclusion Bidder draws from the other Site-related documents.
 - C. The other Site-related documents are not part of the Contract Documents.
 - D. Bidders are encouraged to review the other Site-related documents, but Bidders will not be held accountable for any data or information in such documents. The requirement to review and take responsibility for documentary Site information is limited to information in (1) the Contract Documents and (2) the Technical Data.
 - E. No other Site-related documents are available.
- 5.04 *Site Visit and Testing by Bidders*
- A. Bidder is required to visit the Site and conduct a thorough visual examination of the Site and adjacent areas. During the visit the Bidder must not disturb any ongoing operations at the Site.
 - B. A Site visit is scheduled following the pre-bid conference. Maps to the Site will be available at the pre-Bid conference.
 - C. A Site visit is scheduled for Tuesday, July 22, 2025, at 10:00 AM, at the southwest corner of East 11th Street and Bryan Way in Craig, CO 81625 (nearby address, 1500 East 11th Street).
 - D. Bidders visiting the Site are required to arrange their own transportation to the Site.
 - E. All access to the Site other than during a regularly scheduled Site visit must be coordinated through the following Owner or Engineer contact for visiting the Site: Carl Ray, 970-826-2022. Bidder must conduct the required Site visit during normal working hours.
 - F. Bidder is not required to conduct any subsurface testing, or exhaustive investigations of Site conditions.
 - G. On request, and to the extent Owner has control over the Site, and schedule permitting, the Owner will provide Bidder general 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. Bidder is responsible for establishing access needed to reach specific selected test sites.

- H. Bidder must 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.
- I. Bidder must fill all holes and clean up and restore the Site to its former condition upon completion of such explorations, investigations, tests, and studies.

5.05 *Owner's Safety Program*

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

5.06 *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 6—BIDDER'S REPRESENTATIONS AND CERTIFICATIONS

6.01 *Express Representations and Certifications in Bid Form, Agreement*

- A. The Bid Form that each Bidder will submit contains express representations regarding the Bidder's examination of Project documentation, Site visit, and preparation of the Bid, and certifications regarding lack of collusion or fraud in connection with the Bid. Bidder should review these representations and certifications and assure that Bidder can make the representations and certifications in good faith, before executing and submitting its Bid.
- B. If Bidder is awarded the Contract, Bidder (as Contractor) will make similar express representations and certifications when it executes the Agreement.

ARTICLE 7—INTERPRETATIONS AND ADDENDA

- 7.01 Owner on its own initiative may issue Addenda to clarify, correct, supplement, or change the Bidding Documents.
- 7.02 Bidder shall submit all questions about the meaning or intent of the Bidding Documents to Engineer in writing. Contact information and submittal procedures for such questions are as follows:
 - A. Theresa Weidmann, Western Water Solutions, Theresa@westwtrsoln.com.

- 7.03 Interpretations or clarifications considered necessary by Engineer in response to such questions will be issued by Addenda delivered to all registered plan holders. Questions received less than seven days prior to the date for opening of Bids may not be answered.
- 7.04 Only responses set forth in an Addendum will be binding. Oral and other interpretations or clarifications will be without legal effect. Responses to questions are not part of the Contract Documents unless set forth in an Addendum that expressly modifies or supplements the Contract Documents.

ARTICLE 8—BID SECURITY

- 8.01 A Bid must be accompanied by Bid security made payable to Owner in an amount of 5% percent of Bidder's maximum Bid price (determined by adding the base bid and all alternates) and in the form of a Bid bond issued by a surety meeting the requirements of Paragraph 6.01 of the General Conditions. Such Bid bond will be issued in the form included in the Bidding Documents.
- 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, 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 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, in whole in the case of a penal sum bid bond, and to the extent of Owner's damages in the case of a damages-form bond. Such forfeiture will 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 7 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 7 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 (a) substantially completed and (b) ready for final payment, and (c) Milestones (if any) are to be achieved, are set forth in the Agreement.
- 9.02 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 10—SUBSTITUTE AND "OR EQUAL" ITEMS

- 10.01 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.

- 10.02 All prices that Bidder sets forth in its Bid will 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 11—SUBCONTRACTORS, SUPPLIERS, AND OTHERS

- 11.01 A Bidder must be prepared to retain specific Subcontractors and Suppliers for the performance of the Work if required to do so by the Bidding Documents or in the Specifications. If a prospective Bidder objects to retaining any such Subcontractor or Supplier and the concern is not relieved by an Addendum, then the prospective Bidder should refrain from submitting a Bid.
- 11.02 If requested by Owner, such list must be accompanied by an experience statement with pertinent information regarding similar projects and other evidence of qualification for each such Subcontractor or Supplier. If Owner or Engineer, after due investigation, has reasonable objection to any proposed Subcontractor or Supplier, Owner may, before the Notice of Award is given, request apparent Successful Bidder to submit an acceptable substitute, in which case apparent Successful Bidder will 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.
- 11.03 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 and Suppliers. Declining to make requested substitutions will constitute grounds for forfeiture of the Bid security of any Bidder. Any Subcontractor or Supplier, 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 7.07 of the General Conditions.

ARTICLE 12—PREPARATION OF BID

- 12.01 The Bid Form is included with the Bidding Documents.
- A. All blanks on the Bid Form must be completed in ink and the Bid Form signed in ink. Erasures or alterations must be initialed in ink by the person signing the Bid Form. A Bid price must be indicated for each section, 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 to not furnish pricing for such optional alternate item, then Bidder may enter the words “No Bid” or “Not Applicable.”
- 12.02 If Bidder has obtained the Bidding Documents as Electronic Documents, then Bidder shall prepare its Bid on a paper copy of the Bid Form printed from the Electronic Documents version of the Bidding Documents. The printed copy of the Bid Form must be clearly legible, printed on 8½ inch by 11-inch paper and as closely identical in appearance to the Electronic Document version of the Bid Form as may be practical. The Owner reserves the right to accept Bid Forms which nominally

vary in appearance from the original paper version of the Bid Form, providing that all required information and submittals are included with the Bid.

- 12.03 A Bid by a corporation must 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 must be shown.
- 12.04 A Bid by a partnership must be executed in the partnership name and signed by a partner (whose title must appear under the signature), accompanied by evidence of authority to sign. The official address of the partnership must be shown.
- 12.05 A Bid by a limited liability company must 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 must be shown.
- 12.06 A Bid by an individual must show the Bidder's name and official address.
- 12.07 A Bid by a joint venture must be executed by an authorized representative of each joint venturer in the manner indicated on the Bid Form. The joint venture must have been formally established prior to submittal of a Bid, and the official address of the joint venture must be shown.
- 12.08 All names must be printed in ink below the signatures.
- 12.09 The Bid must contain an acknowledgment of receipt of all Addenda, the numbers of which must be filled in on the Bid Form.
- 12.10 Postal and e-mail addresses and telephone number for communications regarding the Bid must be shown.
- 12.11 The Bid must contain evidence of Bidder's authority to do business in the state where the Project is located, or Bidder must certify in writing that it will obtain such authority within the time for acceptance of Bids and attach such certification to the Bid.
- 12.12 If Bidder is required to be licensed to submit a Bid or perform the Work in the state where the Project is located, the Bid must contain evidence of Bidder's licensure at the time of Bid submission. Bidder's state contractor license number, if any, must also be shown on the Bid Form.

ARTICLE 13—BASIS OF BID

13.01 *Base Bid with Alternates*

- A. Bidders must submit a Bid on a lump sum basis for the base Bid and include a separate price for each alternate described in the Bidding Documents and as provided for in the Bid Form. The price for each alternate will be the amount added to or deleted from the base Bid if Owner selects the alternate.
- B. In the comparison of Bids, alternates will be applied in the same order of priority as listed in the Bid Form.

13.02 *Unit Price*

- A. Bidders must submit a Bid on a unit price basis for each item of Work listed in the unit price section of the Bid Form.
- B. The "Bid Price" (sometimes referred to as the extended price) for each unit price Bid item will be the product of the "Estimated Quantity", which Owner or its representative has set

forth in the Bid Form, for the item and the corresponding “Bid Unit Price” offered by the Bidder. The total of all unit price Bid items will be the sum of these “Bid Prices”; such total will be used by Owner for Bid comparison purposes. The final quantities and Contract Price will be determined in accordance with Paragraph 13.03 of the General Conditions.

- C. Discrepancies between the multiplication of units of Work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum.

ARTICLE 14—SUBMITTAL OF BID

- 14.01 The Bidding Documents include one separate unbound copy of the Bid Form, and, if required, the Bid Bond Form. The unbound copy of the Bid Form is to be completed and submitted with the Bid security and the other documents required to be submitted under the terms of Article 2 of the Bid Form.
- 14.02 A Bid must be received no later than the date and time prescribed and at the place indicated in the Advertisement or invitation to bid and must 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 must 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 must be enclosed in a separate package plainly marked on the outside with the notation “BID ENCLOSED.” A mailed Bid must be addressed to the location designated in the Advertisement.
- 14.03 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 15—MODIFICATION AND WITHDRAWAL OF BID

- 15.01 An unopened 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.
- 15.02 If a Bidder wishes to modify its Bid prior to Bid opening, Bidder must withdraw its initial Bid in the manner specified in Paragraph 15.01 and submit a new Bid prior to the date and time for the opening of Bids.
- 15.03 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, the Bidder may withdraw its Bid,

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

ARTICLE 16—OPENING OF BIDS

16.01 Bids will be opened publicly.

ARTICLE 17—BIDS TO REMAIN SUBJECT TO ACCEPTANCE

17.01 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 18—EVALUATION OF BIDS AND AWARD OF CONTRACT

18.01 Owner reserves the right to reject any or all Bids, including without limitation, nonconforming, nonresponsive, unbalanced, or conditional Bids. Owner also reserves the right to waive all minor Bid informalities not involving price, time, or changes in the Work.

18.02 Owner will reject the Bid of any Bidder that Owner finds, after reasonable inquiry and evaluation, to not be responsible.

18.03 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, whether in the Bid itself or in a separate communication to Owner or Engineer, then Owner will reject the Bid as nonresponsive.

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

18.05 *Evaluation of Bids*

A. In evaluating Bids, Owner will consider whether 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 in the same order of priority as listed in the Bid Form. To determine the Bid prices for purposes of comparison, Owner will announce to all bidders a “Base Bid plus alternates” budget after receiving all Bids, but prior to opening them. For comparison purposes alternates will be accepted, following the order of priority established in the Bid Form, until doing so would cause the budget to be exceeded. 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.

C. For the determination of the apparent low Bidder when unit price bids are submitted, Bids will be compared on the basis of the total of the products of the estimated quantity of each item and unit price Bid for that item, together with any lump sum items.

18.06 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.

- 18.07 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.

ARTICLE 19—BONDS AND INSURANCE

- 19.01 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, other required bonds (if any), and insurance. When the Successful Bidder delivers the executed Agreement to Owner, it must be accompanied by required bonds and insurance documentation.
- 19.02 Article 8, Bid Security, of these Instructions, addresses any requirements for providing bid bonds as part of the bidding process.

ARTICLE 20—SIGNING OF AGREEMENT

- 20.01 When Owner issues a Notice of Award to the Successful Bidder, it will 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 must 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 10 days thereafter, Owner will 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 21—SALES AND USE TAXES

- 21.01 Owner is exempt from Colorado state sales and use taxes on materials and equipment to be incorporated in the Work (Tax Exemption No. 09803583). Said taxes must not be included in the Bid. Refer to Paragraph SC-7.10 of the Supplementary Conditions for additional information.

ARTICLE 22—CONTRACTS TO BE ASSIGNED

- 22.01 This section is not being used.

BID FORM FOR CONSTRUCTION CONTRACT

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 1—OWNER AND BIDDER

- 1.01 This Bid is submitted to: The City of Craig, 300 W 4th Street, Craig, Colorado 81625.
- 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—ATTACHMENTS TO THIS BID

- 2.01 The following documents are submitted with and made a condition of this Bid:
- A. Required Bid security;
 - B. List of Proposed Subcontractors;
 - C. List of Proposed Suppliers;
 - D. Evidence of authority to do business in the state of the Project;
 - E. Contractor's license number as evidence of Bidder's State Contractor's License;
 - F. Required Bidder Qualification Statement with supporting data; and
 - G. Bid Bond Form;
 - H. Performance Bond Form;
 - I. Warranty Bond Form; and
 - J. Project schedule

ARTICLE 3—BASIS OF BID—LUMP SUM BID AND UNIT PRICES

- 3.01 *Unit Price Bids*
- A. Bidder will perform the following Work at the indicated unit prices:

Item No.	Description	Unit	Estimated Quantity	Bid Unit Price	Bid Amount
1	Mobilization / Demobilization	LS	1	\$	\$
2	Door Sheet and Radiograph Testing	LS	1	\$	\$
3	Magnetic Flux Leakage Scan	LS	1	\$	\$
4a	1/4" x 6" Diameter Floor Plate Patches	EA	30	\$	\$
4b	1/4" x Various Sizes Floor Plate Patches	SF	40	\$	\$
4c	Weld Deposition Repairs	EA	20	\$	\$

5	Roof Vent and Riser	LS	1	\$	\$
6	Overflow Weir Modifications	LS	1	\$	\$
7	Interior Surface Preparation, Coatings and Flexible Sealant	LS	1	\$	\$
8	Exterior Lead Abatement	LS	1	\$	\$
9	Exterior Surface Preparation and Coatings	LS	1	\$	\$
10	Exterior Ladder Cage Locking Security Gate	LS	1	\$	\$
11	Impressed Current Cathodic Protection System	LS	1	\$	\$
Subtotal					\$

B. Bidder acknowledges that:

1. each Bid Unit Price includes an amount considered by Bidder to be adequate to cover Contractor's overhead and profit for each separately identified item, and
2. estimated quantities are not guaranteed and are solely for the purpose of comparison of Bids, and final payment for all Unit Price Work will be based on actual quantities, determined as provided in the Contract Documents.

3.02 *Total Bid Price (Lump Sum and Unit Prices)*

Total Bid Price (Total of all Lump Sum and Unit Price Bids)	\$
---	----

3.03 *Bid Alternate Unit Price Bids*

A. Bidder will perform the following Work at the indicated unit prices:

Item No.	Description	Unit	Estimated Quantity	Bid Unit Price	Bid Amount
BA1	Roof Access Hatch and Riser	LS	1	\$	\$
BA2	Center Column Capital	LS	1	\$	\$
BA3	Drain Sump	LS	1	\$	\$
BA4	Interior Ladder	LS	1	\$	\$
BA5	Exterior Joint Repair	LS	1	\$	\$
Total of All Unit Price Bid Alternate Items					\$

3.04 *Total Bid Price (Lump Sum and Unit Prices) including Bid Alternates*

Total Bid Price (Total of all Lump Sum and Unit Price Bids) Including Bid Alternates	\$
--	----

ARTICLE 4—TIME OF COMPLETION

- 4.01 Bidder agrees that the Work will be substantially complete and will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.
- 4.02 Bidder accepts the provisions of the Agreement as to liquidated damages.

ARTICLE 5—BIDDER’S ACKNOWLEDGEMENTS: ACCEPTANCE PERIOD, INSTRUCTIONS, AND RECEIPT OF ADDENDA

5.01 *Bid Acceptance Period*

- A. 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.

5.02 *Instructions to Bidders*

- A. Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security.

5.03 *Receipt of Addenda*

- A. Bidder hereby acknowledges receipt of the following Addenda:

Addendum Number	Addendum Date

ARTICLE 6—BIDDER’S REPRESENTATIONS AND CERTIFICATIONS

6.01 *Bidder’s Representations*

- A. In submitting this Bid, Bidder represents the following:
1. Bidder has examined and carefully studied the Bidding Documents, including Addenda.
 2. Bidder has visited the Site, conducted a thorough visual examination of the Site and adjacent areas, and become familiar with the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
 3. Bidder is familiar with all Laws and Regulations that may affect cost, progress, and performance of the Work.
 4. Bidder has carefully studied the reports of explorations and tests of subsurface conditions at or adjacent to the Site and the drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, with respect to the Technical Data in such reports and drawings.
 5. 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 the Technical Data identified in the Supplementary Conditions or by definition, with respect to the effect of such information, observations, and Technical Data on (a) the cost, progress, and performance of the Work; (b) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, if selected as Contractor; and (c) Bidder’s (Contractor’s) safety precautions and programs.
 6. Based on the information and observations referred to in the preceding paragraph, Bidder 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.

7. 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.
8. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and of discrepancies between Site conditions and the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.
9. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.
10. The submission of this Bid constitutes an incontrovertible representation by Bidder that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

6.02 *Bidder's Certifications*

A. The Bidder certifies the following:

1. 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.
2. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid.
3. Bidder has not solicited or induced any individual or entity to refrain from bidding.
4. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 8.02.A:
 - a. Corrupt practice means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process.
 - b. 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.
 - c. 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.
 - d. 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.

BIDDER hereby submits this Bid as set forth above:

Bidder:

(typed or printed name of organization)

By:

(individual's signature)

Name:

(typed or printed)

Title:

(typed or printed)

Date:

(typed or printed)

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

Attest:

(individual's signature)

Name:

(typed or printed)

Title:

(typed or printed)

Date:

(typed or printed)

Address for giving notices:

Bidder's Contact:

Name:

(typed or printed)

Title:

(typed or printed)

Phone:

Email:

Address:

Bidder's Contractor License No.: (if applicable)

BID BOND

Bidder Name: [Full formal name of Bidder] Address <i>(principal place of business)</i> : [Address of Bidder's principal place of business]	Surety Name: [Full formal name of Surety] Address <i>(principal place of business)</i> : [Address of Surety's principal place of business]
Owner Name: City of Craig Address <i>(principal place of business)</i> : 300 W 4th Street Craig, Colorado 81625	Bid Project <i>(name and location)</i> : Glen Erie South Tank Rehabilitation Bid Due Date: July 29, 2025
Bond Penal Sum: [Amount] Date of Bond: [Date]	
Surety and Bidder, intending to be legally bound hereby, subject to the terms set forth in this Bid Bond, do each cause this Bid Bond to be duly executed by an authorized officer, agent, or representative.	
Bidder	Surety
_____ <i>(Full formal name of Bidder)</i>	_____ <i>(Full formal name of Surety) (corporate seal)</i>
By: _____ <div style="text-align: center;"><i>(Signature)</i></div>	By: _____ <div style="text-align: center;"><i>(Signature) (Attach Power of Attorney)</i></div>
Name: _____ <div style="text-align: center;"><i>(Printed or typed)</i></div>	Name: _____ <div style="text-align: center;"><i>(Printed or typed)</i></div>
Title: _____	Title: _____
Attest: _____ <div style="text-align: center;"><i>(Signature)</i></div>	Attest: _____ <div style="text-align: center;"><i>(Signature)</i></div>
Name: _____ <div style="text-align: center;"><i>(Printed or typed)</i></div>	Name: _____ <div style="text-align: center;"><i>(Printed or typed)</i></div>
Title: _____	Title: _____
<i>Notes: (1) Note: Addresses are to be used for giving any required notice. (2) Provide execution by any additional parties, such as joint venturers, if necessary.</i>	

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 will be Owner's sole and exclusive remedy upon default of Bidder.
2. Default of Bidder occurs 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 will 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 does not in the aggregate exceed 120 days from the Bid due date without Surety's written consent.
6. No suit or action will 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 will be commenced only in a court of competent jurisdiction located in the state in which the Project is located.
8. Notices required hereunder must 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 Postal Service registered or certified mail, return receipt requested, postage pre-paid, and will 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 will 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 governs and the remainder of this Bond that is not in conflict therewith continues in full force and effect.
11. The term "Bid" as used herein includes a Bid, offer, or proposal as applicable.

QUALIFICATIONS STATEMENT

ARTICLE 1—GENERAL INFORMATION

1.01 Provide contact information for the Business:

Legal Name of Business:			
Corporate Office			
Name:		Phone number:	
Title:		Email address:	
Business address of corporate office:			
Local Office			
Name:		Phone number:	
Title:		Email address:	
Business address of local office:			

1.02 Provide information on the Business's organizational structure:

Form of Business:	<input type="checkbox"/> Sole Proprietorship <input type="checkbox"/> Partnership <input type="checkbox"/> Corporation		
<input type="checkbox"/> Limited Liability Company <input type="checkbox"/> Joint Venture comprised of the following companies:			
1.			
2.			
3.			
Provide a separate Qualification Statement for each Joint Venturer.			
Date Business was formed:		State in which Business was formed:	
Is this Business authorized to operate in the Project location?		<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Pending	

1.03 Identify all businesses that own Business in whole or in part (25% or greater), or that are wholly or partly (25% or greater) owned by Business:

Name of business:		Affiliation:	
Address:			
Name of business:		Affiliation:	
Address:			
Name of business:		Affiliation:	

Address:	
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1.04 Provide information regarding the Business's officers, partners, and limits of authority.

Name:		Title:	
Authorized to sign contracts: <input type="checkbox"/> Yes <input type="checkbox"/> No		Limit of Authority:	\$
Name:		Title:	
Authorized to sign contracts: <input type="checkbox"/> Yes <input type="checkbox"/> No		Limit of Authority:	\$
Name:		Title:	
Authorized to sign contracts: <input type="checkbox"/> Yes <input type="checkbox"/> No		Limit of Authority:	\$
Name:		Title:	

ARTICLE 2—LICENSING

2.01 Provide information regarding licensure for Business:

Name of License:			
Licensing Agency:			
License No:		Expiration Date:	
Name of License:			
Licensing Agency:			
License No:		Expiration Date:	

ARTICLE 3—DIVERSE BUSINESS CERTIFICATIONS

3.01 Provide information regarding Business's Diverse Business Certification, if any. Provide evidence of current certification.

Certification	Certifying Agency	Certification Date
<input type="checkbox"/> Disadvantaged Business Enterprise		
<input type="checkbox"/> Minority Business Enterprise		
<input type="checkbox"/> Woman-Owned Business Enterprise		
<input type="checkbox"/> Small Business Enterprise		
<input type="checkbox"/> Disabled Business Enterprise		
<input type="checkbox"/> Veteran-Owned Business Enterprise		
<input type="checkbox"/> Service-Disabled Veteran-Owned Business		
<input type="checkbox"/> HUBZone Business (Historically Underutilized) Business		
<input type="checkbox"/> Other		

☐ None

ARTICLE 4—SAFETY

4.01 Provide information regarding Business's safety organization and safety performance.

Name of Business's Safety Officer:		
Safety Certifications		
Certification Name	Issuing Agency	Expiration

4.02 Provide Worker's Compensation Insurance Experience Modification Rate (EMR), Total Recordable Frequency Rate (TRFR) for incidents, and Total Number of Recorded Manhours (MH) for the last 3 years and the EMR, TRFR, and MH history for the last 3 years of any proposed Subcontractor(s) that will provide Work valued at 10% or more of the Contract Price. Provide documentation of the EMR history for Business and Subcontractor(s).

Year									
Company	EMR	TRFR	MH	EMR	TRFR	MH	EMR	TRFR	MH

ARTICLE 5—FINANCIAL

5.01 Provide information regarding the Business's financial stability. Provide the most recent audited financial statement, and if such audited financial statement is not current, also provide the most current financial statement.

Financial Institution:		
Business address:		
Date of Business's most recent financial statement:		<input type="checkbox"/> Attached
Date of Business's most recent audited financial statement:		<input type="checkbox"/> Attached
Financial indicators from the most recent financial statement		
Contractor's Current Ratio (Current Assets ÷ Current Liabilities)		
Contractor's Quick Ratio ((Cash and Cash Equivalents + Accounts Receivable + Short Term Investments) ÷ Current Liabilities)		

ARTICLE 6—SURETY INFORMATION

- 6.01 Provide information regarding the surety company that will issue required bonds on behalf of the Business, including but not limited to performance and payment bonds.

Surety Name:			
Surety is a corporation organized and existing under the laws of the state of:			
Is surety authorized to provide surety bonds in the Project location?	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Is surety listed in "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" published in Department Circular 570 (as amended) by the Bureau of the Fiscal Service, U.S. Department of the Treasury? <input type="checkbox"/> Yes <input type="checkbox"/> No			
Mailing Address (principal place of business):			
Physical Address (principal place of business):			
Phone (main):		Phone (claims):	

ARTICLE 7—INSURANCE

- 7.01 Provide information regarding Business's insurance company(s), including but not limited to its Commercial General Liability carrier. Provide information for each provider.

Name of insurance provider, and type of policy (CLE, auto, etc.):			
Insurance Provider		Type of Policy (Coverage Provided)	
Are providers licensed or authorized to issue policies in the Project location?		<input type="checkbox"/> Yes <input type="checkbox"/> No	
Does provider have an A.M. Best Rating of A-VII or better?		<input type="checkbox"/> Yes <input type="checkbox"/> No	
Mailing Address (principal place of business):			
Physical Address (principal place of business):			
Phone (main):		Phone (claims):	

ARTICLE 8—CONSTRUCTION EXPERIENCE

8.01 Provide information that will identify the overall size and capacity of the Business.

Average number of current full-time employees:	
Estimate of revenue for the current year:	
Estimate of revenue for the previous year:	

8.02 Provide information regarding the Business's previous contracting experience.

Years of experience with projects like the proposed project:				
As a general contractor:		As a joint venturer:		
Has Business, or a predecessor in interest, or an affiliate identified in Paragraph 1.03:				
Been disqualified as a bidder by any local, state, or federal agency within the last 5 years? <input type="checkbox"/> Yes <input type="checkbox"/> No				
Been barred from contracting by any local, state, or federal agency within the last 5 years? <input type="checkbox"/> Yes <input type="checkbox"/> No				
Been released from a bid in the past 5 years? <input type="checkbox"/> Yes <input type="checkbox"/> No				
Defaulted on a project or failed to complete any contract awarded to it? <input type="checkbox"/> Yes <input type="checkbox"/> No				
Refused to construct or refused to provide materials defined in the contract documents or in a change order? <input type="checkbox"/> Yes <input type="checkbox"/> No				
Been a party to any currently pending litigation or arbitration? <input type="checkbox"/> Yes <input type="checkbox"/> No				
Provide full details in a separate attachment if the response to any of these questions is Yes.				

8.03 List all projects currently under contract in Schedule A and provide indicated information.

8.04 List a minimum of three and a maximum of six projects completed in the last 5 years in Schedule B and provide indicated information to demonstrate the Business's experience with projects similar in type and cost of construction.

8.05 In Schedule C, provide information on key individuals whom Business intends to assign to the Project. Provide resumes for those individuals included in Schedule C. Key individuals include the Project Manager, Project Superintendent, Quality Manager, and Safety Manager. Resumes may be provided for Business's key leaders as well.

ARTICLE 9—REQUIRED ATTACHMENTS

9.01 Provide the following information with the Statement of Qualifications:

- A. If Business is a Joint Venture, separate Qualifications Statements for each Joint Venturer, as required in Paragraph 1.02.
- B. Diverse Business Certifications if required by Paragraph 3.01.
- C. Certification of Business's safety performance if required by Paragraph 4.02.
- D. Financial statements as required by Paragraph 5.01.

- E. Attachments providing additional information as required by Paragraph 8.02.
- F. Schedule A (Current Projects) as required by Paragraph 8.03.
- G. Schedule B (Previous Experience with Similar Projects) as required by Paragraph 8.04.
- H. Schedule C (Key Individuals) and resumes for the key individuals listed, as required by Paragraph 8.05.
- I. Additional items as pertinent.

This Statement of Qualifications is offered by:

Business:

(typed or printed name of organization)

By:

(individual's signature)

Name:

(typed or printed)

Title:

(typed or printed)

Date:

(date signed)

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

Attest:

(individual's signature)

Name:

(typed or printed)

Title:

(typed or printed)

Address for giving notices:

Designated Representative:

Name:

(typed or printed)

Title:

(typed or printed)

Address:

Phone:

Email:

Schedule A—Current Projects

Name of Organization					
Project Owner			Project Name		
General Description of Project					
Project Cost			Date Project		
Key Project Personnel	Project Manager	Project Superintendent	Safety Manager	Quality Control Manager	
Name					
Reference Contact Information (listing names indicates approval to contacting the names individuals as a reference)					
	Name	Title/Position	Organization	Telephone	Email
Owner					
Designer					
Construction Manager					

Project Owner			Project Name		
General Description of Project					
Project Cost			Date Project		
Key Project Personnel	Project Manager	Project Superintendent	Safety Manager	Quality Control Manager	
Name					
Reference Contact Information (listing names indicates approval to contacting the names individuals as a reference)					
	Name	Title/Position	Organization	Telephone	Email
Owner					
Designer					
Construction Manager					

Project Owner			Project Name		
General Description of Project					
Project Cost			Date Project		
Key Project Personnel	Project Manager	Project Superintendent	Safety Manager	Quality Control Manager	
Name					
Reference Contact Information (listing names indicates approval to contacting the names individuals as a reference)					
	Name	Title/Position	Organization	Telephone	Email
Owner					
Designer					
Construction Manager					

Schedule B—Previous Experience with Similar Projects

Name of Organization					
Project Owner			Project Name		
General Description of Project					
Project Cost			Date Project		
Key Project Personnel	Project Manager	Project Superintendent	Safety Manager	Quality Control Manager	
Name					
Reference Contact Information (listing names indicates approval to contacting the names individuals as a reference)					
	Name	Title/Position	Organization	Telephone	Email
Owner					
Designer					
Construction Manager					

Project Owner			Project Name		
General Description of Project					
Project Cost			Date Project		
Key Project Personnel	Project Manager	Project Superintendent	Safety Manager	Quality Control Manager	
Name					
Reference Contact Information (listing names indicates approval to contacting the names individuals as a reference)					
	Name	Title/Position	Organization	Telephone	Email
Owner					
Designer					
Construction Manager					

Project Owner			Project Name		
General Description of Project					
Project Cost			Date Project		
Key Project Personnel	Project Manager	Project Superintendent	Safety Manager	Quality Control Manager	
Name					
Reference Contact Information (listing names indicates approval to contacting the names individuals as a reference)					
	Name	Title/Position	Organization	Telephone	Email
Owner					
Designer					
Construction Manager					

Schedule B—Previous Experience with Similar Projects

Name of Organization					
Project Owner			Project Name		
General Description of Project					
Project Cost			Date Project		
Key Project Personnel	Project Manager	Project Superintendent	Safety Manager	Quality Control Manager	
Name					
Reference Contact Information (listing names indicates approval to contacting the names individuals as a reference)					
	Name	Title/Position	Organization	Telephone	Email
Owner					
Designer					
Construction Manager					

Project Owner			Project Name		
General Description of Project					
Project Cost			Date Project		
Key Project Personnel	Project Manager	Project Superintendent	Safety Manager	Quality Control Manager	
Name					
Reference Contact Information (listing names indicates approval to contacting the names individuals as a reference)					
	Name	Title/Position	Organization	Telephone	Email
Owner					
Designer					
Construction Manager					

Project Owner			Project Name		
General Description of Project					
Project Cost			Date Project		
Key Project Personnel	Project Manager	Project Superintendent	Safety Manager	Quality Control Manager	
Name					
Reference Contact Information (listing names indicates approval to contacting the names individuals as a reference)					
	Name	Title/Position	Organization	Telephone	Email
Owner					
Designer					
Construction Manager					

Schedule C—Key Individuals

Project Manager			
Name of individual			
Years of experience as project manager			
Years of experience with this organization			
Number of similar projects as project manager			
Number of similar projects in other positions			
Current Project Assignments			
Name of assignment		Percent of time used for this project	Estimated project completion date
Reference Contact Information (listing names indicates approval to contact named individuals as a reference)			
Name		Name	
Title/Position		Title/Position	
Organization		Organization	
Telephone		Telephone	
Email		Email	
Project		Project	
Candidate's role on project		Candidate's role on project	
Project Superintendent			
Name of individual			
Years of experience as project superintendent			
Years of experience with this organization			
Number of similar projects as project superintendent			
Number of similar projects in other positions			
Current Project Assignments			
Name of assignment		Percent of time used for this project	Estimated project completion date
Reference Contact Information (listing names indicates approval to contact named individuals as a reference)			
Name		Name	
Title/Position		Title/Position	
Organization		Organization	
Telephone		Telephone	
Email		Email	
Project		Project	
Candidate's role on project		Candidate's role on project	

Safety Manager			
Name of individual			
Years of experience as project manager			
Years of experience with this organization			
Number of similar projects as project manager			
Number of similar projects in other positions			
Current Project Assignments			
Name of assignment		Percent of time used for this project	Estimated project completion date
Reference Contact Information (listing names indicates approval to contact named individuals as a reference)			
Name		Name	
Title/Position		Title/Position	
Organization		Organization	
Telephone		Telephone	
Email		Email	
Project		Project	
Candidate's role on project		Candidate's role on project	
Quality Control Manager			
Name of individual			
Years of experience as project superintendent			
Years of experience with this organization			
Number of similar projects as project superintendent			
Number of similar projects in other positions			
Current Project Assignments			
Name of assignment		Percent of time used for this project	Estimated project completion date
Reference Contact Information (listing names indicates approval to contact named individuals as a reference)			
Name		Name	
Title/Position		Title/Position	
Organization		Organization	
Telephone		Telephone	
Email		Email	
Project		Project	
Candidate's role on project		Candidate's role on project	

NOTICE OF AWARD

Date of Issuance:

Owner: City of Craig

Owner's Project No.:

Engineer: Western Water Solutions

Engineer's Project No.: 2025-COC

Project: Glen Erie South Tank Rehabilitation

Contract Name: Agreement between Owner and Contractor for Construction Contract

Bidder:

Bidder's Address:

You are notified that Owner has accepted your Bid dated July 29, 2025, for the above Contract, and that you are the Successful Bidder and are awarded a Contract for:

The project consists of rehabilitating the existing Glen Erie South Potable Water Storage Tank. The tank measures 66 feet in diameter and 20 feet in height, with an approximate storage capacity of 500,000 gallons. The base bid rehabilitation scope includes installing a new door sheet; performing a magnetic flux leakage scan of the tank floor plates; installing welded patch plates and weld deposition repairs; fabricating and installing a new roof vent and riser; performing interior surface preparation and coating; conducting exterior lead abatement, surface preparation, and coating; and fabricating and installing an exterior ladder security gate. The bid alternate rehabilitation scope includes fabricating and installing a new roof access hatch and riser, a new open-framing center column capital, a new drain sump, a new interior ladder, a new impressed current cathodic protection system, and performing exterior joint repairs.

The Contract Price of the awarded Contract is \$[**Contract Price**]. Contract Price is subject to adjustment based on the provisions of the Contract, including but not limited to those governing changes, Unit Price Work, and Work performed on a cost-plus-fee basis, as applicable.

[**Number of copies sent**] unexecuted counterparts of the Agreement accompany this Notice of Award, and one copy of the Contract Documents accompanies this Notice of Award, or has been transmitted or made available to Bidder electronically.

☐ Drawings will be delivered separately from the other Contract Documents.

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

1. Deliver to Owner [**number of copies sent**] counterparts of the Agreement, signed by Bidder (as Contractor).
2. Deliver with the signed Agreement(s) the Contract security (such as required performance and payment bonds) and insurance documentation, as specified in the Instructions to Bidders and in the General Conditions, Articles 2 and 6.
3. Other conditions precedent (if any): [**Describe other conditions that require Successful Bidder's compliance**]

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.

Within 10 days after you comply with the above conditions, Owner will return to you one fully signed counterpart of the Agreement, together with any additional copies of the Contract Documents as indicated in Paragraph 2.02 of the General Conditions.

Owner: **City of Craig**

By *(signature)*: _____

Name *(printed)*: _____

Title: _____

Copy: Engineer

AGREEMENT BETWEEN OWNER AND CONTRACTOR FOR CONSTRUCTION CONTRACT (STIPULATED PRICE)

This Agreement is by and between City of Craig (“Owner”) and [name of contracting entity] (“Contractor”).

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

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: Rehabilitation of an existing above-grade, welded steel water storage tank with an inside diameter of 66 feet and height of 20 feet for a total storage capacity of 500,000 gallons. Refer to Article 2 below.

ARTICLE 2—THE PROJECT

- 2.01 The Project, of which the Work under the Contract Documents is a part, is generally described as follows: The base bid rehabilitation scope includes installing a new door sheet; performing a magnetic flux leakage scan of the tank floor plates; installing welded patch plates and weld deposition repairs; fabricating and installing a new roof vent and riser; performing interior surface preparation and coating; conducting exterior lead abatement, surface preparation, and coating; and fabricating and installing an exterior ladder security gate. The bid alternate rehabilitation scope includes fabricating and installing a new roof access hatch and riser, a new open-framing center column capital, a new drain sump, a new interior ladder, a new impressed current cathodic protection system, and performing exterior joint repairs.

ARTICLE 3—ENGINEER

- 3.01 The Owner has retained Western Water Solutions (“Engineer”) to act as Owner’s representative, assume all duties and responsibilities of Engineer, and have the rights and authority assigned to Engineer in the Contract.
- 3.02 The part of the Project that pertains to the Work has been designed by Western Water Solutions.

ARTICLE 4—CONTRACT TIMES

- 4.01 *Time is 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 begin no later than August 18, 2025. Work will be substantially complete on or before October 17, 2025, and completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before October 31, 2025.

4.03 Liquidated Damages

- A. Contractor and Owner recognize that time is of the essence as stated in Paragraph 4.01 above and that Owner will suffer financial and other losses if the Work is not completed and Milestones not achieved within the Contract Times, as duly modified. 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):
1. *Substantial Completion:* Contractor shall pay Owner \$1,000.00 for each day that expires after the time (as duly adjusted pursuant to the Contract) specified above for Substantial Completion, until the Work is substantially complete.
 2. *Completion of Remaining Work:* After Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Times (as duly adjusted pursuant to the Contract) for completion and readiness for final payment, Contractor shall pay Owner \$500.00 for each day that expires after such time until the Work is completed and ready for final payment.
- B. If Owner recovers liquidated damages for a delay in completion by Contractor, then such liquidated damages are Owner's sole and exclusive remedy for such delay, and Owner is precluded from recovering any other damages, whether actual, direct, excess, or consequential, for such delay, except for special damages (if any) specified in this Agreement.

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 Unit Price Work, an amount equal to the sum of the extended prices (established for each separately identified item of Unit Price Work by multiplying the unit price times the actual quantity of that item).

Item No.	Description	Unit	Estimated Quantity	Bid Unit Price	Bid Amount
1	Mobilization / Demobilization	LS	1	\$	\$
2	Door Sheet and Radiograph Testing	LS	1	\$	\$
3	Magnetic Flux Leakage Scan	LS	1	\$	\$
4a	1/4" x 6" Diameter Floor Plate Patches	EA	30	\$	\$
4b	1/4" x Various Sizes Floor Plate Patches	SF	40	\$	\$
4c	Weld Deposition Repairs	EA	20	\$	\$
5	Roof Vent and Riser	LS	1	\$	\$
6	Overflow Weir Modifications	LS	1	\$	\$
7	Interior Surface Preparation, Coatings and Flexible Sealant	LS	1	\$	\$
8	Exterior Lead Abatement	LS	1	\$	\$

9	Exterior Surface Preparation and Coatings	LS	1	\$	\$
10	Exterior Ladder Cage Locking Security Gate	LS	1	\$	\$
11	Impressed Current Cathodic Protection System	LS	1	\$	\$
Subtotal					\$

The extended prices for Unit Price Work set forth as of the Effective Date of the Contract are based on estimated quantities. As provided in Paragraph 13.03 of the General Conditions, estimated quantities are not guaranteed, and determinations of actual quantities and classifications are to be made by Engineer.

