

PROJECT MANUAL

FOR

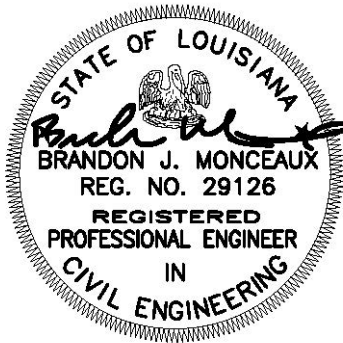
JACKSON STREET GAS MAIN REPLACEMENT FOR CITY OF ALEXANDRIA

STATE OF LOUISIANA
JEFF LANDRY – GOVERNOR

CITY OF ALEXANDRIA
JACQUES M. ROY, MAYOR

CITY OF ALEXANDRIA
MARCUS CONNELLA, UTILITY DIRECTOR

August 2025



8-4-25

Monceaux
Buller
& Associates, LLC
civil engineers & land surveyors

610 Desoto Street Alexandria, LA 71301
Tel: 318.442.8465

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BIDDING REQUIREMENTS

ADVERTISEMENT OR INVITATION TO BID

JACKSON STREET GAS MAIN REPLACEMENT FOR CITY OF ALEXANDRIA

Separate sealed bids for, **JACKSON STREET GAS MAIN REPLACEMENT**, will be received by the CITY OF ALEXANDRIA PURCHASING DEPARTMENT ATTN: JoAnn Swain, Located at 2021 Industrial Park Road, Building WH, Alexandria, LA 71303 or via mail to The City of Alexandria Purchasing Department, Attn: JoAnn Swain, P.O. Box 71, Alexandria, LA 71309-007; fax to (318) 441-6201 or 6185; or email to joann.swain@cityofalex.com prior to the deadline date and time TEN (10) O'CLOCK A.M., September 17, 2025 and then at said office publicly opened and read aloud. The Instruction to Bidders, Bid Form, Agreement Between Owner and Contractor, Forms of Bid Bond, Performance Bond and Payment Bonds, Drawings and Specifications and other contract Documents may be examined at the following location:

MONCEAUX – BULLER and ASSOCIATES, LLC
610 Desoto Street
Alexandria, LA. 71301

Copies may be obtained at the offices of MONCEAUX – BULLER and ASSOCIATES, LLC, 610 Desoto Street, Alexandria, LA. 71301. Any BIDDER or Non-Bidder. Upon obtaining CONTRACT DOCUMENTS will require a deposit of \$350. The OWNER reserves the right to reject any or all bids. Each bidder must deposit with his bid, security in the amount, form and subject to the conditions provided in the Bid requirements and conditions.

Any BIDDER or Non-Bidder. Upon returning the CONTRACT DOCUMENTS in their entirety promptly and in good condition within 14 days of receipt of bids will be refunded their deposit of \$350.

All Bidders shall be licensed in the classification of **Municipal and Public Works Construction** as prescribed by the Louisiana State Licensing Board for Contractors.

A Bid Bond in the amount of five percent (5%) of the Total Base Bid is required. The successful Bidder will be required to furnish Performance and Payment Bonds in the amount of one hundred percent (100%) of Total Base Bid.

Pre-Bid Meeting:

A Pre-Bid Meeting will be held on September 4, 2025 at 10:00 am the offices of MONCEAUX – BULLER and ASSOCIATES, LLC, 610 Desoto Street, Alexandria, LA. 71301.

Address for Postal Delivery:

City of Alexandria Purchasing Department
P.O. Box 71
Alexandria, LA 71309-007

Address for Courier Delivery:

City of Alexandria Purchasing Department
2021 Industrial Park Road, Building WH
Alexandria, LA 71303

PLEASE PUBLISH THREE (3) TIMES:

August 27, 2025
September 3, 2025
September 10, 2025

INSTRUCTIONS TO BIDDERS

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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:

Monceaux-Buller & Associates, LLC
610 Desoto Street, Alexandria, Louisiana 71301

ARTICLE 2 – COPIES OF BIDDING DOCUMENTS

- 2.01 Complete sets of the Bidding Documents may be obtained from the Issuing Office in the number and format stated in the advertisement or invitation to bid.
- 2.02 Complete sets of Bidding Documents shall be used in preparing Bids; neither Owner nor Engineer assumes any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.
- 2.03 Owner and Engineer, in making copies of Bidding Documents available on the above terms, do so only for the purpose of obtaining Bids for the Work and do not authorize or confer a license for any other use.