- B. Total of Lump Sum Amount and Unit Price Work (subject to final Unit Price adjustment) \$[number].
- C. For all Unit Price Bid Alternate Work, amount equal to the sum of the extended prices (established for each separately identified item of Unit Price Work by multiplying the unit price times the actual quantity of that item).

Item No.	Description	Unit	Estimated Quantity	Bid Unit Price	Bid Amount
BA1	Roof Access Hatch and Riser	LS	1	\$	\$
BA2	Center Column Capital	LS	1	\$	\$
BA3	Drain Sump	LS	1	\$	\$
BA4	Interior Ladder	LS	1	\$	\$
BA5	Exterior Joint Repair	LS	1	\$	\$
Total of All Unit Price Bid Alternate Items					\$

- D. Total of Lump Sum Amount and Unit Price Work including Bid Alternates (subject to final Unit Price adjustment) \$[number].

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 the basis of Contractor's Applications for Payment on or about the 5th day of each month 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 the value of the Work completed (with the balance being retainage).
- B. An amount equal to five percent (5%) of each progress payment made on the Contract Price shall be retained by Owner. Owner shall pay the remaining amount of each progress payment to Contractor without retaining additional funds if, in the opinion of Owner an Engineer, satisfactory progress is being made on the Project. Such retainage of the Contract Price shall be held by Owner until the Project is completed and finally accepted in accordance with the Contract Documents. Owner shall pay the full amount of such retainage to Contractor within sixty (60) days of final completion and acceptance, except to the extent of any claims filed pursuant to Section 38-26-107, C.R.S. Any release of retainage to Contractor or a subcontractor prior to final payment shall, in addition to any other requirements of the Contract Documents, require written approval from the surety furnishing bonds required by the Contract Documents.

6.03 *Final Payment*

- A. Upon final completion and acceptance of the Work, Owner shall pay the remainder of the Contract Price in accordance with Paragraph 15.06 of the General Conditions.

6.04 *Consent of Surety*

- A. Owner will not make final payment, or return or release retainage at Substantial Completion or any other time, unless Contractor submits written consent of the surety to such payment, return, or release.

6.05 *Interest*

- A. All amounts not paid when due will bear interest at the rate of **[number]** percent per annum.

ARTICLE 7—CONTRACT DOCUMENTS

7.01 *Contents*

- A. The Contract Documents consist of all of the following:
 - 1. This Agreement.
 - 2. Bonds:
 - a. Performance bond (together with power of attorney).
 - b. Payment bond (together with power of attorney).
 - 3. General Conditions.
 - 4. Supplementary Conditions.
 - 5. Specifications as listed in the table of contents of the project manual (copy of list attached).
 - 6. Drawings (not attached but incorporated by reference) consisting of 8 sheets with each sheet bearing the following general title: Glen Erie South Water Storage Tank Rehabilitation Project.
 - 8. Addenda (numbers **[number]** to **[number]**, inclusive).

10. 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.
 - e. Warranty Bond, if any.
- B. The Contract Documents listed in Paragraph 7.01.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 7.
- D. The Contract Documents may only be amended, modified, or supplemented as provided in the Contract.

ARTICLE 8—REPRESENTATIONS, CERTIFICATIONS, AND STIPULATIONS

8.01 *Contractor's Representations*

- A. In order to induce Owner to enter into this Contract, Contractor makes the following representations:
 1. Contractor has examined and carefully studied the Contract Documents, including Addenda.
 2. Contractor has visited the Site, conducted a thorough visual examination of the Site and adjacent areas, and become familiar with the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
 3. Contractor is familiar with all Laws and Regulations that may affect cost, progress, and performance of the Work.
 4. Contractor has carefully studied the reports of explorations and tests of subsurface conditions at or adjacent to the Site and the drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, with respect to the Technical Data in such reports and drawings.
 5. 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 Technical Data identified in the Supplementary Conditions or by definition, with respect to the effect of such information, observations, and Technical Data on (a) the cost, progress, and performance of the Work; (b) the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor; and (c) Contractor's safety precautions and programs.
 6. 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.

7. 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.
8. Contractor has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract Documents, and of discrepancies between Site conditions and the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.
9. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.
1. 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.

8.02 *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 8.02:
 1. "corrupt practice" means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process or in the Contract execution;
 2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process or the execution of the Contract to the detriment of Owner, (b) to establish Bid or Contract prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;
 3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish Bid prices at artificial, non-competitive levels; and
 4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

8.03 *Standard General Conditions*

- A. Owner stipulates that if the General Conditions that are made a part of this Contract are EJCDC® C-700, Standard General Conditions for the Construction Contract (2018), 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.

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

This Agreement will be effective on **[indicate date on which Contract becomes effective]** (which is the Effective Date of the Contract).

Owner:

(typed or printed name of organization)

By: _____
(individual's signature)

Date: _____
(date signed)

Name: _____
(typed or printed)

Title: _____
(typed or printed)

Attest: _____
(individual's signature)

Title: _____
(typed or printed)

Address for giving notices:

Designated Representative:

Name: _____
(typed or printed)

Title: _____
(typed or printed)

Address:

Phone: _____

Email: _____

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

Contractor:

(typed or printed name of organization)

By: _____
(individual's signature)

Date: _____
(date signed)

Name: _____
(typed or printed)

Title: _____
(typed or printed)

(If **[Type of Entity]** is a corporation, a partnership, or a joint venture, attach evidence of authority to sign.)

Attest: _____
(individual's signature)

Title: _____
(typed or printed)

Address for giving notices:

Designated Representative:

Name: _____
(typed or printed)

Title: _____
(typed or printed)

Address:

Phone: _____

Email: _____

License No.: _____
(where applicable)

State: _____

NOTICE TO PROCEED

Owner: City of Craig Owner's Project No.: _____
Engineer: Western Water Solutions Engineer's Project No.: 2025-COC
Contractor: _____ Contractor's Project No.: _____
Project: Glen Erie South Water Storage Tank Rehabilitation
Contract Name: Agreement between Owner and Contractor Stipulated Price
Effective Date of Contract: _____

Owner hereby notifies Contractor that the Contract Times under the above Contract will commence to run on **[date Contract Times are to start]** pursuant to Paragraph 4.01 of the General Conditions.

On that date, Contractor shall start performing its obligations under the Contract Documents. No Work will be done at the Site prior to such date.

In accordance with the Agreement: **[Select one of the following two alternatives, insert dates or number of days, and delete the other alternative.]**

The date by which Substantial Completion must be achieved is **October 17, 2025**, and the date by which readiness for final payment must be achieved is **October 31, 2025**.

Before starting any Work at the Site, Contractor must comply with the following:

[Note any access limitations, security procedures, or other restrictions]

Owner: City of Craig
By (signature): _____
Name (printed): _____
Title: _____
Date Issued: _____
Copy: Engineer

PERFORMANCE BOND

Contractor Name: [Full formal name of Contractor] Address <i>(principal place of business)</i> : [Address of Contractor's principal place of business]	Surety Name: [Full formal name of Surety] Address <i>(principal place of business)</i> : [Address of Surety's principal place of business]
Owner Name: City of Craig Mailing address <i>(principal place of business)</i> : 300 W 4th Street Craig, Colorado 81625	Contract Description <i>(name and location)</i> : Glen Erie South Water Storage Tank Rehabilitation Project Contract Price: [Amount from Contract] Effective Date of Contract: [Date from Contract]
Bond Bond Amount: [Amount] Date of Bond: [Date] <i>(Date of Bond cannot be earlier than Effective Date of Contract)</i> Modifications to this Bond form: <input type="checkbox"/> None <input type="checkbox"/> See Paragraph 16	
Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth in this Performance Bond, do each cause this Performance Bond to be duly executed by an authorized officer, agent, or representative.	
Contractor as Principal	Surety
<i>(Full formal name of Contractor)</i>	<i>(Full formal name of Surety) (corporate seal)</i>
By: _____	By: _____
<i>(Signature)</i>	<i>(Signature)(Attach Power of Attorney)</i>
Name: _____	Name: _____
<i>(Printed or typed)</i>	<i>(Printed or typed)</i>
Title: _____	Title: _____
Attest: _____	Attest: _____
<i>(Signature)</i>	<i>(Signature)</i>
Name: _____	Name: _____
<i>(Printed or typed)</i>	<i>(Printed or typed)</i>
Title: _____	Title: _____
<i>Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party is considered plural where applicable.</i>	

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 will 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 may 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 will 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 does 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 does 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 will not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety will 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 will not be reduced or set off on account of any such unrelated obligations. No right of action will 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 must be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and must 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 will be applicable.
- 12. Notice to the Surety, the Owner, or the Contractor must 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 will be deemed deleted therefrom and provisions conforming to such

statutory or other legal requirement will be deemed incorporated herein. When so furnished, the intent is that this Bond will 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 will be deemed to be Subcontractor and the term Owner will be deemed to be Contractor.
16. Modifications to this Bond are as follows: **[Describe modification or enter “None”]**

WARRANTY BOND

Contractor Name: [Full formal name of Contractor] Address <i>(principal place of business)</i> : [Address of Contractor's principal place of business]	Surety Name: [Full formal name of Surety] Address <i>(principal place of business)</i> : [Insert address of Surety's principal place of business]
Owner Name: City of Craig Address <i>(principal place of business)</i> : 300 W 4th Street Craig, Colorado 81625	Construction Contract Description <i>(name and location)</i> : Glen Erie South Water Storage Tank Rehabilitation Project Contract Price: [Amount from Contract] Effective Date of Contract: [Date from Contract] Contract's Date of Substantial Completion: [Date from Contract]
Bond Bond Amount: [Amount] Date of Bond: [Date] Modifications to this Bond form: <input type="checkbox"/> None <input type="checkbox"/> See Paragraph 9	
Bond Period: Commencing 364 days after Substantial Completion of the Work under the Construction Contract, and continuing until [insert number of years, typically either two or three] years after such Substantial Completion.	
Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth herein, do each cause this Warranty Bond to be duly executed by an authorized officer, agent, or representative.	
Contractor as Principal	Surety
<i>(Full formal name of Contractor)</i> By: _____ <i>(Signature)</i>	<i>(Full formal name of Surety) (corporate seal)</i> By: _____ <i>(Signature) (Attach Power of Attorney)</i>
Name: _____ <i>(Printed or typed)</i>	Name: _____ <i>(Printed or typed)</i>
Title: _____	Title: _____
Attest: _____ <i>(Signature)</i>	Attest: _____ <i>(Signature)</i>
Name: _____ <i>(Printed or typed)</i>	Name: _____ <i>(Printed or typed)</i>
Title: _____	Title: _____
<i>Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party is considered plural where applicable.</i>	

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's Correction Period Obligations. The Construction Contract is incorporated herein by reference.
2. If the Contractor performs the Correction Period Obligations, the Surety and the Contractor shall have no obligation under this Warranty Bond.
3. If Owner gives written notice to Contractor and Surety during the Bond Period of Contractor's obligation under the Correction Period Obligations, and Contractor does not fulfill such obligation, then Surety shall be responsible for fulfillment of such Correction Period Obligations. Surety shall either fulfill the Correction Period Obligations itself, through its agents or contractors, or, in the alternative, Surety may waive the right to fulfill the Correction Period Obligations itself, and reimburse the Owner for all resulting costs incurred by Owner in performing Contractor's Correction Period Obligations, including but not limited to correction, removal, replacement, and repair costs.
4. The Surety's liability is limited to the amount of this Warranty Bond. Renewal or continuation of the Warranty Bond will not modify such amount, unless expressly agreed to by Surety in writing.
5. The Surety shall have no liability under this Warranty Bond for obligations of the Contractor that are unrelated to the Construction Contract. No right of action will accrue on this Warranty Bond to any person or entity other than the Owner or its heirs, executors, administrators, successors, and assigns.
6. Any proceeding, legal or equitable, under this Warranty 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 must be instituted within two years after the Surety refuses or fails to perform its obligations under this Warranty Bond.
7. Written notice to the Surety, the Owner, or the Contractor must be mailed or delivered to the address shown in this Warranty Bond.
8. Definitions
 - 8.1. *Construction Contract*—The agreement between the Owner and Contractor identified on the cover page of this Warranty Bond, including all Contract Documents and changes made to the agreement and the Contract Documents.
 - 8.2. *Contract Documents*—All the documents that comprise the agreement between the Owner and Contractor.
 - 8.3. *Correction Period Obligations*—The duties, responsibilities, commitments, and obligations of the Contractor with respect to correction or replacement of defective Work, as set forth in the Construction Contract's Correction Period clause, EJCDC® C-700, Standard General Conditions of the Construction Contract (2018), Paragraph 15.08, as duly modified.
 - 8.4. *Substantial Completion*—As defined in the Construction Contract.
 - 8.5. *Work*—As defined in the Construction Contract.
9. Modifications to this Bond are as follows: **[Describe modification or enter "None"]**

PAYMENT BOND

Contractor Name: [Full formal name of Contractor] Address <i>(principal place of business)</i> : [Address of Contractor's principal place of business]	Surety Name: [Full formal name of Surety] Address <i>(principal place of business)</i> : [Address of Surety's principal place of business]
Owner Name: City of Craig Mailing address <i>(principal place of business)</i> : 300 W 4th Street Craig, Colorado 81625	Contract Description <i>(name and location)</i> : Glen Erie South Water Storage Tank Rehabilitation Project Contract Price: [Amount, from Contract] Effective Date of Contract: [Date, from Contract]
Bond Bond Amount: [Amount] Date of Bond: [Date] <i>(Date of Bond cannot be earlier than Effective Date of Contract)</i> Modifications to this Bond form: <input type="checkbox"/> None <input type="checkbox"/> See Paragraph 18	
Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth in this Payment Bond, do each cause this Payment Bond to be duly executed by an authorized officer, agent, or representative.	
Contractor as Principal	Surety
<i>(Full formal name of Contractor)</i>	<i>(Full formal name of Surety) (corporate seal)</i>
By: _____ <i>(Signature)</i>	By: _____ <i>(Signature)(Attach Power of Attorney)</i>
Name: _____ <i>(Printed or typed)</i>	Name: _____ <i>(Printed or typed)</i>
Title: _____	Title: _____
Attest: _____ <i>(Signature)</i>	Attest: _____ <i>(Signature)</i>
Name: _____ <i>(Printed or typed)</i>	Name: _____ <i>(Printed or typed)</i>
Title: _____	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 is 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 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 will 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 will 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 will 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 will 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 will 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 will 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 satisfying 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 will be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in 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 will be applicable.
13. Notice and Claims to the Surety, the Owner, or the Contractor must be mailed or delivered to the address shown on the page on which their signature appears. Actual receipt of notice or Claims, however accomplished, will 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 will be deemed deleted here from and provisions conforming to such statutory or other legal requirement will be deemed incorporated herein. When so furnished, the intent is that this Bond will 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:
 - 16.1.1. The name of the Claimant;
 - 16.1.2. The name of the person for whom the labor was done, or materials or equipment furnished;
 - 16.1.3. 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;
 - 16.1.4. A brief description of the labor, materials, or equipment furnished;

- 16.1.5. The date on which the Claimant last performed labor or last furnished materials or equipment for use in the performance of the Construction Contract;
 - 16.1.6. The total amount earned by the Claimant for labor, materials, or equipment furnished as of the date of the Claim;
 - 16.1.7. The total amount of previous payments received by the Claimant; and
 - 16.1.8. 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 is 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 will be deemed to be Subcontractor and the term Owner will be deemed to be Contractor.
18. Modifications to this Bond are as follows: **[Describe modification or enter "None"]**

CERTIFICATE OF SUBSTANTIAL COMPLETION

Owner: City of Craig Owner's Project No.:
Engineer: Western Water Solutions Engineer's Project No.: 2025-COC
Contractor: Contractor's Project No.:
Project: Glen Erie South Water Storage Tank Rehabilitation
Contract Name:

This ☐ Preliminary ☐ Final Certificate of Substantial Completion applies to:

☐ All Work ☐ The following specified portions of the Work:

[Describe the portion of the work for which Certificate of Substantial Completion is issued]

Date of Substantial Completion: **[Enter date, as determined by Engineer]**

The Work to which this Certificate applies has been inspected by authorized representatives of Owner, Contractor, and Engineer, and found to be substantially complete. The Date of Substantial Completion of the Work or portion thereof designated above is hereby established, subject to the provisions of the Contract pertaining to Substantial Completion. The date of Substantial Completion in the final Certificate of Substantial Completion marks the commencement of the contractual correction period and applicable warranties required by the Contract.

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

Amendments of contractual responsibilities recorded in this Certificate should be the product of mutual agreement of Owner and Contractor; see Paragraph 15.03.D of the General Conditions.

The responsibilities between Owner and Contractor for security, operation, safety, maintenance, heat, utilities, insurance, and warranties upon Owner's use or occupancy of the Work must be as provided in the Contract, except as amended as follows:

Amendments to Owner's Responsibilities: ☐ None ☐ As follows:

[List amendments to Owner's Responsibilities]

Amendments to Contractor's Responsibilities: ☐ None ☐ As follows:

[List amendments to Contractor's Responsibilities]

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

[List attachments such as punch list; other documents]

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

Engineer

By *(signature)*: _____

Name *(printed)*: _____

Title: _____

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

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STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

ARTICLE 1—DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

- A. Wherever used in the Bidding Requirements or Contract Documents, 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 document prepared by Contractor, in a form acceptable to Engineer, to request 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; 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 of Contract Price or Contract Times; 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.

- 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.
 - c. A demand or assertion by Owner or Contractor, duly submitted in compliance with the procedural requirements set forth herein, made pursuant to Paragraph 12.01.A.4, concerning disputes arising after Engineer has issued a recommendation of final payment.
 - d. 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), lead-based paint (as defined by the HUD/EPA standard), hazardous waste, and any substance, product, waste, or other material of any nature whatsoever that is or becomes listed, regulated, or addressed pursuant to Laws and Regulations 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 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. *Electronic Document*—Any Project-related correspondence, attachments to correspondence, data, documents, drawings, information, or graphics, including but not limited to Shop Drawings and other Submittals, that are in an electronic or digital format.
 - 21. *Electronic Means*—Electronic mail (email), upload/download from a secure Project website, or other communications methods that allow: (a) the transmission or communication of Electronic Documents; (b) the documentation of transmissions, including sending and receipt; (c) printing of the transmitted Electronic Document by the

recipient; (d) the storage and archiving of the Electronic Document by sender and recipient; and (e) the use by recipient of the Electronic Document for purposes permitted by this Contract. Electronic Means does not include the use of text messaging, or of Facebook, Twitter, Instagram, or similar social media services for transmission of Electronic Documents.

22. *Engineer*—The individual or entity named as such in the Agreement.
23. *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.
24. *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.
 - a. The presence at the Site of materials that are necessary for the execution of the Work, or that are to be incorporated into the Work, and that are controlled and contained pursuant to industry practices, Laws and Regulations, and the requirements of the Contract, is not a Hazardous Environmental Condition.
 - b. The presence of Constituents of Concern that are to be removed or remediated as part of the Work is not a Hazardous Environmental Condition.
 - c. The presence of Constituents of Concern as part of the routine, anticipated, and obvious working conditions at the Site, is not a Hazardous Environmental Condition.
25. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, statutes, rules, regulations, ordinances, codes, and binding decrees, resolutions, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.
26. *Liens*—Charges, security interests, or encumbrances upon Contract-related funds, real property, or personal property.
27. *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.
28. *Notice of Award*—The written notice by Owner to a Bidder of Owner's acceptance of the Bid.
29. *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.
30. *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.
31. *Progress Schedule*—A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising Contractor's plan to accomplish the Work within the Contract Times.
32. *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.

33. *Resident Project Representative*—The authorized representative of Engineer assigned to assist Engineer at the Site. As used herein, the term Resident Project Representative (RPR) includes any assistants or field staff of Resident Project Representative.
34. *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.
35. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements for Engineer’s review of the submittals.
36. *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.
37. *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.
38. *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 or areas furnished by Owner which are designated for the use of Contractor.
39. *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.
40. *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.
41. *Submittal*—A written or graphic document, prepared by or for Contractor, which the Contract Documents require Contractor to submit to Engineer, or that is indicated as a Submittal in the Schedule of Submittals accepted by Engineer. Submittals may include Shop Drawings and Samples; schedules; product data; Owner-delegated designs; sustainable design information; information on special procedures; testing plans; results of tests and evaluations, source quality-control testing and inspections, and field or Site quality-control testing and inspections; warranties and certifications; Suppliers’ instructions and reports; records of delivery of spare parts and tools; operations and maintenance data; Project photographic documentation; record documents; and other such documents required by the Contract Documents. Submittals, whether or not approved or accepted by Engineer, are not Contract Documents. Change Proposals, Change Orders, Claims, notices, Applications for Payment, and requests for interpretation or clarification are not Submittals.
42. *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 of such Work.

43. *Successful Bidder*—The Bidder to which the Owner makes an award of contract.
44. *Supplementary Conditions*—The part of the Contract that amends or supplements these General Conditions.
45. *Supplier*—A manufacturer, fabricator, supplier, distributor, 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.
46. *Technical Data*
- a. Those items expressly identified as Technical Data in the Supplementary Conditions, with respect to either (1) existing subsurface conditions at or adjacent to the Site, or existing physical conditions at or adjacent to the Site including existing surface or subsurface structures (except Underground Facilities) or (2) Hazardous Environmental Conditions at the Site.
 - b. If no such express identifications of Technical Data have been made with respect to conditions at the Site, then Technical Data is defined, with respect to conditions at the Site under Paragraphs 5.03, 5.04, and 5.06, as the data contained in boring logs, recorded measurements of subsurface water levels, assessments of the condition of subsurface facilities, laboratory test results, and other factual, objective information regarding conditions at the Site that are set forth in any geotechnical, environmental, or other Site or facilities conditions report prepared for the Project and made available to Contractor.
 - c. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data, and instead Underground Facilities are shown or indicated on the Drawings.
47. *Underground Facilities*—All active or not-in-service underground lines, pipelines, conduits, ducts, encasements, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or systems at the Site, including but not limited to those facilities or systems that produce, transmit, distribute, or convey telephone or other communications, cable television, fiber optic transmissions, power, electricity, light, heat, gases, oil, crude oil products, liquid petroleum products, water, steam, waste, wastewater, storm water, other liquids or chemicals, or traffic or other control systems. An abandoned facility or system is not an Underground Facility.
48. *Unit Price Work*—Work to be paid for on the basis of unit prices.
49. *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.
50. *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 Paragraphs 1.02.B, C, D, and E are not defined terms that require initial capital letters, but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.
- B. *Intent of Certain Terms or Adjectives:* 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:* The word “day” means a calendar day of 24 hours measured from midnight to the next midnight.
- D. *Defective:* The word “defective,” when modifying the word “Work,” refers to Work that is unsatisfactory, faulty, or deficient in that it:
 - 1. does not conform to the Contract Documents;
 - 2. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or
 - 3. 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 Paragraph 15.04).
- E. *Furnish, Install, Perform, Provide*
 - 1. The word “furnish,” when used in connection with services, materials, or equipment, means 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, means 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, means 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. *Contract Price or Contract Times*: References to a change in “Contract Price or Contract Times” or “Contract Times or Contract Price” or similar, indicate that such change applies to (1) Contract Price, (2) Contract Times, or (3) both Contract Price and Contract Times, as warranted, even if the term “or both” is not expressed.
- G. 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 Performance and Payment Bonds; Evidence of Insurance*

- A. *Performance and Payment Bonds*: When Contractor delivers the signed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner the performance bond and payment bond (if the Contract requires Contractor to furnish such bonds).
- B. *Evidence of Contractor’s Insurance*: When Contractor delivers the signed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner, with copies to each additional insured (as identified in the Contract), the certificates, endorsements, and other evidence of insurance required to be provided by Contractor in accordance with Article 6, except to the extent the Supplementary Conditions expressly establish other dates for delivery of specific insurance policies.
- C. *Evidence of Owner’s Insurance*: After receipt of the signed counterparts of the Agreement and all required bonds and insurance documentation, Owner shall promptly deliver to Contractor, with copies to each additional insured (as identified in the Contract), 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 signed 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 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 *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 the schedules submitted in accordance with Paragraph 2.03.A. No progress payment will 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.
 - 4. If a schedule is not acceptable, Contractor will have an additional 10 days to revise and resubmit the schedule.

2.06 *Electronic Transmittals*

- A. Except as otherwise stated elsewhere in the Contract, the Owner, Engineer, and Contractor may send, and shall accept, Electronic Documents transmitted by Electronic Means.
- B. If the Contract does not establish protocols for Electronic Means, then Owner, Engineer, and Contractor shall jointly develop such protocols.
- C. Subject to any governing protocols for Electronic Means, when transmitting Electronic Documents by Electronic Means, the transmitting party makes no representations as to long-term compatibility, usability, or readability of the Electronic Documents 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 Electronic Documents.

ARTICLE 3—CONTRACT DOCUMENTS: INTENT, REQUIREMENTS, REUSE

3.01 *Intent*

- A. The Contract Documents are complementary; what is required by one Contract Document 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 versions of the Contract Documents (including any printed copies derived from such electronic versions) and the printed record version, the printed record version will 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.
- F. Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation will be deemed stricken, and all remaining provisions will continue to be valid and binding upon Owner and Contractor, which agree that the Contract Documents will 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.
- G. Nothing in the Contract Documents creates:
 - 1. any contractual relationship between Owner or Engineer and any Subcontractor, Supplier, or other individual or entity performing or furnishing any of the Work, for the benefit of such Subcontractor, Supplier, or other individual or entity; or
 - 2. 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.

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, means 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, and no instruction of a Supplier, will be effective to change the duties or responsibilities of Owner, Contractor, or Engineer 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 or Engineer 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 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 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 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 in writing 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.

- 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 notify Owner and Contractor in writing 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 versions, 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 precludes 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 30th 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 60th day after the day of Bid opening or the 30th 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 may 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 must 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 will 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 Contract Price or 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. Such an adjustment will 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 third-party utility owners or other third-party entities (other than those third-party utility owners or other third-party entities performing other work at or adjacent to the Site as arranged by or under contract with Owner, as contemplated in Article 8); and
 - 4. Acts of war or terrorism.

- D. Contractor's entitlement to an adjustment of Contract Times or Contract Price is limited as follows:
1. Contractor's entitlement to an adjustment of the Contract Times is conditioned on the delay, disruption, or interference adversely affecting an activity on the critical path to completion of the Work, as of the time of the delay, disruption, or interference.
 2. Contractor shall not be entitled to an adjustment in Contract Price 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. Such a concurrent delay by Contractor shall not preclude an adjustment of Contract Times to which Contractor is otherwise entitled.
 3. Adjustments of Contract Times or Contract Price are subject to the provisions of Article 11.
- E. Each Contractor request or Change Proposal seeking an increase in Contract Times or Contract Price must be supplemented by supporting data that sets forth in detail the following:
1. The circumstances that form the basis for the requested adjustment;
 2. The date upon which each cause of delay, disruption, or interference began to affect the progress of the Work;
 3. The date upon which each cause of delay, disruption, or interference ceased to affect the progress of the Work;
 4. The number of days' increase in Contract Times claimed as a consequence of each such cause of delay, disruption, or interference; and
 5. The impact on Contract Price, in accordance with the provisions of Paragraph 11.07.
- Contractor shall also furnish such additional supporting documentation as Owner or Engineer may require including, where appropriate, a revised progress schedule indicating all the activities affected by the delay, disruption, or interference, and an explanation of the effect of the delay, disruption, or interference on the critical path to completion of the Work.
- F. 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, together with the provisions of Paragraphs 4.05.D and 4.05.E.
- G. Paragraph 8.03 addresses 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.

ARTICLE 5—SITE; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS

5.01 *Availability of Lands*

- A. Owner shall furnish the Site. Owner shall notify Contractor in writing 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, or to improvements, structures, utilities, or similar facilities located at such adjacent lands 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 7.13, 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 in a court of competent jurisdiction; 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 materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris will conform to applicable Laws and Regulations.
 - C. *Cleaning:* Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work Contractor shall remove from the Site 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 of explorations and tests of subsurface conditions at or adjacent to the Site that contain Technical Data;
2. Those drawings of existing physical conditions at or adjacent to the Site, including those drawings depicting existing surface or subsurface structures at or adjacent to the Site (except Underground Facilities), that contain Technical Data; and
3. Technical Data contained in such reports and drawings.

- B. *Underground Facilities:* Underground Facilities are shown or indicated on the Drawings, pursuant to Paragraph 5.05, and not in the drawings referred to in Paragraph 5.03.A. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data.

- C. *Reliance by Contractor on Technical Data:* 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 Paragraph 1.01.A.46.b.

- D. *Limitations of Other Data and Documents:* 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;
 2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings;
 3. the contents of other Site-related documents made available to Contractor, such as record drawings from other projects at or adjacent to the Site, or Owner's archival documents concerning the Site; or
 4. 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:
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;
 2. is of such a nature as to require a change in the Drawings or Specifications;
 3. differs materially from that shown or indicated in the Contract Documents; or
 4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 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 whether it is necessary for Owner to obtain 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; 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. *Early Resumption of Work:* If at any time Engineer determines that Work in connection with the subsurface or physical condition in question may resume prior to completion of Engineer's review or Owner's issuance of its statement to Contractor, because the condition in question has been adequately documented, and analyzed on a preliminary basis, then the Engineer may at its discretion instruct Contractor to resume such Work.
- E. *Possible Price and Times Adjustments*
1. Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times, 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 subject to the provisions of Paragraphs 4.05.D and 4.05.E.
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;
 - 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 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, then any such adjustment will 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, 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.
- F. *Underground Facilities; Hazardous Environmental Conditions:* Paragraph 5.05 governs rights and responsibilities regarding the presence or location of Underground Facilities. Paragraph 5.06 governs rights and responsibilities regarding Hazardous Environmental Conditions. The provisions of Paragraphs 5.03 and 5.04 are not applicable to the presence or location of Underground Facilities, or to Hazardous Environmental Conditions.

5.05 *Underground Facilities*

- A. *Contractor's Responsibilities:* Unless it is otherwise expressly provided in the Supplementary Conditions, the cost of all of the following are included in the Contract Price, and Contractor shall have full responsibility for:
1. reviewing and checking all information and data regarding existing Underground Facilities at the Site;
 2. complying with applicable state and local utility damage prevention Laws and Regulations;

3. verifying the actual location of those Underground Facilities shown or indicated in the Contract Documents as being within the area affected by the Work, by exposing such Underground Facilities during the course of construction;
 4. coordination of the Work with the owners (including Owner) of such Underground Facilities, during construction; and
 5. 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 on the Drawings, or was not shown or indicated on the Drawings 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), notify Owner and Engineer in writing regarding such Underground Facility.
- C. *Engineer's Review:* Engineer will:
1. promptly review the Underground Facility and conclude whether such Underground Facility was not shown or indicated on the Drawings, or was not shown or indicated with reasonable accuracy;
 2. identify and communicate with the owner of the Underground Facility; prepare recommendations to Owner (and if necessary issue any preliminary instructions to Contractor) regarding the Contractor's resumption of Work in connection with the Underground Facility in question;
 3. obtain any pertinent cost or schedule information from Contractor; 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
 4. 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. *Early Resumption of Work:* If at any time Engineer determines that Work in connection with the Underground Facility may resume prior to completion of Engineer's review or Owner's issuance of its statement to Contractor, because the Underground Facility in question and conditions affected by its presence have been adequately documented, and analyzed on a preliminary basis, then the Engineer may at its discretion instruct Contractor to resume such Work.
- F. *Possible Price and Times Adjustments*
1. Contractor shall be entitled to an equitable adjustment in the Contract Price or Contract Times, to the extent that any existing Underground Facility at the Site that was not shown

or indicated on the Drawings, 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. 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;
 - b. Contractor's entitlement to an adjustment of the Contract Times is subject to the provisions of Paragraphs 4.05.D and 4.05.E; and
 - c. 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, then any such adjustment will 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, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the Underground Facility in question.
 4. The information and data shown or indicated on the Drawings with respect to existing Underground Facilities at the Site is based on information and data (a) furnished by the owners of such Underground Facilities, or by others, (b) obtained from available records, or (c) gathered in an investigation conducted in accordance with the current edition of ASCE 38, Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data, by the American Society of Civil Engineers. If such information or data is incorrect or incomplete, Contractor's remedies are limited to those set forth in this Paragraph 5.05.F.

5.06 *Hazardous Environmental Conditions at Site*

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

1. those reports known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site;
2. drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site; 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 on the accuracy of the Technical Data as defined in Paragraph 1.01.A.46.b. 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;
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, as a result of such Work stoppage, such special conditions under which Work is agreed to be resumed by Contractor, or any costs or expenses incurred in response to the Hazardous Environmental Condition, 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. Entitlement to any such adjustment is subject to the provisions of Paragraphs 4.05.D, 4.05.E, 11.07, and 11.08.
- 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, 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, 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.I obligates 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 obligates 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 Contractor's obligations under the Contract. These bonds must 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 terms of a prescribed bond form, the Supplementary Conditions, or other provisions of the Contract.
- B. Contractor shall also furnish such other bonds (if any) as are required by the Supplementary Conditions or other provisions of the Contract.
- C. All bonds must be in the form included in the Bidding Documents or otherwise specified by Owner prior to execution of the Contract, except as provided otherwise by Laws or

Regulations, and must be issued and signed by a surety named in “Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies” as published in Department Circular 570 (as amended and supplemented) by the Bureau of the Fiscal Service, 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 must show that it is effective on the date the agent or attorney-in-fact signed the accompanying bond.

- D. Contractor shall obtain the required bonds from surety companies that are duly licensed or authorized, in the state or jurisdiction in which the Project is located, to issue bonds in the required amounts.
- E. If the surety on a bond furnished by Contractor is declared bankrupt or becomes insolvent, or the surety ceases to meet the requirements above, then Contractor shall promptly notify Owner and Engineer in writing and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which must comply with the bond and surety requirements above.
- F. 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.
- G. Upon request to Owner from any Subcontractor, Supplier, or other person or entity claiming to have furnished labor, services, materials, or equipment used in the performance of the Work, Owner shall provide a copy of the payment bond to such person or entity.
- H. Upon request to Contractor from any Subcontractor, Supplier, or other person or entity claiming to have furnished labor, services, materials, or equipment used in the performance of the Work, Contractor shall provide a copy of the payment bond to such person or entity.

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. Alternative forms of insurance coverage, including but not limited to self-insurance and “Occupational Accident and Excess Employer’s Indemnity Policies,” are not sufficient to meet the insurance requirements of this Contract, unless expressly allowed in the Supplementary Conditions.
- D. Contractor shall deliver to Owner, with copies to each additional insured identified in the Contract, certificates of insurance and endorsements establishing that Contractor has obtained and is maintaining the policies and coverages 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, documentation of applicable self-insured retentions (if allowed) and deductibles, full disclosure of all relevant exclusions, and evidence of insurance required to be purchased and maintained by

Subcontractors or Suppliers. In any documentation furnished under this provision, Contractor, Subcontractors, and Suppliers may block out (redact) (1) any confidential premium or pricing information and (2) any wording specific to a project or jurisdiction other than those applicable to this Contract.

- E. Owner shall deliver to Contractor, with copies to each additional insured identified in the Contract, certificates of insurance and endorsements establishing that Owner has obtained and is maintaining the policies and coverages 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, documentation of applicable self-insured retentions (if allowed) and deductibles, and full disclosure of all relevant exclusions. In any documentation furnished under this provision, Owner may block out (redact) (1) any confidential premium or pricing information and (2) any wording specific to a project or jurisdiction other than those relevant to this Contract.
- F. 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, will not be construed as a waiver of the other party's obligation to obtain and maintain such insurance.
- G. In addition to the liability insurance required to be provided by Contractor, the Owner, at Owner's option, may purchase and maintain Owner's own liability insurance. 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.
- H. Contractor shall require:
 - 1. Subcontractors to purchase and maintain worker's compensation, commercial general liability, and other insurance that is appropriate for their participation in the Project, and to name as additional insureds Owner and Engineer (and any other individuals or entities identified in the Supplementary Conditions as additional insureds on Contractor's liability policies) on each Subcontractor's commercial general liability insurance policy; and
 - 2. Suppliers to purchase and maintain insurance that is appropriate for their participation in the Project.
- I. If either party does not purchase or maintain 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.
- J. If Contractor has failed to obtain and maintain required insurance, Contractor's entitlement to enter or remain at the Site will end immediately, and Owner may impose an appropriate set-off against payment for any associated costs (including but not limited to the cost of purchasing necessary insurance coverage), and exercise Owner's termination rights under Article 16.
- K. Without prejudice to any other right or remedy, if a party has failed to obtain required insurance, the other party may elect (but is in no way obligated) 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 will be adjusted accordingly.

- L. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor or Contractor's interests. Contractor is responsible for determining whether such coverage and limits are adequate to protect its interests, and for obtaining and maintaining any additional insurance that Contractor deems necessary.
- M. The insurance and insurance limits required herein will not be deemed as a limitation on Contractor's liability, or that of its Subcontractors or Suppliers, under the indemnities granted to Owner and other individuals and entities in the Contract or otherwise.
- N. All the policies of insurance required to be purchased and maintained under this Contract will contain a provision or endorsement that the coverage afforded will not be canceled, 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 and Engineer.

6.03 *Contractor's Insurance*

- A. *Required Insurance:* Contractor shall purchase and maintain Worker's Compensation, Commercial General Liability, and other insurance pursuant to the specific requirements of the Supplementary Conditions.
- B. *General Provisions:* The policies of insurance required by this Paragraph 6.03 as supplemented must:
 - 1. include at least the specific coverages required;
 - 2. be written for not less than the limits provided, or those required by Laws or Regulations, whichever is greater;
 - 3. remain in effect at least until the Work is complete (as set forth in Paragraph 15.06.D), and longer if expressly required elsewhere in this Contract, 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;
 - 4. apply with respect to the performance of the Work, whether such performance is 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; and
 - 5. include all necessary endorsements to support the stated requirements.
- C. *Additional Insureds:* The Contractor's commercial general liability, automobile liability, employer's liability, umbrella or excess, pollution liability, and unmanned aerial vehicle liability policies, if required by this Contract, must:
 - 1. include and list as additional insureds Owner and Engineer, and any individuals or entities identified as additional insureds in the Supplementary Conditions;
 - 2. include coverage for the respective officers, directors, members, partners, employees, and consultants of all such additional insureds;
 - 3. afford primary coverage to these additional insureds for all claims covered thereby (including as applicable those arising from both ongoing and completed operations);

4. not seek contribution from insurance maintained by the additional insured; and
5. as to commercial general liability insurance, apply to additional insureds with respect to liability caused in whole or in part by Contractor's acts or omissions, or the acts and omissions of those working on Contractor's behalf, in the performance of Contractor's operations.

6.04 *Builder's Risk and Other 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 Work's full insurable replacement cost (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). The specific requirements applicable to the builder's risk insurance are set forth in the Supplementary Conditions.
- B. *Property Insurance for Facilities of Owner Where Work Will Occur*: Owner is responsible for obtaining and maintaining property insurance covering each existing structure, building, or facility in which any part of the Work will occur, or to which any part of the Work will attach or be adjoined. Such property insurance will be written on a special perils (all-risk) form, on a replacement cost basis, providing coverage consistent with that required for the builder's risk insurance, and will be maintained until the Work is complete, as set forth in Paragraph 15.06.D.
- C. *Property Insurance for Substantially Complete Facilities*: Promptly after Substantial Completion, and before actual occupancy or use of the substantially completed Work, Owner will obtain property insurance for such substantially completed Work, and maintain such property insurance at least until the Work is complete, as set forth in Paragraph 15.06.D. Such property insurance will be written on a special perils (all-risk) form, on a replacement cost basis, and provide coverage consistent with that required for the builder's risk insurance. The builder's risk insurance may terminate upon written confirmation of Owner's procurement of such property insurance.
- 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 advance notice of such occupancy or use to the builder's risk insurer, and obtain an endorsement consenting to the continuation of coverage prior to commencing such partial occupancy or use.
- E. *Insurance of Other Property; Additional Insurance*: If the express insurance provisions of the Contract do not require or address the insurance of a property item or interest, then the entity or individual owning such property item will be responsible for insuring it. 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 6.04, it may do so at Contractor's expense.

6.05 *Property Losses; Subrogation*

- A. The builder's risk insurance policy purchased and maintained in accordance with Paragraph 6.04 (or an installation floater policy if authorized by the Supplementary Conditions), will contain provisions to the effect that in the event of payment of any loss or damage the insurer 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.

1. 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, risks, 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 individuals or entities identified in the Supplementary Conditions as builder's risk or installation floater 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.
 2. None of the above waivers extends 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.
- B. Any property insurance policy maintained by Owner covering any loss, damage, or consequential loss to Owner's existing structures, buildings, or facilities in which any part of the Work will occur, or to which any part of the Work will attach or adjoin; to adjacent structures, buildings, or facilities of Owner; or to part or all of the completed or substantially completed Work, 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, will contain provisions to the effect that in the event of payment of any loss or damage the insurer will have no rights of recovery against any insureds thereunder, or against Contractor, Subcontractors, or Engineer, or the officers, directors, members, partners, employees, agents, consultants, or subcontractors of each and any of them, and that the insured is allowed to waive the insurer's rights of subrogation in a written contract executed prior to the loss, damage, or consequential loss.
1. 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 all losses and damages caused by, arising out of, or resulting from fire or any of the perils, risks, or causes of loss covered by such policies.
- C. The waivers in this Paragraph 6.05 include the waiver of rights 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 insured peril, risk, or cause of loss.
- D. Contractor shall be responsible for assuring that each Subcontract 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 fire or other peril, risk, or cause of loss covered by builder's risk insurance, installation floater, and any other property insurance applicable to the Work.

6.06 *Receipt and Application of Property Insurance Proceeds*

- A. Any insured loss under the builder's risk and other policies of property insurance required by Paragraph 6.04 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 6.04 shall maintain such proceeds in a segregated account, and 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, Contractor shall repair or replace the damaged Work, using allocated insurance proceeds.

ARTICLE 7—CONTRACTOR'S RESPONSIBILITIES

7.01 *Contractor's Means and Methods of Construction*

- A. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction.
- B. If the Contract Documents note, or Contractor determines, that professional engineering or other design services are needed to carry out Contractor's responsibilities for construction means, methods, techniques, sequences, and procedures, or for Site safety, then Contractor shall cause such services to be provided by a properly licensed design professional, at Contractor's expense. Such services are not Owner-delegated professional design services under this Contract, and neither Owner nor Engineer has any responsibility with respect to (1) Contractor's determination of the need for such services, (2) the qualifications or licensing of the design professionals retained or employed by Contractor, (3) the performance of such services, or (4) any errors, omissions, or defects in such services.

7.02 *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.
- B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who will not be replaced without written notice to Owner and Engineer except under extraordinary circumstances.

7.03 *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 maintain good discipline and order at the Site.

- B. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of Contractor's employees; of Suppliers and Subcontractors, and their employees; and of any other individuals or entities performing or furnishing any of the Work, just as Contractor is responsible for Contractor's own acts and omissions.
- C. 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 will 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.

7.04 *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 must be new and of good quality, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications will 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 must 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.

7.05 *"Or Equals"*

- A. *Contractor's Request; Governing Criteria:* Whenever an item of equipment or material is specified or described in the Contract Documents by using the names of one or more proprietary items or specific Suppliers, 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 equipment or material, or items from other proposed Suppliers, under the circumstances described below.
 - 1. If Engineer in its sole discretion determines that an item of equipment or material proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, Engineer will deem it an "or equal" item. For the purposes of this paragraph, a proposed item of equipment or material will be considered functionally equal to an item so named if:
 - a. in the exercise of reasonable judgment Engineer determines that the proposed item:
 - 1) is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;

- 2) 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) has a proven record of performance and availability of responsive service; and
 - 4) is not objectionable to Owner.
- b. Contractor certifies that, if the proposed item is approved and incorporated into the Work:
 - 1) there will be no increase in cost to the Owner or increase in Contract Times; and
 - 2) the item 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 will result in any change in Contract Price. The Engineer's denial of an "or-equal" request will be final and binding, and may not be reversed through an appeal under any provision of the Contract.
- E. *Treatment as a Substitution Request*: If Engineer determines that an item of equipment or material proposed by Contractor does not qualify as an "or-equal" item, Contractor may request that Engineer consider the item a proposed substitute pursuant to Paragraph 7.06.

7.06 Substitutes

- A. *Contractor's Request; Governing Criteria*: Unless the specification or description of an item of equipment or material 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 equipment or material under the circumstances described below. To the extent possible such requests must 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 equipment or material from anyone other than Contractor.
 2. The requirements for review by Engineer will be as set forth in Paragraph 7.06.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 equipment or material that Contractor seeks to furnish or use. The application:
 - a. will 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 the item specified; and
 - 3) be suited to the same use as the item 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 the item specified; and
 - 2) available engineering, sales, maintenance, repair, and replacement services.
 - d. will 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 will be final and binding, and may not be reversed through an appeal under any provision of the Contract. Contractor may challenge the scope of reimbursement costs imposed under Paragraph 7.06.D, by timely submittal of a Change Proposal.

7.07 *Concerning Subcontractors and Suppliers*

- A. Contractor may retain Subcontractors and Suppliers for the performance of parts of the Work. Such Subcontractors and Suppliers must be acceptable to Owner. The Contractor's retention of a Subcontractor or Supplier for the performance of parts of the Work will not relieve Contractor's obligation to Owner to perform and complete the Work in accordance with the Contract Documents.
- B. Contractor shall retain specific Subcontractors and Suppliers 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 or Supplier 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 5 days.
- E. Owner may require the replacement of any Subcontractor or Supplier. 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 or Suppliers 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 or Supplier so identified solely on the basis of substantive, reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor or Supplier.
- F. If Owner requires the replacement of any Subcontractor or Supplier retained by Contractor to perform any part of the Work, then Contractor shall be entitled to an adjustment in Contract Price or Contract Times, 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 or Supplier, whether initially or as a replacement, will 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 solely responsible for scheduling and coordinating the work of Subcontractors and Suppliers.
- J. The divisions and sections of the Specifications and the identifications of any Drawings do not control Contractor in dividing the Work among Subcontractors or Suppliers, or in delineating the Work to be performed by any specific trade.
- K. All Work performed for Contractor by a Subcontractor or Supplier must be pursuant to an appropriate contractual agreement that specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract for the benefit of Owner and Engineer.
- L. Owner may furnish to any Subcontractor or Supplier, to the extent practicable, information about amounts paid to Contractor for Work performed for Contractor by the Subcontractor or Supplier.
- M. Contractor shall restrict all Subcontractors and Suppliers from communicating with Engineer or Owner, except through Contractor or in case of an emergency, or as otherwise expressly allowed in this Contract.

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

7.09 *Permits*

- A. Unless otherwise provided in the Contract Documents, Contractor shall obtain and pay for all construction permits, licenses, and certificates of occupancy. 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.

7.10 *Taxes*

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

7.11 *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. 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 is not Contractor's responsibility to make certain that the Work described in the Contract Documents is in accordance with Laws and Regulations, but this does not relieve Contractor of its obligations under Paragraph 3.03.
- C. Owner or Contractor may give written 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 written notice Contractor may submit a Change Proposal, or Owner may initiate a Claim.

7.12 *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.

7.13 *Safety and Protection*

- A. Contractor shall be solely responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work. Such responsibility does not relieve Subcontractors of their responsibility for the safety of persons or property in the performance of their work, nor for compliance with applicable safety Laws and Regulations.
- B. Contractor shall designate a qualified and experienced safety representative whose duties and responsibilities are the prevention of Work-related accidents and the maintenance and supervision of safety precautions and programs.
- C. 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.
- D. All damage, injury, or loss to any property referred to in Paragraph 7.13.C.2 or 7.13.C.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).
- E. 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.
- F. Contractor shall notify Owner; the owners of adjacent property; the owners of Underground Facilities and other utilities (if the identity of such owners is known to Contractor); and other contractors and utility owners performing work at or adjacent to the Site, in writing, when Contractor knows that 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.
- G. Contractor shall comply with the applicable requirements of Owner's safety programs, if any. Any Owner's safety programs that are applicable to the Work are identified or included in the Supplementary Conditions or Specifications.
- H. 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.

- I. Contractor's duties and responsibilities for safety and protection will continue until all the Work is completed, Engineer has issued a written notice to Owner and Contractor in accordance with Paragraph 15.06.C that the Work is acceptable, and Contractor has left the Site (except as otherwise expressly provided in connection with Substantial Completion).
- J. Contractor's duties and responsibilities for safety and protection will 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.

7.14 *Hazard Communication Programs*

- A. Contractor shall be responsible for coordinating any exchange of safety data sheets (formerly known as 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 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 by an emergency, or are required as a result of Contractor's response to an emergency. If Engineer determines that a change in the Contract Documents is required because of an emergency or Contractor's response, a Work Change Directive or Change Order will be issued.

7.16 *Submittals*

A. *Shop Drawing and Sample Requirements*

- 1. Before submitting a Shop Drawing or Sample, Contractor shall:
 - a. review and coordinate the Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;
 - b. determine and verify:
 - 1) all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect to the Submittal;
 - 2) 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
 - 3) all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto;
 - c. confirm that the Submittal is complete with respect to all related data included in the Submittal.
- 2. Each Shop Drawing or Sample must 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 Shop Drawing or Sample, Contractor shall give Engineer specific written notice of any variations that the Submittal may have from the requirements of the Contract Documents. This notice must be set forth in a written communication separate from the Submittal; and, in addition, in the case of a Shop Drawing by a specific notation made on the Shop Drawing itself.
- B. *Submittal Procedures for Shop Drawings and Samples:* Contractor shall label and submit Shop Drawings and Samples to Engineer for review and approval in accordance with the accepted Schedule of Submittals.
1. *Shop Drawings*
 - a. Contractor shall submit the number of copies required in the Specifications.
 - b. Data shown on the Shop Drawings must 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.C.
 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.C.
 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. *Engineer's Review of Shop Drawings and Samples*
1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the accepted Schedule of Submittals. 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, comply with the requirements of 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 will 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 or other appropriate Contract modification.

5. Engineer's review and approval of a Shop Drawing or Sample will not relieve Contractor from responsibility for complying with the requirements of Paragraphs 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, will 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 or Sample will 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.C.4.

D. Resubmittal Procedures for Shop Drawings and Samples

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 Shop Drawing and Sample submittals with sufficient information and accuracy to obtain required approval of an item with no more than two resubmittals. Engineer will record Engineer's time for reviewing a third or subsequent resubmittal of a Shop Drawing or Sample, and Contractor shall be responsible for Engineer's charges to Owner for such time. Owner may impose a set-off against payments due Contractor to secure reimbursement for such charges.
3. If Contractor requests a change of a previously approved Shop Drawing or Sample, Contractor shall be responsible for Engineer's charges to Owner for its review time, and Owner may impose a set-off against payments due Contractor to secure reimbursement for such charges, unless the need for such change is beyond the control of Contractor.

E. Submittals Other than Shop Drawings, Samples, and Owner-Delegated Designs

1. The following provisions apply to all Submittals other than Shop Drawings, Samples, and Owner-delegated designs:
 - a. Contractor shall submit all such Submittals to the Engineer in accordance with the Schedule of Submittals and pursuant to the applicable terms of the Contract Documents.
 - b. Engineer will provide timely review of all such Submittals in accordance with the Schedule of Submittals and return such Submittals with a notation of either Accepted or Not Accepted. Any such Submittal that is not returned within the time established in the Schedule of Submittals will be deemed accepted.
 - c. Engineer's review will be only to determine if the Submittal is acceptable under the requirements of the Contract Documents as to general form and content of the Submittal.

- d. If any such Submittal is not accepted, Contractor shall confer with Engineer regarding the reason for the non-acceptance, and resubmit an acceptable document.
- 2. Procedures for the submittal and acceptance of the Progress Schedule, the Schedule of Submittals, and the Schedule of Values are set forth in Paragraphs 2.03, 2.04, and 2.05.
- F. Owner-delegated Designs: Submittals pursuant to Owner-delegated designs are governed by the provisions of Paragraph 7.19.

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 is entitled to rely on Contractor's warranty and guarantee.
- B. Owner's rights under this warranty and guarantee are in addition to, and are not limited by, Owner's rights under the correction period provisions of Paragraph 15.08. The time in which Owner may enforce its warranty and guarantee rights under this Paragraph 7.17 is limited only by applicable Laws and Regulations restricting actions to enforce such rights; provided, however, that after the end of the correction period under Paragraph 15.08:
 - 1. Owner shall give Contractor written notice of any defective Work within 60 days of the discovery that such Work is defective; and
 - 2. Such notice will be deemed the start of an event giving rise to a Claim under Paragraph 12.01.B, such that any related Claim must be brought within 30 days of the notice.
- C. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:
 - 1. abuse, or improper modification, 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.
- D. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents is absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents, a release of Contractor's obligation to perform the Work in accordance with the Contract Documents, or a release of Owner's warranty and guarantee rights under this Paragraph 7.17:
 - 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. The end of the correction period established in Paragraph 15.08;
 - 8. Any inspection, test, or approval by others; or

9. Any correction of defective Work by Owner.
- E. 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 will 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 losses, damages, costs, and judgments (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 from third-party claims or actions relating to or resulting from the performance or furnishing of the Work, provided that any such claim, action, loss, cost, judgment or damage is attributable to bodily injury, sickness, disease, or death, or to damage 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 will 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.

7.19 Delegation of Professional Design Services

- A. Owner may require Contractor to provide professional design services for a portion of the Work by express delegation in the Contract Documents. Such delegation will specify the performance and design criteria that such services must satisfy, and the Submittals that Contractor must furnish to Engineer with respect to the Owner-delegated design.
- B. Contractor shall cause such Owner-delegated professional design services to be provided pursuant to the professional standard of care by a properly licensed design professional, whose signature and seal must appear on all drawings, calculations, specifications, certifications, and Submittals prepared by such design professional. Such design professional must issue all certifications of design required by Laws and Regulations.
- C. If a Shop Drawing or other Submittal related to the Owner-delegated design is prepared by Contractor, a Subcontractor, or others for submittal to Engineer, then such Shop Drawing or other Submittal must bear the written approval of Contractor's design professional when submitted by Contractor to Engineer.

- D. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy, and completeness of the services, certifications, and approvals performed or provided by the design professionals retained or employed by Contractor under an Owner-delegated design, subject to the professional standard of care and the performance and design criteria stated in the Contract Documents.
- E. Pursuant to this Paragraph 7.19, Engineer's review, approval, and other determinations regarding design drawings, calculations, specifications, certifications, and other Submittals furnished by Contractor pursuant to an Owner-delegated design will be only for the following limited purposes:
 - 1. Checking for conformance with the requirements of this Paragraph 7.19;
 - 2. Confirming that Contractor (through its design professionals) has used the performance and design criteria specified in the Contract Documents; and
 - 3. Establishing that the design furnished by Contractor is consistent with the design concept expressed in the Contract Documents.
- F. Contractor shall not be responsible for the adequacy of performance or design criteria specified by Owner or Engineer.
- G. Contractor is not required to provide professional services in violation of applicable Laws and Regulations.

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 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 third-party utility work that Owner has arranged to take place at or adjacent to the Site, Owner shall provide such information to Contractor.
- C. Contractor shall afford proper and safe access to the Site to each contractor that performs such other work, each utility owner performing other work, and Owner, if Owner is performing other work with Owner's employees, and provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work.
- D. 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.

- E. If the proper execution or results of any part of Contractor's Work depends upon work performed by others, 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.
- F. The provisions of this article are not applicable to work that is performed by third-party utilities or other third-party entities without a contract with Owner, or that is performed without having been arranged by Owner. If such work occurs, then any related delay, disruption, or interference incurred by Contractor is governed by the provisions of Paragraph 4.05.C.3.

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; and
 - 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 for Owner at or adjacent to the Site, the Owner's employees, any other contractor working for Owner, or any utility owner that Owner has arranged to perform work, 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. 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 will 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, and any remedies available to Contractor under Laws or Regulations concerning utility action or inaction. When applicable, any such equitable adjustment in Contract Price will 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 of the Contract Times or Contract Price is subject to the provisions of Paragraphs 4.05.D and 4.05.E.

- 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.
 - 1. 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 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 8.03.B.
 - 2. 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 Contractor.
- C. 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 will 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 (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 10.07. 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 *Resident 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 the Supplementary Conditions and in Paragraph 10.07.
- B. If Owner designates an individual or entity who is not Engineer's consultant, agent, or employee to represent Owner at the Site, then the responsibilities and authority of such individual or entity will be as provided in the Supplementary Conditions.

10.04 *Engineer's Authority*

- A. Engineer has the authority to reject Work in accordance with Article 14.
- B. Engineer's authority as to Submittals is set forth in Paragraph 7.16.
- C. Engineer's authority as to design drawings, calculations, specifications, certifications and other Submittals from Contractor in response to Owner's delegation (if any) to Contractor of professional design services, is set forth in Paragraph 7.19.
- D. Engineer's authority as to changes in the Work is set forth in Article 11.

E. Engineer's authority as to Applications for Payment is set forth in Article 15.

10.05 *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.

10.06 *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.

10.07 *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, will 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 Contractor under 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 10.07 also apply to the Resident Project Representative, if any.

10.08 *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 of which Engineer has been informed.

ARTICLE 11—CHANGES TO THE CONTRACT

11.01 *Amending and Supplementing the Contract*

- A. The Contract may be amended or supplemented by a Change Order, a Work Change Directive, or a Field Order.
- B. If an amendment or supplement to the Contract includes a change in the Contract Price or the Contract Times, such amendment or supplement must be set forth in a Change Order.
- C. All changes to the Contract that 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, must be supported by Engineer's recommendation. Owner and Contractor may amend other terms and conditions of the Contract without the recommendation of the Engineer.

11.02 *Change Orders*

- A. Owner and Contractor shall execute appropriate Change Orders covering:
 - 1. Changes in 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 11.05, (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 that embody the substance of any final and binding results under: Paragraph 11.03.B, resolving the impact of a Work Change Directive; Paragraph 11.09, concerning Change Proposals; Article 12, Claims; Paragraph 13.02.D, final adjustments resulting from allowances; Paragraph 13.03.D, final adjustments relating to determination of quantities for Unit Price Work; and similar provisions.
- B. If Owner or Contractor refuses to execute a Change Order that is required to be executed under the terms of Paragraph 11.02.A, it will be deemed to be of full force and effect, as if fully executed.

11.03 *Work Change Directives*

- A. 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 11.07 regarding change of Contract Price.

- B. If Owner has issued a Work Change Directive and:
 - 1. Contractor believes that an adjustment in Contract Times or Contract Price is necessary, then Contractor shall submit any Change Proposal seeking such an adjustment no later than 30 days after the completion of the Work set out in the Work Change Directive.
 - 2. Owner believes that an adjustment in Contract Times or Contract Price is necessary, then Owner shall submit any Claim seeking such an adjustment no later than 60 days after issuance of the Work Change Directive.

11.04 *Field Orders*

- A. 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.
- B. If Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, then before proceeding with the Work at issue, Contractor shall submit a Change Proposal as provided herein.

11.05 *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. Changes involving the design (as set forth in the Drawings, Specifications, or otherwise) or other engineering or technical matters will be supported by Engineer's recommendation.
- B. Such changes in the Work 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 must be performed under the applicable conditions of the Contract Documents.
- C. Nothing in this Paragraph 11.05 obligates 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.

11.06 *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.C.2.

11.07 *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 must comply with the provisions of Paragraph 11.09. Any Claim for an adjustment of Contract Price must 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);
 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 11.07.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 11.07.C).
- C. *Contractor's Fee:* When applicable, the Contractor's fee for overhead and profit will 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 will be 15 percent;
 - b. For costs incurred under Paragraph 13.01.B.3, the Contractor's fee will be 5 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 11.07.C.2.a and 11.07.C.2.b is that the Contractor's fee will be based on: (1) a fee of 15 percent of the costs incurred under Paragraphs 13.01.B.1 and 13.01.B.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 5 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 will be no greater than 27 percent of the costs incurred by the Subcontractor that actually performs the Work;
 - d. No fee will be payable on the basis of costs itemized under Paragraphs 13.01.B.4, 13.01.B.5, and 13.01.C;
 - e. The amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in Cost of the Work will be the amount of the actual net decrease in Cost of the Work and a deduction of an additional amount equal to 5 percent of such actual net decrease in Cost of the Work; and
 - f. When both additions and credits are involved in any one change or Change Proposal, the adjustment in Contractor's fee will be computed by determining the sum of the costs in each of the cost categories in Paragraph 13.01.B (specifically, payroll costs, Paragraph 13.01.B.1; incorporated materials and equipment costs, Paragraph 13.01.B.2; Subcontract costs, Paragraph 13.01.B.3; special consultants costs, Paragraph 13.01.B.4; and other costs, Paragraph 13.01.B.5) and applying to each such cost category sum the appropriate fee from Paragraphs 11.07.C.2.a through 11.07.C.2.e, inclusive.

11.08 *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 must comply with the provisions of Paragraph 11.09. Any Claim for an adjustment in the Contract Times must comply with the provisions of Article 12.
- B. Delay, disruption, and interference in the Work, and any related changes in Contract Times, are addressed in and governed by Paragraph 4.05.

11.09 *Change Proposals*

- A. *Purpose and Content:* Contractor shall submit a Change Proposal to Engineer to request an adjustment in the Contract Times or Contract Price; contest an initial decision by Engineer concerning the requirements of the Contract Documents or relating to the acceptability of the Work under the Contract Documents; challenge a set-off against payment due; or seek other relief under the Contract. The Change Proposal will specify any proposed change in Contract Times or Contract Price, or other proposed relief, and explain the reason for the proposed change, with citations to any governing or applicable provisions of the Contract Documents. Each Change Proposal will address only one issue, or a set of closely related issues.

- B. *Change Proposal Procedures*

- 1. *Submittal:* Contractor shall submit each Change Proposal to Engineer within 30 days after the start of the event giving rise thereto, or after such initial decision.
- 2. *Supporting Data:* 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.
 - a. Change Proposals based on or related to delay, interruption, or interference must comply with the provisions of Paragraphs 4.05.D and 4.05.E.
 - b. Change proposals related to a change of Contract Price must include full and detailed accounts of materials incorporated into the Work and labor and equipment used for the subject Work.

The supporting data must 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.

- 3. *Engineer's Initial Review:* Engineer will advise Owner regarding the Change Proposal, and consider any comments or response from Owner regarding the Change Proposal. If in its discretion Engineer concludes that additional supporting data is needed before conducting a full review and making a decision regarding the Change Proposal, then Engineer may request that Contractor submit such additional supporting data by a date specified by Engineer, prior to Engineer beginning its full review of the Change Proposal.
- 4. *Engineer's Full Review and Action on the Change Proposal:* Upon receipt of Contractor's supporting data (including any additional data requested by Engineer), Engineer will conduct a full review of each Change Proposal and, within 30 days after such receipt of the Contractor's supporting data, either approve the Change Proposal in whole, deny it in whole, or approve it in part and deny it in part. Such actions must 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.

5. *Binding Decision*: Engineer's decision is final and binding upon Owner and Contractor, unless Owner or Contractor appeals the decision by filing a Claim under Article 12.
- C. *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 in writing that the Engineer is unable to resolve the Change Proposal. For purposes of further resolution of such a Change Proposal, such notice will be deemed a denial, and Contractor may choose to seek resolution under the terms of Article 12.
- D. *Post-Completion*: Contractor shall not submit any Change Proposals after Engineer issues a written recommendation of final payment pursuant to Paragraph 15.06.B.

11.10 *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 are subject 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;
 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; and
 4. Subject to the waiver provisions of Paragraph 15.07, any dispute arising after Engineer has issued a written recommendation of final payment pursuant to Paragraph 15.06.B.
- 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 rests with the party making the Claim. In the case of a Claim by Contractor seeking an increase in the Contract Times or Contract Price, 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 will 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 will 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 will 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 will 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 will 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 will 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 will be incorporated in a Change Order or other written document 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. When needed 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 will be in amounts no higher than those commonly incurred in the locality of the Project, will not include any of the costs itemized in Paragraph 13.01.C, and will 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 in advance of the subject Work. Such employees include, without limitation, superintendents, foremen, safety managers, safety representatives, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work will be apportioned on the basis of their time spent on the Work. Payroll costs include, but are not limited to, salaries and wages plus the cost of fringe benefits, which include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, 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, will 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 accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts will accrue to Owner. All trade discounts, rebates, and refunds and returns from sale of surplus materials and equipment will 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, which 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 will 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 or retained for services specifically related to the Work.
 5. Other costs consisting of 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, 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.

- 1) In establishing included costs for materials such as scaffolding, plating, or sheeting, consideration will be given to the actual or the estimated life of the material for use on other projects; or rental rates may be established on the basis of purchase or salvage value of such items, whichever is less. Contractor will not be eligible for compensation for such items in an amount that exceeds the purchase cost of such item.

c. *Construction Equipment Rental*

- 1) Rentals of all construction equipment and machinery, and the parts thereof, in accordance with rental agreements approved by Owner as to price (including any surcharge or special rates applicable to overtime use of the construction equipment or machinery), and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs will be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts must cease when the use thereof is no longer necessary for the Work.
 - 2) Costs for equipment and machinery owned by Contractor or a Contractor-related entity will be paid at a rate shown for such equipment in the equipment rental rate book specified in the Supplementary Conditions. An hourly rate will be computed by dividing the monthly rates by 176. These computed rates will include all operating costs.
 - 3) With respect to Work that is the result of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price ("changed Work"), included costs will be based on the time the equipment or machinery is in use on the changed Work and the costs of transportation, loading, unloading, assembly, dismantling, and removal when directly attributable to the changed Work. The cost of any such equipment or machinery, or parts thereof, must cease to accrue when the use thereof is no longer necessary for the changed 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 builder's risk or other property insurance established in accordance with Paragraph 6.04), 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 include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses will 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 does not include any of the following items:
 - 1. Payroll costs and other compensation of Contractor's officers, executives, principals, general managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 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. The cost of purchasing, renting, or furnishing small tools and hand tools.
 - 3. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.
 - 4. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.
 - 5. 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.
 - 6. Expenses incurred in preparing and advancing Claims.
 - 7. 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*
 - 1. When the Work as a whole is performed on the basis of cost-plus-a-fee, then:
 - a. Contractor's fee for the Work set forth in the Contract Documents as of the Effective Date of the Contract will be determined as set forth in the Agreement.
 - b. for any Work covered by a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price on the basis of Cost of the Work, Contractor's fee will be determined as follows:
 - 1) When the fee for the Work as a whole is a percentage of the Cost of the Work, the fee will automatically adjust as the Cost of the Work changes.
 - 2) When the fee for the Work as a whole is a fixed fee, the fee for any additions or deletions will be determined in accordance with Paragraph 11.07.C.2.
 - 2. When the Work as a whole is performed on the basis of a stipulated sum, or any other basis other than cost-plus-a-fee, then Contractor's fee for any Work covered by a Change

Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price on the basis of Cost of the Work will be determined in accordance with Paragraph 11.07.C.2.

- E. *Documentation and Audit:* Whenever the Cost of the Work for any purpose is to be determined pursuant to this Article 13, Contractor and pertinent Subcontractors will establish and maintain records of the costs in accordance with generally accepted accounting practices. Subject to prior written notice, Owner will be afforded reasonable access, during normal business hours, to all Contractor's accounts, records, books, correspondence, instructions, drawings, receipts, vouchers, memoranda, and similar data relating to the Cost of the Work and Contractor's fee. Contractor shall preserve all such documents for a period of three years after the final payment by Owner. Pertinent Subcontractors will afford such access to Owner, and preserve such documents, to the same extent required of Contractor.

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 for any of the foregoing will be valid.
- C. *Owner's Contingency Allowance:* Contractor agrees that an Owner's 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 for Work covered by allowances, and the Contract Price will 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, and the final adjustment of Contract Price will be set forth in a Change Order, subject to the provisions of the following paragraph.

E. *Adjustments in Unit Price*

1. Contractor or Owner shall be entitled to an adjustment in the unit price with respect to an item of Unit Price Work if:
 - a. the quantity of the item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and
 - b. Contractor's unit costs to perform the item of Unit Price Work have changed materially and significantly as a result of the quantity change.
2. The adjustment in unit price will account for and be coordinated with any related changes in quantities of other items of Work, and in Contractor's costs to perform such other Work, such that the resulting overall change in Contract Price is equitable to Owner and Contractor.
3. Adjusted unit prices will apply to all units of that item.

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 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 with such procedures and programs 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 will 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 will 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 will 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 written 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 will 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 additional 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, 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 will 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 defective Work as required by Engineer, then Owner may, after 7 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 for 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.
 - 2. 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 must also be accompanied by: (a) a bill of sale, invoice, copies of subcontract or purchase order payments, or other documentation

establishing full payment by Contractor for the materials and equipment; (b) at Owner's request, documentation warranting that Owner has received the materials and equipment free and clear of all Liens; and (c) 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.

3. Beginning with the second Application for Payment, each Application must include an affidavit of Contractor stating that all previous progress payments received by Contractor have been applied to discharge Contractor's legitimate obligations associated with prior Applications for Payment.
4. 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;
 - b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto;
 - c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work;
 - d. to make any examination to ascertain how or for what purposes Contractor has used the money paid by Owner; 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 based on Contractor's conduct in the performance or furnishing of the Work, or Owner has incurred costs, losses, or damages resulting from 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 has occurred that would constitute a default by Contractor and therefore justify a termination for cause;
 - j. Liquidated or other 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; or
 - l. Other items entitle 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 will 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 will be treated as an amount due as determined by Paragraph 15.01.D.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 7 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 will 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 7 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 that the Work is not substantially complete, stating 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 15.03.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 6.04 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 7.12), and other documents, Contractor may make application for final payment.
2. The final Application for Payment must 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 duly pending Change Proposals and Claims; 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 Final Application and Recommendation of Payment:* 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 10 days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of final payment and present the final Application for Payment to Owner for payment. Such recommendation will 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. 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. *Notice of Acceptability:* In support of its recommendation of payment of the final Application for Payment, Engineer will also give written notice to Owner and Contractor that the Work is acceptable, subject to stated limitations in the notice and to the provisions of Paragraph 15.07.
- D. *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 and issuance of notice of the acceptability of the Work.
- E. *Final Payment Becomes Due:* Upon receipt from Engineer of the final Application for Payment and accompanying documentation, Owner shall set off against the amount recommended by Engineer for final payment any further sum to which Owner is entitled, including but not limited to set-offs for liquidated damages and set-offs allowed under the provisions of this Contract with respect to progress payments. Owner shall pay the resulting balance due to Contractor within 30 days of Owner's receipt of the final Application for Payment from Engineer.

15.07 *Waiver of Claims*

- A. By making final payment, Owner waives its claim or right to liquidated damages or other damages for late completion by Contractor, except as set forth in an outstanding Claim,

appeal under the provisions of Article 17, set-off, or express reservation of rights by Owner. Owner reserves all other claims or rights after final payment.

- 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 as a Claim, 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 Supplementary Conditions or the terms of any applicable special guarantee required by the Contract Documents), Owner gives Contractor written notice that any Work has been found to be defective, or that Contractor's repair of any damages to the Site or adjacent areas has been found to be defective, then after receipt of such notice of defect 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 adjacent areas;
 - 2. correct such defective Work;
 - 3. remove the defective Work from the Project and replace it with Work that is not defective, if the defective Work has been rejected by Owner, 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 from the corrective measures.
- B. Owner shall give any such notice of defect within 60 days of the discovery that such Work or repairs is defective. If such notice is given within such 60 days but after the end of the correction period, the notice will be deemed a notice of defective Work under Paragraph 7.17.B.
- C. If, after receipt of a notice of defect within 60 days and within the correction period, 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 costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others). Contractor's failure to pay such costs, losses, and damages within 10 days of invoice from Owner will be deemed the start of an event giving rise to a Claim under Paragraph 12.01.B, such that any related Claim must be brought within 30 days of the failure to pay.
- D. 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.
- E. 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.

- F. Contractor's obligations under this paragraph are in addition to all other obligations and warranties. The provisions of this paragraph are not to 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 directly attributable to any such suspension. Any Change Proposal seeking such adjustments must 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) 10 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) written 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 7 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 will govern over any inconsistent provisions of Paragraphs 16.02.B and 16.02.D.

16.03 *Owner May Terminate for Convenience*

- A. Upon 7 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 for any loss of anticipated profits or revenue, post-termination overhead costs, 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 7 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, 7 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, pursuant to Article 12; and
 - 2. Disputes between Owner and Contractor concerning the Work, or obligations under the Contract Documents, that arise 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;
 - 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 requires the giving of written notice to Owner, Engineer, or Contractor, it will be deemed to have been validly given only if delivered:
 - 1. in person, by a commercial courier service or otherwise, to the recipient's place of business;
 - 2. by registered or certified mail, postage prepaid, to the recipient's place of business; or
 - 3. by e-mail to the recipient, with the words "Formal Notice" or similar in the e-mail's subject line.

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 will not constitute a waiver of that provision, nor will 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 of the Contract or 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 *Assignment of Contract*

- A. Unless expressly agreed to elsewhere in the Contract, no assignment by a party to this Contract of any rights under or interests in the Contract will be binding on the other party 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.

18.09 *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.

18.10 *Headings*

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

SUPPLEMENTARY CONDITIONS OF THE CONSTRUCTION CONTRACT

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SUPPLEMENTARY CONDITIONS OF THE CONSTRUCTION CONTRACT

These Supplementary Conditions amend or supplement EJCDC® C-700, Standard General Conditions of the Construction Contract (2018). The General Conditions remain in full force and effect except as amended.

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—for example, "Paragraph SC-4.05."

ARTICLE 1—DEFINITIONS AND TERMINOLOGY

No suggested Supplementary Conditions in this Article.

ARTICLE 2—PRELIMINARY MATTERS

No suggested Supplementary Conditions in this Article.

ARTICLE 3—CONTRACT DOCUMENTS: INTENT, REQUIREMENTS, REUSE

No suggested Supplementary Conditions in this Article.

ARTICLE 4—COMMENCEMENT AND PROGRESS OF THE WORK

No suggested Supplementary Conditions in this Article.

ARTICLE 5—SITE, SUBSURFACE AND PHYSICAL CONDITIONS, HAZARDOUS ENVIRONMENTAL CONDITIONS

5.03 *Subsurface and Physical Conditions*

SC-5.03 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 adjacent to the Site, or drawings of physical conditions relating to existing surface or subsurface structure at the Site, are known to the Owner.
- B. Not used.

5.06 *Hazardous Environmental Conditions*

SC-5.06 Delete Paragraphs 5.06.A and 5.06.B in their entirety and insert the following:

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

- B. Not used.

ARTICLE 6—BONDS AND INSURANCE

6.03 Contractor's Insurance

SC-6.03 Supplement Paragraph 6.03 with the following provisions after Paragraph 6.03.C:

- D. *Workers' Compensation and Employer's Liability*: Contractor shall purchase and maintain workers' compensation and employer's liability insurance, including, as applicable, United States Longshoreman and Harbor Workers' Compensation Act, Jones Act, stop-gap employer's liability coverage for monopolistic states, and foreign voluntary workers' compensation (from available sources, notwithstanding the jurisdictional requirement of Paragraph 6.02.B of the General Conditions).

Workers' Compensation and Related Policies	Policy limits of not less than:
Workers' Compensation	
State	Statutory
Applicable Federal (e.g., Longshoreman's)	Statutory
Foreign voluntary workers' compensation (employer's responsibility coverage), if applicable	Statutory
Jones Act (if applicable)	
Bodily injury by accident—each accident	\$1,000,000 each person
Bodily injury by disease—aggregate	\$1,000,000 each person
Employer's Liability	
Each accident	\$1,000,000
Each employee	\$1,000,000
Policy limit	\$1,000,000
Stop-gap Liability Coverage	
For work performed in monopolistic states, stop-gap liability coverage must be endorsed to either the worker's compensation or commercial general liability policy with a minimum limit of:	\$

- F. *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 claims for:
1. damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees,
 2. damages insured by reasonably available personal injury liability coverage, and
 3. damages because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom.
- G. *Commercial General Liability—Form and Content*: Contractor's commercial liability policy must be written on a 1996 (or later) Insurance Services Organization, Inc. (ISO) commercial

general liability form (occurrence form) and include the following coverages and endorsements:

1. Products and completed operations coverage.
 - a. Such insurance must 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, including but not limited to coverage of Contractor's contractual indemnity obligations in Paragraph 7.18.
 3. Severability of interests and no insured-versus-insured or cross-liability exclusions.
 4. Underground, explosion, and collapse coverage.
 5. Personal injury coverage.
 6. Additional insured endorsements that include both ongoing operations and products and completed operations coverage through ISO Endorsements CG 20 10 10 01 and CG 20 37 10 01 (together). If Contractor demonstrates to Owner that the specified ISO endorsements are not commercially available, then Contractor may satisfy this requirement by providing equivalent endorsements.
 7. 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.
- H. *Commercial General Liability—Excluded Content:* The commercial general liability insurance policy, including its coverages, endorsements, and incorporated provisions, must not include any of the following:
1. Any modification of the standard definition of "insured contract" (except to delete the railroad protective liability exclusion if Contractor is required to indemnify a railroad or others with respect to Work within 50 feet of railroad property).
 2. Any exclusion for water intrusion or water damage.
 3. Any provisions resulting in the erosion of insurance limits by defense costs other than those already incorporated in ISO form CG 00 01.
 4. Any exclusion of coverage relating to earth subsidence or movement.
 5. Any exclusion for the insured's vicarious liability, strict liability, or statutory liability (other than worker's compensation).
 6. Any limitation or exclusion based on the nature of Contractor's work.
 7. Any professional liability exclusion broader in effect than the most recent edition of ISO form CG 22 79.

I. *Commercial General Liability—Minimum Policy Limits*

Commercial General Liability	Policy limits of not less than:
General Aggregate	\$2,000,000
Products—Completed Operations Aggregate	\$2,000,000
Personal and Advertising Injury	\$1,000,000
Bodily Injury and Property Damage—Each Occurrence	\$1,000,000

- J. *Automobile Liability*: Contractor shall purchase and maintain automobile liability insurance 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 must be written on an occurrence basis.