ARTICLE 3 – SITE AND OTHER AREAS; EXISTING SITE CONDITIONS; EXAMINATION OF SITE; OWNER'S SAFETY PROGRAM; OTHER WORK AT THE SITE

3.01 *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.

3.02 *Existing Site Conditions*

- A. Subsurface and Physical Conditions; Hazardous Environmental Conditions
1. The Supplementary Conditions identify:
 - a. those reports known to Owner of explorations and tests of subsurface conditions at or adjacent to the Site.
 - b. those drawings known to Owner of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities).
 - c. reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site.
 - d. Technical Data contained in such reports and drawings.
 2. Owner will make copies of reports and drawings referenced above available to any Bidder on request. These reports and drawings are not part of the Contract Documents, but the Technical Data contained therein upon whose accuracy Bidder is entitled to rely, as provided in the General Conditions, has been identified and established in the Supplementary Conditions. Bidder is responsible for any interpretation or conclusion Bidder draws from any Technical Data or any other data,

interpretations, opinions, or information contained in such reports or shown or indicated in such drawings.

3. If the Supplementary Conditions do not identify Technical Data, the default definition of Technical Data set forth in Article 1 of the General Conditions will apply.
- B. Underground Facilities: Information and data shown or indicated in the Bidding Documents with respect to existing Underground Facilities at or adjacent to the Site are set forth in the Contract Documents and are based upon information and data furnished to Owner and Engineer by owners of such Underground Facilities, including Owner, or others.
- C. Adequacy of Data: Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with respect to subsurface conditions, other physical conditions, and Underground Facilities, and possible changes in the Bidding Documents due to differing or unanticipated subsurface or physical conditions appear in Paragraphs 5.03, 5.04, and 5.05 of the General Conditions. Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with respect to a Hazardous Environmental Condition at the Site, if any, and possible changes in the Contract Documents due to any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work, appear in Paragraph 5.06 of the General Conditions.

3.03 *Site Visit and Testing by Bidders*

- A. Bidder shall conduct the required Site visit during normal working hours, and shall not disturb any ongoing operations at the Site.
- B. Bidder is not required to conduct any subsurface testing, or exhaustive investigations of Site conditions.
- C. On request, and to the extent Owner has control over the Site, and schedule permitting, the Owner will provide Bidder access to the Site to conduct such additional examinations, investigations, explorations, tests, and studies as Bidder deems necessary for preparing and submitting a successful Bid. Owner will not have any obligation to grant such access if doing so is not practical because of existing operations, security or safety concerns, or restraints on Owner's authority regarding the Site.
- D. Bidder shall comply with all applicable Laws and Regulations regarding excavation and location of utilities, obtain all permits, and comply with all terms and conditions established by Owner or by property owners or other entities controlling the Site with respect to schedule, access, existing operations, security, liability insurance, and applicable safety programs.
- E. Bidder shall fill all holes and clean up and restore the Site to its former condition upon completion of such explorations, investigations, tests, and studies.

3.04 *Owner's Safety Program*

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

3.05 *Other Work at the Site*

- A. Reference is made to Article 8 of the Supplementary Conditions for the identification of the general nature of other work of which Owner is aware (if any) that is to be performed at the Site by Owner or others (such as utilities and other prime contractors) and relates to

the Work contemplated by these Bidding Documents. If Owner is party to a written contract for such other work, then on request, Owner will provide to each Bidder access to examine such contracts (other than portions thereof related to price and other confidential matters), if any.

ARTICLE 4 – BIDDER’S REPRESENTATIONS

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

- A. examine and carefully study the Bidding Documents, and any data and reference items identified in the Bidding Documents;
- B. visit the Site, conduct a thorough, visual examination of the Site and adjacent areas, and become familiar with and satisfy itself as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work;
- C. become familiar with and satisfy itself as to all Laws and Regulations that may affect cost, progress, and performance of the Work;
- D. carefully study all: (1) reports of explorations and tests of subsurface conditions at or adjacent to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings, and (2) reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings;
- E. consider the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and the Site-related reports and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder; and (3) Bidder’s safety precautions and programs;
- F. agree, based on the information and observations referred to in the preceding paragraph, that at the time of submitting its Bid no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of its Bid for performance of the Work at the price bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents;
- G. become aware of the general nature of the work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents;
- H. promptly give Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder discovers in the Bidding Documents and confirm that the written resolution thereof by Engineer is acceptable to Bidder;
- I. determine that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance and furnishing of the Work; and
- J. agree that the submission of a Bid will constitute an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article, that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