Automobile Liability	Policy limits of not less than:
Bodily Injury	
Each Person	\$1,000,000
Each Accident	\$2,000,000
Property Damage	
Each Accident	\$1,000,000
[or]	
Combined Single Limit	
Combined Single Limit (Bodily Injury and Property Damage)	\$1,000,000

6.04 *Builder's Risk and Other Property Insurance*

SC-6.04 Delete Paragraph 6.04.A and insert the following in its place:

- A. Owner shall purchase and maintain builder's risk insurance upon the Work on a completed value basis, in the amount of the Work's full insurable replacement cost (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). The specific requirements applicable to the builder's risk insurance are set forth in the Supplementary Conditions.

ARTICLE 7—CONTRACTOR'S RESPONSIBILITIES

7.10 *Taxes*

SC-7.10 Add a new paragraph immediately after Paragraph 7.10.A:

- A. Owner is exempt from payment of sales and compensating use taxes of the State of **Colorado** and of cities and counties thereof on all materials to be incorporated into the Work.
1. Owner will furnish the required certificates of tax exemption to Contractor for use in the purchase of supplies and materials to be incorporated into the Work.

2. Owner's exemption does not apply to construction tools, machinery, equipment, or other property purchased by or leased by Contractor, or to supplies or materials not incorporated into the Work.

ARTICLE 8—OTHER WORK AT THE SITE

No suggested Supplementary Conditions in this Article.

ARTICLE 9—OWNER'S RESPONSIBILITIES

No suggested Supplementary Conditions in this Article.

ARTICLE 10—ENGINEER'S STATUS DURING CONSTRUCTION

10.03 Resident Project Representative

SC-10.03 Add the following new paragraphs immediately after Paragraph 10.03.B:

- C. The Resident Project Representative (RPR) will be Engineer's representative at the Site. RPR's dealings in matters pertaining to the Work in general will be with Engineer and Contractor. RPR's dealings with Subcontractors will only be through or with the full knowledge or approval of Contractor. The RPR will:
 1. *Conferences and Meetings:* Attend meetings with Contractor, such as preconstruction conferences, progress meetings, job conferences, and other Project-related meetings (but not including Contractor's safety meetings), and as appropriate prepare and circulate copies of minutes thereof.
 2. *Safety Compliance:* Comply with Site safety programs, as they apply to RPR, and if required to do so by such safety programs, receive safety training specifically related to RPR's own personal safety while at the Site.
 3. *Liaison*
 - a. Serve as Engineer's liaison with Contractor. Working principally through Contractor's authorized representative or designee, assist in providing information regarding the provisions and intent of the Contract Documents.
 - b. Assist Engineer in serving as Owner's liaison with Contractor when Contractor's operations affect Owner's on-Site operations.
 - c. Assist in obtaining from Owner additional details or information, when required for Contractor's proper execution of the Work.
 4. *Review of Work; Defective Work*
 - a. Conduct on-Site observations of the Work to assist Engineer in determining, to the extent set forth in Paragraph 10.02, if the Work is in general proceeding in accordance with the Contract Documents.
 - b. Observe whether any Work in place appears to be defective.

- c. Observe whether any Work in place should be uncovered for observation, or requires special testing, inspection or approval.
- 5. *Inspections and Tests*
 - a. Observe Contractor-arranged inspections required by Laws and Regulations, including but not limited to those performed by public or other agencies having jurisdiction over the Work.
 - b. Accompany visiting inspectors representing public or other agencies having jurisdiction over the Work.
- 6. *Payment Requests:* Review Applications for Payment with Contractor.
- 7. *Completion*
 - a. Participate in Engineer's visits regarding Substantial Completion.
 - b. Assist in the preparation of a punch list of items to be completed or corrected.
 - c. Participate in Engineer's visit to the Site in the company of Owner and Contractor regarding completion of the Work, and prepare a final punch list of items to be completed or corrected by Contractor.
 - d. Observe whether items on the final punch list have been completed or corrected.
- D. The RPR will not:
 - 1. Authorize any deviation from the Contract Documents or substitution of materials or equipment (including "or-equal" items).
 - 2. Exceed limitations of Engineer's authority as set forth in the Contract Documents.
 - 3. Undertake any of the responsibilities of Contractor, Subcontractors, or Suppliers.
 - 4. Advise on, issue directions relative to, or assume control over any aspect of the means, methods, techniques, sequences or procedures of construction.
 - 5. Advise on, issue directions regarding, or assume control over security or safety practices, precautions, and programs in connection with the activities or operations of Owner or Contractor.
 - 6. Participate in specialized field or laboratory tests or inspections conducted off-site by others except as specifically authorized by Engineer.
 - 7. Authorize Owner to occupy the Project in whole or in part.

ARTICLE 11—CHANGES TO THE CONTRACT

No suggested Supplementary Conditions in this Article.

ARTICLE 12—CLAIMS

No suggested Supplementary Conditions in this Article.

ARTICLE 13—COST OF WORK; ALLOWANCES, UNIT PRICE WORK

No suggested Supplementary Conditions in this Article.

ARTICLE 14—TESTS AND INSPECTIONS; CORRECTION, REMOVAL, OR ACCEPTANCE OF DEFECTIVE WORK

No suggested Supplementary Conditions in this Article.

ARTICLE 15—PAYMENTS TO CONTRACTOR, SET OFFS; COMPLETIONS; CORRECTION PERIOD

15.03 *Substantial Completion*

SC-15.03 Add the following new 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, will 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 this Article 15.

ARTICLE 16—SUSPENSION OF WORK AND TERMINATION

No suggested Supplementary Conditions in this Article.

ARTICLE 17—FINAL RESOLUTIONS OF DISPUTES

No suggested Supplementary Conditions in this Article.

ARTICLE 18—MISCELLANEOUS

18.11 *Liquidated Damages*

SC-18.11 Add the following new paragraphs following 18.10:

- A. Contractor understands and agrees that time is an essential condition of the Contract. Contractor further understands and agrees that delay in completion of the project will cause Owner to suffer substantial losses and damages which cannot be measured, including without limitation the loss of revenues for services, loss of other revenue incidental to the operation of the facility, additional engineering, legal, accounting and administrative costs, reduced public confidence and adverse public relations which would reduce future revenues, and additional interest and financing costs and charges if the Work is not completed within the times specified in paragraph 3.00 above, plus any extensions thereof allowed in accordance with Article 12 of the General Conditions. The parties also recognize the delays, expense, and difficulties involved in proving in a legal or mediation proceeding the actual loss suffered by Owner if the Work is not completed on time. Accordingly, instead of requiring proof of such losses and damages, Owner and Contractor agree that as liquidated damages for delay (but

not as a penalty), Contractor shall pay Owner One Thousand dollars (\$1,000) for each day that expires after the time specified in paragraph 2.00 for Substantial Completion until the Work is substantially complete.

- B. After Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Time or any proper extension thereof granted by Owner, Owner and Contractor agree that as liquidated damages for delay (but not as a penalty) Contractor shall pay Owner Five Hundred dollars (\$500) for each day that expires after the time specified in paragraph 3.00 for final completion and readiness for final payment until the Work is finally complete and ready for final payment.
- C. Owner shall have the right to deduct the liquidated damages from any money in its hands, otherwise due, or to become due, to Contractor, or to sue for and recover compensation for damages for nonperformance of this Contract within the time stipulated.
- D. Any Liquidated Damages payable by Contractor may, at Owner's election be deducted from any amounts owed to Contractor. In the event no funds are due Contractor at a time when Contractor becomes liable to Owner for Liquidated Damages, then Contractor agrees to pay all accrued Liquidated Damages to Owner on the first (1st) day and on the fifteenth (15th) day of each month when Contractor is liable to Owner for Liquidated Damages, Permitting Contractor to continue and finish the Work or any part thereof after the deadline for completion of the Work shall not act as a waiver of these Liquidated Damages provisions.
- E. The aggregate liability of Contractor to pay Liquidated Damages pursuant to this section shall not exceed an amount equal to fifty percent (50%) of the Contract Price. This Section shall not be construed to limit Contractor's other obligations or liabilities arising under or in connection with this Contract.
- F. In the event that this section conflicts with any other provisions regarding liquidated damages within the Contract Documents, this section shall control.

WORK CHANGE DIRECTIVE NO.: [Number of Work Change Directive]

Owner: City of Craig Owner's Project No.:
Engineer: Western Water Solutions Engineer's Project No.: 2025-COC
Contractor: Contractor's Project No.:
Project: Glen Erie South Water Storage Tank Rehabilitation
Contract Name:
Date Issued: Effective Date of Work Change Directive:

Contractor is directed to proceed promptly with the following change(s):

Description:

[Description of the change to the Work]

Attachments:

[List documents related to the change to the Work]

Purpose for the Work Change Directive:

[Describe the purpose for the change to the Work]

Directive to proceed promptly with the Work described herein, prior to agreeing to change in Contract Price and Contract Time, is issued due to:

Notes to User—Check one or both of the following

☐ Non-agreement on pricing of proposed change. ☐ Necessity to proceed for schedule or other reasons.

Estimated Change in Contract Price and Contract Times (non-binding, preliminary):

Contract Price: \$ _____ **[increase] [decrease] [not yet estimated].**

Contract Time: _____ days **[increase] [decrease] [not yet estimated].**

Basis of estimated change in Contract Price:

☐ Lump Sum ☐ Unit Price ☐ Cost of the Work ☐ Other

Recommended by Engineer

Authorized by Owner

By:

Title:

Date:

CHANGE ORDER NO.: [Number of Change Order]

Owner:	City of Craig	Owner's Project No.:	
Engineer:	Western Water Solutions	Engineer's Project No.:	2025-COC
Contractor:		Contractor's Project No.:	
Project:	Glen Erie South Water Storage Tank Rehabilitation		
Contract Name:			
Date Issued:		Effective Date of Change Order:	
The Contract is modified as follows upon execution of this Change Order:			
Description:			

[Description of the change]

Attachments:

[List documents related to the change]

Change in Contract Price		Change in Contract Times [State Contract Times as either a specific date or a number of days]	
Original Contract Price:		Original Contract Times:	
\$ _____		Substantial Completion: _____	
		Ready for final payment: _____	
[Increase] [Decrease] from previously approved Change Orders No. 1 to No. [Number of previous Change Order] :		[Increase] [Decrease] from previously approved Change Orders No.1 to No. [Number of previous Change Order] :	
\$ _____		Substantial Completion: _____	
		Ready for final payment: _____	
Contract Price prior to this Change Order:		Contract Times prior to this Change Order:	
\$ _____		Substantial Completion: _____	
		Ready for final payment: _____	
[Increase] [Decrease] this Change Order:		[Increase] [Decrease] this Change Order:	
\$ _____		Substantial Completion: _____	
		Ready for final payment: _____	
Contract Price incorporating this Change Order:		Contract Times with all approved Change Orders:	
\$ _____		Substantial Completion: _____	
		Ready for final payment: _____	

	Recommended by Engineer (if required)	Accepted by Contractor
By:	_____	_____
Title:	_____	_____
Date:	_____	_____
	Authorized by Owner	Approved by Funding Agency (if applicable)
By:	_____	_____
Title:	_____	_____
Date:	_____	_____

MATERIAL AND EQUIPMENT SUPPLIER LISTING

The following information is submitted for each major supplier of material and each manufacturer and supplier of equipment for manufacturers and suppliers of major items of material, equipment, and systems to be used in the Work if the Bidder is awarded the contract.

<u>Specification Section No.</u>	<u>Material or Equipment Description</u>	<u>Manufacturer and Supplier</u>
05 53 00	Access Hatch	
09 97 13	Tank Coatings	
Drawing Sheet S502	Tank Vent	

The Surety who will be the surety on the Performance, Payment and Warranty Bond will be _____.

Signature

SUBCONTRACTOR LISTING

The following information is submitted for each subcontractor that will be used in the Work if the Bidder is awarded the Agreement. Additional numbered pages shall be attached to this page as required. Each page shall be headed "SUBCONTRACTOR LISTING" and signed. All Work to be subcontracted shall be listed.

<u>Amount of Subcontract</u>	<u>Name and Address of Subcontractor</u>	<u>Portion of Work</u>
	Premiere NDT Services, Inc.	Magnetic Flux Leakage Door Sheet Radiograph Testing Fabrication and Welding Surface Preparation and Coatings Lead Abatement
	QualCorr Engineering, Inc.	Impressed Current Cathodic Protection Design and Installation

Signature

DIVISION 01

GENERAL REQUIREMENTS

SECTION 01 11 00

SUMMARY OF WORK, SEQUENCING, AND SCHEDULING

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. Work covered by Contract Documents.
2. Commencement, Prosecution, and Completion of Work.
3. Location of Project site.
4. Work under separate contracts.
5. Access to site.

1.02 WORK COVERED BY CONTRACT DOCUMENTS

A. The Work of the Project is defined by the Contract Documents and consists of the following:

1. Interior tank cleaning;
2. Door sheet;
3. Mobilizing a third-party nondestructive testing company to perform a magnetic flux leakage scan of the tank floor;
4. Installing by welding various size floor plate patches and weld deposition repairs on tank floor;
5. Removal of existing roof vent and riser, fabrication and installation of steel vent riser and aluminum vent;
6. Removal of existing roof access hatch and riser, fabrication and installation of new aluminum roof access hatch;
7. Fabrication and installation of new drain sump;
8. Fabrication and installation of new interior column capital;
9. Interior and exterior surface preparation and coatings;
10. Exterior lead abatement;
11. Installation of new impressed current cathodic protection system;

12. Exterior joint repair;
13. Tank cleaning and disinfection;
14. Reclamation of areas disturbed by construction; and
15. Furnishing and installing additional materials and equipment as specified.

1.03 COMMENCEMENT, PROSECUTION AND COMPLETION OF WORK

- A. The Contractor shall be required to commence Work under this Contract no later than August 18, 2025, prosecute the Work diligently, and complete the various parts of the Work ready for use by the Owner not later than the following dates:

Description	Not Later Than
a. All Work required for Tank to be in-service:	October 17, 2025
b. Final completion of Work:	October 31, 2025

1.04 LOCATION OF PROJECT SITE

- A. The Project is located at the southwest corner of East 11th Street and Bryan Way in Craig, CO 81625 (nearby address, 1500 East 11th Street).

1.05 WORK UNDER SEPARATE CONTRACTS

- A. General: Cooperate fully with separate contractors so work on those contracts may be carried out smoothly, without interfering with or delaying work under this Contract or other contracts. Coordinate the Work of this Contract with work performed under separate contracts.
- B. Separate Contracts:
 1. The Owner will award separate contracts for third-party welding and coating inspection.
- C. Concurrent Work Contracted by Owner: The Owner will award a separate contract for the following:
 1. The Owner will award a separate contracts for third-party welding and coating inspection.

1.06 ACCESS TO SITE

- A. General: Contractor shall have full use of Project site for construction operations during the construction period. Contractor's use of Project site is limited only by Owner's right to perform work or to retain other contractors on portions of Project.
- B. Use of Site: Limit use of Project Site to areas shown on Drawings. Do not disturb portions of Project Site beyond areas in which the Work is indicated.

- C. Owner Limited Occupancy of Completed Areas of Construction: Owner reserves the right to occupy and to place and install equipment in completed portions of the Work, prior to Substantial Completion of the Work, provided such occupancy does not interfere with completion of the Work. Such placement of equipment and limited occupancy shall not constitute acceptance of the total Work.
1. Engineer will prepare a Certificate of Substantial Completion for each specific portion of the Work to be occupied prior to Owner acceptance of the completed Work.
 2. Before limited Owner occupancy, pipelines, valves, and tanks shall be fully operational and required tests and inspections shall be successfully completed. On occupancy, Owner will operate and maintain mechanical and electrical systems serving occupied portions of Work.

PART 2 - PRODUCTS

(Not Used)

PART 3 - EXECUTION

(Not Used)

END OF SECTION

SECTION 01 14 14

CONTROL OF WORK

PART 1 - GENERAL

1.01 HOURS OF CONSTRUCTION

- A. Construction activities requiring regular Engineer/Owner inspection shall take place only between the hours of 7 a.m. to 5 p.m., excluding Sundays and legal holidays. Work not requiring regular Engineer/Owner inspection, outside the above time periods will be permitted with the approval of the Engineer/Owner.

1.02 WORK RESTRICTIONS

- A. The Contractor shall confine construction equipment, the storage of materials and equipment, and the operations of Contractor personnel to the sites of the Work and areas permitted by Laws and Regulations, rights-of-way, permits, and easements and shall not unreasonably encumber the premises with construction equipment or other materials or equipment.
- B. The Contractor shall assume full responsibility for and damage to any such land or area, or to the owners or occupants thereof, resulting from the performance of the Work. Should any claim be made by any such owner or occupant because of the performance of the Work, the Contractor shall promptly settle with such other party by negotiation or otherwise resolve the claim by other dispute resolution proceeding or at law.
- C. The Contractor, to the fullest extent permitted by Laws and Regulations, shall indemnify and hold harmless the Owner, Engineer, Owner's Representative, and anyone directly or indirectly employed by any of them from and against all claims, costs, losses, and damages to the extent caused by or based upon the Contractor's performance of the Work.

1.03 OCCUPYING PRIVATE LAND

- A. The Contractor shall not (except after written consent from the proper parties) enter or occupy with employees, tools, materials, or equipment any land outside the rights-of-way or property of the Owner. A copy of the written consent shall be given to the Engineer.

1.04 OPEN EXCAVATIONS

- A. All open excavations shall be adequately safeguarded by providing temporary barricades, fencing, caution signs, lights, and other means to prevent accidents to persons and damage to property and shall comply with OSHA and other applicable regulatory requirements.
- B. The length or size of excavation will be controlled by the particular surrounding conditions but shall always be confined to areas shown on the Drawings. See Section 31 23 16 "Trenching, Backfilling, and Compacting" for additional open excavation requirements.

1.05 INTERFERENCE WITH AND PROTECTION OF ROADS AND STREETS

- A. The Contractor shall not close or obstruct any portion of a street, road, or private way without obtaining permits therefore from the proper authorities. If any street, road, or private way shall be rendered unsafe by the Contractor's operations, he shall make such repairs or provide such temporary ways or guards as shall be acceptable to the proper authorities.
- B. Streets, roads, private ways, and walks not closed shall be maintained passable and safe by the Contractor, who shall assume and have full responsibility for the adequacy and safety of provisions made therefore.
- C. Contractor employee parking will not be allowed along County maintained roads. All parking must be located within designated Construction Limits.
- D. The Contractor shall, at least 24 hours in advance, notify the local authorities having jurisdiction in writing, with a copy to the Engineer, if the closure of a street or road is necessary. The Contractor shall cooperate with the local authorities in the establishment of alternate routes and shall provide adequate detour signs, plainly marked and well lit, in order to minimize confusion. If additional notification is required as a condition of a particular permit, the requirements of the permit shall govern.

1.06 TRAFFIC CONTROL

- A. For control of traffic, the Contractor shall provide an adequate number of flagmen employed at his own expense. Contractor shall comply with all requirements from entity with jurisdiction over road, including obtaining all required permits.

1.07 INSPECTION OF WORK AWAY FROM THE SITE

- A. If work to be done away from the construction site is to be inspected on behalf of the Owner during its fabrication, manufacture, or testing, or before shipment, the Contractor shall give notice to the Engineer of the place and time where such fabrication, manufacture, testing, or shipping is to be done. Such notice shall be in writing and delivered to the Engineer in ample time so that the necessary arrangements for the inspection can be made.

1.08 CLEANUP AND DISPOSAL OF EXCESS MATERIAL

- A. During the course of the Work, the Contractor shall keep the site of his operations in a clean and neat condition. He shall dispose of all refuse resulting from the construction Work, and at the conclusion of the Work, he shall remove and haul away any surplus excavation, broken pavement, lumber, equipment, temporary structures, and any other refuse remaining from the construction operations and shall leave the entire site of the Work in a neat and orderly condition.
- B. In order to prevent environmental pollution arising from the construction activities related to the performance of this Contract, the Contractor and his subcontractors shall obtain all applicable permits and comply with all applicable Federal, State, and local laws and regulations concerning waste material disposal, as well as the specific requirements stated in this Section and elsewhere in the Specifications.

- C. The Contractor is advised that the disposal of excess excavated material in wetlands, stream corridors, and public rights-of-way is strictly prohibited even if the permission of the property owner is obtained. Any violation of this restriction by the Contractor or any person employed by him will be brought to the immediate attention of the responsible regulatory agencies, with a request that appropriate action be taken against the offending parties. Therefore, the Contractor will be required to remove the fill at his own expense and restore the area impacted.
- D. The Contractor shall restore to original condition all property not designated for alteration by the Contract Documents

PART 2 - PRODUCTS

(Not Used)

PART 3 - EXECUTION

(Not Used)

END OF SECTION

SECTION 01 22 00

MEASUREMENT AND PAYMENT

1.01 WORK LISTED IN THE SCHEDULE OF WORK ITEMS

- A. Work under this contract will be paid on a unit price or lump-sum basis as outlined on the Bid Form for the quantity of work installed.
- B. The unit prices and lump-sum prices include full compensation for furnishing the labor, materials, tools, and equipment and doing all the work involved to complete the work included in the contract documents.
- C. The application for payment will be for a specific item based on the percentage completed or quantity installed. The percentage complete will be based on the value of the partially completed work relative to the value of the item when entirely completed and ready for service.

1.02 WORK NOT LISTED IN THE SCHEDULE OF WORK ITEMS

- A. The General Conditions and items in the Special Provisions, general requirements, and specifications which are not listed in the schedule of work items of the Bid Form are, in general, applicable to more than one listed work item, and no separate work item is provided therefor. Include the cost of work not listed but necessary to complete the project designated in the contract documents in the various listed work items of the Bid Form.
- B. The bids for the work are intended to establish a total cost for the work in its entirety. Should the Contractor feel that the cost for the work has not been established by specific items in the Bid Form, include the cost for that work in some related bid item so that the Proposal for the project reflects the total cost for completing the work in its entirety.

1.03 MOBILIZATION / DEMOBILIZATION--BID ITEM 1

- A. Measurement: This bid Item will not be measured for payment. The value of this Bid Item shall not exceed five (5) percent of the value of the "Total Bid," excluding Mobilization/Demobilization for Project, for the Contract Work as a whole.
- B. Payment: Payment for this Bid Item will be made at the lump sum price bid in the Bid Form, which price shall include mobilization of all personnel, equipment, and temporary construction facilities to the Project site; providing any temporary utilities, construction surveying, and staking. Payment for this item will be made in accordance with the following:
 - 1. Forty (40) percent of the price bid for Mobilization/Demobilization for Project shall be made at the time of the first progress payment after the Contractor has purchased bonds and insurance for the Project.

2. An additional forty (40) percent of the price bid for Mobilization/Demobilization for Project will be paid when the Contractor is nearing complete mobilization, including having established temporary facilities required at the site as specified.
3. The remaining payment, twenty (20) percent shall be paid as a lump sum after the Project is complete, the Contractor has demobilized, the site has been restored, and the Contractor as-builts have been reviewed and accepted by the Owner.

1.04 DOOR SHEET AND RADIOGRAPH TESTING--BID ITEM 2

- A. Door sheet and radiograph testing Bid Item will not be measured for payment.
- B. Payment for this Bid Item will be made at the lump-sum bid price bid in the Bid Form, which shall include the costs for all equipment, materials, incidentals, and labor to remove a section of shell plate as a "door sheet" to provide access to the tank interior and performing weld radiograph testing following reinstallation of the removed door sheet. Door sheet removal and reinstallation shall meet the requirements of API 653-14. Door sheet submittal to be submitted and approved by the Engineer prior to installation.

1.05 MAGNETIC FLUX LEAKAGE SCAN--BID ITEM 3

- A. Magnetic flux leakage scan Bid Item will not be measured for payment.
- B. Payment for magnetic flux leakage scan will be made at the lump-sum price in the Bid Form, which price shall include all costs for all equipment, materials, incidentals, and labor necessary for supplying and performing a floor plate thickness scan of the complete tank bottom plate utilizing magnetic flux leakage (MFL) testing equipment by a qualified third-party nondestructive testing company. Examination and testing shall be in accordance with API 653-14. The MFL scan shall be performed by Premiere NSD Services, Inc. Test results with recommendations for repair must be submitted and approved by the Engineer prior to installation.

1.06 1/4" X 6" DIAMETER FLOOR PLATE PATCHES--BID ITEM 4A

- A. 1/4" X 6" diameter floor plate patches Bid Item will be based on the quantity, each, of 1/4" thick x 6" diameter floor plate patches installed by welding.
- B. Payment for 1/4" x 6" diameter floor plate patches will be made at the unit price per each patch in the Bid Form, which price shall include all costs for all equipment, materials, incidentals, and labor necessary to supply and install ¼-inch thick by 6-inch diameter welded-on patch plates for corrosion discontinuities as identified from the magnetic flux leakage test performed by a third-party nondestructive testing company. Floor plate repairs are to be installed to meet the requirements of API 653-14. Patch plate material certificates must be submitted and approved by the Engineer prior to installation.

1.07 1/4" X VARIOUS SIZES FLOOR PLATE PATCHES--BID ITEM 4B

- A. 1/4" x various sizes floor plate patches Bid Item will be based on the quantity, square feet, of 1/4" thick floor plate patches installed by welding.

- B. Payment for 1/4" x various sizes floor plate patches will be made at the unit price per square foot of installed patch plates in the Bid Form, which price shall include all costs for all equipment, materials, incidentals, and labor necessary to supply and install ¼-inch thick by various sizes welded-on patch plates for corrosion discontinuities as identified from the magnetic flux leakage test performed by a third-party nondestructive testing company. Floor plate repairs are to be installed to meet the requirements of API 653-14. Patch plate material certificates must be submitted and approved by the Engineer prior to installation.
- 1.08 WELD DEPOSITION REPAIRS--BID ITEM 4C
- A. Weld deposition repairs Bid Item will be based on the quantity, each, of deposition repairs made by welding.
 - B. Payment for weld deposition repairs will be made at the unit price per each weld deposition repair made in the Bid Form, which price shall include costs for materials, labor, equipment, incidentals, for supplying and installing weld deposition repairs to the top surface of the floor plate where pitting discontinuities are identified from the magnetic flux leakage test performed by a third-party nondestructive testing company. Weld deposition repairs are to be installed to meet the requirements of API 653-14. Weld material certificates must be submitted and approved by the Engineer prior to installation.
- 1.09 ROOF VENT AND RISER--BID ITEM 5
- A. Roof vent and riser Bid Item will not be measured for payment.
 - B. Payment for this Bid Item will be made at the lump-sum price in the Bid Form, which price shall include all costs for equipment, materials, incidentals, and labor to demolish and remove the existing roof vent and riser and fabrication and installation by welding a new carbon steel riser and new 30-inch diameter aluminum roof vent. Steel riser and vent shop drawings, product information, and material certificates must be submitted to and approved by the Engineer prior to installation.
- 1.10 OVERFLOW WEIR MODIFICATIONS--BID ITEM 6
- A. Overflow weir modifications Bid Item will not be measured for payment.
 - B. Payment for this Bid Item will be made at the lump-sum price in the Bid Form, which price shall include all costs for equipment, materials, incidentals, and labor to selectively demolish and remove a portion of the existing overflow weir to provide required freeboard as detailed in the drawings.
- 1.11 INTERIOR SURFACE PREPARATION, COATINGS, AND FLEXIBLE SEALANT—BID ITEM 7
- A. Interior surface preparation, coatings, and flexible sealant Bid Item will not be measurement for payment.
 - B. Payment for this Bid Item will be made at the lump-sum price in the Bid Form, which price shall include all costs for equipment, materials, incidentals, and labor to surface prepare and install a new NSF 61 approved interior coating system for the existing water storage tank and interior

pipng meeting the requirements of AWWA D102 as described in the contract documents. In addition, this item must be the complete cost to supply and install sealant material to the underside of the roof plate unwelded seams and roof to shell joint. Product information and installation and curing methods must be submitted to and approved by the Engineer prior to installation.

1.12 EXTERIOR LEAD ABATEMENT--BID ITEM 8

- A. Exterior lead abatement Bid Item will not be measured for payment.
- B. Payment for this Bid Item will be made at the lump-sum price in the Bid Form, which price shall include all costs for equipment, materials, incidentals, and labor to provide proper worker protection and testing, environmental protection and testing, and waste management for removal and disposal of the exterior coating system having lead concentration. Lead-based paint waste shall be disposed of in a properly permitted sanitary landfill or sent to a facility that has a permit issued by the state of Colorado to accept lead-based paint waste for storage or treatment. A lead abatement site specific safety plan must be submitted to and approved by the Engineer prior to installation. Waste material disposal tickets showing lead paint waste was properly disposed of must be submitted to the Owner and Engineer.

1.13 EXTERIOR SURFACE PREPARATION AND COATINGS—BID ITEM 9

- A. Exterior surface preparation and coatings Bid Item will not be measurement for payment.
- B. Payment for this Bid Item will be made at the lump-sum price in the Bid Form, which price shall include all costs for equipment, materials, incidentals, and labor to surface prepare and install an approved exterior coating system for the existing water storage tank and appurtenances meeting the requirements of AWWA D102 as described in the contract documents. Product information and installation and curing methods must be submitted to and approved by the Engineer prior to installation.

1.14 EXTERIOR LADDER CAGE LOCKING SECURITY GATE--BID ITEM 10

- A. Exterior ladder cage locking security gate Bid Alternate Item will not be measured for payment.
- B. Payment for this Bid Item will be made at the lump-sum price in the Bid Form, which price shall include all costs for equipment, materials, incidentals, and labor to fabricate and install by welding a swinging and locking security gate on the exterior ladder cage. Security gate shop drawings, material certificates, and product information must be submitted to and approved by the Engineer prior to installation.

1.15 IMPRESSED CURRENT CATHODIC PROTECTION SYSTEM—BID ITEM 11

- A. Impressed current cathodic protection system Bid Alternate Item will not be measurement for payment.
- B. Payment for this Bid Item will be made at the lump-sum price in the Bid Form, which price shall include all costs for equipment, materials, incidentals, and labor for the complete design, installation, testing, and start-up for an impressed current cathodic protection system as

described in the contract documents. This line item shall include electric requirements for cathodic system to be powered from the existing electric utility located at the pump station. Cathodic protection system must be designed and installed by a licensed Cathodic Protection Specialist, QualCorr Engineering, Inc. A complete design submittal, operations and maintenance manuals, and warranty information shall be submitted to and approved by the Engineer prior to installation.

1.16 ROOF ACCESS HATCH AND RISER—BID ALTERNATE ITEM BA1

- A. Roof access hatch and riser Bid Alternate Item will not be measured for payment.
- B. Payment for this Bid Alternate Item will be made at the lump-sum price in the Bid Form, which price shall include all costs for equipment, materials, incidentals, and labor to demolish and remove the existing roof access hatch and riser and fabrication and installation by welding a new carbon steel riser, and new S-50 30-inch by 36-inch aluminum roof access hatch as manufactured by Bilco. Bid item shall include inclusion of two threaded couplings welded to the steel riser for the hatch alarm electrical and SCADA wiring. Bid item shall also include relocation of existing unused Unistrut to be repurposed and installed by welding for alignment of new conduit to the access hatch. Steel riser and roof access hatch shop drawings, product information, material certificates, and warranty information must be submitted to and approved by the Engineer prior to installation.

1.17 CENTER COLUMN CAPITAL—BID ALTERNATE ITEM BA2

- A. Center column capital Bid Alternate Item will not be measured for payment.
- B. Payment for this Bid Alternate Item will be made at the lump-sum price in the Bid Form, which price shall include all costs for equipment, materials, incidentals, and labor to fabricate and install by welding new carbon steel open framing center column capital as shown on the drawings. Column capital shop drawings and material certificates must be submitted to and approved by the Engineer prior to installation.

1.18 DRAIN SUMP—BID ALTERNATE ITEM BA3

- A. Drain sump Bid Alternate Item will not be measured for payment.
- B. Payment for this Bid Alternate Item will be made at the lump-sum price in the Bid Form, which price shall include all costs for equipment, materials, incidentals, and labor to fabricate and install by welding new carbon steel drain sump as shown on the drawings. Drain sump material shop drawings and material certificates must be submitted to and approved by the Engineer prior to installation.

1.19 INTERIOR LADDER--BID ALTERNATE ITEM BA4

- A. Interior ladder Bid Alternate Item will not be measured for payment.
- B. Payment for this Bid Item will be made at the lump-sum price in the Bid Form, which price shall include all costs for equipment, materials, incidentals, and labor to demolish and remove the existing interior ladder and ladder supports. This Bid Item shall include all costs for equipment,

materials, incidentals, and labor to fabricate and install by welding a new interior vertical ladder and ladder supports as shown on the drawings. Ladder shop drawings, material certificates, product information, and warranty information must be submitted to and approved by the Engineer prior to installation.

1.20 EXTERIOR JOINT REPAIR—BID ALTERNATE ITEM BA5

- A. Exterior joint repair Bid Alternate Item will not be measurement for payment.
- B. Payment for this Bid Alternate Item will be made at the lump-sum price in the Bid Form, which price shall include all costs for equipment, materials, incidentals, and labor to remove existing vegetation and to surface prepare and install an approved exterior joint system for the existing water storage tank shell/floor chime/concrete ringwall joint as described in the contract documents. This line item shall also include concrete repair on the ringwall, as needed to provide a continuous concrete surface. Product information and installation and curing methods must be submitted to and approved by the Engineer prior to installation.

END OF SECTION

SECTION 01 31 00

PROJECT MEETINGS, SCHEDULES, AND REPORTS

PART 1 - GENERAL

1.01 COORDINATION

- A. Contractor shall:
 - 1. Coordinate Work of its own employees and subcontractors.
 - 2. Expedite Work to ensure compliance with schedules.
 - 3. Coordinate Work with that of other contractors through the Engineer.
 - 4. Coordinate Work on Public property with the agency having jurisdiction.

1.02 SUMMARY

- A. Contractor's superintendent and project manager shall schedule and administer weekly Contractor construction foremen's meetings with subcontractors and suppliers, and specially called meetings throughout progress of the Work, including preconstruction as specified herein. Contractor shall:
 - 1. Make physical arrangements for meetings.
 - 2. Preside at meetings.
 - 3. Record material delivery or manpower schedules that might adversely impact Project schedules; include significant proceedings and decisions of this meeting.
- B. Representatives of Contractor, subcontractors, and suppliers attending meetings shall be qualified and authorized to act on behalf of the entity each represents.
- C. Owner and Engineer will attend the meetings. At the Contractor's discretion and invitation, Owner and Engineer may attend other meetings scheduled by the Contractor.
- D. The Contractor shall prepare and report details of these meetings at the Progress Meetings with Engineer as detailed in Article 1.08 of this Section.

1.03 PRECONSTRUCTION CONFERENCE

- A. Schedule a meeting with the Owner and Engineer at least one week prior to accessing the property. Contractor to conduct a Preconstruction Conference in accordance with this Section. The Engineer may elect to schedule additional Preconstruction Conferences for specific Project tasks, if needed.

- B. Location: Project site or City of Craig, 300 W 4th Street, Craig, Colorado 81625, or field office supplied by Contractor.
- C. Attendance:
 - 1. Contractor's project manager.
 - 2. Contractor's resident superintendent.
 - 3. Contractor's safety representative(s).
 - 4. Subcontractors' or suppliers' representatives Contractor may desire to invite or Engineer may request.
 - 5. Engineer's representatives.
 - 6. Owner's representatives.
- D. General format includes:
 - 1. Project safety (see Article 1.05, herein).
 - 2. Presentation of preliminary progress schedule in accordance with EJCDC C-700 "Standard General Conditions of the Construction Contract" and preliminary schedule of Shop Drawing and sample submissions in accordance with Section 01 33 00, "Submittals".
 - 3. Check of required bonds and insurance policies prior to Notice to Proceed.
 - 4. Liquidated damages.
 - 5. Procedures for handling submittals such as substitutions and shop drawings.
 - 6. O&M submittal procedures.
 - 7. Direction of correspondence and coordinating responsibility.
 - 8. Weekly, biweekly, and monthly progress meetings.
 - 9. State Revolving Funding and Equal opportunity requirements.
 - 10. Laboratory and field testing requirements.
 - 11. Provisions for inventory of material stored on-site or off-site (if off-site storage is authorized).
 - 12. Schedule of values, application for progress payment, and progress payment procedures.
 - 13. Change Order procedures.
 - 14. Contractor's proposed Erosion Control Plan.

1.04 PROJECT SAFETY MEETING

- A. Representatives of the Contractor shall meet with the Owner and the Engineer prior to the start of the construction work under this Contract for the purpose of reviewing the Contractor's safety and health programs and discussing implementation of all safety and health provisions pertinent to the Work to be performed under this Contract.
- B. If directed by the Engineer, this meeting may be held in conjunction with other meetings that are scheduled to take place prior to start of Work under this Contract. The level of detail for the safety meeting is dependent upon the nature of the Work and the potential inherent hazards.
- C. The Contractor shall be prepared to discuss, in detail, the measures the Contractor intends to take in order to control any unsafe or unhealthy conditions associated with the Work to be performed under this Contract.
- D. The Contractor's principal onsite representative(s), the resident superintendent, and the safety representative(s) shall attend this meeting.

1.05 PROGRESS MEETINGS WITH ENGINEER AND OWNER

- A. In addition to other regular Project meetings for other purposes (as indicated elsewhere in the Contract Documents), attend biweekly general progress meetings. Meeting dates shall be established by the Engineer or the onsite Engineer's Representative. Require every entity then involved in the planning, coordination or performance of Work to be properly represented at each meeting. Include (when applicable):
 - 1. Consultants.
 - 2. Separate contractors (if any).
 - 3. Principal subcontractors.
 - 4. Suppliers/manufacturers/fabricators.
 - 5. Governing authorities.
 - 6. Insurers.
 - 7. Special supervisory personnel and others with an interest or expertise in the progress of the Work.
- B. Suggested format includes the following:
 - 1. Review each entity's present and future needs including interface requirements.
 - 2. Time, sequence.
 - 3. Deliveries.
 - 4. Access.

5. Site utilization.
 6. Temporary facilities and services.
 7. Hours of work.
 8. Hazards and risks.
 9. Construction site upkeep and housekeeping.
 10. Submittals.
 11. Change orders.
 12. Documentation of information for payment requests.
- C. Discuss whether each element of current Work is ahead of schedule. Determine how behind-time Work will be expedited and secure commitments from the entities involved in doing so. Discuss whether schedule revisions are required to ensure that current Work and subsequent Work will be completed within the Contract Time. Review everything of significance that could affect the progress of the Work.
- D. Within seven days after each progress meeting date, the Engineer will forward copies of the minutes-of-the-meeting to the Contractor.
- E. Immediately following each progress meeting where revisions to the Progress Schedule/Critical Path Schedule have been made or recognized (regardless of whether agreed to by each entity represented), revise the Schedule. Reissue revised Schedule within ten days after meeting.
- F. At intervals matching the preparation of payment requests, revise and reissue the Schedule to show actual progress of the Work in relation to the latest revision of the Schedule.
- 1.06 PRE-INSTALLATION MEETINGS:
- A. When required in individual Specification Sections, convene at site prior to commencing Work of that Section.
 - B. Require attendance of entities directly affecting, or affected by, Work of that Section.
 - C. Notify Engineer 10 days in advance of meeting date.
 - D. Provide suggested agenda to Engineer to include reviewing conditions of installation, preparation and installation or application procedures, and coordination with related Work and work of others.
- 1.07 FACILITY STARTUP MEETINGS:
- A. Schedule and attend a minimum of one facility startup meeting prior to facility startup, i.e., tank disinfection, leak testing, and Bac-T sampling.

- B. Agenda items shall include preliminary discussions regarding such plan, the content of the Facility Startup Plan, coordination needed between the various parties in attendance, and potential problems associated with the startup.
- C. Attendees shall include:
 - 1. Contractor.
 - 2. Contractor's designated quality control representative.
 - 3. Subcontractors and equipment manufacturer's representatives whom Contractor deems to be directly involved in the facility startup.
 - 4. Engineer and Engineer's representatives.
 - 5. Owner's operations and maintenance personnel.
 - 6. Pipeline Installation contractor (Contract 5) and Outlet Structures and Pipe contractor (Contract 7) and their subcontractor and equipment manufacturer representatives whom they deem to be directly involved in the facility startup.
 - 7. Others as required by the Contract Documents or as deemed necessary by the Contractor.

1.08 SCHEDULES AND REPORTS

- A. Initial Coordination Submittals:
 - 1. Within five days after the Notice to Proceed, the Contractor shall submit the following electronic copies to the Engineer:
 - a. A preliminary Work progress schedule.
 - b. A preliminary schedule of submittals complying with the requirements of Section 01 33 00.
- B. Work Progress Schedule:
 - 1. After submittal of the preliminary Work progress schedule at the preconstruction meeting, submit electronic copy to the Engineer and Owner. The revised Work progress schedule shall be submitted within five days after the preconstruction meeting. The Work progress schedule shall include details of the timing of specific Work activities to be completed and milestones for meeting the substantial completion date, and shall incorporate review comments and other feedback.
 - 2. The schedule shall show the Work in a graphic format suitable for displaying scheduled and actual progress.
 - a. Prepare schedules as a horizontal bar chart with separate bar for each major portion of the Work or operation.

- b. The schedule shall also show the Work broken down into major phases and key items with dates Work is expected to begin and be completed. Sequence of listings shall be in the chronological order of the start of each item of Work.
 - c. Scale and spacing shall allow space for notations and revisions.
 - d. Sheet size: 11 x 17 inches.
- 3. Provide sub-schedules to define critical portions of entire schedules.
- 4. Coordinate Work progress schedule with Work progress reports and delivery schedule.
- 5. Engineer will review and comment on Work progress schedule.
- 6. Contractor shall print and distribute copies of the schedule to Owner, Engineer, Suppliers, and other parties required to comply with scheduled dates.
- 7. Contractor shall not change the accepted Work progress schedule without prior concurrence of Engineer.
- 8. Contractor shall submit to Engineer an updated schedule tracking progress at least once monthly. Schedule shall show actual progress and any proposed accepted changes in the schedule of remaining Work. Owner reserves the right to hold progress payments for failure to provide the monthly updated schedule.

C. Work Progress Reports:

- 1. Contractor shall submit a bi-weekly report on actual Work progress. More frequent reports may be required should the Work fall behind the accepted schedule.
- 2. Work progress reports shall consist of marked copies of prints made from the accepted Work progress schedule and a narrative report that shall include but not be limited to the following:
 - a. A description of current and anticipated delaying factors, if any.
 - b. Impact of possible delaying factors.
 - c. Proposed corrective actions.
- 3. Should operations fall behind accepted schedule to an extent that completion of Work within the Contract Time appears doubtful, Contractor shall, at no change in Contract Price, take corrective action to get back on schedule.

PART 2 - PRODUCTS

(Not Used)

PART 3 - EXECUTION

(Not Used)

END OF SECTION

SECTION 01 33 00

SUBMITTALS

1.01 SHOP DRAWINGS

- A. Submit shop drawings in accordance with the General Conditions.
- B. The use of contract drawing reproductions for shop drawings is subject to rejection.
- C. Submit four copies of shop drawings. The Owner's Representative will keep two copies and return two copies. If the Contractor desires more than two copies, he shall transfer the Owner's Representative's comments onto additional copies at his own expense. Clearly indicate the equipment tag or identification number, specification section, and drawing number to which each shop drawing is referenced.
- D. If the Contractor submits shop drawings of equipment by manufacturers other than those listed in the specifications, provide the following information with the submittal:
 - 1. The name and address of at least three companies or agencies that are currently using the equipment.
 - 2. The name and telephone number of at least one person at each of the above companies or agencies whom the Owner's Representative may contact.
 - 3. A description of the equipment that was installed at the above locations. The description shall be in sufficient detail to allow the Owner's Representative to compare it with the equipment that is proposed to be installed in this project.
- E. For materials originating outside of the United States for which tests are required, provide recertification and retesting by an independent domestic testing laboratory.

1.02 SAMPLES

- A. Furnish samples of the various materials, together with the finish thereon, as specified for and intended to be used on or in the work. Send samples to the office of the Owner's Representative, carriage prepaid.
- B. Submit samples before purchasing, fabricating, applying, or installing such materials and finishes.
- C. Submit samples, other than field samples, in duplicate. A cover letter shall accompany the sample and shall list all items being transmitted, designating their particular usage and location in the project. One sample marked "Resubmittal Not Required" will be returned to the Contractor; rejected samples will not be returned.

- D. Samples shall be submitted and resubmitted until acceptable. Materials, finishes, and workmanship in the completed project shall be equal in every respect to that of the samples so submitted and accepted.
- E. Samples shall conform to materials, fixtures, equipment, surface textures, colors, etc., as required by drawings and specifications or as requested by the Owner's Representative.
- F. Identify sample as to product, color, manufacturer, trade name, lot, style, model, etc., location of use, and contract document reference, as well as the names of the Contractor, supplier, project, and Owner's Representative.
- G. Samples shall be 8 inches by 10 inches in size and shall be limited in thickness to a minimum consistent with sample presentation. In lieu thereof, submit the actual full-size item.
- H. Samples of value may be returned to the Contractor for use in the project after review, analysis, comparison, and/or testing as may be required by the Owner's Representative.
- I. Furnish one 8-inch by 10-inch sample of the finally reviewed materials, colors, or textures to the Owner's Representative for final record. Such material samples shall carry on the back all identification as previously described including, if paint sample, manufacturer, mix, proportion, name of color, building, Contractor, subcontractor, and surfaces to which applied.

1.03 SUBMITTAL REQUIREMENTS

- A. Make submittals promptly in such sequence as to cause no delay in the work. Schedule submission a minimum of 30 calendar days before reviewed submittals will be needed.
- B. Submittals shall contain:
 - 1. The date of submission and the dates of any previous submissions.
 - 2. The project title and number.
 - 3. Contract identification.
 - 4. The names of:
 - a. Contractor.
 - b. Supplier.
 - c. Manufacturer.
 - 5. Identification of the product, with the specification section number.
 - 6. Field dimensions, clearly identified as such.
 - 7. Relationship to adjacent or critical features of the work or materials.
 - 8. Identification of deviations from contract documents.

9. Identification of revisions on resubmittals.
10. A 5-inch by 5-inch blank space for stamps of the Owner's Representative.
11. Contractor's stamp, initialed or signed, shall certify Contractor's review of submittal, verification of products, field measurements and field construction criteria, and coordination of the information within the submittal that the product meets the requirements of the work and of the contract documents.

1.04 SUBMITTAL FORMAT

- A. Each submittal shall have a transmittal form. A sample transmittal form is included at the end of this section. Every page in a submittal shall be numbered in sequence. Each copy of a submittal shall be collated and stapled or bound, as appropriate. Copies not collated will be rejected.
- B. Where product data from a manufacturer is submitted, clearly mark which model is proposed, with all pertinent data, capacities, dimensions, clearances, diagrams, controls, connections, anchorage, and supports. Present a sufficient level of detail for assessment of compliance with the contract documents.
- C. Each submittal shall be assigned a unique number. Submittals shall be numbered sequentially. The submittal numbers shall be clearly noted on the transmittal. Original submittals shall be assigned a numeric submittal number. Resubmittals shall bear an alphanumeric system which consists of the number and specification section assigned to the original submittal for that item followed by a letter of the alphabet to represent that it is a subsequent submittal of the original. For example, if Submittal 25 03 05 00 requires a resubmittal, the first resubmittal will bear the designation "25-A" "03 05 00A" and the second resubmittal will bear the designation "25-B" "03 05 00B" and so on.
- D. Disorganized submittals that do not meet the requirements above will be returned without review.

1.05 RESUBMITTALS

Resubmittal of submittals will be reviewed and returned in the same review period as for the original submittal. It is considered reasonable that the Contractor shall make a complete and acceptable submittal by the second submission of a submittal item. The Owner's Representative reserves the right to withhold monies due to the Contractor to cover additional costs of any review beyond the second submittal.

1.06 CONTRACTOR'S JOBSITE DRAWINGS

Provide and maintain on the jobsite one complete set of prints of all drawings which form a part of the contract. Immediately after each portion of the work is installed, indicate all deviations from the original design shown in the drawings either by additional sketches or ink thereon. Upon completion of the job, deliver this record set to the Owner's Representative.

SUBMITTAL NO. _____

WESTERN WATER SOLUTIONS

ATTN: _____

ATTN: _____

PROJECT

WWS PROJECT NO.

OWNER PROJECT NO.

CONTRACTOR PROJECT NO.

ITEM NO.	COPIES	DESCRIPTION	PREVIOUS SUBMITTAL NO.	SPEC. SECTION NO.	PLAN SHEET NO.

SUBMITTED BY: _____

CONTRACTOR

DATE

SUBMITTAL RETURN (TO BE COMPLETED BY ENGINEER)

ITEM NO.	COPIES	RESUBMIT		COMMENTS
		YES	NO	

COPY:

RETURNED BY: _____

ENGINEER

DATE

END OF SECTION

SECTION 01 45 00

QUALITY REQUIREMENTS

PART 1 - GENERAL

1.01 DESCRIPTION

- A. This Section covers Quality Assurance and Control requirements for this Contract.
- B. The Contractor is responsible for controlling the quality of Work, including Work of its subcontractors and suppliers and for assuring the quality specified in these Contract Documents is achieved.

1.02 SUMMARY

- A. Section includes administrative and procedural requirements for quality assurance and quality control.
- B. Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with these Contract Document requirements.
 - 1. Specific quality-assurance and -control requirements for individual construction activities are specified in the Sections that specify those activities.
 - 2. Specified tests, inspections, and related actions do not limit Contractor's other quality-assurance and control procedures that facilitate compliance with these Contract Document requirements.
 - 3. The Contractor is not limited by the quality assurance and quality control requirements identified in these Contract Documents to provide the product(s) meeting the project requirements.

1.03 TOLERANCES

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

1.04 REFERENCES

- A. For products or workmanship specified by association, trades, or other consensus standards, comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes or these Specifications.

- B. Conform to reference standard by date of issue current on date of Contract Documents, or date specified in the individual Specification sections, except where a specific date is established by code.
- C. The contractual relationship, duties, and responsibilities of the parties in the Contract and those of the Engineer shall not be altered from the Contract Documents by mention or inference otherwise in any reference document.

1.05 DEFINITIONS

- A. Quality-Assurance Services: Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and substantiate that proposed construction will comply with requirements.
- B. Quality-Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that actual products incorporated into the Work and completed construction comply with requirements. Services do not include contract enforcement activities performed by Owner or Engineer
- C. Field Quality-Control Testing: Tests and inspections that are performed on-site for installation of the Work and for completed Work.
- D. Testing Agency: An entity engaged to perform specific tests, inspections, or both. Testing laboratory shall mean the same as testing agency.
- E. Installer/Applicator/Erector: Contractor or another entity engaged by Contractor as an employee, Subcontractor, or Sub-subcontractor, to perform a particular construction operation, including installation, erection, application, and similar operations.
- F. Use of trade-specific terminology in referring to a trade or entity does not require that certain construction activities be performed by accredited or unionized individuals, or that requirements specified apply exclusively to specific trade(s).
- G. Experienced: When used with an entity or individual, "experienced" means having successfully completed a minimum of five previous projects similar in nature, size, and extent to this Project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.

1.06 CONFLICTING REQUIREMENTS

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

appropriate, for the context of requirements. Refer uncertainties to Engineer for a decision before proceeding.

1.07 CONTRACTOR'S QUALITY-CONTROL PLAN

- A. Quality-Control Plan, General: Submit quality-control plan within 10 days of Notice of Award and not less than five days prior to preconstruction conference. Submit in format acceptable to Engineer. Identify personnel, procedures, controls, instructions, tests, records, and forms to be used to carry out Contractor's quality-control responsibilities. Coordinate with Contractor's construction schedule.
- B. Submittal Procedure: Describe procedures for ensuring compliance with requirements through review and management of submittal process. Indicate qualifications of personnel responsible for submittal review.
- C. Testing and Inspection: In quality-control plan, include a comprehensive schedule of Work requiring testing or inspection, including the following:
 - 1. Contractor-performed tests and inspections including subcontractor-performed tests and inspections. Include required tests and inspections and Contractor-elected tests and inspections.
 - 2. Owner-performed tests and inspections indicated in the Contract Documents.
- D. Continuous Inspection of Workmanship: Describe process for continuous inspection during construction to identify and correct deficiencies in workmanship in addition to testing and inspection specified. Indicate types of corrective actions to be required to bring work into compliance with standards of workmanship established by Contract requirements and accepted mockups.
- E. Monitoring and Documentation: Maintain testing and inspection reports including log of accepted and rejected results. Include work Engineer has indicated as nonconforming or defective. Indicate corrective actions taken to bring nonconforming work into compliance with requirements. Comply with requirements of authorities having jurisdiction.

1.08 REPORTS AND DOCUMENTS

- A. Test and Inspection Reports: Prepare and submit certified written reports specified in other Sections. Include the following:
 - 1. Date of issue.
 - 2. Project title and number.
 - 3. Name, address, and telephone number of testing agency.
 - 4. Dates and locations of samples and tests or inspections.
 - 5. Names of individuals making tests and inspections.

6. Description of the Work and test and inspection method.
 7. Identification of product and Specification Section.
 8. Complete test or inspection data.
 9. Test and inspection results and an interpretation of test results.
 10. Record of temperature and weather conditions at time of sample taking and testing and inspecting.
 11. Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.
 12. Name and signature of laboratory inspector.
 13. Recommendations on retesting and reinspecting.
- B. Permits, Licenses, and Certificates: For Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents, established for compliance with standards and regulations bearing on performance of the Work.

1.09 MATERIALS AND EQUIPMENT

- A. The Contractor shall comply with manufacturer's printed instructions for contractor supplied and owner furnished materials, regarding all facets of materials and/or equipment movement, storage, installation, testing, startup, and operation. Should circumstances occur where the contract documents are more stringent than the manufacturer's printed instructions, the Contractor shall comply with the specifications. In cases where the manufacturer's printed instructions are more stringent than the contract documents, the Contractor shall advise the Engineer of the disparity and conform to the manufacturer's printed instructions. In either case, the Contractor is to apply the more stringent specification or recommendation, unless accepted otherwise by the Engineer.

1.10 QUALITY CONTROL

- A. Owner Responsibilities: Where quality-control services are indicated as Owner's responsibility, Owner will engage a qualified testing agency to perform these services.
1. Owner will furnish Contractor with names, addresses, and telephone numbers of testing agencies engaged and a description of types of testing and inspecting they are engaged to perform.
 2. The Contractor shall furnish a construction schedule and a minimum of 48 hour notice of readiness for testing and inspection of the work. The Engineer shall determine the exact time and location of field sampling and testing, and may require such additional sampling and testing to determine that materials and equipment conform with data previously furnished by Contractor and with the Contract Documents.

3. The Contractor shall schedule the work to permit adequate time for testing and re-testing should test results not conform to the contract documents. Lack of testing or inspection which is attributable to insufficient notice by the Contractor or failure of the Contractor to cooperate, will be cause for rejection of the work.
 4. The Contractor shall deliver materials in sufficient quantities to the Owner's testing agency as may be required. Laboratory testing shall be performed within a reasonable time, consistent with the specified standards.
 5. The Contractor shall furnish material samples and cooperate in the field sampling and testing activities, interrupting the work when necessary. The Contractor shall furnish personnel, facilities and access to assist in the sampling and testing activities.
 6. Costs for retesting and reinspecting construction that replaces or is necessitated by work that failed to comply with the Contract Documents will be charged to Contractor.
- B. Contractor Responsibilities: Tests and inspections not explicitly assigned to Owner are Contractor's responsibility. Perform additional quality-control activities required to verify that the Work complies with requirements, whether specified or not.
1. Unless otherwise indicated, provide quality-control services specified and those required by authorities having jurisdiction. Perform quality-control services required of Contractor by authorities having jurisdiction, whether specified or not.
 2. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce Work of specified quality.
 3. Comply with manufacturers' instructions, including each step in sequence.
 4. When manufacturers' instructions conflict with Contract Documents, request clarification from Engineer before proceeding.
 5. Comply with specified standards as minimum quality for the Work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
 6. Perform Work by persons qualified to produce required and specified quality.
 7. Verify field measurements are as indicated on Shop Drawings or as instructed by manufacturer.
 8. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, or disfigurement.
 9. (NTS: Retain first subparagraph below if some Specification Sections require an independent testing agency to perform certain tests and inspections.)
 10. Where services are indicated as Contractor's responsibility, engage a qualified testing agency to perform these quality-control services.

- a. Contractor shall not employ same entity engaged by Owner, unless agreed to in writing by Owner.
- 11. Notify testing agencies at least 24 <Insert number> hours in advance of time when Work that requires testing or inspecting will be performed.
- 12. Where quality-control services are indicated as Contractor's responsibility, submit a certified written report, in duplicate, of each quality-control service.
- 13. Testing and inspecting requested by Contractor and not required by the Contract Documents are Contractor's responsibility.
- 14. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.
- C. Manufacturer's Field Services: Where indicated, engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including service connections. Report results in writing as specified in Division 01 Section "Submittals."
- D. Manufacturer's Technical Services: Where indicated, engage a manufacturer's technical representative to observe and inspect the Work. Manufacturer's technical representative's services include participation in preinstallation conferences, examination of substrates and conditions, verification of materials, observation of Contractor activities, inspection of completed portions of the Work, and submittal of written reports.
- E. Retesting/Reinspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and reinspecting, for construction that replaced Work that failed to comply with the Contract Documents.
- F. Testing Agency Responsibilities: Cooperate with Owner, Engineer, and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.
 - 1. Notify Engineer and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
 - 2. Determine the location from which test samples will be taken and in which in-situ tests are conducted.
 - 3. Conduct and interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from requirements.
 - 4. Submit a certified written report, in duplicate, of each test, inspection, and similar quality-control service through Contractor.
 - 5. Do not release, revoke, alter, or increase the Contract Document requirements or approve or accept any portion of the Work.
 - 6. Do not perform any duties of Contractor.

- G. Associated Services: Cooperate with agencies performing required tests, inspections, and similar quality-control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:
1. Access to the Work.
 2. Incidental labor and facilities necessary to facilitate tests and inspections.
 3. Adequate quantities of representative samples of materials that require testing and inspecting. Assist agency in obtaining samples.
 4. Facilities for storage and field curing of test samples.
 5. Delivery of samples to testing agencies.
 6. Preliminary design mix proposed for use for material mixes that require control by testing agency.
 7. Security and protection for samples and for testing and inspecting equipment at Project site.
- H. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and -control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.
- I. Schedule times for tests, inspections, obtaining samples, and similar activities.
- J. Schedule of Tests and Inspections: Prepare a schedule of tests, inspections, and similar quality-control services required by the Contract Documents as a component of Contractor's quality-control plan. Coordinate and submit concurrently with Contractor's construction schedule. Update as the Work progresses.
1. Distribution: Distribute schedule to Owner, Engineer, testing agencies, and each party involved in performance of portions of the Work where tests and inspections are required.

PART 2 - PRODUCTS

(Not Used)

PART 3 - EXECUTION

3.01 QUALITY CONTROL

- A. Quality control is the responsibility of the Contractor, and the Contractor shall maintain control over construction and installation processes to assure compliance with specified requirements.

- B. Means and methods of construction and installation processes are the responsibility of the Contractor, and at no time is it the intent of the Engineer to supersede or void that responsibility.

3.02 TEST AND INSPECTION LOG:

- A. Test and Inspection Log: Prepare a record of tests and inspections. Include the following:
 - 1. Date test or inspection was conducted.
 - 2. Description of the Work tested or inspected.
 - 3. Date test or inspection results were transmitted to Engineer.
 - 4. Identification of testing agency or special inspector conducting test or inspection.
- B. Maintain log at Project site. Post changes and revisions as they occur. Provide access to test and inspection log for Engineer's reference during normal working hours.

3.03 REPAIR AND PROTECTION

- A. General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.
 - 1. Provide materials and comply with installation requirements specified in other Specification Sections or matching existing substrates and finishes.
 - 2. Restore patched areas and extend restoration into adjoining areas with durable seams that are as invisible as possible.
- B. Protect construction exposed by or for quality-control service activities.
- C. Repair and protection are the Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

END OF SECTION

SECTION 01 45 35

STATEMENT OF SPECIAL INSPECTIONS

PART 1 - GENERAL

1.01 SCOPE OF WORK

- A. This Section outlines the responsibilities and requirements for special inspections and structural testing outlined by Chapter 17 of the International Building Code (IBC).
- B. The Owner or Registered Design Professional in Responsible Charge, acting as the Owner's agent (Engineer), shall employ one or more Special Inspectors to provide inspections during construction on the types of work listed directly within or referenced by this Section.
- C. Material testing requirements are included in the individual materials specifications.
- D. Related Work specified elsewhere:
 - 1. Submittals are included in Section 01 33 00.
 - 2. Metals are included in Division 5.
 - 3. Tank surface preparation and coatings are included in Division 9.

1.02 REFERENCES

- A. International Code Council (ICC):
 - 1. International Building Code – 2018 Edition.

1.03 RESPONSIBILITIES FOR SPECIAL INSPECTIONS

- A. Owner's responsibility:
 - 1. Except as noted, the Engineer, Owner or a Registered Design Professional in Responsible Charge, acting as the Owner's agent, shall employ one or more Special Inspectors to provide inspections during construction on the types of work listed directly within or referenced by this Section.
 - 2. Here after the Registered Design Professional in Responsible Charge acting as the Owner's agent is referred to as the Engineer.
- B. Special Inspector's responsibilities:
 - 1. Special Inspector shall be qualified to perform the inspections listed.

2. The Special Inspector shall be independent of the Contractor whose work is to be inspected or tested. Any conflicts of interest must be disclosed to the Engineer and Building Department prior to commencing work.
3. The Special Inspector shall promptly review the laboratory test reports of all material testing. Test reports indicating deficient, or potentially deficient, materials or workmanship shall be reported to the Engineer within 48 hours.
4. Special Inspector shall perform their work efficiently, making an effort not to unreasonably delay the work.
5. Reporting: The Special Inspector shall:
 - a. Keep records of all inspections.
 - b. Immediately bring any non-conformities to the attention of the Contractor and the Engineer.
 - c. If non-conformities are not corrected, notify the Engineer within 24 hours.
 - d. Maintain a daily log noting, as a minimum, weather and job conditions, material testing, job progress, work locations, and observations from the day's inspections. Once a week submit an assembled copy of the handwritten daily logs to the Engineer.
 - e. Submit a weekly summary report to the Engineer and provide copies to the Building Department if requested.
 - f. Upon completion of the Work, the Special Inspector shall submit a signed Final Report of Special Inspections to the Engineer, which documents completion of all required Special Inspections, correction of any non-conformities, and stating whether, to the best of his/her knowledge, the work was accomplished in conformance with the contract documents. This report shall be prepared and submitted within two weeks of the final inspection.

C. Contractor's responsibilities:

1. Contractor shall aid the Special Inspector in performing their duties, including, but not limited to:
 - a. Notify the Engineer and Special Inspector a minimum of 48 hours prior to required inspections. If work is delayed, notify Special Inspector as soon as possible. Contractor shall compensate Owner for additional Special Inspection costs resulting from failure to notify Special Inspector of delays 24 hours in advance more than four times in any one month period.
 - b. Provide Special Inspector access to the site and area of interest, including ladders, scaffolding, lifts, and all necessary appurtenances.
 - c. Provide Special Inspector with materials for required samples, and incidental labor.

2. Inspection does not relieve the Contractor from responsibility to perform the Work in accordance with the Contract Documents.
3. Job site safety and means and methods of construction are the responsibility of the Contractor.
4. The Contractor is responsible for, and shall bear the cost of, correcting work which does not conform to the requirements of the Contract Documents.
 - a. Additional testing may be performed at the Contractor's expense.
 - b. Contractor shall secure Engineer's written approval of any proposed corrective action.
 - c. Additional testing for the Contractor's convenience may be performed at the Contractor's expense.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.01 INSPECTIONS

- A. The following Special Inspection forms comprise the Statement of Special Inspections deemed applicable to this Project, by the Structural Engineer of Record.
- B. Perform inspections indicated on the Statement of Special Inspections.
- C. Perform additional testing and inspections required for specific items, as noted in the corresponding Sections of these Specifications.

3.02 LIST OF STATEMENT OF SPECIAL INSPECTION FORMS

- A. General Statement of Special Inspection
- B. Form A: Schedule of Special Inspection Services Responsibility
- C. Form B: Verification and Inspection of Soils
- D. Form C: Verification and Inspection of Concrete Construction

GENERAL: STATEMENT OF SPECIAL INSPECTION

Project Name: Water Storage Tank Rehabilitation

Owner: City of Craig
300 W 4th Street
Craig, Colorado 81625
Attention: Carl Ray, (970)-826-2022

Engineer: Western Water Solutions
PO Box 3741
Basalt, Colorado 81621
Attention: Theresa Weidmann (970)-964-7206

This *Statement of Special Inspections* is submitted in accordance with the International Building Code. It includes a Schedule of Special Inspection Services applicable to this project as well as the name of the Special Inspector and the identity of other agencies intended to be retained for conducting these inspections.

Prepared by:

_____	_____	_____
Name (Printed)	Signature	Date

Title		

Owner's Authorization:

_____	_____	_____
Name (Printed)	Signature	Date

Title		

Building Official's Acceptance:

_____	_____	_____
Name (Printed)	Signature	Date

Title		

Form A: Schedule of Special Inspection Services Responsibility

Inspection Agent Phone & email	Firm Address	Area(s) of Expertise e.g. Concrete, Soils, etc.
1. Special Inspector		
2. Inspector		
3. Inspector		
4. Inspector		
5. Testing Laboratory		
6. Testing Laboratory		
7. Testing Laboratory		
8. Other		
9. Other		

Form B: Verification and Inspection of Steel Construction

Item and Scope	Minimum Frequency	Agent Number and Req'd Qualifications (if applicable)
1. Verify identification markings on bolts, nuts, washers, and anchor rods indicate fasteners conform to ASTM standards specified.	Prior to installing fasteners.	# _____
2. Inspection of high-strength bolts:	Refer to Specification 05 05 20	--
a. Bearing-type connections.	Visually inspect all connections before they are concealed by subsequent work.	# _____
b. Post Tensioning Anchor assembly.	Visually inspect all portions of the anchor assembly before they are concealed by subsequent work.	# _____
c. Material verification of structural steel.	Inspect all members and assemblies prior to concealing.	# _____

END OF SECTION

SECTION 01 74 10

CLEANING DURING CONSTRUCTION AND FINAL CLEANING

1.01 GENERAL

- A. This section includes cleaning during construction and final cleaning on completion of the work.
- B. At all times maintain areas covered by the contract and adjacent properties and public access roads free from accumulations of waste, debris, and rubbish caused by construction operations.
- C. Conduct cleaning and disposal operations to comply with local ordinances and antipollution laws. Do not burn or bury rubbish or waste materials on project site. Do not dispose of volatile wastes, such as mineral spirits, oil, or paint thinner, in storm or sanitary drains. Do not dispose of wastes into streams or waterways.
- D. Use only cleaning materials recommended by manufacturer of surface to be cleaned.

1.02 CLEANING DURING CONSTRUCTION

- A. During execution of work, clean site, adjacent properties, and public access roads and dispose of waste materials, debris, and rubbish to assure that buildings, grounds, and public properties are maintained free from accumulations of waste materials and rubbish.
- B. Wet down dry materials and rubbish to lay dust and prevent blowing dust.
- C. Provide containers for collection and disposal of waste materials, debris, and rubbish.
- D. Cover or wet excavated material leaving and arriving at the site to prevent blowing dust. Clean the public access roads to the site of any material falling from the haul trucks.

1.03 FINAL CLEANING

- A. At the completion of work and immediately prior to final inspection, clean the entire project site as follows.
- B. Clean, sweep, wash, and polish all work and equipment including finishes.
- C. Remove grease, dust, dirt, stains, labels, fingerprints, and other foreign materials from sight-exposed interior and exterior finished surfaces; polish surfaces.
- D. Repair, patch, and touch up marred surfaces to match adjacent surfaces.
- E. Broom clean paved surfaces; rake clean landscaped areas.
- F. Remove from the site temporary structures and materials, equipment, and appurtenances not required as a part of, or appurtenant to, the completed work.

END OF SECTION

SECTION 01 78 23

OPERATION AND MAINTENANCE MANUALS

1.01 GENERAL

Submit two copies of all manufacturer's operation and maintenance manuals and data pertinent to equipment supplied for the project. Prepare and organize the material in three-ring binders with divider tabs and labels. Include a table of contents. Include a CD of all catalog data in pdf format and all drawings in both pdf and CADD formats. All pdf files shall be formatted to allow word search.

1.02 SUBMITTALS

A. Submittals shall include:

1. List of equipment furnished for project with name, address, and telephone number of each vendor.
2. List of serial numbers of equipment furnished.
3. A copy of shop drawings for mechanical, electrical, and instrument equipment in final form.
4. Manufacturer's operation and maintenance instructions and parts lists.
5. Tabulation of motor nameplate horsepower, nameplate current, field-measured current, overload relay setting, and catalog number for polyphase motors.
6. List of fuses, lamps, seals, and other expendable equipment and devices. Specify size, type, and ordering description. List name, address, e-mail address, website address, fax number, and telephone number of vendor.

B. Provide manuals for each piece of equipment including individual components and subsystems of complete assemblies. Line out nonapplicable text and illustrations. The section of the manual on operation shall describe the functions and limitations of each component and its relationship to the system of which it is a part. Where several models, options, or styles are described, the manual shall identify the items actually provided.

C. Each manual shall contain the following:

1. Manufacturer's identification, including order number, model, and serial number.
2. Blue line prints or reviewed shop drawings and diagrams of all systems, including temperature control system.
3. Certified equipment drawings or reviewed shop drawing data clearly marked for equipment furnished.

4. Complete operating and maintenance instructions for each and every item of equipment, setting forth in detail and step-by-step the procedure for starting, stopping, operating, and maintaining the entire system as installed. Include a schedule of recommended maintenance intervals.
 5. Complete parts list of replaceable parts, their part numbers, and the name and address of their nearest vendor.
 6. A complete valve tag list including the name and function of the pipe in which the valve is mounted.
 7. Any special emergency operating instruction and a list of service organizations (including addresses and telephone numbers) capable of rendering emergency service to the various parts of the system.
 8. Copy of manufacturer's equipment guarantees and warranties.
- D. Brochures shall be loose leaf with durable plastic or fiberboard covers. Each sheet shall be reinforced to prevent tearing from continued use, and each brochure shall have the following information clearly printed on its cover:
1. Project name, name of Owner, and address.
 2. Name and address of Owner's Representative.
 3. Name and addresses of contractors and subcontractors and department to contact.
 4. Telephone number of contractors, including night and emergency numbers.
 5. Major equipment vendors' names and telephone numbers.
- E. Operation and maintenance manuals specified herein are in addition to any operation, maintenance, or installation instructions required by the Contractor to install, test, and start up equipment.

1.03 EQUIPMENT DATA SHEETS

Provide two sets of equipment data sheets, bound in three-ring binders, summarizing the equipment manufacturer's maintenance instructions and recommendations.

Preventive Maintenance and Operating Requirement Sheets

Preventive Maintenance Program		Equipment Record Number	
EQUIPMENT DESCRIPTION		ELECTRICAL OR MECHANICAL DATA	
Name:		Size:	
Serial No.:		Model:	
Vendor:			
Vendor Address:		Type:	
		Mfr.:	
Vendor Rep:		Voltage:	Amps:
Phone:		Phase:	rpm:
Maintenance Work to be Done			Frequency*
OPERATING REQUIREMENTS AND REFERENCE			

*D - Daily; W - Weekly; B - Biweekly; M - Monthly; Q - Quarterly;
S - Semiannually; A - Annually.

END OF SECTION

DIVISION 05

METALS

SECTION 05 05 20

BOLTS, WASHERS, ANCHORS, AND EYEBOLTS

PART 1 - GENERAL

1.01 DESCRIPTION

- A. This section describes materials and installation of anchor bolts, connecting bolts, washers, drilled anchors, epoxy anchors, screw anchors, eyebolts, and stainless-steel fasteners.

1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Miscellaneous Structural Steel and Aluminum: 05 12 10
- B. Ladders: 05 51 00
- C. Handrails: 05 52 00
- D. Access Hatches: 05 53 00

1.03 DESIGN CRITERIA

- A. Structural Connections: AISC Specification for Structural Steel Buildings (latest edition), except connection details are shown in the contract drawings.

1.04 SUBMITTALS

- A. Submit shop drawings in accordance with the General Conditions and Section 01 33 00.
- B. Submit manufacturer's catalog data and ICC reports for bolts, washers, and concrete anchors. Show dimensions and reference materials of construction by ASTM designation and grade.

PART 2 - MATERIALS

2.01 ANCHOR BOLTS

- A. Steel anchor bolts shall conform to ASTM A307, Grade A, B, or C, which are intended for use as follows:
 - 1. Grade A Bolts and studs having a minimum tensile strength of 60 ksi (414 MPa) and intended for general applications.
 - 2. Grade B Bolts and studs having a tensile strength of 60 to 100 ksi (414 to 690 MPa) and intended for flanged joints in piping systems with cast iron flanges.

3. Grade C Nonheaded anchor bolts, either bent or straight, having properties conforming to ASTM A36 (tensile strength of 58 to 80 ksi [400 to 550 MPa]) and intended for structural anchorage purposes.

2.02 CONNECTION BOLTS

- A. Steel connection bolts shall conform to ASTM F3125 per the AISC handbook.
- B. Provide galvanized bolts where shown in drawings. Galvanizing of bolts, nuts, and washers shall be in accordance with ASTM F2329.

2.03 STAINLESS STEEL BOLTS

- A. Stainless steel bolts shall be ASTM F593, Type 316. Nuts shall be ASTM F594, Type 316. Use ASTM F594 nuts with ASTM F593 bolts. Provide washer for each nut and bolthead. Washers shall be of the same material as the nuts.

2.04 LUBRICANT FOR STAINLESS STEEL BOLTS AND NUTS

- A. Lubricant shall be chloride free and shall be RAMCO TG-50, Anti-Seize by RAMCO, Specialty Lubricants Corporation Husky™ Lube O'Seal, or equal.

2.05 HARDENED STEEL WASHERS

- A. Washers for American Standard beams and channels shall be square or rectangular, tapered in thickness, smooth, and conforming to ASTM F436.

2.06 PLAIN UNHARDENED STEEL AND STAINLESS-STEEL WASHERS

- A. Washers shall comply with ASTM F844. Stainless steel washers shall be Type 316. Provide clipped washers where space limitations necessitate.

2.07 DRILLED ANCHORS

- A. Unless otherwise indicated in the drawings, drilled anchors shall be Type 316 stainless steel wedge anchors as manufactured by ITW Ramset/Redhead, Kwik Bolt TZ by Hilti, or equal. Anchors shall have ICC-approved testing.

2.08 EPOXY ANCHORS

- A. Epoxy anchors in concrete shall be Type 316 stainless steel threaded rod adhesive anchors. Adhesive shall be Hilti HIT RE 500-V3, Simpson SET-XP, or equal. Epoxy anchor assemblies shall be ICC approved.

2.09 SCREW ANCHORS

- A. Screw anchors shall be Titen HD screw anchors by Simpson, HUS-H by Hilti, or equal.

2.10 EMBEDDED EYEBOLTS

- A. Eyebolts shall be of the welded-eye or forged type, per ASTM F2329 Type 316 stainless steel.

PART 3 - EXECUTION

3.01 STORAGE OF MATERIALS

- A. Store material, either plain or fabricated, above ground on platforms, skids, or other supports. Keep material free from dirt, grease, and other foreign matter and protect from corrosion.

3.02 GALVANIZING

- A. Zinc coating for bolts, anchor bolts, and threaded parts shall be in accordance with ASTM F2329.

3.03 INSTALLING CONNECTION BOLTS

- A. Use steel bolts to connect structural steel members. Use stainless steel bolts to connect structural aluminum members.
- B. Install washers per AISC Specification for ASD.
- C. Bolt holes in structural members shall be 1/16 inch in diameter larger than bolt size. Measure cast-in-place bolt locations in the field before drilling companion holes in structural steel beam or assembly.
- D. Slotted holes, if required in the drawings, shall conform to AISC Specifications, Chapter J, Section J3, Table J3.1.

3.04 INSTALLING ANCHOR BOLTS

- A. Preset bolts and anchors by the use of templates. For mechanical equipment (pumps, compressors, and blowers), do not use concrete anchors set in holes drilled in the concrete after the concrete is placed.
- B. For static items (storage tanks), use preset epoxy anchors with ICC report data.
- C. After anchor bolts have been embedded, protect projecting threads by applying grease and having the nuts installed until the time of installation of the equipment or metalwork.
- D. Minimum depth of embedment of drilled mechanical anchors shall be as recommended by the manufacturer, but no less than that shown in the drawings.
- E. Minimum depth of embedment of epoxy anchors shall be as recommended by the manufacturer, but no less than that shown in the drawings.
- F. Prepare holes for drilled and epoxy anchors in accordance with the anchor manufacturer's recommendations prior to installation.

3.05 INSTALLATION OF STAINLESS STEEL BOLTS AND NUTS

- A. Prior to assembly, coat threaded portions of stainless steel bolts and nuts with lubricant.

END OF SECTION

SECTION 05 05 23

WELDING

PART 1 GENERAL

1.01 SCOPE OF WORK

- A. Furnish labor, materials, equipment and other items necessary to properly perform the welding identified in the contract drawings and specified herein.

1.02 RELATED WORK

- A. Miscellaneous Structural Steel and Aluminum: 05 12 10
- B. Ladders: 05 51 00
- C. Handrails: 05 52 00
- D. Access Hatches: 05 53 00

1.03 REFERENCE STANDARDS

- A. American Society of Mechanical Engineers (ASME):
 - 1. BPVC SEC V and SEC IX, Nondestructive Examination.
- B. American Society of Nondestructive Testing (ASNT):
 - 1. SNT-TC-1A, Personnel Qualification and Certification in Nondestructive Testing.
- C. American Society for Testing and Materials (ASTM):
 - 1. A370: Standard Test Methods and Definitions for Mechanical Testing of Steel Products.
- D. American Welding Society (AWS):
 - 1. A2.4: Standard Symbols for Welding, Brazing, and Nondestructive Examination.
 - 2. A3.0: Standard Welding Terms and Definitions; Including Terms for Adhesive Bonding, Brazing, Soldering, Thermal Cutting and Thermal spraying.
 - 3. D1.1/D1.1M: Structural Welding Code – Steel.
 - 4. D1.2/D1.2M: Structural Welding Code – Aluminum.
 - 5. D1.3/D1.3M: Structural Welding Code – Sheet Steel.