ARTICLE 5 – PRE-BID CONFERENCE

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

ARTICLE 6 – INTERPRETATIONS AND ADDENDA

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

ARTICLE 7 – BID SECURITY

- 7.01 A Bid must be accompanied by Bid security made payable to Owner in an amount of [5] percent of Bidder's maximum Bid price (determined by adding the base bid and all alternates) and in the form of a certified check, bank money order, or a Bid bond (on the form included in the Bidding Documents) issued by a surety meeting the requirements of Paragraphs 6.01 and 6.02 of the General Conditions.
- 7.02 The Bid security of the apparent Successful Bidder will be retained until Owner awards the contract to such Bidder, and such Bidder has executed the Contract Documents, furnished the required contract security, and met the other conditions of the Notice of Award, whereupon the Bid security will be released. If the Successful Bidder fails to execute and deliver the Contract Documents and furnish the required contract security within 15 days after the Notice of Award, Owner may consider Bidder to be in default, annul the Notice of Award, and the Bid security of that Bidder will be forfeited. Such forfeiture shall be Owner's exclusive remedy if Bidder defaults.
- 7.03 The Bid security of other Bidders that Owner believes to have a reasonable chance of receiving the award may be retained by Owner until the earlier of seven days after the Effective Date of the Contract or 61 days after the Bid opening, whereupon Bid security furnished by such Bidders will be released.
- 7.04 Bid security of other Bidders that Owner believes do not have a reasonable chance of receiving the award will be released within seven days after the Bid opening.

ARTICLE 8 – CONTRACT TIMES

- 8.01 The number of days within which, or the dates by which the Work is to be substantially completed, and completed and ready for final payment, are set forth in the Agreement.

ARTICLE 9 – LIQUIDATED DAMAGES

- 9.01 Provisions for liquidated damages, if any, for failure to timely attain 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 shall be based on the presumption that the Contractor will furnish the materials and equipment specified or described in the Bidding Documents, as supplemented by Addenda. Any assumptions regarding the possibility of post-Bid approvals of “or-equal” or substitution requests are made at Bidder’s sole risk.

ARTICLE 11 – PREPARATION OF BID

- 11.01 The Bid Form is included with the Bidding Documents.
- A. All blanks on the Bid Form shall be completed in ink and the Bid Form signed in ink. Erasures or alterations shall be initialed in ink by the person signing the Bid Form. A Bid price shall be indicated for each 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.”
- 11.02 A Bid by a corporation shall be executed in the corporate name by a corporate officer (whose title must appear under the signature), accompanied by evidence of authority to sign. The corporate address and state of incorporation shall be shown.
- 11.03 A Bid by a partnership shall be executed in the partnership name and signed by a partner (whose title must appear under the signature), accompanied by evidence of authority to sign. The partnership’s address for receiving notices shall be shown.
- 11.04 A Bid by a limited liability company shall be executed in the name of the firm by a member or other authorized person and accompanied by evidence of authority to sign. The state of formation of the firm and the firm’s address for receiving notices shall be shown.
- 11.05 A Bid by an individual shall show the Bidder’s name and address for receiving notices.
- 11.06 A Bid by a joint venture shall be executed by an authorized representative of each joint venturer in the manner indicated on the Bid Form. The joint venture’s address for receiving notices shall be shown.
- 11.07 All names shall be printed in ink below the signatures.
- 11.08 The Bid shall contain an acknowledgment of receipt of all Addenda, the numbers of which shall be filled in on the Bid Form.
- 11.09 Postal and e-mail addresses and telephone number for communications regarding the Bid shall be shown.

- 11.10 The Bid shall contain evidence of Bidder's authority and qualification to do business in the state where the Project is located, or Bidder shall covenant in writing to obtain such authority and qualification prior to award of the Contract and attach such covenant to the Bid. Bidder's state contractor license number, if any, shall also be shown on the Bid Form.

ARTICLE 12 – BASIS OF BID

12.01 Base Bid with Alternates

- A. Bidders shall 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.

ARTICLE 13 – SUBMITTAL OF BID

- 13.01 With each copy of the Bidding Documents, a Bidder is furnished one separate unbound copy of the Bid Form, and, if required, the Bid Bond Form. The unbound copy of the Bid Form is to be completed and submitted with the Bid security and the other documents required to be submitted under the terms of Article 6 of the Bid Form.
- 13.02 A Bid shall be received no later than the date and time prescribed and at the place indicated in the advertisement or invitation to bid and shall be enclosed in a plainly marked package with the Project title (and, if applicable, the designated portion of the Project for which the Bid is submitted), the name and address of Bidder, and shall be accompanied by the Bid security and other required documents. If a Bid is sent by mail or other delivery system, the sealed envelope containing the Bid shall be enclosed in a separate package plainly marked on the outside with the notation "BID ENCLOSED." A mailed Bid shall be addressed to:

City of Alexandria Purchasing Department
2021 Industrial Park Road, Building WH
Alexandria, LA 71303

- 13.03 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 14 – MODIFICATION AND WITHDRAWAL OF BID

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

ARTICLE 15 – OPENING OF BIDS

- 15.01 Bids will be opened at the time and place indicated in the advertisement or invitation to bid and, unless obviously non-responsive, read aloud publicly. An abstract of the amounts of the base Bids and major alternates, if any, will be made available to Bidders after the opening of Bids.