6. D1.4/D1.4M: Structural Welding Code – Reinforcing Steel.
7. D1.6/D1.6M: Structural Welding Code – Stainless Steel.
8. QC1: Standards for AWS Certification of Welding Inspectors.

1.04 DEFINITIONS

- A. CJP: Complete Joint Penetration.
- B. CWI: Certified Welding Inspector.
- C. MT: Magnetic Particle Testing.
- D. NDE: Nondestructive Examination.
- E. NDT: Nondestructive Testing.
- F. PJP: Partial Joint Penetration.
- G. PQR: Procedure Qualification Record.
- H. PT: Liquid Penetrant Testing.
- I. RT: Radiographic Testing.
- J. UT: Ultrasonic Testing.
- K. VT: Visual Testing.
- L. WPQ: Welder/Welding Operator Performance Qualification.
- M. WPS: Welding Procedure Specification.

1.05 SUBMITTALS

- A. Shop Drawings:
 1. Shop and field WPSs, PQRs, and WPQs.
 2. NDT procedure specifications prepared in accordance with ASME BVPC SEC V.
 3. Welding Data (Shop and Field):
 - a. Show on Shop Drawings or a weld map complete information regarding base metal specification designation, location, type, size, and extent of welds with reference called out for WPS and NDE numbers in tails of combined welding and NDE symbols as indicated in AWS A2.4.
 - b. Distinguish between shop and field welds.

- c. Indicate, by welding symbols or sketches, details of welded joints and preparation of base metal. Provide complete joint welding details showing bevels, groove angles, and root opening for welds.
- d. For pipe fittings, provide a joint weld beveling diagram.
- e. Welding and NDE symbols shall be in accordance with AWS A2.4.
- f. Welding terms and definitions shall be in accordance with AWS A3.0.
- g. Submit welding data together with shop drawings as a complete package.

B. Informational Submittals:

- 1. CWI credentials.
- 2. Testing agency personnel credentials.
- 3. CWI reports.
- 4. WPQs.
- 5. WPSs.
- 6. Field welding map including welder identification and delineation of welds they installed.
- 7. Other Welding Documentation: Submit on appropriate forms in referenced welding codes.

1.06 PRE-WORK CONFERENCE

A. Required meeting attendees:

- 1. Contractor.
- 2. Contractor's CWI.
- 3. Fabricator's lead Certified welder or Quality Control Representative (for shop welds).
- 4. Contractor's lead Certified Welder (for field welds).
- 5. Engineer's representative.
- 6. Owner's representative (optional).

B. Contractor shall schedule and conduct the pre-work conference prior to performing any of the welding identified in the contract drawings. Notify Engineer of location and time.

- C. As a minimum the Contractor shall have approved versions of all submittals required by Part 1.05, with the exception of 1.05.B, item 3 and 6, prior to holding the Pre-Work Conference.
- D. The following minimum topics shall be covered by the Contractor during the Pre-Work Conference.
 - 1. Current Project and 4-Week Look Ahead Schedule, including specific dates and details for fabrication and welding activities
 - 2. Discuss role of CWI for shop and field welding (where applicable).
 - 3. Shop and field weld testing requirements (where applicable).
 - 4. Criteria for acceptance or rejection of welds.
 - 5. Procedures for removal and replacement of rejected welds.
 - 6. Procedures for testing replacement welds.
 - 7. Adjustments to weld inspection and testing as a result of rejected welds.
 - 8. Procedures for maintaining and recording test results.
 - 9. Other specified requirements requiring coordination.

1.07 QUALIFICATIONS

- A. WPSs: In accordance with AWS D1.1/D1.1M (Annex E Forms); ASME BPVC SEC IX (Forms QW 482 and QW 483) for welded steel pipe and fittings.
- B. WPQs: In accordance with AWS D1.1/D1.1M (Annex E Forms); ASME BPVC SEC IX (Forms QW 484 and QW 483) for welded steel pipe and fittings.
- C. CWI: Certified in accordance with AWS QC1, and having prior experience with the welding codes specified. Alternate welding inspector qualifications require approval by the Owner or Engineer.
- D. Testing Agency: Personnel performing tests shall be NDT Level II certified in accordance with ANST SNT-TC-1A.

1.08 SEQUENCING AND SCHEDULING

- A. Unless otherwise specified, all Submittals required in this section shall be submitted and approved prior to commencement of welding operations.

PART 2 - PRODUCTS

2.01 WELDING:

- A. Class E70XX electrodes in conformance with AWS A5.1.
- B. Provide equipment for welding, electrodes, welding wire and fluxes capable of producing indicated welds when used by certified welders under AWS welding procedures. Provide welding materials that comply with requirements of AWS Structural Welding Code.

2.02 SOURCE QUALITY CONTROL

- A. CWI shall be present whenever shop welding is performed. CWI shall perform inspection prior to assembly, during assembly, during welding, and after welding. CWI shall perform inspections as required in AWS D1.1/D1.1M or referenced welding code and as follows:
 - 1. Verify conformance of specified job material and proper storage.
 - 2. Monitor conformance with approved WPS.
 - 3. Monitor conformance of WPQ.
 - 4. Inspect weld joint fit-up and perform in-process inspection.
 - 5. Provide 100 percent visual inspection of welds.
 - 6. Supervise nondestructive testing personnel and evaluate test results.
 - 7. Maintain records and prepare report confirming results of inspection and testing comply with the Work.

PART 3 – EXECUTION

3.01 GENERAL

- A. Welding and Fabrication by Welding: Conform to governing welding codes referenced in attached Welding and Nondestructive Testing Table.
- B. For welding of carbon steel conform to codes for arc and gas welding in building construction of AWS and to AISC Specifications. Surfaces to be welded shall be free from loose scale, rust, grease, paint, and other foreign material, except mill scale that will withstand vigorous wire brushing may remain. Perform no welding when base metal is lower than 0 degrees F.
- C. Qualify welding operators in accordance with AWS D1.1. Qualification tests shall be run by a recognized testing laboratory acceptable to the Engineer at Contractor's expense.

3.02 NONDESTRUCTIVE WELD TESTING REQUIREMENTS

- A. The Contractor shall hire an AWS Certified Welding Inspector (CWI) to perform weld inspections as noted in IBC table 1704.3, Item 4 and 5, as well as those items noted in this Specification.
- B. Weld Inspection Criteria:
 - 1. NDT shall be performed on field welds identified by the CWI, and these Documents.
 - 2. Unless otherwise specified, perform NDT of welds at a frequency as shown below or in the attached table in accordance with the referenced welding codes as follows. In case there is a conflict the higher frequency level of NDT shall apply:
 - a. Groove Welds at column butt joints: 1 RT test for each day and each welder. If any joints do not pass, test 100 percent of the column butt joint welds. RT test procedures shall be in accordance with AWS D1.1/D1.1M, Section 6.17.
 - b. Fillet Welds: NDT as identified by CWI.
 - c. All Welds: 100 percent VT.
 - d. Weld Acceptance:
 - a) VT:
 - i. Structural Piping and Tubing: ASWD1.1/D1.1M, Paragraph 6.9, Visual Inspection, Tubular Connections.
 - ii. All Other Structural Steel: AWS D1.1/D1.1M, Paragraph 6.9, Visual Inspection, Statically Loaded Nontubular Connections.
 - b) RT:
 - i. Statically Loaded, Non-Tubular: AWS D1.1/D1.1M, Paragraph 6.12.1.
 - ii. Cyclically Loaded, Non-Tubular: AWS D1.1/D1.1M, Paragraph 6.12.2.
 - iii. Tubular Sections: AWS D1.1/D1.1M, Paragraph 6.12.3.

3.03 FIELD QUALITY CONTROL

- A. The CWI shall be present whenever field welding is performed. The CWI shall perform inspection prior to assembly, during assembly, during welding, and after welding. CWI shall perform inspections as required in AWS D1.1/D1.1M or referenced welding code and as follows:
 - 1. Verify conformance of specified job material and proper storage.

2. Monitor conformance with approved WPS.
3. Monitor conformance of WPQ.
4. Inspect weld joint fit-up and perform in-process inspection.
5. Provide 100 percent visual inspection of all welds.
6. Supervise nondestructive testing personnel and evaluate test results.
7. Maintain records and prepare report confirming results of inspection and testing comply with the Work.

3.04 TESTS AND INSPECTIONS

- A. Certified Welding Inspector's services will be provided by the Contractor, as required by this Specification.
- B. Repair and retest rejectable weld defects until sound weld metal has been deposited in accordance with appropriate welding codes.

3.05 SUPPLEMENT

- A. The supplement listed below, following "End of Section," is a part of this Specification:
 1. Welding and Nondestructive Testing Table.

Welding and Nondestructive Testing						
Specification Section	Governing Welding Codes or Standards	Submit WPS	Submit WPQ	Onsite CWI Req'd	Submit Written NDT Procedure Specifications	NDT Requirements
Misc Structural Steel 05 12 10	AWS D1.1/D1.1M, Structural Welding Code – Steel	Yes	Yes	Yes	Yes	100% VT of all fillet field welds.
Door Sheet	API 653	Yes	Yes	Yes	Yes	Replaced shell plate and door sheet welds shall be radiographed. All junctions between repair and existing welds shall be radiographed. If defects are found, 100% radiography shall be performed on the repaired weld.

END OF SECTION

SECTION 05 12 10

MISCELLANEOUS STRUCTURAL STEEL AND ALUMINUM

PART 1 - GENERAL

1.01 DESCRIPTION

- A. This section describes materials, fabrication, and installation of structural steel, structural aluminum, stainless steel plate and members, steel tubing, aluminum tubing, and aluminum sheet.

1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Bolts, Washers, Anchors, and Eyebolts: 05 05 20
- B. Ladders: 05 51 00
- C. Handrails: 05 52 00
- D. Access Hatches: 05 53 00

1.03 DESIGN CRITERIA

- A. Structural Connections and Framing: AISC Specification for Structural Steel Buildings (latest edition), except connection details are shown in the contract drawings.

1.04 SUBMITTALS

- A. Submit shop drawings in accordance with the General Conditions and Section 01 33 00.
- B. Submit placing or erection drawings that indicate locations of fabricated items. Reproductions of contract documents will not be accepted for this purpose.

PART 2 - MATERIALS

2.01 STRUCTURAL STEEL

Material for all-purpose bolted or welded construction shall conform to the following:

- A. ASTM A992: W shapes (rolled wide flange shapes).
- B. ASTM A36 or A572, Grade 50: S, M, HP, and channels.
- C. ASTM A36: Angles and plates.

2.02 BOLTS AND WASHERS

See Section 05 05 20.

2.03 STEEL PIPE COLUMNS

Conform to ASTM A53, Grade B.

2.04 HOLLOW STRUCTURAL STEEL (HSS) AND STAINLESS STEEL TUBING

- A. Steel: Conform to ASTM A500, Grade A.
- B. Stainless Steel: Conform to ASTM A554, Grade MT-316.

2.05 STAINLESS STEEL PLATE AND MEMBERS

Except where otherwise specified, stainless steel plate shall be Type 304316, ASTM A240. Stainless steel pipe shall conform to ASTM A312, Grade TP316. Wrought stainless steel fittings shall conform to ASTM A403, Class WP316.

2.06 ALUMINUM SHEET

Aluminum sheet shall conform to ASTM B209, Alloy 3003, H 14 temper.

2.07 STRUCTURAL ALUMINUM

Aluminum structural members shall conform to ASTM B308, Alloy 6061-T6. Aluminum bars and rods shall conform to ASTM B221, Alloy 6061-T6.

2.08 ALUMINUM TUBING

Aluminum seamless pipe and tubing shall conform to ASTM B241, Alloy 6061-T6. Wall thickness shall be Schedule 80, per ANSI H35.2, unless otherwise shown in the drawings.

2.09 WELDING ELECTRODES

- A. Welding electrodes for structural steel shall conform to AWS A5.5. Use electrodes in the E-70 series.
- B. Filler metal shall have a minimum charpy V-notch toughness of 20 ft-lbs at –20°F.
- C. Welding electrodes for aluminum shall be ER4043 filler metal.
- D. Welding electrodes for stainless steel shall conform to AWS A5.4. Use electrodes as follows:

Stainless Steel Material	Welding Electrode Material
Type 304	E 308
Type 304L	E 347
Type 316	E 316
Type 316L	E 318

PART 3 - EXECUTION

3.01 STORAGE OF MATERIALS

Store structural material, either plain or fabricated, above ground on platforms, skids, or other supports. Keep material free from dirt, grease, and other foreign matter and protect from corrosion.

3.02 FABRICATION AND ERECTION

- A. Fabricate miscellaneous metal items to straight lines and true curves. Drilling and punching shall not leave burrs or deformations. Continuously weld permanent connections along the entire area of contact. Exposed work shall have a smooth finish with welds ground smooth. Joints shall have a close fit with corner joints coped or mitered and shall be in true alignment. Unless specifically indicated in the drawings, there shall be no bends, twists, or open joints in any finished member nor any projecting edges or corners at intersections. Conceal fastenings wherever possible. Built-up parts shall be free of warp. Exposed ends and edges of metal shall be slightly rounded.
- B. Clean the surfaces of metalwork to be in contact with concrete of rust, dirt, grease, and other foreign substances before placing concrete.
- C. Set embedded metalwork accurately in position when concrete is placed and support rigidly to prevent displacement or undue vibration during or after the placement of concrete. Unless otherwise specified, where metalwork is to be installed in recesses in formed concrete, said recesses shall be made, metalwork installed, and recesses filled with dry-pack mortar in conformance with Section 03 30 00.

3.03 GALVANIZING FOR STEEL PLATES, PIPE, AND TUBING

Zinc coating shall be in accordance with ASTM A123.

3.04 WELDING

- A. Perform welding on steel by the SMAW process. Welding shall conform to the AWS D1.1-2008, except as modified in AISC Section J2.
- B. Perform welding on aluminum by the gas metal arc (MIG) or gas tungsten arc (TIG) process. Welding shall conform to the AWS D1.2-2003.

- C. Perform welding on stainless steel by the TIG process. All welds shall be full penetration and smooth unless otherwise indicated in the drawings. Provide inert gas on the inside of pipe during welding to reduce oxidation.
- D. Provide a minimum of two passes for metal in excess of 5/16-inch thickness.
- E. Produce weld uniform in width and size throughout its length with each layer of weldment smooth; free of slag, cracks, pinholes, and undercuttings; and completely fused to the adjacent weld beads and base metal. Avoid irregular surface, nonuniform bead pattern, and high crown. Form fillet welds of the indicated size of uniform height and fully penetrating. Accomplish repair, chipping, and grinding of welds in manner that will not gouge, groove, or reduce the base metal thickness.

3.05 BOLTING

See Section 05 05 20.

3.06 CONTROL OF FLAME CUTTING

Do not use a gas-cutting torch in the field for correcting fabrication errors on any member in structural framing. Use a gas-cutting torch only on minor members when the member is not under stress.

3.07 REPAIR OF GALVANIZED SURFACES

Repair or replace metal with damaged galvanized surfaces at no additional cost to the Owner. Repair galvanized surfaces per Section 099000, System No. 55.

3.08 CORROSION PROTECTION OF ALUMINUM SURFACES

- A. Coat aluminum surfaces to be embedded or which will be in contact with concrete or masonry, per Section 09 97 13 before installation. Allow the coating to dry before the aluminum is placed in contact with the concrete.
- B. Where aluminum surfaces come in contact with dissimilar metals, except stainless steel, keep the dissimilar metallic surfaces from direct contact by use of neoprene gaskets or washers.

3.09 PAINTING AND COATING OF STRUCTURAL STEEL

Coat nongalvanized structural steel surfaces per Section 09 97 13. Apply prime coat in the shop prior to shipping to the site. Apply intermediate and finish coats after erection, except surfaces that will be inaccessible for coating after erection or assembly shall be finish coated prior to erection or assembly. Color of finish coat shall be selected by Owner. Faying surfaces of connections that are not specified to be slip critical may be primed and need not be further painted.

END OF SECTION

SECTION 05 51 00

LADDERS

PART 1 - GENERAL

1.01 DESCRIPTION

This section describes materials, fabrication, and installation of ladders.

1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Bolts, Washers, Anchors, and Eyebolts: 05 05 20
- B. Miscellaneous Structural Steel and Aluminum: 05 12 10

1.03 DESIGN CRITERIA

- A. Walkways, Ladders, and Personnel Platforms: OSHA.

1.04 SUBMITTALS

- A. Submit shop drawings in accordance with the General Conditions and Section 01 33 00.
- B. Submit drawings of stairs, ladders, and stair nosings. Show dimensions and reference materials of construction by ASTM designation and grade.

PART 2 - MATERIALS

2.01 VERTICAL LADDERS

- A. Fabricate ladders as shown in the drawings. Ladders shall be carbon steel. Minimum diameter of rungs shall be 3/4 inch. The distance between rungs, cleats, and steps shall not exceed 12 inches and shall be uniform throughout the length of the ladder. The minimum clear length of rungs or cleats shall be 16 inches.

2.02 LANDINGS FOR VERTICAL LADDERS

- A. Fabricate landings as shown in the drawings. Landing and grating shall be carbon steel.

2.03 SECURITY COVERS FOR LADDERS

- A. Provide 6-foot-high security covers at bottom of ladders. Equip covers with hinges on one side and locking clasp on the other side. Covers shall be 1/8-inch-thick aluminum as manufactured by DBI-SALA, Carbis Inc., Core Terminal Products, or equal.

2.04 WELDING ELECTRODES

- A. Welding electrodes for structural steel shall conform to AWS A5.5. Use electrodes in the E-70 series.

PART 3 - EXECUTION

3.01 STORAGE OF MATERIALS

- A. Store structural material, either plain or fabricated, above ground on platforms, skids, or other supports. Keep material free from dirt, grease, and other foreign matter and protect from corrosion.

3.02 INSTALLING LADDERS

- A. Mount ladders to provide clearance in back of ladder so that the distance from the centerline of rungs, cleats, or steps to the nearest permanent object in back of the ladder shall be not less than 7 inches.

3.03 INSTALLING ANCHOR BOLTS

- A. See Section 05 05 2005050.

END OF SECTION

SECTION 05 53 00

ACCESS HATCHES

PART 1 - GENERAL

1.01 DESCRIPTION

- A. This section describes materials, fabrication, and installation of access hatches.

1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Bolts, Washers, Anchors, and Eyebolts: 05 05 20
- B. Miscellaneous Structural Steel and Aluminum: 05 12 10.

1.03 DESIGN CRITERIA

- A. Access Hatches: 300 psf loading.

1.04 SUBMITTALS

- A. Submit shop drawings in accordance with the General Conditions and Section 01 33 00.
- B. Submit drawings of access hatches. Show dimensions and reference materials of construction by ASTM designation and grade. Show design criteria.
- C. Submit placing or erection drawings that indicate locations of fabricated items. Reproductions of contract documents will not be accepted for this purpose.

PART 2 - MATERIALS

2.01 ALUMINUM ACCESS HATCHES

- A. Access hatches shall be aluminum, Bilco Type S-50 of the size and configuration shown in the drawings. Aluminum doors shall be anodized. Latch and lifting mechanism assemblies, hold-open arms and guides, and brackets, hinges, pins, and fasteners shall be Type 316 stainless steel zinc plated and chromate sealed.
- B. Locking and Latching Devices:
 - 1. Recessed hasp covered by a hinged lid flush with the exterior surface.

2.02 WELDING ELECTRODES

- A. Welding electrode for aluminum shall be ER4043 filler metal.

- B. Welding electrodes for stainless steel shall conform to AWS A5.4. Use electrodes as follows:

Stainless Steel Material	Welding Electrode Material
Type 304	E 308
Type 304L	E 347
Type 316	E 316
Type 316L	E 318

PART 3 - EXECUTION

3.01 STORAGE OF MATERIALS

Store structural material, either plain or fabricated, above ground on platforms, skids, or other supports. Keep material free from dirt, grease, and other foreign matter and protect from corrosion.

3.02 INSTALLATION AND ERECTION

- A. Clean the surfaces of metalwork to be in contact with concrete of rust, dirt, grease, and other foreign substances before placing concrete.
- B. Set grating seats and frames and checkered plate frames and supports accurately in position when concrete is placed and support it rigidly to prevent displacement or undue vibration during or after the placement of concrete. Unless otherwise specified, where metalwork is to be installed in recesses in formed concrete, said recesses shall be made, metalwork installed, and recesses filled with dry-pack mortar in conformance with Section 03 30 00.

3.03 WELDING

- A. Perform welding on aluminum by the gas metal arc (MIG) or gas tungsten arc (TIG) process. Welding shall conform to AWS D1.2-2003.
- B. Provide a minimum of two passes for metal in excess of 5/16-inch thickness.
- C. Produce weld uniform in width and size throughout its length with each layer of weldment smooth; free of slag, cracks, pinholes, and undercuttings; and completely fused to the adjacent weld beads and base metal. Avoid irregular surface, nonuniform bead pattern, and high crown. Form fillet welds of the indicated size of uniform height and fully penetrating. Accomplish repair, chipping, and grinding of welds in manner that will not gouge, groove, or reduce the base metal thickness.

3.04 CORROSION PROTECTION OF ALUMINUM SURFACES

- A. Where aluminum surfaces come in contact with dissimilar metals, keep the dissimilar metallic surfaces from direct contact by use of neoprene gaskets or washers.

END OF SECTION

DIVISION 09

FINISHES

SECTION 09 97 13

COATINGS FOR STEEL WATER STORAGE TANKS

PART 1 - GENERAL

1.01 DESCRIPTION

This section describes the materials, applications, and inspection of the protective coatings to be utilized on the interior and exterior surfaces of the steel water storage tank. Clean and coat steel water tank in accordance with AWWA D102 and the following. Use a two-component moisture-cured, zinc-rich primer / polyamidoamine epoxy stripe coat / 100% solids, high-build modified polyamine epoxy for all interior surfaces. All interior coatings to be NSF 600/61 certified. Exterior coating system: use a zinc-rich aromatic urethane primer / aliphatic acrylic polyurethane intermediate coat / advanced thermoset fluoropolymer final coat. Apply protective coatings in the field.

1.02 REFERENCES

- A. ANSI/NSF 600/61 – Drink Water Treatment Chemicals – Health Effects.
- B. AWWA C652 – Disinfection of Water Storage Facilities.
- C. ASTM D16 – Terminology Relating to Paint, Varnish, Lacquer, and Related Products.
- D. AWWA D102 – Coating Steel Water Storage Tanks.
- E. OTC – Draft Model Rule for Architectural and Industrial Maintenance of Coatings.
- F. SSPC-PA 2 – Measurement of Dry Coating Thickness with Magnetic Gages.
- G. SSPC-SP 2 – Power Tool Cleaning.
- H. SSPC-SP 6/NACE 3 – Commercial Blast Cleaning.
- I. SSPC-SP 10/NACE 2 – Near-White Metal Blast Cleaning.
- J. SSPC-SP 16 – Brush-off Blast Cleaning.
- K. SSPC-VIS 1 – Visual Standard for Abrasive Blast Cleaned Steel.

1.03 DEFINITIONS

- A. Definitions of Painting Terms: ASTM D16, unless otherwise specified.
- B. Dry Film Thickness (DFT): Thickness of a coat of paint in fully cured state measured in mils (1/1000 inch).

- C. Low VOC: All interior and exterior field applied coatings shall have minimal VOC content as listed in OTC Draft Model Rule for Architectural and Industrial Maintenance of Coatings.
- D. Wet Film Thickness (WFT): Thickness of a coat of paint in an uncured state measured in mils (1/1000 inch).

1.04 SUBMITTALS

- A. Submit coating manufacturer's catalog data on formulation and recommended use.
- B. Submit coating manufacturer's surface preparation recommendations including maximum height of surface profile on abrasive blast cleaned steel.
- C. Submit coating manufacturer's application instructions, equipment, temperature and humidity limitations, drying time, and recoat cycle time.
- D. Submit coating manufacturer's recommended minimum and maximum time intervals between the application of field-applied primers and the subsequent field-applied coats.
- E. Submit manufacturer's safety data sheets on painting and coating products.
- F. Submit the name of the company and abrasive to be used, the generic type of abrasive, and product data sheets.
- G. Submit product data and procedures for the dehumidification and temperature control system.

1.05 PRECONSTRUCTION CONFERENCE

At least 5 days prior to the field application of the coating systems to the steel tank, schedule and arrange a conference with the Owner, Owner's third-party coating inspector, coating applicator, and the coating manufacturer to coordinate the following:

- A. Coating applicator's work schedule for inspection coordination.
- B. Surface preparation methods.
- C. Specification compliance of blast abrasives and surface profile.
- D. Schedule of blast cleaning and coating application.
- E. List of equipment for cleaning and coating applications.
- F. Weather limitations for acceptable work.
- G. Inspection facilities.

1.06 QUALIFICATIONS

The Contractor shall require the coating applicator to hold a valid State of Colorado Contractor's license for performing abrasive blast cleaning and coating/painting work. The Contractor's coating applicator shall have a minimum of five years' experience and successful history in the application of the specified products to surfaces of steel tanks.

1.07 INSPECTION

- A. The Owner will provide a coating inspector. Test equipment shall be provided by the coating inspector. Evidence of recent calibration will be required.
- B. The Owner's third-party coating inspector will perform inspection on all on-site phases of the surface preparation, abrasive blast cleaning, and application of the coating systems.
- C. Holiday testing shall be performed on all interior coating surfaces, above and below the normal water elevation.

PART 2 - MATERIALS

2.01 COATING SYSTEMS

- A. All materials of a specified system including primer, touch-up, intermediate, stripe-coat, and finish coats shall be provided by the same manufacturer. Thinners, cleaners, driers, and other additives shall be as recommended by the coating manufacturer for the specified system.
- B. Coating materials, including additives to be used on interior tank surfaces, shall not contain trichloroethylene (TCE) or tetrachloroethylene (PCE) volatile organic constituents.
- C. No request for product substitution will be considered.

2.02 INTERIOR COATING SYSTEM FOR ROOF AND ROOF FRAMING

- A. Surface Preparation: All existing coatings shall be removed, and all interior surfaces blast cleaned in accordance with SSPC-SP 10/NACE 2. Profile depth: 1.5 to 2.5 mils.
- B. Prime Coat: NSF 600/61 approved, two-component, zinc-rich primer. Product: Tnemec Series 91-H2O Hydro-Zinc. DFT: 2.5 to 3.5 mils.
- C. Stripe Coat: NSF 600/61 approved, polyamidoamine epoxy. Product: Tnemec Series L140 Pota-Pox Plus. DFT: 2.0 to 5.0 mils. Color: 1255 Beige.
- D. Intermediate Coat: NSF 600/61 approved, polyamidoamine epoxy. Product: Tnemec Series L140 Pota-Pox Plus. DFT: 4.0 to 6.0 mils. Color: 1255 Beige.
- E. Finish Coat: NSF 600/61 approved, polyamidoamine epoxy. Product: Tnemec Series L140 Pota-Pox Plus. DFT: 4.0 to 6.0 mils. Color: WH11.

- F. Touch-up and Holiday Repairs: NSF 600/61 approved, 100% solids, high-build modified polyamine epoxy. Product: Tnemec Epoxoline Series FC22.

2.03 INTERIOR COATING SYSTEM FOR SHELL AND FLOOR

- A. Surface Preparation: All existing coatings shall be removed, and all interior surfaces blast cleaned in accordance with SSPC-SP 10/NACE 2. Profile depth: 1.5 to 2.5 mils.
- B. Prime Coat: NSF 600/61 approved, two-component, zinc-rich primer. Product: Tnemec Series 91-H2O Hydro-Zinc. DFT: 2.5 to 3.5 mils.
- C. Stripe Coat: NSF 600/61 approved, polyamidoamine epoxy. Product: Tnemec Series L140 Pota-Pox Plus. DFT: 2.0 to 5.0 mils. Color: 1255 Beige.
- D. Finish Coat: NSF 600/61 approved, 100% solids, high-build modified polyamine epoxy. Product: Tnemec Epoxoline Series FC22. DFT Average: 20.0 to 40.0 mils. Color: WH11.
- E. Touch-up and Holiday Repairs: NSF 600/61 approved, 100% solids, high-build modified polyamine epoxy. Product: Tnemec Epoxoline Series FC22.

2.04 EXTERIOR COATING SYSTEM INCLUDING LADDER, VENT AND ACCESS HATCH RISERS, AND HANDRAIL

- A. Surface Preparation: All existing coatings shall be removed, and all exterior surfaces blast cleaned in accordance with SSPC-SP 10/NACE 2. Profile depth: 1.5 to 2.5 mils.
- B. Prime Coat: Two-component, zinc-rich primer. Product: Tnemec Series 90-97. DFT: 2.5 to 3.5 mils.
- C. Intermediate Coat: Polyamidoamine epoxy. Product: Tnemec Series V69 Hi-Build Epoxoline II. DFT Average: 2.0 to 4.0 mils.
- D. Finish Coat: Aliphatic acrylic polyurethane. Product: Tnemec Series 1095 Endura-Shield. DFT Average: 3.0 to 5.0 mils. Color: to be selected by Owner.

2.05 EXTERIOR COATING SYSTEM – ALUMINUM ROOF HATCH AND ALUMINUM ROOF VENT

- A. Surface Preparation: All exterior surfaces blast cleaned in accordance with SSPC-SP 16.
- B. Prime Coat: Two-component, zinc-rich primer. Product: Tnemec Series 91-H2O Hydro-Zinc. DFT: 2.5 to 3.5 mils.
- C. Intermediate Coat: Polyamidoamine epoxy. Product: Tnemec Series V69 Hi-Build Epoxoline II. DFT Average: 2.0 to 4.0 mils.
- D. Finish Coat: Aliphatic acrylic polyurethane. Product: Tnemec Series 1095 Endura-Shield. DFT Average: 3.0 to 5.0 mils. Color: to be selected by Owner.

2.06 ABRASIVES FOR BLAST CLEANING

Use abrasives currently certified and appear on the Approved Abrasives List for the State of Colorado.

PART 3 - EXECUTION

3.01 DELIVERY AND STORAGE OF COATING MATERIALS

- A. Deliver coating materials to the job in original sealed containers identified with labels indicating manufacturer; product name and number; color, batch, or lot number; and date of manufacture. Note the date of manufacture and apply coatings prior to the expiration of the guaranteed storage life. Coating materials exceeding storage life will be rejected.
- B. Store coating materials in enclosed structures to protect from weather and excessive heat or cold. Conform to state and local requirements for flammable materials.

3.02 PROTECTION OF THE WORK

- A. Protect adjacent work and surfaces not to be coated from blast cleaning, overspray, spattering, and spillage. Use protective coverings or drop cloths. Where protection is required or provided for coated surface, maintain until the coating has properly cured. Do not handle, work on, or disturb these areas until the coating is completely dry and hard.

3.03 CONDITION OF EQUIPMENT

Use coating equipment designed for the application of the specified materials.

3.04 VENTILATION OF TANK INTERIOR

Use forced-air ventilation at all times and after the application of the interior coating systems. During the coating application, provide a ventilating system with a capacity of at least 300 cfm per gallon of coating applied per hour. After the application of the finish coat, force ventilate the tank continuously at a rate of one air change per hour for a period of five days. If the Owner third-party inspector has any doubt about the adequacy of the curing conditions, provide additional curing time with continued forced-air ventilation.

3.05 HUMIDITY AND TEMPERATURE CONTROL

- A. Use dehumidification equipment to control the environment within the tank 24 hours per day during blast cleaning, coating, and coating curing. Dehumidification equipment shall:
 - 1. Continuously deliver air with a maximum relative humidity of 11% sufficient to supply the space with two complete air changes per hour.
 - 2. Supply sufficient dry air so that the air adjacent to the work surfaces shall not exceed 35% relative humidity at any time during the blasting, coating, or curing cycle.

3. Be capable of depressing the dew point in the tank 10°F below ambient air temperature within 20 minutes.
 4. Maintain a minimum temperature inside the tank of 60°F.
- B. Auxiliary heaters or chillers may be required to maintain the surface temperature at a level acceptable to the coating manufacturer's application parameters. This auxiliary equipment shall be approved for use by the manufacturer of the dehumidification equipment and shall:
1. Be installed in the process air supply duct between the dehumidifier and the space, as close to the space as possible.
 2. Use electric or indirect gas-fired heaters. Do not use direct-fired space heaters.
 3. Include heater controls that automatically turn the heater off if the airflow is interrupted or the internal temperature of the heater exceeds design temperature.
- C. Air heaters or refrigeration equipment are not acceptable substitutes for dehumidification.
- D. Seal the space to be controlled as well as possible, allowing air to escape at the bottom of the space away from the point where the dehumidified air is introduced. Maintain a slight positive pressure within the space, unless dust from the blasting operation is hazardous.
- E. If it is necessary to filter the air escaping the tank, design the filtration system to match the air volume of the dehumidification equipment to avoid interference with the ability to control the space as described herein. Do not recirculate air from the space or from filtration equipment back through the dehumidifier when coating or solvent vapors are present.
- 3.06 SURFACE PREPARATION PRIOR TO ABRASIVE BLAST CLEANING
- A. Remove oil, grease, dust, dirt, rust, moisture, mill scale, and all other foreign or interference substances that would adversely affect the adhesion or durability of the coating system.
 - B. Remove oil and grease in accordance with SSPC SP-1. Use clean cloths and cleaning solvents and wipe dry with clean cloths. Do not leave a film or greasy residue on the cleaned surfaces.
 - C. Remove weld spatter and weld slag, and grind smooth rough welds, beads, peaked corners, and sharp edges, including erection lugs, in accordance with SSPC SP-3.
- 3.07 LIMITATIONS ON ABRASIVE BLAST CLEANING
- The specified limitations on the application of coatings also applies to blast cleaning. Do not blast clean when conditions would not permit the subsequent application of coating. Blast clean only the area that can be coated with primer or touch-up coating during the same day. In the event that a cleaned surface colors, oxidizes, or becomes moist, blast clean it again before applying the coating.

3.08 STANDARD BLAST-CLEANED PANELS

On the first day of abrasive blast cleaning, achieve the specified surface profile and select with the Owner's third-party inspector, a panel illustrating the degree of cleaning specified.

3.09 ABRASIVE BLAST CLEANING

- A. Use dry abrasive blast cleaning for metal surfaces. Use a maximum particle size to produce a 1.5- to 2.5-mil surface profile or as recommended by the manufacturer of the specified coating system. Measurement of surface profile will be in accordance with NACE RP0287-02. Sand used for cleaning shall be washed, uniformly graded, dry, and free of contaminants. Do not use sand containing salt or unwashed beach sand. Do not use abrasives that have become contaminated in automatic equipment. When field blast cleaning with hand-held nozzles, do not recycle or reuse blast particles.
- B. The references to working within an eight-hour working day are largely because most Owners' inspectors work eight-hour days. Contractor painting crews can work up to 24 hours per day if they use forced-air ventilation and dehumidifying equipment to keep the tank interior dry. Dehumidifying also has other advantages, such as greatly reducing the probability of flash rusting occurring on the tank surface (and the associated requirement for more surface preparation) and significantly reducing the time required to coat the tank and, hence, complete the project. Modify paragraph below if you allow or require dehumidifying and the Owner is willing to provide inspection on a 24-hour-per-day basis. Note that this will require a team of two or three inspectors, with possible overtime payment.
- C. After blast cleaning and prior to application of coating, dry clean surfaces to be coated by dusting, sweeping, and vacuuming to remove residue from blasting. Apply the specified primer or touch-up coating within the period of an eight-hour working day. Do not apply coating over damp or moist surfaces. Reclean prior to application of primer or touch-up coating any blast-cleaned surface not coated within said eight-hour period.
- D. Keep the area of the work in a clean condition and do not permit blasting particles to accumulate and constitute a nuisance or hazard. Cover the reservoir inlet, outlet, drain, and overflow piping, and prevent blasting particles from being blown into the piping.
- E. During blast cleaning, exercise caution to prevent damage to adjacent preapplied coatings. Schedule blast cleaning and coating such that dust, dirt, blast particles, old coatings, rust, mill scale, etc., will not damage or fall upon wet or newly coated surfaces. Restore any damaged coatings to their specified condition.

3.10 LIMITATIONS ON THE APPLICATION OF COATINGS

- A. Do not apply coatings under the following conditions:
 - 1. When the surrounding ambient air temperature or the temperature of the surface to be coated is below 45°F or as recommended by the manufacturer of the specified coating system.

2. When the temperature of the surface to be coated is more than 5°F below the air temperature or when the surface temperature is over 120°F.
 3. When the surface to be coated is wet, moist, or contaminated with any foreign matter.
 4. During rain, snow, fog, or mist or when the relative humidity exceeds 85%.
 5. When the surface temperature is less than 5°F above the dew point within eight hours after application of coating.
- B. If the above conditions are prevalent, the application of coating shall be delayed or postponed until conditions are favorable. Dew or moisture condensation should be anticipated, and if such conditions are prevalent, coating work shall be delayed until midmorning to be certain that the surfaces are dry. The day's coating shall be completed in time to permit the film sufficient drying time prior to damage by climatic conditions.
 - C. Climatic conditions will be monitored by the Owner's third-party coating inspector utilizing psychrometers and other measuring gauges at the worksite to aid in inspection.
 - D. If a change in climatic conditions damages a coating application, repair the damaged coatings to their specified condition.

3.11 PROCEDURES FOR THE APPLICATION OF COATINGS

- A. Conform to the requirements of SSPC PA-1. Follow the recommendations of the coating manufacturer including the selection of spray equipment, brushes, rollers, cleaners, thinners, mixing, drying time, temperature and humidity of application, and safety precautions.
- B. Stir, strain, and keep coating materials at a uniform consistency during application. Apply each coating evenly, free of brush marks, sags, runs, and other evidence of poor workmanship. Finished surfaces shall be free from holidays, defects, or blemishes.
- C. Use a different shade or tint on succeeding coating applications to indicate coverage.
- D. Prior to each coating application, brush coat with the coating material all welds, sharp edges, nuts, bolts, and irregular surfaces difficult to coat to provide complete coverage of all surfaces.
- E. Do not use thinners unless recommended by the coating manufacturer. If thinning is allowed, do not exceed the maximum allowable amount of thinner per gallon of coating material. Stir coating materials at all times when adding thinner. Do not flood the coating material surface with thinner prior to mixing.
- F. Do not reduce coating materials more than is absolutely necessary to obtain the proper application characteristics and to obtain the specified dry-film thicknesses.
- G. Remove dust, blast particles, and other debris from blast-cleaned surfaces by dusting, sweeping, and vacuuming. Allow ventilator fans to clean airborne dust to provide good visibility of working area prior to coating applications. Remove dust from coated surfaces by dusting, sweeping, and vacuuming prior to applying succeeding coats.

- H. Delete paragraph below if you use the epoxy system in Article 2.03 previous for all interior surfaces.
- I. Observe minimum and maximum recoat times between primer and succeeding coating applications to achieve maximum crosslinking of coatings. If the recommended minimum or maximum recoat time is exceeded, prepare the surface as directed by the coating manufacturer. Apply a second application of the primer or coating if the maximum recoat time has been exceeded.
- J. Apply coating systems to the specified minimum dry-film thicknesses as measured from above the peaks of the surface profile. Measurement shall be in accordance with SSPC PA-2 and shall be corrected for the magnetic effect of the surface profile.
- K. Apply primer or touch-up coating immediately after blast cleaning and before any surface rusting occurs or any dust, dirt, or any foreign matter has accumulated. Reclean steel surfaces by blast cleaning that have surface colored or become moist prior to coating application.