ARTICLE 16 – BIDS TO REMAIN SUBJECT TO ACCEPTANCE

- 16.01 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 17 – EVALUATION OF BIDS AND AWARD OF CONTRACT

- 17.01 Owner reserves the right to reject any or all Bids, including without limitation, nonconforming, nonresponsive, unbalanced, or conditional Bids. Owner will reject the Bid of any Bidder that Owner finds, after reasonable inquiry and evaluation, to not be responsible. If Bidder purports to add terms or conditions to its Bid, takes exception to any provision of the Bidding Documents, or attempts to alter the contents of the Contract Documents for purposes of the Bid, then the Owner will reject the Bid as nonresponsive; provided that Owner also reserves the right to waive all minor informalities not involving price, time, or changes in the Work.
- 17.02 If Owner awards the contract for the Work, such award shall be to the responsible Bidder submitting the lowest responsive Bid.
- 17.03 Evaluation of Bids
- A. In evaluating Bids, Owner will consider whether or not the Bids comply with the prescribed requirements, and such alternates, unit prices, and other data, as may be requested in the Bid Form or prior to the Notice of Award.
 - B. In the comparison of Bids, alternates will be applied in the same order of priority as listed in the Bid Form. To determine the Bid prices for purposes of comparison, Owner shall 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.
- 17.04 In evaluating whether a Bidder is responsible, Owner will consider the qualifications of the Bidder and may consider the qualifications and experience of Subcontractors and Suppliers proposed for those portions of the Work for which the identity of Subcontractors and Suppliers must be submitted as provided in the Bidding Documents.
- 17.05 Owner may conduct such investigations as Owner deems necessary to establish the responsibility, qualifications, and financial ability of Bidders and any proposed Subcontractors or Suppliers.

ARTICLE 18 – BONDS AND INSURANCE

- 18.01 Article 6 of the General Conditions, as may be modified by the Supplementary Conditions, sets forth Owner's requirements as to performance and payment bonds and insurance. When the Successful Bidder delivers the Agreement (executed by Successful Bidder) to Owner, it shall be accompanied by required bonds and insurance documentation.

ARTICLE 19 – SIGNING OF AGREEMENT

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

LOUISIANA UNIFORM PUBLIC WORK BID FORM

**TO: City of Alexandria
2021 Industrial Park Road
Building WH
Alexandria, LA 71303**

**BID FOR: Jackson Street Gas Main Replacement
Alexandria, Louisiana**

The undersigned bidder hereby declares and represents that she/he: a) has carefully examined and understands the Bidding Documents, b) has not received, relied on, or based his bid on any verbal instructions contrary to the Bidding Documents or any addenda, c) has personally inspected and is familiar with the project site, and hereby proposes to provide all labor, materials, tools, appliances and facilities as required to perform, in a workmanlike manner, all work and services for the construction and completion of the referenced project, all in strict accordance with the Bidding Documents prepared by: Monceaux – Buller & Associates, LLC and dated: 8/2025

(Owner to provide name of entity preparing bidding documents.)

Bidders must acknowledge all addenda. The Bidder acknowledges receipt of the following **ADDENDA:** (Enter the number the Designer has assigned to each of the addenda that the Bidder is acknowledging) _____.

TOTAL BASE BID: For all work required by the Bidding Documents (including any and all unit prices designated “Base Bid” * but not alternates) the sum of: _____ Dollars (\$ _____)

ALTERNATES: For any and all work required by the Bidding Documents for Alternates including any and all unit prices designated as alternates in the unit price description.

Additive Alternate No. 1 for the lump sum of:

N/A _____ Dollars (\$ _____ N/A _____)

Additive Alternate No. 2 for the lump sum of:

N/A _____ Dollars (\$ _____ N/A _____)

Additive Alternate No. 3 for the lump sum of:

N/A _____ Dollars (\$ _____ N/A _____)

NAME OF BIDDER: _____

ADDRESS OF BIDDER: _____

LOUISIANA CONTRACTOR’S LICENSE NUMBER: _____

NAME OF AUTHORIZED SIGNATORY OF BIDDER: _____

TITLE OF AUTHORIZED SIGNATORY OF BIDDER: _____

SIGNATURE OF AUTHORIZED SIGNATORY OF BIDDER **: _____

DATE: _____

THE FOLLOWING ITEMS ARE TO BE INCLUDED WITH THE SUBMISSION OF THIS LOUISIANA UNIFORM PUBLIC WORK BID FORM

* The Unit Price Form shall be used if the contract includes unit prices. Otherwise it is not required and need not be included with the form. The number of unit prices that may be included is not limited and additional sheets may be included if needed.

** **A CORPORATE RESOLUTION OR WRITTEN EVIDENCE** of the authority of the person signing the bid for the public work as prescribed by LA R.S. 38:2212(B)(5).

BID SECURITY in the form of a bid bond, certified check or cashier’s check as prescribed by LA R.S. 38:2218(A) attached to and made a part of this bid

BID BOND

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

BIDDER (*Name and Address*):

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

OWNER (*Name and Address*):

BID

Bid Due Date:

Description (*Project Name— Include Location*):

BOND

Bond Number:

Date:

Penal sum _____ \$ _____
(Words) (Figures)

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

BIDDER

SURETY

Bidder's Name and Corporate Seal

Surety's Name and Corporate Seal

By: _____
Signature

By: _____
Signature (Attach Power of Attorney)

Print Name

Print Name

Title

Title

Attest: _____
Signature

Attest: _____
Signature

Title

Title

Note: Addresses are to be used for giving any required notice.

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

1. Bidder and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to pay to Owner upon default of Bidder the penal sum set forth on the face of this Bond. Payment of the penal sum is the extent of Bidder's and Surety's liability. Recovery of such penal sum under the terms of this Bond shall be Owner's sole and exclusive remedy upon default of Bidder.
2. Default of Bidder shall occur upon the failure of Bidder to deliver within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents.
3. This obligation shall be null and void if:
 - 3.1 Owner accepts Bidder's Bid and Bidder delivers within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents, or
 - 3.2 All Bids are rejected by Owner, or
 - 3.3 Owner fails to issue a Notice of Award to Bidder within the time specified in the Bidding Documents (or any extension thereof agreed to in writing by Bidder and, if applicable, consented to by Surety when required by Paragraph 5 hereof).
4. Payment under this Bond will be due and payable upon default of Bidder and within 30 calendar days after receipt by Bidder and Surety of written notice of default from Owner, which notice will be given with reasonable promptness, identifying this Bond and the Project and including a statement of the amount due.
5. Surety waives notice of any and all defenses based on or arising out of any time extension to issue Notice of Award agreed to in writing by Owner and Bidder, provided that the total time for issuing Notice of Award including extensions shall not in the aggregate exceed 120 days from the Bid due date without Surety's written consent.
6. No suit or action shall be commenced under this Bond prior to 30 calendar days after the notice of default required in Paragraph 4 above is received by Bidder and Surety and in no case later than one year after the Bid due date.
7. Any suit or action under this Bond shall be commenced only in a court of competent jurisdiction located in the state in which the Project is located.
8. Notices required hereunder shall be in writing and sent to Bidder and Surety at their respective addresses shown on the face of this Bond. Such notices may be sent by personal delivery, commercial courier, or by United States Registered or Certified Mail, return receipt requested, postage pre-paid, and shall be deemed to be effective upon receipt by the party concerned.
9. Surety shall cause to be attached to this Bond a current and effective Power of Attorney evidencing the authority of the officer, agent, or representative who executed this Bond on behalf of Surety to execute, seal, and deliver such Bond and bind the Surety thereby.
10. This Bond is intended to conform to all applicable statutory requirements. Any applicable requirement of any applicable statute that has been omitted from this Bond shall be deemed to be included herein as if set forth at length. If any provision of this Bond conflicts with any applicable statute, then the provision of said statute shall govern and the remainder of this Bond that is not in conflict therewith shall continue in full force and effect.
11. The term "Bid" as used herein includes a Bid, offer, or proposal as applicable.