3.12 FIELD INSPECTION FACILITIES

- A. Provide the Owner's third-party coating inspector with facilities for inspection including:
- B. Illumination and labor to move the lights. Provide additional lights and supports sufficient to illuminate areas to be inspected.
- C. Temporary ladders and scaffolding. Erect and move to the locations requested by the Owner's inspector.

3.13 INSPECTION AND TESTING

- A. The Owner's third-party coating inspector will perform such tests as are required to demonstrate substantial compliance with all phases of the surface preparation, abrasive blast cleaning, and application of the coating systems. Test equipment shall include but not be limited to the following: SSPC surface preparation standards, surface profile comparator, test tape, micrometer, abrasive sieve test, ultraviolet lamp, mirror, certified thickness calibration plates, magnetic-type dry-film thickness gauge, nondestructive holiday detector, and nonsudsing-type wetting agent. Recent calibration certificates should be provided for all of the equipment.
- B. Notify the Owner's third-party coating inspector three working days in advance of field operations involving abrasive blast cleaning and coating applications.
- C. The Owner's third-party coating inspector will verify the degree of surface cleanliness profile of the field blast cleaned surface. Perform additional blast cleaning over areas not conforming to the specified surface preparation.
- D. The Owner's third-party coating inspector will inspect each coat of primer, touch-up, intermediate, stripe coat, and finish coating to determine thickness and integrity. Each coating application will be checked and deficiencies marked. After observing specified recoat time, apply additional coating materials over areas not having the specified minimum dry-film

thickness and areas having any holidays or pinholes. After correction of deficiencies, the Owner's third-party coating inspector will reinspect those areas to determine the acceptability of the additional coating. Each coating application must be 100% to the satisfaction of the Owner's third-party coating inspector prior to succeeding coating applications.

- E. After completion of the coating curing cycle, conduct an MEK wipe test with a clean rag, using 25 rubs per each immersion test area on the floor and shell. Test areas will be selected at random by the Owner's third-party coating inspector. The coating shall be considered cured if it retains its gloss and hardness after the MEK wipe test.

3.14 DISINFECTION

- A. Disinfect the interior surfaces of the tank after the finish coat of the interior coating system has dried and cured. Observe the manufacturer's recommendations of the specified coating system for ventilation requirements and time interval for complete drying.
- B. Prior to disinfection, remove all scaffolding, planks, tools, rags, and other material not a permanent part of the tank. Thoroughly flush the inlet and outlet piping with potable water. Use a high-pressure water blaster and wash interior surfaces of the tank with potable water. Drain and squeegee water, dirt, and foreign material accumulated in this cleaning operation from the tank.
- C. Disinfect the tank by chlorination in accordance with the requirements of AWWA C652. Use either liquid chlorine or sodium hypochlorite solution as the available form of chlorine. Do not use calcium hypochlorite in granular or tablet form. Spray a chlorine solution having a chlorine content of 200 mg/L on the interior surfaces to be in contact with water when the tank is put into service. The solution shall thoroughly coat surfaces to be treated, including the inlet and outlet piping, and shall be applied to the drain piping such that it will have available chlorine of not less than 10 mg/L when filled with water. Do not drain the used chlorine solution from the tank during the spraying operation.
- D. The disinfected surfaces shall remain in contact with the strong chlorine solution for at least 30 minutes, after which potable water shall be admitted, the drain piping purged of the 10 mg/L chlorinated water, and the storage facility then filled to its overflow level.
- E. Once filled to the overflow level, the water should sit for 24 hours. Following the 24-hour period, a bacteriological sample should be collected and tested. Following satisfactory bacteriological testing, and satisfactory chlorine residual testing, the water may be delivered to the distribution system.
- F. Potable water necessary for the wash down and disinfection shall be provided by the Contractor. The Owner will fill the tank with potable water to the overflow level after the Contractor has completed the disinfection operation.
- G. If the testing procedure shows the presence of coliform bacteria, the Contractor shall drain the tank, disinfect, refill, and retest at the Contractor's expense. The Owner will deduct the cost of water used to refill the tank from progress payments due the Contractor. Continue disinfecting and retesting until satisfactory results are achieved.

- H. Discharge of chlorinated water shall meet the requirements of the Colorado Department of Public Health and Environment.

3.15 ELEVEN-MONTH INSPECTION OF COATING SYSTEMS

Conduct a first-anniversary warranty inspection of the interior surfaces of the tank during the eleventh month following final acceptance of the work by the Owner to determine whether any repair work is necessary. The Owner will establish the inspection date and notify the Contractor. The Owner will drain and wash down the tank. The Contractor shall provide lighting and scaffolding for the tank inspection. Where coatings have peeled off, bubbled, or cracked, and any location where rusting is evident shall be considered to be a failure of the coating system. Perform repairs at failures by removing the deteriorated coating. Prepare the surface by abrasive blast cleaning and apply the same coating systems as specified in this section. Inspection and repairs shall be performed at no cost to the Owner. The Owner's third-party coating inspector will inspect the surface preparation and recoating.

END OF SECTION

CITY OF CRAIG

GLEN ERIE SOUTH WATER STORAGE TANK REHABILITATION PROJECT

CRAIG, COLORADO



WESTERN WATER SOLUTIONS, LLC
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BASALT, COLORADO 81621

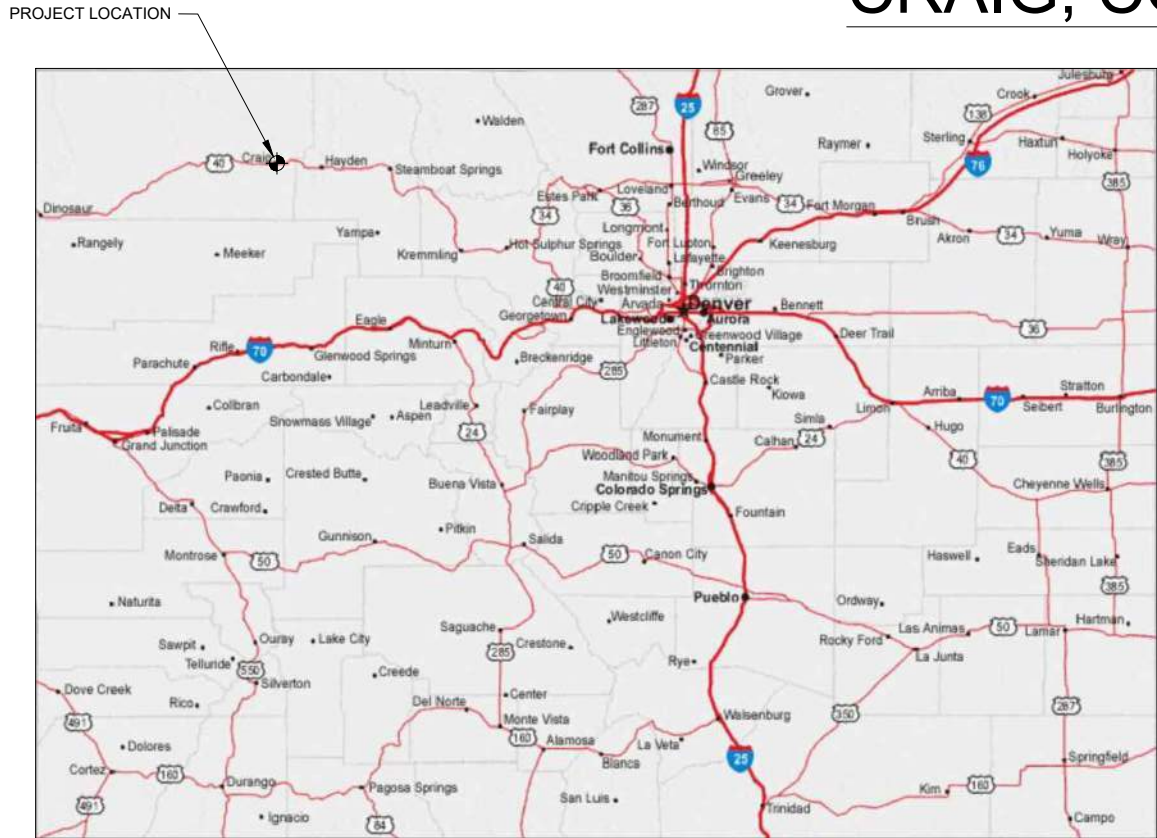
Prepared For
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Project
GLEN ERIE SOUTH
WATER STORAGE
TANK
REHABILITATION
PROJECT

DRAWING SHEET INDEX

G000	COVER SHEET
G001	GENERAL NOTES AND ABBREVIATIONS
G002	GENERAL SITE PLAN
S001	STRUCTURAL GENERAL NOTES
S101	FLOOR AND ROOF PLANS
S301	TANK SECTIONS
S501	TANK DETAILS
S502	VENT DETAILS



VICINITY MAP
NOT TO SCALE



LOCATION MAP
NOT TO SCALE

No.	Revision/Issue	Date
Project No.:	2025-COC-GES	
Drawn By:	TAW	
Checked By:	WWS	
Drawing Date:	05.19.2025	

Sheet Title
COVER SHEET

Sheet No
G000

BID SET

DRAWING SCALES SHOWN BASED ON A 22x34 DRAWING

ABBREVIATIONS:

ADD'L	ADDITIONAL
ALUM	ALUMINUM
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
API	AMERICAN PETROLEUM INSTITUTE
APPROX	APPROXIMATELY
ASCE	AMERICAN SOCIETY OF CIVIL ENGINEERS
ASTM	AMERICAN SOCIETY OF TESTING AND MATERIALS
AWS	AMERICAN WELDING SOCIETY
AWWA	AMERICAN WATER WORKS ASSOCIATION
BAC	BACTERIOLOGICAL
B.O.	BOTTOM OF
CDOT	COLORADO DEPARTMENT OF TRANSPORTATION
CDPHE	CO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT
DIAM.	DIAMETER
D.I.	DUCTILE IRON
EL/ELEV	ELEVATION
EPA	ENVIRONMENTAL PROTECTION AGENCY
EQ	EQUAL
EQUIV.	EQUIVALENT
ETC.	ETCETERA
EX / EXIST	EXISTING
FG	FINISHED GRADE
FL	FLANGE
FT	FOOT
FY	YIELD STRENGTH
GPM	GALLONS PER MINUTE
HWL	HIGH WATER LEVEL
HSS	HOLLOW STEEL SECTION
IBC	INTERNATIONAL BUILDING CODE
I.D.	INSIDE DIAMETER
IN	INCH
K	THOUSAND
KSI	KIPS PER SQUARE INCH
LBS	POUNDS
MAX	MAXIMUM
MFL	MAGNETIC FLUX LEAKAGE
MIN	MINIMUM
MNFR	MANUFACTURER
MPH	MILE PER HOUR
NACE	NATIONAL ASSOCIATION OF CORROSION ENGINEERS
NO.	NUMBER
NSF	NATIONAL SANITARY FOUNDATION
O.D.	OUTSIDE DIAMETER
OPNG	OPENING
PE	PLAIN END
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
QTY	QUANTITY
RE:	REFERENCE
RECT	RECTANGULAR
REQ'D	REQUIRED
SCH	SCHEDULE
SEAC	STRUCTURAL ENGINEERS ASSOCIATION OF COLORADO
SEC	SECOND
SP	SPACING
SPEC	SPECIFICATION
SQ	SQUARE
SS	STAINLESS STEEL
SSPC	SOCIETY FOR PROTECTIVE COATINGS
STD	STANDARD
T.O.	TOP OF
TYP	TYPICAL
UE	UNDERGROUND ELECTRIC
USGS	U.S. GEOLOGICAL SURVEY
W/	WITH
"	INCH
'	FOOT
℄	CENTERLINE
Ø	DIAMETER
&	AND
%	PERCENT
°	DEGREE
#	NUMBER

GENERAL NOTES:

1. THE GLEN ERIE SOUTH TANK IS AN ABOVE-GRADE, WELDED STEEL WATER STORAGE TANK WITH A DIAMETER OF 66 FEET AND HEIGHT OF 20 FEET FOR A TOTAL STORAGE CAPACITY OF APPROXIMATELY 500,000 GALLONS. THE TANK IS LOCATED ON THE CORNER OF E 11TH STREET AND BRYAN WAY IN CRAIG, COLORADO.
2. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND BE SUBJECT TO CONSTRUCTION OBSERVATION BY THIRD PARTY INSPECTORS, ENGINEER OF RECORD, AND CITY OF CRAIG REPRESENTATIVES OR PERSONNEL.
3. WESTERN WATER SOLUTIONS AND CITY OF CRAIG DO NOT GUARANTEE THE ACCURACY OF LOCATIONS OF EXISTING PIPELINES AND UTILITIES. LOCATIONS, ELEVATIONS, AND DIMENSIONS OF EXISTING UTILITIES, STRUCTURES, AND OTHER FEATURES ARE SHOWN ACCORDING TO THE BEST INFORMATION AVAILABLE AT THE TIME OF THE PREPARATION OF THESE DRAWINGS, BUT DO NOT PURPORT TO BE ABSOLUTELY CORRECT OR ACCURATE. THE CONTRACTOR SHALL VERIFY THE LOCATIONS, ELEVATIONS, AND DIMENSIONS OF ALL EXISTING UTILITIES, STRUCTURES, AND OTHER FEATURES AFFECTING THE WORK. SHOULD THE CONTRACTOR IDENTIFY ANY UTILITIES, STRUCTURES OR OTHER FEATURES NOT SHOWN ON THE PLANS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER. ANYTHING NOT SHOWN ON THESE DRAWINGS SHALL NOT CONSTITUTE AN EXTRA, UNLESS RECOMMENDED BY THE ENGINEER AND APPROVED BY THE OWNER.
4. PROJECT SHALL BE CONSTRUCTED TO MEET THE REQUIREMENTS OF THE STATE OF COLORADO DESIGN CRITERIA FOR POTABLE WATER SYSTEMS PUBLISHED BY THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENTS WATER QUALITY CONTROL DIVISION, LATEST EDITION.
5. ANY CHANGES OF MATERIAL OR DEVIATIONS FROM THE APPROVED PLANS OR THE PROJECT SPECIFICATIONS MUST BE DONE WITH WRITTEN PERMISSION FROM THE NTM DISTRICT ENGINEER.
6. ALL UTILITIES SHALL BE KEPT IN OPERATION EXCEPT WITH THE EXPRESS WRITTEN CONSENT OF THE CITY OF CRAIG. IT IS THE CONTRACTORS RESPONSIBILITY TO PRESERVE EXISTING UTILITIES. ANY AND ALL DAMAGE TO EXISTING UTILITIES AS A RESULT OF THE CONTRACTOR'S ACTIONS SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
7. USE EXTREME CAUTION WHEN WORKING NEAR OVERHEAD OR UNDERGROUND POWER, GAS, OR OTHER UTILITIES SO AS TO SAFELY PROTECT ALL PERSONNEL AND EQUIPMENT.
8. ALL WORK IN THE RIGHT-OF-WAY SHALL INCLUDE TRAFFIC CONTROL. ALL BARRICADING AND TRAFFIC CONTROL DEVICES OR METHODS USED DURING CONSTRUCTION SHALL BE IN ACCORDANCE WITH LOCAL AND CDOT STANDARDS.
9. THE CONTRACTOR SHALL CONTACT COLORADO 811 AT 1-800-922-1987 WITH REQUIRED NOTICE PRIOR TO ANY EXCAVATION TO OBTAIN UTILITY LOCATES. UTILITY LOCATIONS, WHETHER OR NOT SHOWN ON THESE DRAWINGS, IN NO WAY RELIEVES THE CONTRACTOR FROM THE RESPONSIBILITY OF CALLING FOR AND OBTAINING UTILITY LOCATIONS FROM THE APPROPRIATE AUTHORITIES PRIOR TO BEGINNING EXCAVATION
10. THE NOTES ON THIS SHEET AND THE STRUCTURAL GENERAL NOTES ARE GENERAL AND APPLY TO THE ENTIRE PROJECT. QUESTIONS SHOULD BE SUBMITTED TO THE ENGINEER AND ANSWERED IN WRITING PRIOR TO CONSTRUCTION.
11. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND ELEVATIONS. SUBMIT REQUIRED CHANGES FOR APPROVAL.
12. CONTRACTOR TO COMPLY WITH THE LIMITS OF CONSTRUCTION.
13. CONTRACTOR WILL BE RESPONSIBLE FOR CLEANUP OF SEDIMENT AND CONSTRUCTION DEBRIS TRACKED ONTO ADJACENT PAVED ROADS AND ACCESS AREAS.
14. CITY OF CRAIG WILL REMOVE LEVEL SENSING INSTRUMENTATION AND THE TANK MIXER FROM THE TANK PRIOR TO CONSTRUCTION.
15. REFER TO SHEET NOTES AND PROJECT SPECIFICATIONS FOR DETAILED MATERIAL REQUIREMENTS.
16. NO HOLES, OPENINGS, OR ALTERATIONS TO THE TANK MAY BE MADE WITHOUT PRIOR WRITTEN APPROVAL OF THE ENGINEER, OR AS SHOWN ON THE DRAWINGS.
17. CONTRACTOR WILL BE RESPONSIBLE FOR RESTORING DISTURBED AREAS PRIOR TO FINAL COMPLETION.
18. CLEANING AND DISINFECTION OF THE TANK IS THE CONTRACTORS RESPONSIBILITY. DISINFECT THE TANK AND PIPING IN ACCORDANCE WITH AWWA C652, LATEST EDITION.

GENERAL NOTES CONTINUED:

19. OWNER TO HIRE A THIRD-PARTY COATING INSPECTOR AND WELDING INSPECTOR. CONTRACTOR RESPONSIBLE FOR SCHEDULING INSPECTORS AND PROVIDING NECESSARY ACCESS TO PERFORM INSPECTIONS.
20. CONTRACTOR WILL BE RESPONSIBLE FOR THE COMPLETION OF RECORD DRAWINGS. A SET OF FOR-CONSTRUCTION DRAWINGS SHALL BE KEPT ON SITE WITH REDLINES FOR AS-CONSTRUCTED CONDITION OF NEW WORK.

SUBMITTALS TO BE PROVIDED FOR ENGINEER REVIEW:

REFER TO PROJECT SPECIFICATIONS FOR SUBMITTAL REQUIREMENTS. NOT ALL REQUIRED SUBMITTALS ARE LISTED BELOW.

1. LOCATION AND SIZE OF DOOR SHEET, ILLUSTRATING LOCATION OF NEARBY VERTICAL AND HORIZONTAL WELD SEAMS. DOOR SHEET TO COMPLY WITH THE REQUIREMENTS OF API 653-14 FOR SHELL PLATE INSTALLATION.
2. FABRICATION AND ERECTION DRAWINGS SHOWING A COMPLETE MATERIAL LIST WITH ASTM DESIGNATION AND WELD SYMBOLS, INDICATING SHOP VERSUS FIELD WELDING FOR ALL COMPONENTS OF THE CENTER COLUMN CAPITAL, HATCH RISER, VENT RISER, DRAIN SUMP, AND WELDED ON PATCH PLATES.
3. PRODUCT DATA SHEETS FOR INTERIOR AND EXTERIOR COATING SYSTEMS.
4. PRODUCT DATA SHEETS FOR EXTERIOR JOINT REPAIR SYSTEM.
5. PRODUCT DATA SHEET FOR FLEXIBLE JOINT SEALANT.
6. NONDESTRUCTIVE TESTING COMPANY QUALIFICATIONS, CERTIFICATIONS, AND COMPLETE MAGNETIC FLUX LEAKAGE SCAN REPORT WITH AUTOCAD FILE OF FLOOR PLATE AND RECOMMENDED REPAIRS.
7. WELDER QUALIFICATIONS, PROCEDURES, CERTIFICATIONS AND WELD MATERIALS.
8. VENT AND ACCESS HATCH FABRICATION DRAWINGS AND WARRANTY INFORMATION.
9. CENTER COLUMN CAPITAL AND DRAIN SUMP FABRICATION SHOP DRAWINGS.
10. COMPLETE DESIGN AND INSTALLATION SUBMITTAL FOR AN IMPRESSED CURRENT CATHODIC PROTECTION SYSTEM.
11. TANK AND PIPING DISINFECTION PLAN.

INSPECTION, TESTING, AND QUALITY ASSURANCE:

1. STRUCTURAL STEEL CONSTRUCTION WILL BE INSPECTED IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE (IBC) SECTION 1704.3, AND TABLE 1704.3.
2. THE OWNER WILL HIRE AN AWS CERTIFIED WELDING INSPECTOR TO PERFORM WELD INSPECTIONS AS NOTED IN IBC TABLE 1704.3, ITEM 4 AND 5, IN ADDITION TO ITEMS NOTED IN THE DOCUMENTS TO BE INSPECTED BY A WELD INSPECTOR.
3. SURFACE PREPARATION AND COATINGS SHALL BE INSPECTED BY A NACE CERTIFIED COATING INSPECTOR HIRED BY THE OWNER.



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Prepared For
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4300 CHERRY CREEK DRIVE SOUTH, B2
DENVER, COLORADO 80246-1530

Client
CITY OF CRAIG
300 W 4TH ST
CRAIG, COLORADO 81625

Project
**GLEN ERIE SOUTH
WATER STORAGE
TANK
REHABILITATION
PROJECT**

No.	Revision/Issue	Date

Project No.:	2025-COC-GES
Drawn By:	TAW
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Sheet Title
**GENERAL NOTES
AND
ABBREVIATIONS**

Sheet No
G001



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Project
**GLEN ERIE SOUTH
WATER STORAGE
TANK
REHABILITATION
PROJECT**

0 200' 400'

SCALE BASED ON FULL-SIZE
22x34 DRAWING SHEET
1" = 200'

No.	Revision/Issue	Date
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Sheet Title
**GENERAL SITE
PLAN**

Sheet No
G002

BID SET

STRUCTURE DESIGN LOADS:

1. THE FOLLOWING DESIGN CODES AND STANDARDS WERE USED.
2. DESIGN CODES:

A. INTERNATIONAL BUILDING CODE (IBC), 2018.

B. ASCE 7-16 MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES.

C. AWWA D100 WELDED CARBON STEEL TANKS FOR WATER STORAGE.

D. API 653 TANK INSPECTION, REPAIR, ALTERATION, AND RECONSTRUCTION.

DESIGN LOADS:

- A. DEAD LOAD

B. ROOF LIVE LOAD

C. MINIMUM ROOF SNOW LOAD

EXPOSURE FACTOR

THERMAL FACTOR

IMPORTANCE FACTOR

MEMBER SELF WEIGHT

48 PSF

40 PSF (CITY OF CRAIG)

0.9

1.0

1.20
- D. WIND

WIND SPEED

EXPOSURE

SURFACE ROUGHNESS

TOPOGRAPHIC FACTOR

WIND PRESSURES

115 MPH (3-SECOND GUST)

B

B

1.0

±30.0 PSF (SIDEWALL), AWWA D100

±30.0 PSF (ROOF), AWWA D100
- E. SEISMIC

OCCUPANCY

IMPORTANCE FACTOR, I_e

SOIL SITE CLASS

S_s

S₁

S_{Ds}

S_{D1}

SEISMIC DESIGN CATEGORY

IV

1.50

D, ASSUMED

0.332g

0.077g

0.340g

0.123g

B (CITY OF CRAIG)

MAGNETIC FLUX LEAKAGE SCAN AND FLOOR PLATE REPAIR NOTES:

1. FOLLOWING INTERIOR CLEANING, CONTRACTOR TO DRY FLOOR PLATES AND ALLOW ACCESS TO PREMIERE NDT SERVICES, INC. TO PERFORM MFL TESTING. RESULTS WILL BE REVIEWED WITH OWNER AND ENGINEER. ENGINEER WILL DEVELOP A REPAIR PLAN BASED ON RESULTS OF MFL SCAN.
2. ALL BOTTOM SURFACE DISCONTINUITIES SHALL BE PATCHED WITH WELDED ON PATCH PLATES PER THE REQUIREMENTS OF API 653-14 AND THE DIRECTION OF THE ENGINEER. TOP SURFACE DISCONTINUITIES WILL BE REPAIRED WITH WELDED ON PATCH PLATES OR BY DEPOSITION OF WELD METAL FOLLOWED BY EXAMINATION TESTING IN ACCORDANCE WITH API 653-14, SECTION 12.1.7.3 AND PER DIRECTION OF THE ENGINEER.
3. QUANTITIES LISTED IN THE BID FORM ARE ESTIMATED FOR BIDDING PURPOSES. PER THE REQUIREMENTS OF API 653-14, FLOOR PATCH PLATE SIZES WILL VARY BASED ON LOCATION OF DISCONTINUITY TO WELD SEAM, SHELL PLATE, OTHER PATCH PLATES, ETC. PAYMENT APPLICATIONS SHALL BE BASED ON THE QUANTITY AND TOTAL SQUARE FOOTAGE OF WELDED ON PATCH PLATES AND NUMBER OF DEPOSITION OF WELD METAL REPAIRS. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING EXISTING CONDITIONS AND QUANTITIES BASED ON ACTUAL FIELD CONDITIONS AS MARKED BY THE THIRD-PARTY NON-DESTRUCTIVE TESTING COMPANY.

STRUCTURAL STEEL INSTALLATION AND INSPECTION:

1. FURNISH AND INSTALL TEMPORARY BRACING FOR NEW FRAMING AS NECESSARY TO PROVIDE STABILITY DURING ERECTION AND TO PREVENT DAMAGE OR DISTORTION TO THE FRAME DUE TO WIND, SEISMIC, OR ERECTION FORCES. REMOVE TEMPORARY BRACING WHEN ERECTION IS COMPLETE.
2. UNLESS OTHERWISE NOTED, ALL BOLTED CONNECTIONS ARE BEARING TYPE, AND SHALL BE TIGHTENED TO THE SNUG TIGHT CONDITION.
3. ALL HIGH STRENGTH BOLTS SHALL HAVE THE TURNED PORTION MARKED WITH REFERENCE TO THE STEEL BEING CONNECTED AFTER THE NUT HAS BEEN MADE SNUG AND PRIOR TO FINAL TIGHTENING.
4. FIELD WELDING SHALL BE DONE ONLY WHERE SHOWN ON THE DRAWINGS OR SPECIFIED AND ONLY BY WELDERS CURRENTLY QUALIFIED AND APPROVED FOR THE PROCEDURES USED. NO WELDING SHALL BE COMPLETED WHEN SURFACES ARE WET, EXPOSED TO RAIN OR WIND, OR WHEN WELDERS ARE EXPOSED TO INCLEMENT CONDITIONS THAT WILL AFFECT THE QUALITY OF WORKMANSHIP.

STRUCTURAL STEEL INSTALLATION AND INSPECTION (CONTINUED):

5. FIELD WELDING SHALL BE INSPECTED VISUALLY AND BY NON-DESTRUCTIVE TESTING BY AN AWS CERTIFIED WELDING INSPECTOR.
6. ACCEPTANCE CRITERIA FOR VISUALLY INSPECTED WELDS SHALL BE IN ACCORDANCE WITH TABLE 6.1 OF AWS D1.1.
7. 100% OF THE FIELD INSTALLED FILLET WELDS SHALL BE VISUALLY INSPECTED UNLESS THE WELDING INSPECTOR IDENTIFIES GROUNDS FOR MORE RIGOROUS INSPECTION AND NDS TESTING.

GENERAL TANK NOTES:

1. ACCESS SHALL BE LIMITED TO AUTHORIZED PERSONNEL ONLY, WITH APPROPRIATE SIGNAGE.
2. ALL ACCESS LADDERS SHALL BE FITTED WITH A LOCKING SECURITY GATE.
3. ALL ROOF ACCESS HATCHES AND VENTS SHALL BE FITTED WITH OWNER SUPPLIED LOCKS.
4. LEVEL SENSING EQUIPMENT TO BE PROVIDED BY THE OWNER.
5. ALL MATERIALS USED IN CONSTRUCTION SHALL BE ANSI/NSF 61 AND ANSI/NSF 600 CERTIFIED.
6. OVERFLOW WEIR SHALL PROVIDE A MINIMUM OF 1'-0" FREEBOARD.
7. VENTS MUST BE SCREENED WITH 12 OR 16 MESH SCREEN (OPENINGS LESS THAN 0.07 INCHES). ABOVE GRADE TANK VENTS MUST PROVIDE A MINIMUM OF 24-INCHES OF CLEARANCE FROM THE ROOF SURFACE TO THE VENT OPENING.

MATERIAL NOTES:

STRUCTURAL STEEL MATERIALS:

1. REFER TO THE DIVISION 05 SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
2. NEW STRUCTURAL STEEL ITEMS SHALL CONFORM TO THE FOLLOWING STANDARDS AND REQUIREMENTS.

CARBON STEEL WIDE FLANGES: ASTM A992, FY = 50 KSI

CARBON STEEL CHANNELS, ANGLES, PLATES: ASTM A36, FY = 36 KSI

PIPES: ASTM A53, GRADE B, FY = 35 KSI

HSS: ASTM A500, GRADE B, FY 46 KSI

WELDING ELECTRODES: E7018, AWS A5.1
3. NEW 316 STAINLESS STEEL ITEMS SHALL CONFORM TO THE FOLLOWING STANDARDS AND REQUIREMENTS.

STAINLESS STEEL BOLT ASSEMBLIES: BOLTS: ASTM F593

STAINLESS STEEL FLAT PLATE: ASTM A240

STAINLESS STEEL SOLID ROUND BAR: ASTM A276

WELDING PROCEDURE SPECIFICATION: AWS D1.6.

WELDING ELECTRODES: E316L-16 (SMAW, AWS A5.4), ER316L (GTAW TIG FILLER ROD, AWS A5.9) AND ER316L (GMAW MID WIRE, AWS A5.9)
4. FIELD WELDING WILL BE INSPECTED VISUALLY BY THIRD-PARTY OWNER HIRED AWS CERTIFIED WELDING INSPECTOR.

ALUMINUM:

1. STRUCTURAL ALUMINUM YIELD STRENGTH, FY = 36 KSI.
2. ALUMINUM ALLOY 6061-T6.
3. WELDING PROCEDURE SPECIFICATION: AWS D1.2.
4. WELDING ELECTRODES: ER5356 (AWS A5.10).

SURFACE PREPARATION AND COATINGS:

1. REFER TO SPECIFICATION 09 97 13 FOR SURFACE PREPARATION AND COATING REQUIREMENTS.
2. FIELD APPLIED COATINGS SHALL BE INSPECTED BY OWNER HIRED NACE CERTIFIED INSPECTOR.

ACCESS HATCHES:

1. BILCO 30"x36" ALUMINUM, SINGLE-LEAF ROOF ACCESS HATCH. ALL HATCH HARDWARE AND COMPONENTS TO BE 316 STAINLESS STEEL.
2. AVOID CONTACT BETWEEN CONCRETE AND ALUMINUM SURFACES TO PREVENT ADVERSE CHEMICAL REACTION AND PRODUCT FAILURE. INSULATE AREAS BY COATING ALUMINUM MEMBERS AS REQUIRED IN THE SPECIFICATIONS.

CATHODIC PROTECTION SYSTEM:

1. IMPRESSED CURRENT CATHODIC PROTECTION SYSTEM DESIGNED AND INSTALLED BY QUALCORR ENGINEERING.

THREADED ANCHOR STUDS, WEDGE ANCHORS, AND EPOXY ADHESIVE:

1. DRILL AND EPOXY ANCHORS: HILTI HEADED ANCHOR STUDS 316 STAINLESS STEEL.
2. WEDGE ANCHORS: HILTI KWIK BOLT T22 WEDGE ANCHOR 316 STAINLESS STEEL.
3. EPOXY ADHESIVE SHALL BE HILTI HIT-RE 500 V3.

WELDED STEEL PIPE AND FLANGES:

1. STEEL PIPE FLANGES FOR WATERWORKS SERVICES PER AWWA C207, CLASS B OR D. WELDED STEEL PIPE, SCHEDULE 40 PER AWWA C200.

TANK SCOPE OF WORK NOTES:

1. THE FOLLOWING IS AN OUTLINE OF THE KEY PROJECT SCOPE OF WORK TASKS. THE COMPLETE PROJECT SCOPE OF WORK INCLUDES OTHER ITEMS WHICH MAY BE DOCUMENTED IN OTHER PORTIONS OF THE REHABILITATION DOCUMENTS. THE ACTIVITIES LIST PRESENTS SCOPE OF WORK ONLY. SEQUENCING OF THE WORK IS THE RESPONSIBILITY OF THE CONTRACTOR. SOME OF THESE ITEMS ARE CONSIDERED BID ALTERNATES, REFER TO THE BID FORM.

A. FOLLOWING THE OWNER'S DRAINING OF THE TANK, THE CONTRACTOR MAY CREATE ACCESS TO THE TANK INTERIOR TO BEGIN REHABILITATION WORK BY CUTTING A DOOR SHEET. A DOOR SHEET SUBMITTAL IS REQUIRED FOR REVIEW AND APPROVAL PRIOR TO CREATING ACCESS.

B. CLEAN ALL INTERIOR SURFACES AND PIPING. CLEAN AND DRY FLOOR PLATES.

C. PREMIERE NDT SERVICES, INC. TO PERFORM A MAGNETIC FLUX LEAKAGE (MFL) SCAN OF THE TANK FLOOR PLATES.

D. ENGINEER TO REVIEW THE MFL SCAN RESULTS AND PREPARE A FLOOR PLATE REPAIR PLAN.

E. INSTALL ¼" THICK WELDED ON PATCH PLATES PER DEVELOPED REPAIR PLAN. INSTALL WELD DEPOSITION REPAIRS PER THE FLOOR PLATE REPAIR PLAN.

F. DEMO AND REMOVE EXISTING COLUMN CAPITAL; FABRICATE AND INSTALL BY WELDING NEW OPEN FRAMING COLUMN CAPITAL.

G. DEMO AND REMOVE EXISTING ROOF VENT AND STEEL RISER; FABRICATE AND INSTALL BY WELDING NEW VENT RISER AND VENT.

H. DEMO AND REMOVE EXISTING ROOF HATCH AND RISER; FABRICATE AND INSTALL BY WELDING NEW HATCH RISER AND NEW ROOF ACCESS HATCH.

I. DEMO AND REMOVE EXISTING INTERIOR LADDER; FABRICATE AND INSTALL BY WELDING NEW INTERIOR LADDER.

J. MODIFY EXISTING OVERFLOW WEIR.

K. SELECTIVELY DEMOLISH EXISTING FLOOR PLATE AROUND DRAIN PIPE; INSTALL BY WELDING NEW RECESSED DRAIN SUMP.

L. SURFACE PREPARE AND RECOAT THE COMPLETE INTERIOR OF THE TANK AND PIPING PER SPECIFICATION 09 97 13. INSTALL FLEXIBLE SEALANT TO THE UNDERSIDE OF ROOF PLATE UNWELDED SEAMS AND ROOF TO SHELL PERIMETER.

M. PROVIDE ACCESS TO THIRD PARTY COATING INSPECTOR FOR SURFACE PREPARATION AND COATING INSPECTIONS. TO INCLUDE HOLIDAY TESTING OF ALL INTERIOR SURFACES.

N. CURE INTERIOR PER MANUFACTURER REQUIREMENTS. HEAT AND VENTILATION ARE THE RESPONSIBILITY OF THE CONTRACTOR, IF REQUIRED, TO MEET COMPLETION DATES.

O. COORDINATE DESIGN AND INSTALLATION OF NEW IMPRESSED CURRENT CATHODIC PROTECTION SYSTEM WITH QUALCORR ENGINEERING.

P. EXTERIOR: PERFORM LEAD ABATEMENT, SURFACE PREPARE AND RECOAT THE COMPLETE EXTERIOR AND APPURTENANCES PER SPECIFICATION 09 97 13.

Q. EXTERIOR: FABRICATE AND INSTALL A SWINGING AND LOCKING SECURITY GATE AT THE BASE OF THE EXISTING LADDER CAGE.

R. FOLLOWING FINAL INSPECTION BY OWNER, ENGINEER AND INSPECTOR, PERFORM FINAL CLEAN AND DISINFECT.

S. EXPOSE CONCRETE RINGWALL AND COMPLETE EXTERIOR JOINT REPAIR. VISCOTAQ TANK CHIME SEALING SYSTEM. REFER TO TECHNICAL SPECIFICATIONS.