II. CONTRACT DOCUMENTS

NOTICE OF AWARD
AGREEMENT BETWEEN OWNER AND CONTRACTOR
CONTRACTOR'S AFFIDAVIT
PAYMENT POND
PERFORMANCE BOND
NOTICE TO PROCEED
APPLICATION FOR PAVEMENT
CHANGE ORDER

CONTRACT DOCUMENTS

NOTICE OF AWARD

Date of Issuance: _____, 2025

Owner: **City of Alexandria**

Engineer: **Monceaux-Buller & Associates, LLC**

Engineer's Project No.: **23-74**

Project Name: **Jackson Street Gas Main Replacement**

Bidder:

Bidder's Address:

TO BIDDER:

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

Jackson Street Gas Main Replacement

The Contract Price of the awarded Contract is: \$

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 four **(4)** counterparts of the Agreement, fully executed by Bidder.
2. Deliver with the executed Agreement(s) the Contract security [*e.g., performance and payment bonds*] and insurance documentation as specified in the Instructions to Bidders and General Conditions, Articles 2 and 6.

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 ten days after you comply with the above conditions, Owner will return to you one fully executed 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 Alexandria** _____

By: _____

Title: _____

Copy: Monceaux-Buller & Associates

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

THIS AGREEMENT is by and between City of Alexandria (“Owner”) and
____ (“Contractor”).

Owner and Contractor hereby agree as follows:

ARTICLE 1 – WORK

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

ARTICLE 2 – THE PROJECT

- 2.01 The Project, of which the Work under the Contract Documents is a part, is generally described as follows: **Jackson Street Gas Main Replacement**

ARTICLE 3 – ENGINEER

- 3.01 The part of the Project that pertains to the Work has been designed by **Monceaux-Buller & Associates, LLC**
- 3.02 The Owner has retained **Monceaux-Buller & Associates, LLC** (“Engineer”) to act as Owner’s representative, assume all duties and responsibilities, and have the rights and authority assigned to Engineer in the Contract Documents in connection with the completion of the Work in accordance with the Contract Documents.

ARTICLE 4 – CONTRACT TIMES

- 4.01 *Time of the Essence*
- A. All time limits for Milestones, if any, Substantial Completion, and completion and readiness for final payment as stated in the Contract Documents are of the essence of the Contract.
- 4.02 *Contract Times: Days*
- A. The Work will be substantially completed within **90** days after the date when the Contract Times commence to run as provided in Paragraph 4.01 of the General Conditions, and completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions within **120** days after the date when the Contract Times commence to run.
- 4.03 *Liquidated Damages*
- A. Contractor and Owner recognize that time is of the essence as stated in Paragraph 4.01 above and that Owner will suffer financial and other losses if the Work is not completed and Milestones not achieved within the times specified in Paragraph 4.02 above, plus any extensions thereof allowed in accordance with the Contract. 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 **\$500.00** for each day that expires after the time (as duly adjusted pursuant to the Contract) specified in Paragraph 4.02.A 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.
3. Liquidated damages for failing to timely attain Substantial Completion and final completion are not additive and will not be imposed concurrently.

4.04 *Special Damages*

- A. In addition to the amount provided for liquidated damages, Contractor shall reimburse Owner (1) for any fines or penalties imposed on Owner as a direct result of the Contractor's failure to attain Substantial Completion according to the Contract Times, and (2) for the actual costs reasonably incurred by Owner for engineering, construction observation, inspection, and administrative services needed after the time specified in Paragraph 4.02 for Substantial Completion (as duly adjusted pursuant to the Contract), until the Work is substantially complete.
- B. After Contractor achieves Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Times, Contractor shall reimburse Owner for the actual costs reasonably incurred by Owner for engineering, construction observation, inspection, and administrative services needed after the time specified in Paragraph 4.02 for Work to be completed and ready for final payment (as duly adjusted pursuant to the Contract), until the Work is completed and ready for final payment.

ARTICLE 5 – CONTRACT PRICE

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

- A. For all Work a lump sum of: \$ _____

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

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

ARTICLE 6 – PAYMENT PROCEDURES

6.01 *Submittal and Processing of Payments*

- A. Contractor shall submit Applications for Payment in accordance with Article 15 of the General Conditions. Applications for Payment will be processed by Engineer as provided in the General Conditions.

6.02 *Progress Payments; Retainage*

- A. Owner shall make progress payments on account of the Contract Price on the basis of Contractor's Applications for Payment on or about the **20th** 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. **95** percent of Work completed (with the balance being retainage). If the Work has been 50 percent completed as determined by Engineer, and if the character and progress of the Work have been satisfactory to Owner and Engineer, then as long as the character and progress of the Work remain satisfactory to Owner and Engineer, there will be no additional retainage; and
 - b. **95** percent of cost of materials and equipment not incorporated in the Work (with the balance being retainage).
- B. Upon Substantial Completion, Owner shall pay an amount sufficient to increase total payments to Contractor to **100** percent of the Work completed, less such amounts set off by Owner pursuant to Paragraph 15.01.E of the General Conditions, and less **200** percent of Engineer's estimate of the value of Work to be completed or corrected as shown on the punch list of items to be completed or corrected prior to final payment.

6.03 *Final Payment*

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

ARTICLE 7 – INTEREST

- 7.01 All amounts not paid when due shall bear interest at the rate of **7.0** percent per annum.

ARTICLE 8 – CONTRACTOR'S REPRESENTATIONS

- 8.01 In order to induce Owner to enter into this Contract, Contractor makes the following representations:
 - A. Contractor has examined and carefully studied the Contract Documents, and any data and reference items identified in the Contract Documents.
 - B. Contractor has visited the Site, conducted a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
 - C. Contractor is familiar with and is satisfied as to all Laws and Regulations that may affect cost, progress, and performance of the Work.

- D. Contractor has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or adjacent to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings, and (2) reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings.
- E. Contractor has considered the information known to Contractor itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Contract Documents; and the Site-related reports and drawings identified in the Contract Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor; and (3) Contractor's safety precautions and programs.
- F. Based on the information and observations referred to in the preceding paragraph, Contractor agrees that no further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract.
- G. Contractor is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Contract Documents.
- H. Contractor has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.
- I. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.
- J. Contractor's entry into this Contract constitutes an incontrovertible representation by Contractor that without exception all prices in the Agreement are premised upon performing and furnishing the Work required by the Contract Documents.

ARTICLE 9 – CONTRACT DOCUMENTS

9.01 *Contents*

- A. The Contract Documents consist of the following:
 - 1. This Agreement.
 - 2. Performance bond.
 - 3. Payment bond.
 - 4. General Conditions.
 - 5. Supplementary Conditions.
 - 6. Specifications as listed in the table of contents of the Project Manual.
 - 7. Drawings (not attached but incorporated by reference) consisting of 6 sheets with each sheet bearing the following general title: **Jackson Street Gas Main Replacement**
 - 8. The following which may be delivered or issued on or after the Effective Date of the Contract and are not attached hereto:

- a. Notice to Proceed.
 - b. Work Change Directives.
 - c. Change Orders.
 - d. Field Orders.
- B. The documents listed in Paragraph 9.01.A are attached to this Agreement (except as expressly noted otherwise above).
- C. There are no Contract Documents other than those listed above in this Article 9.
- D. The Contract Documents may only be amended, modified, or supplemented as provided in the General Conditions.

ARTICLE 10 – MISCELLANEOUS

10.01 Terms

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

10.02 Assignment of Contract

- A. Unless expressly agreed to elsewhere in the Contract, no assignment by a party hereto of any rights under or interests in the Contract will be binding on another party hereto without the written consent of the party sought to be bound; and, specifically but without limitation, money that may become due and money that is due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.

10.03 Successors and Assigns

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

10.04 Severability

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

10.05 Contractor's Certifications

- A. Contractor certifies that it has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for or in executing the Contract. For the purposes of this Paragraph 10.05:
- 1. "corrupt practice" means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process or in the Contract execution;

2. “fraudulent practice” means an intentional misrepresentation of facts made (a) to influence the bidding process or the execution of the Contract to the detriment of Owner, (b) to establish Bid or Contract prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;
3. “collusive practice” means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish Bid prices at artificial, non-competitive levels; and
4. “coercive practice” means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

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

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

OWNER:

CONTRACTOR:

City of Alexandria

By: _____

By: _____

Title: _____

Title: _____

Attest: _____

Attest: _____

Title: _____

Title: _____

Address for giving notices:

Address for giving notices:

City of Alexandria

2021 Industrial Park Road, Building WH

Alexandria, LA 71303

License No.: _____

STATE OF LOUISIANA
PARISH OF «PARISH OF CONTRACTOR»

PROJECT NO.:«ProjectNo», «Part No»«WBS»;
«Supplement Project No», Part
«Supplement Part No» («Supplement WBS»)(Supplement)
NAME: «Project Reference 1»
«Project Reference 2»
«Project Reference 3»
LOCATION: «Project City»

NON-COLLUSION AFFIDAVIT

Before me, the undersigned authority, duly commissioned and qualified within and for the State and Parish aforesaid, personally came and appeared _____ representing «Contractor» who, being by me first duly sworn deposed and said that he has read this affidavit and does hereby agree under oath to comply with all provisions herein as follows:

PART I.

Section 2224 of Part II of Chapter 10 of Title 38 of the Louisiana Revised Statutes, as amended.