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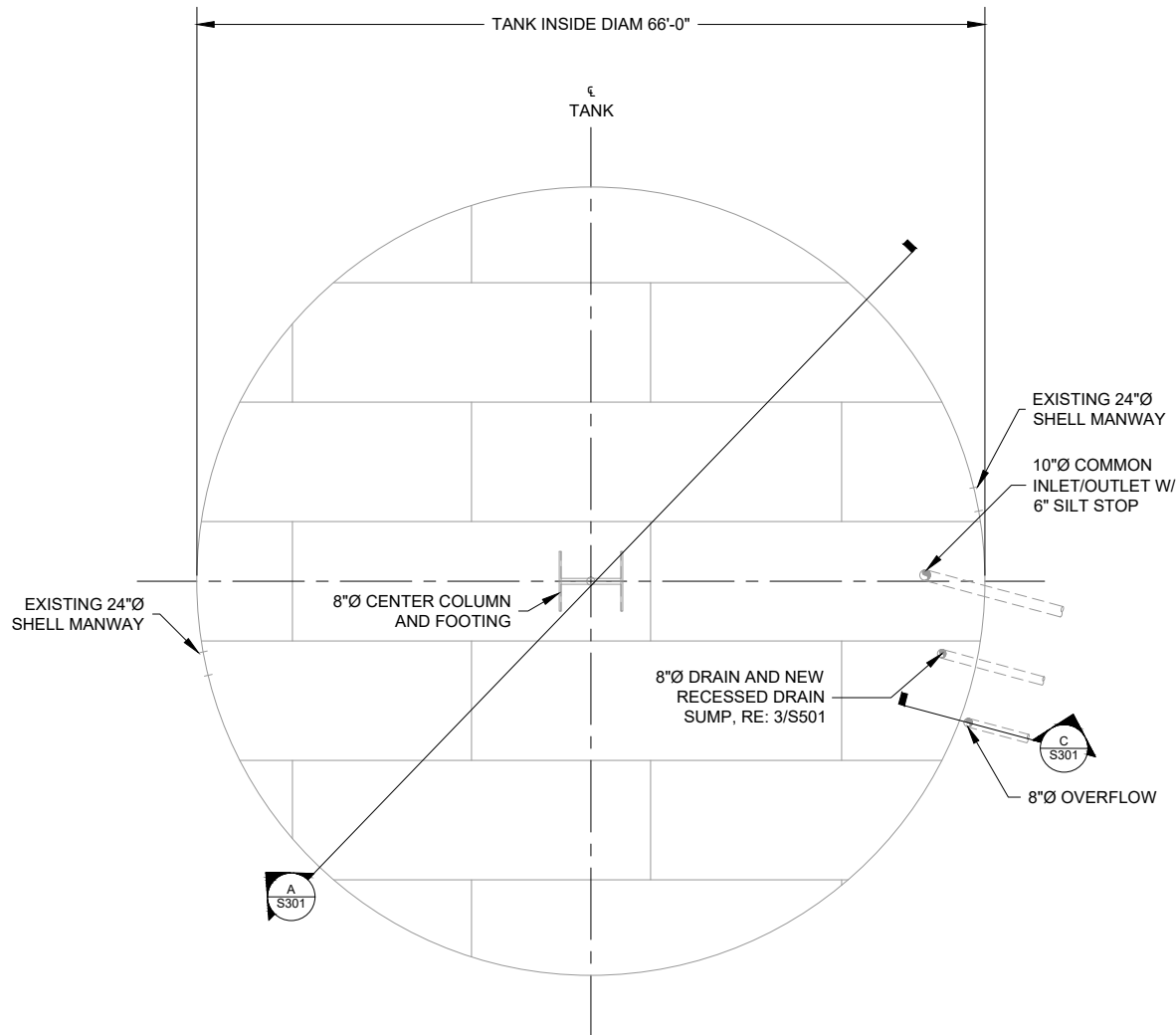
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Project
GLEN ERIE SOUTH
WATER STORAGE
TANK
REHABILITATION
PROJECT

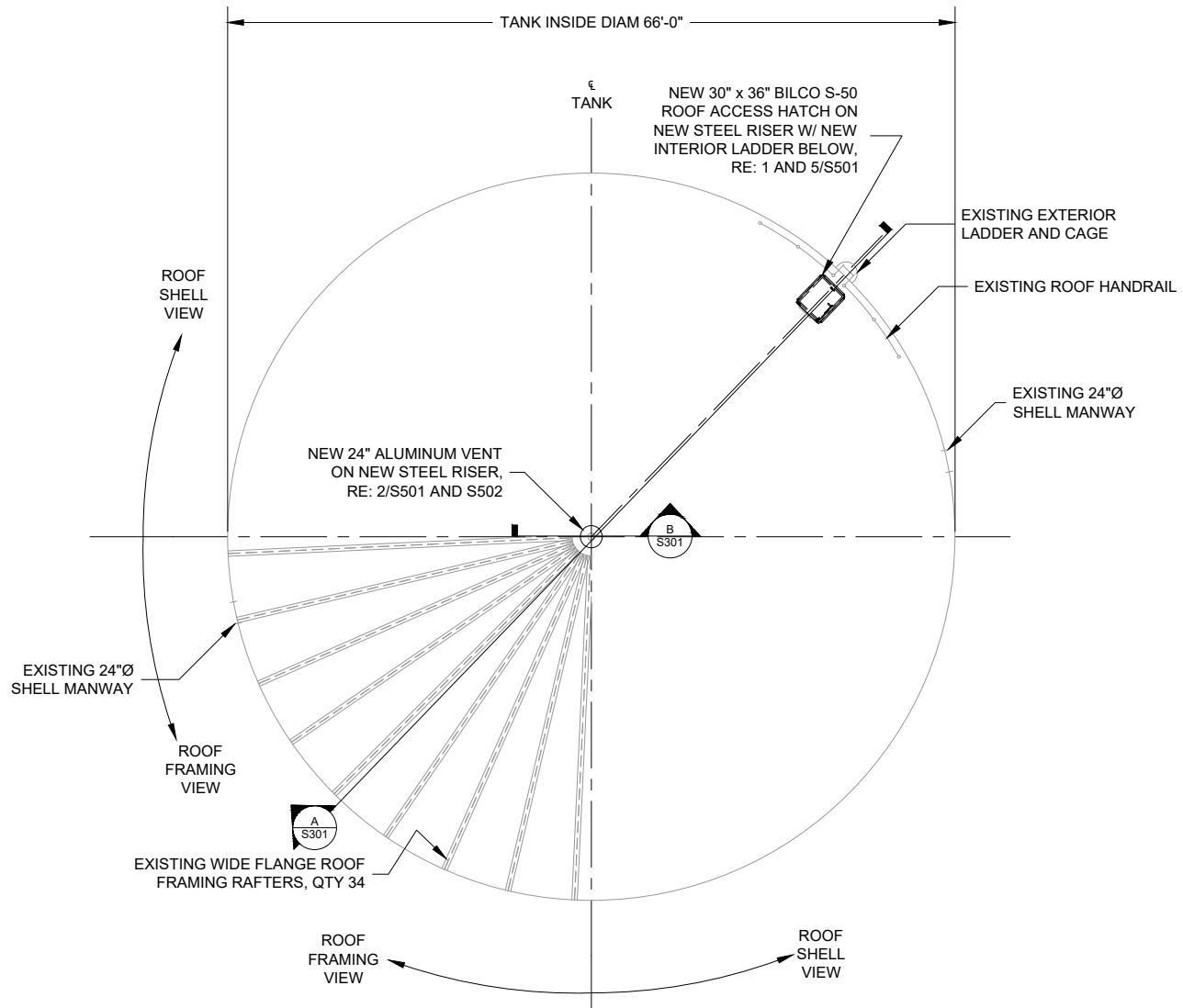
No.	Revision/Issue	Date
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Sheet Title
STRUCTURAL
GENERAL NOTES

Sheet No
S001



FLOOR PLAN
SCALE: 1/8" = 1'-0"



ROOF PLAN
SCALE: 1/8" = 1'-0"



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Project
**GLEN ERIE SOUTH
WATER STORAGE
TANK
REHABILITATION
PROJECT**

0 4' 8' 16'

SCALE BASED ON FULL-SIZE
22x34 DRAWING SHEET
1/8" = 1'-0"

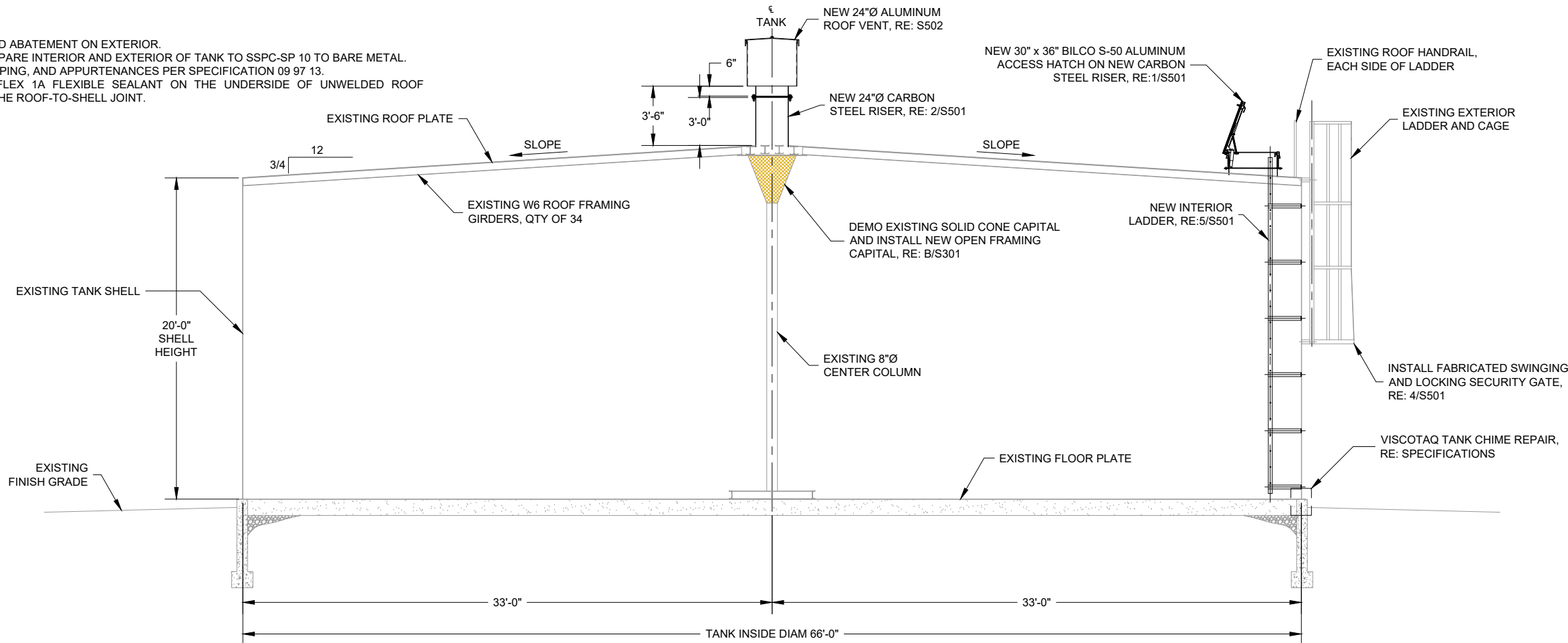
No.	Revision/Issue	Date
Project No.: 2025-COC-GES		
Drawn By: TAW		
Checked By: WWS		
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Sheet Title
**FLOOR AND ROOF
PLANS**

Sheet No
S101

NOTES:

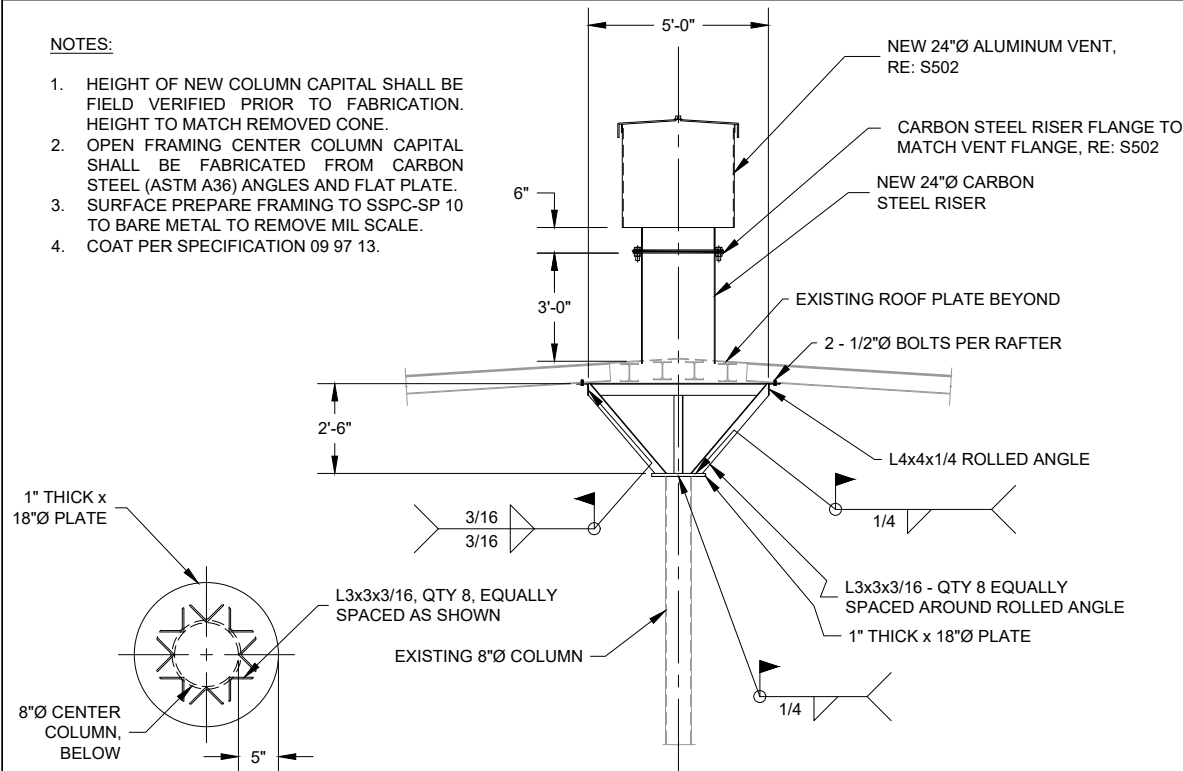
1. PERFORM LEAD ABATEMENT ON EXTERIOR.
2. SURFACE PREPARE INTERIOR AND EXTERIOR OF TANK TO SSPC-SP 10 TO BARE METAL.
3. COAT TANK, PIPING, AND APPURTENANCES PER SPECIFICATION 09 97 13.
4. INSTALL SIKAFLEX 1A FLEXIBLE SEALANT ON THE UNDERSIDE OF UNWELDED ROOF PLATES AND THE ROOF-TO-SHELL JOINT.



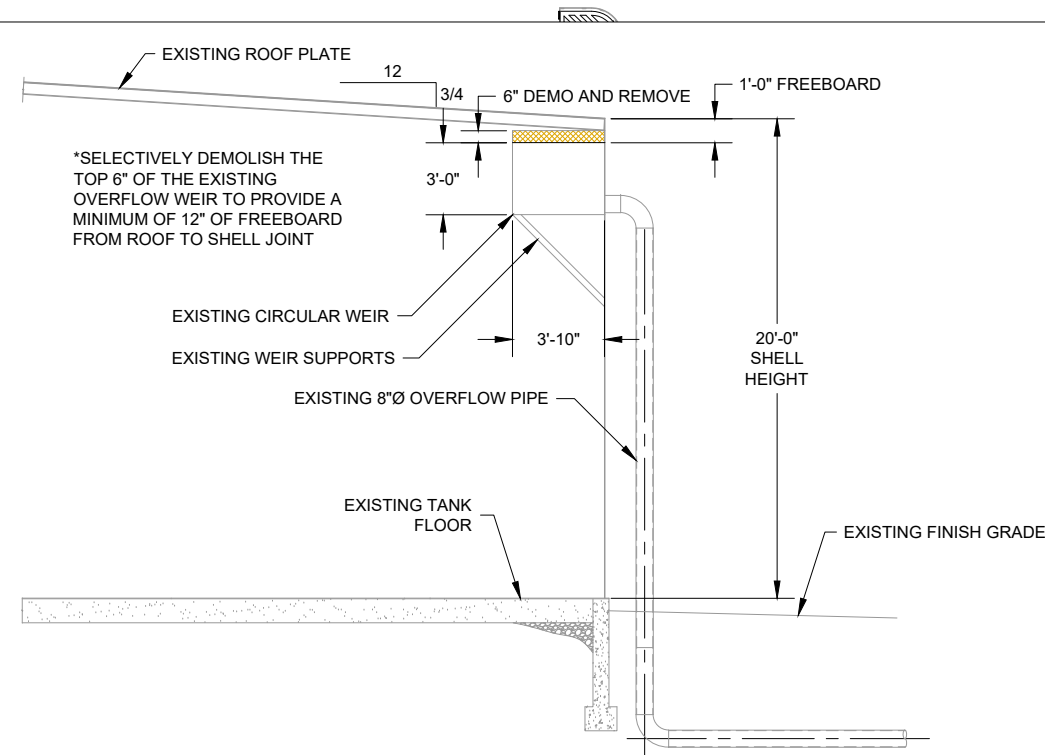
A SECTION
SCALE: 1/4" = 1'-0"

NOTES:

1. HEIGHT OF NEW COLUMN CAPITAL SHALL BE FIELD VERIFIED PRIOR TO FABRICATION. HEIGHT TO MATCH REMOVED CONE.
2. OPEN FRAMING CENTER COLUMN CAPITAL SHALL BE FABRICATED FROM CARBON STEEL (ASTM A36) ANGLES AND FLAT PLATE.
3. SURFACE PREPARE FRAMING TO SSPC-SP 10 TO BARE METAL TO REMOVE MIL SCALE.
4. COAT PER SPECIFICATION 09 97 13.



B SECTION
SCALE: 3/8" = 1'-0"



C SECTION
SCALE: 1/4" = 1'-0"



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**GLEN ERIE SOUTH
WATER STORAGE
TANK
REHABILITATION
PROJECT**

0 2 4 8 1/4" = 1'-0"
0 2 4 6 3/8" = 1'-0"

SCALE BASED ON FULL-SIZE
22x34 DRAWING SHEET

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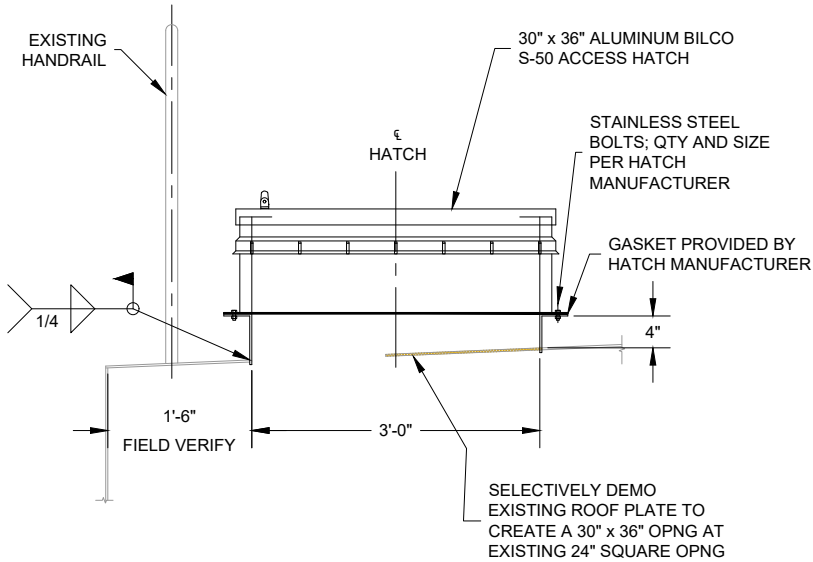
Sheet Title
TANK SECTIONS

Sheet No
S301

BID SET

NOTES:

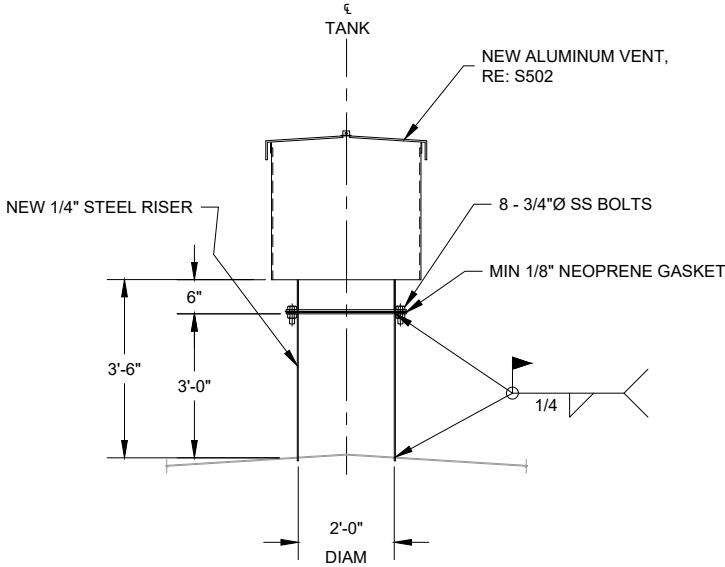
1. HATCH RISER SHALL BE FABRICATED OF ASTM A36 CARBON STEEL 1/4" FLAT PLATE.
2. PROVIDE A MINIMUM OF 4" OF CLEARANCE ON THE LOW SIDE.
3. FRAME FLANGE TO BE 3-1/2" WIDE TO MATCH BILCO HATCH FLANGE.
4. WELD FRAME TO EXISTING ROOF PLATE.
5. FIELD LOCATE OPENING BETWEEN ROOF FRAMING RAFTERS, CONFIRM LOCATION WITH OWNER AND ENGINEER PRIOR TO INSTALLATION.
6. SURFACE PREPARE RISER FRAME TO SSPC-SP 10 TO REMOVE MIL SCALE. COAT PER SPECIFICATION 09 97 13.
7. ALUMINUM HATCH TO BE SURFACE PREPARED AND COATED PER SPECIFICATION 09 97 13.



1 DETAIL
SCALE: 1" = 1'-0"

NOTES:

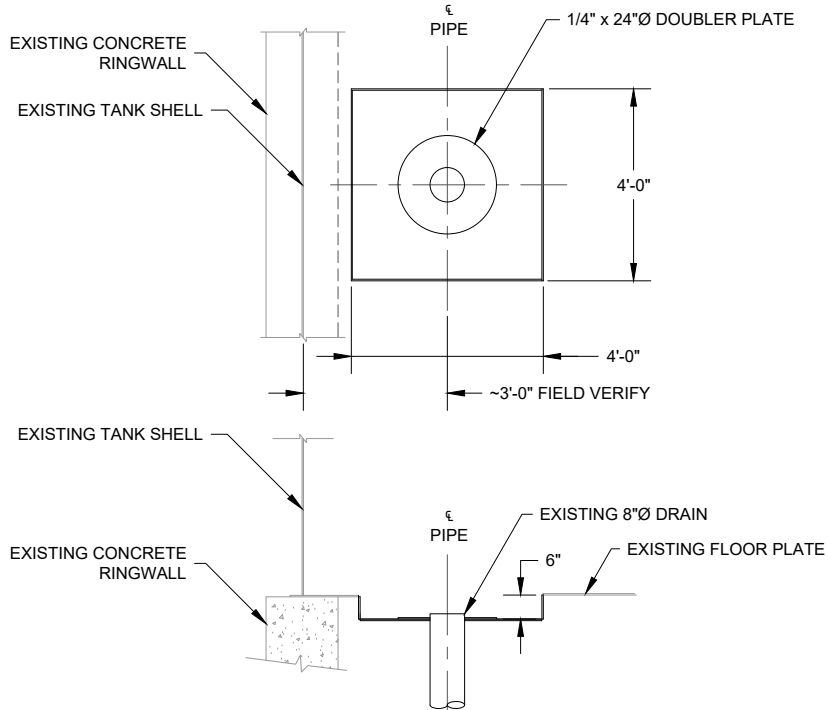
1. VENT RISER SHALL BE FABRICATED OF ASTM A36 CARBON STEEL 1/4" FLAT PLATE OR SCHEDULE 40 STEEL PIPE.
2. WELD RISER TO EXISTING ROOF PLATE.
3. SURFACE PREPARE RISER TO SSPC-SP 10 TO REMOVE MIL SCALE. COAT PER SPECIFICATION 09 97 13.
4. ALUMINUM VENT TO BE SURFACE PREPARED AND COATED PER SPECIFICATION 09 97 13.
5. REFER TO DRAWING SHEET S502 FOR VENT DETAILS.



2 DETAIL
SCALE: 1/2" = 1'-0"

NOTES:

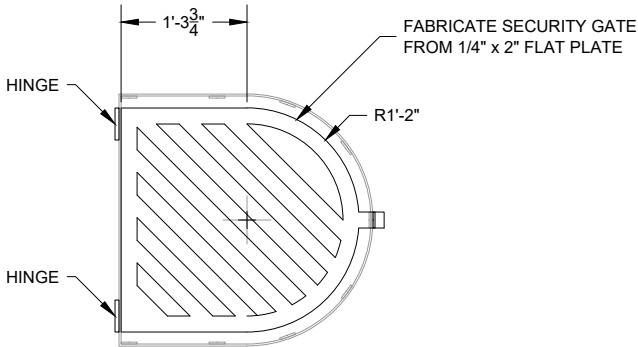
1. PRIOR TO CUTTING FLOOR PLATE, AND PRIOR TO FABRICATION OF NEW RECESSED STEEL DRAIN SUMP, FIELD MEASURE TO LAYOUT DIMENSIONED SUMP.
2. USE 1/4" PLATE TO FABRICATE RECESSED DRAIN SUMP AND DOUBLER PLATES.
3. SEAL WELD ALL AROUND DRAIN PIPE AND FABRICATED DRAIN SUMP.
4. THIRD PARTY WELD INSPECTOR TO INSPECT WELDS AND PERFORM DYE-PENETRATE TESTING.
5. TRIM EXISTING DRAIN PIPE TO APPROXIMATELY 1" ABOVE NEW DOUBLER. PLATE.



3 DETAIL
SCALE: 1/2" = 1'-0"

NOTES:

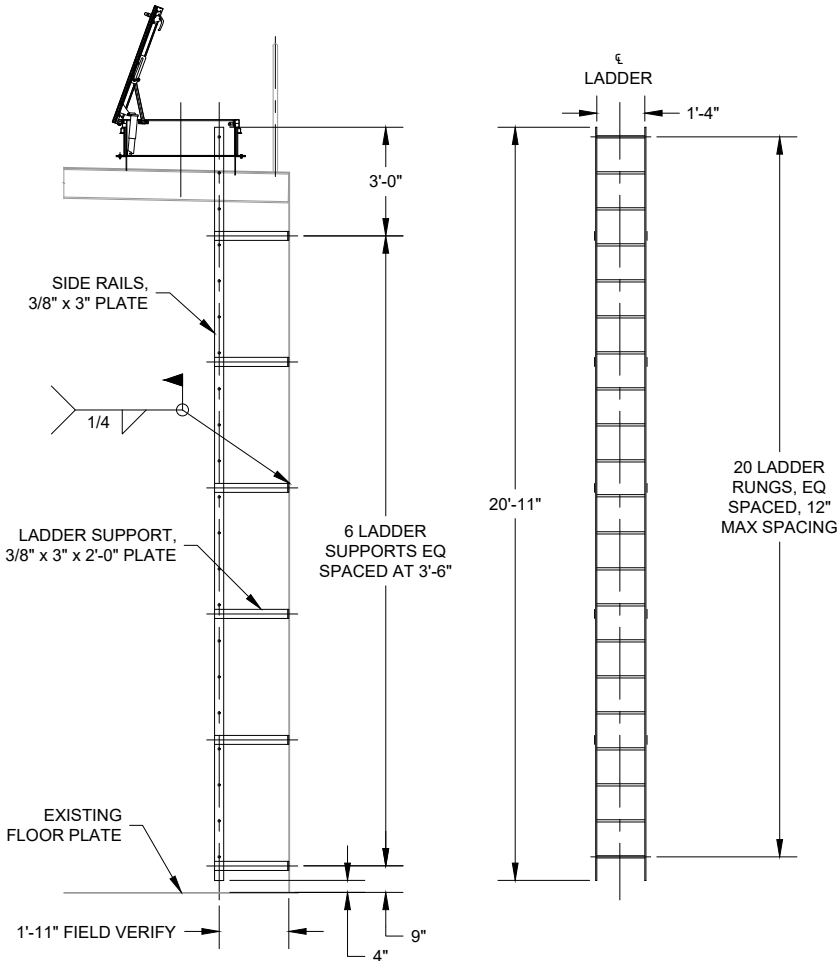
1. FIELD VERIFY EXISTING LADDER CAGE DIMENSIONS.
2. FABRICATE A CARBON STEEL LOCKING AND SWINGING SECURITY GATE TO CONNECT TO AND FIT WITHIN THE EXISTING LADDER CAGE.
3. SURFACE PREPARE RISER TO SSPC-SP 10 TO REMOVE MIL SCALE. COAT PER SPECIFICATION 09 97 13.



4 DETAIL
SCALE: 1" = 1'-0"

NOTES:

1. ALL LADDER COMPONENTS SHALL BE ASTM A36 CARBON STEEL.
2. FIELD VERIFY DIMENSIONS PRIOR TO PREPARATION OF FABRICATION SHOP DRAWINGS.
3. LENGTH OF SUPPORTS WILL DEPEND ON LOCATION OF FIELD LOCATED HATCH OPENING.
4. FIELD WELD TO EXISTING TANK SHELL.
5. SURFACE PREPARE NEW EXTERIOR LADDER AND SUPPORTS TO SSPC-SP 10 TO BARE METAL TO REMOVE MIL SCALE.
6. COAT PER SPECIFICATION 09 97 13.



5 DETAIL
SCALE: 3/8" = 1'-0"



WESTERN WATER SOLUTIONS, LLC
PO BOX 3741
BASALT, COLORADO 81621

Prepared For
COLORADO DEPARTMENT OF PUBLIC
HEALTH
4300 CHERRY CREEK DRIVE SOUTH, B2
DENVER, COLORADO 80246-1530

Client
CITY OF CRAIG
300 W 4TH ST
CRAIG, COLORADO 81625

Project
**GLEN ERIE SOUTH
WATER STORAGE
TANK
REHABILITATION
PROJECT**



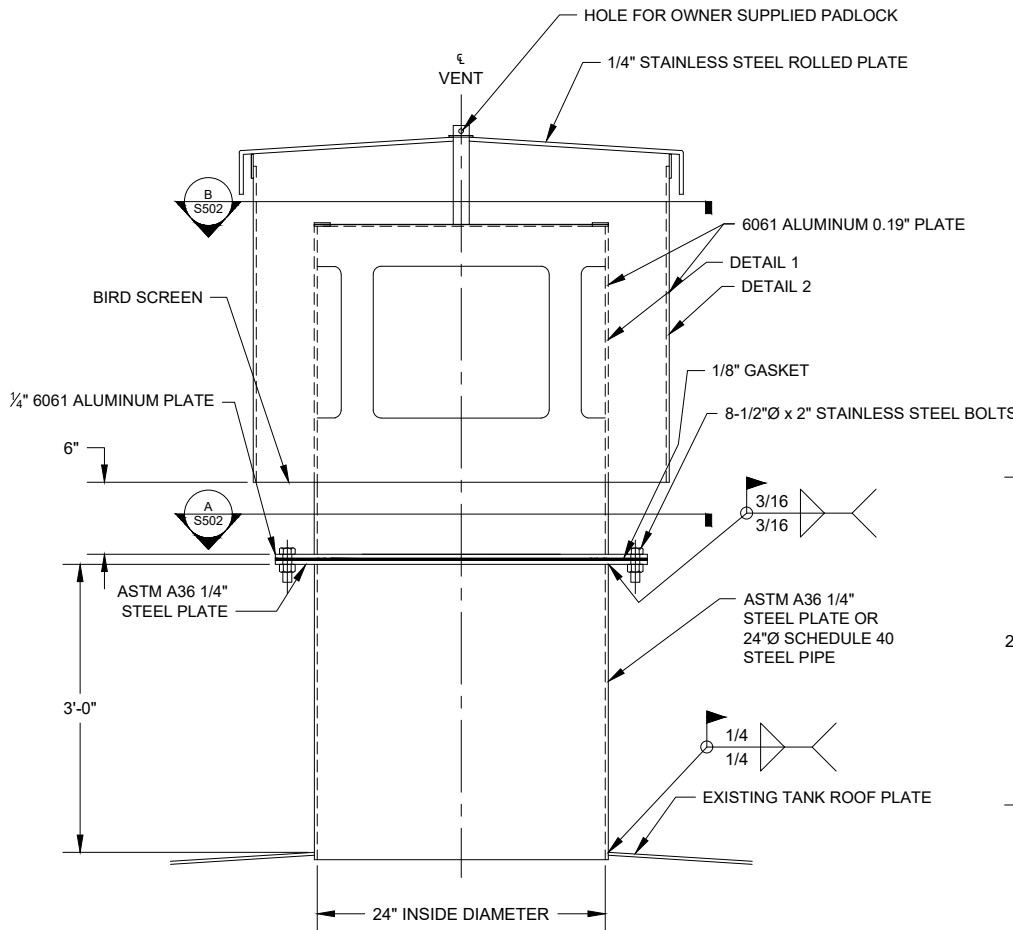
SCALE BASED ON FULL-SIZE
22x34 DRAWING SHEET

No.	Revision/Issue	Date
Project No.:	2025-COC-GES	
Drawn By:	TAW	
Checked By:	WWS	
Drawing Date:	05.19.2025	

Sheet Title
TANK DETAILS

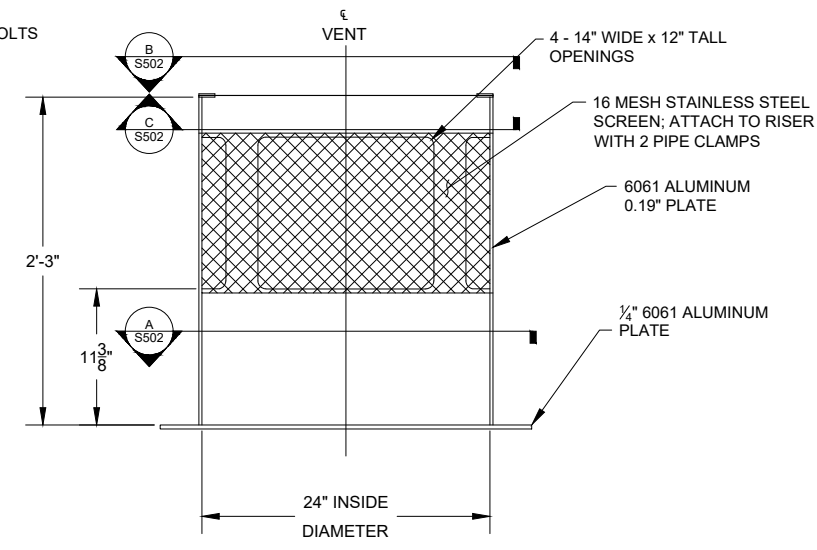
Sheet No
S501

BID SET

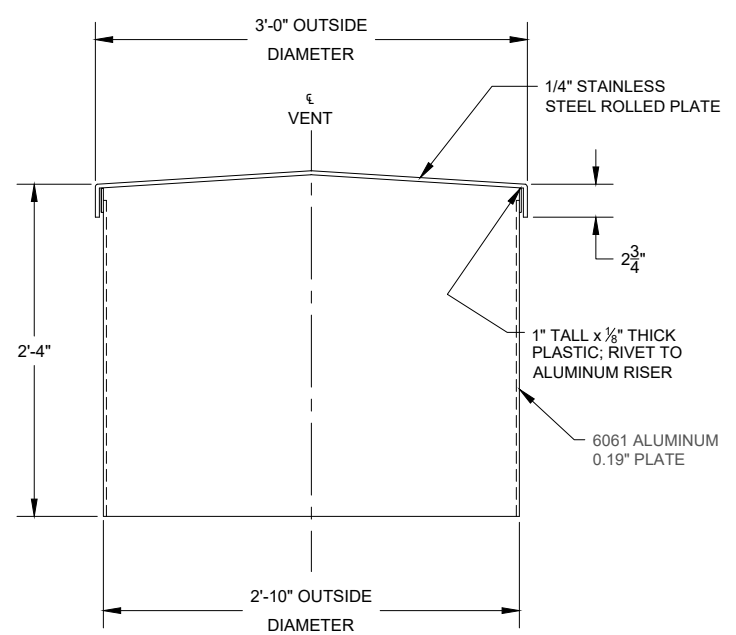


STAINLESS STEEL SCREEN:
 316 STAINLESS STEEL MESH SCREEN: 16 x 16 SQUARE,
 0.0455" x 0.0455" OPENING, 0.018" THICK WIRE DIAMETER,
 51% OPEN AREA AS MANUFACTURED BY McNICHOLS OR
 APPROVED EQUAL.

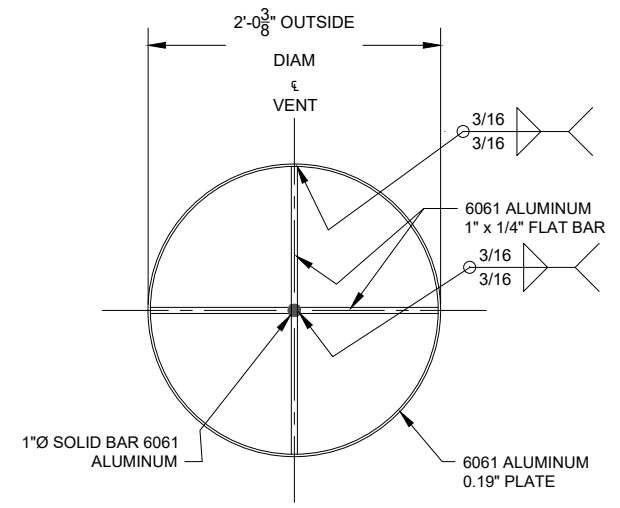
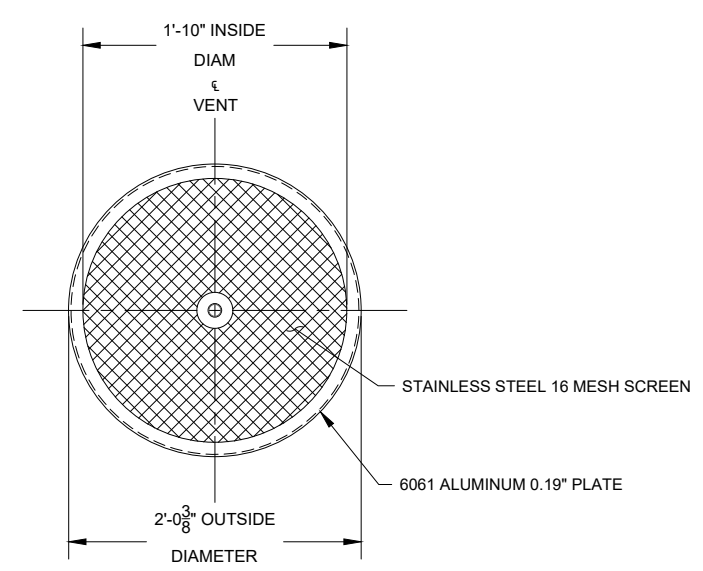
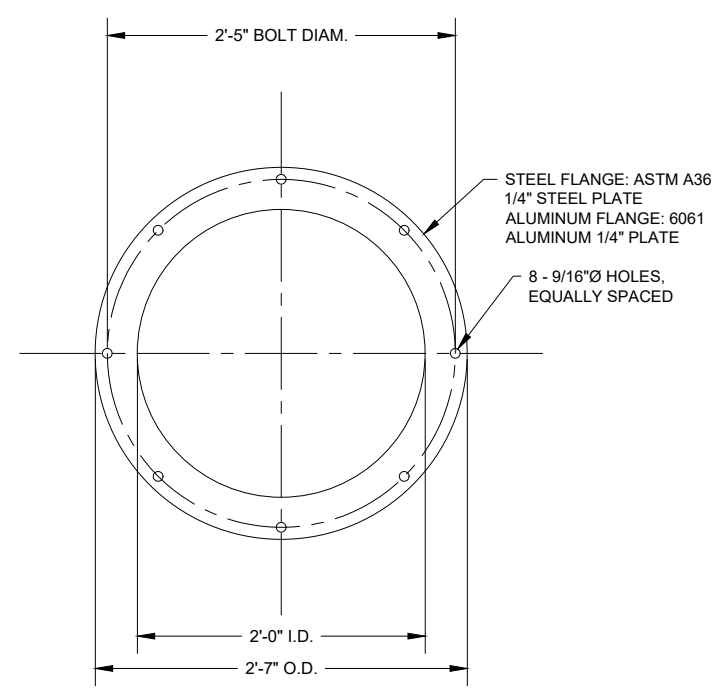
BIRD SCREEN:
 3/4-INCH NO. 051 FLATTENED EXPANDED ALUMINUM
 METAL BIRD SCREEN AS MANUFACTURED BY McNICHOLS
 OR APPROVED EQUAL.



1 DETAIL
 SCALE: 1-1/2" = 1'-0"



2 DETAIL
 SCALE: 1-1/2" = 1'-0"



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Client
 CITY OF CRAIG
 300 W 4TH ST
 CRAIG, COLORADO 81625

Project
GLEN ERIE SOUTH WATER STORAGE TANK REHABILITATION PROJECT

0 1/2' 1' 1 1/2'
 SCALE BASED ON FULL-SIZE 22x34 DRAWING SHEET
 1-1/2" = 1'-0"

No.	Revision/Issue	Date
Project No.:	2025-COC-GES	
Drawn By:	TAW	
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Sheet Title
VENT DETAILS

Sheet No
S502