(1) That affiant employed no person, corporation, firm, association, or other organization, either directly or indirectly, to secure the public contract under which he received payment, other than persons regularly employed by the affiant whose services in connection with the construction, alteration or demolition of the public building or project or in securing the public contract were in the regular course of their duties for affiant; and

(2) That no part of the Contract price received by affiant was paid or will be paid to any person, corporation, firm, association, or other organization for soliciting the Contract, other than the payment of their normal compensation to persons regularly employed by the affiant whose services in connection with the construction, alteration or demolition of the public building or project were in the regular course of their duties for affiant.

PART II.

Section 2190 of Part I of Chapter 10 of Title 38 of the Louisiana Revised Statutes, as amended.

That affiant, if an architect or engineer, or representative thereof, does not own a substantial financial interest, either directly or indirectly, in any corporation, firm, partnership, or other organization which supplies materials for the construction of a public work when the architect or engineer has performed architectural or engineering services, either directly or indirectly, in connection with the public work for which the materials are being supplied.

For the purposes of this Section, a "substantial financial interest" shall exclude any interest in stock being traded on the American Stock Exchange or the New York Stock Exchange.

That affiant, if subject to the provisions of this section, does hereby agree to be subject to the penalties involved for the violation of this section.

AFFIANT

SWORN TO AND SUBSCRIBED BEFORE ME THIS _____ DAY OF _____, 2025.

NOTARY

PAYMENT BOND

CONTRACTOR *(name and address):*

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

OWNER *(name and address):*

CONSTRUCTION CONTRACT

Effective Date of the Agreement:

Amount:

Description *(name and location):*

BOND

Bond Number:

Date *(not earlier than the Effective Date of the Agreement of the Construction Contract):*

Amount:

Modifications to this Bond Form: ☐ None ☐ See Paragraph 18

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

CONTRACTOR AS PRINCIPAL

SURETY

(seal)

Contractor's Name and Corporate Seal

By: _____

Signature

Print Name

Title

Attest: _____

Signature

Title

(seal)

Surety's Name and Corporate Seal

By: _____

Signature *(attach power of attorney)*

Print Name

Title

Attest: _____

Signature

Title

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

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 shall arise after the Owner has promptly notified the Contractor and the Surety (at the address described in Paragraph 13) of claims, demands, liens, or suits against the Owner or the Owner's property by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, and tendered defense of such claims, demands, liens, or suits to the Contractor and the Surety.
4. When the Owner has satisfied the conditions in Paragraph 3, the Surety shall promptly and at the Surety's expense defend, indemnify, and hold harmless the Owner against a duly tendered claim, demand, lien, or suit.
5. The Surety's obligations to a Claimant under this Bond shall arise after the following:
 - 5.1 Claimants who do not have a direct contract with the Contractor,
 - 5.1.1 have furnished a written notice of non-payment to the Contractor, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were, or equipment was, furnished or supplied or for whom the labor was done or performed, within ninety (90) days after having last performed labor or last furnished materials or equipment included in the Claim; and
 - 5.1.2 have sent a Claim to the Surety (at the address described in Paragraph 13).
 - 5.2 Claimants who are employed by or have a direct contract with the Contractor have sent a Claim to the Surety (at the address described in Paragraph 13).
6. If a notice of non-payment required by Paragraph 5.1.1 is given by the Owner to the Contractor, that is sufficient to satisfy a Claimant's obligation to furnish a written notice of non-payment under Paragraph 5.1.1.
7. When a Claimant has satisfied the conditions of Paragraph 5.1 or 5.2, whichever is applicable, the Surety shall promptly and at the Surety's expense take the following actions:
 - 7.1 Send an answer to the Claimant, with a copy to the Owner, within sixty (60) days after receipt of the Claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed; and
 - 7.2 Pay or arrange for payment of any undisputed amounts.
 - 7.3 The Surety's failure to discharge its obligations under Paragraph 7.1 or 7.2 shall not be deemed to constitute a waiver of defenses the Surety or Contractor may have or acquire as to a Claim, except as to undisputed amounts for which the Surety and Claimant have reached agreement. If, however, the Surety fails to discharge its obligations under Paragraph 7.1 or 7.2, the Surety shall indemnify the Claimant for the reasonable attorney's fees the Claimant incurs thereafter to recover any sums found to be due and owing to the Claimant.
8. The Surety's total obligation shall not exceed the amount of this Bond, plus the amount of reasonable attorney's fees provided under Paragraph 7.3, and the amount of this Bond shall be credited for any payments made in good faith by the Surety.
9. Amounts owed by the Owner to the Contractor under the Construction Contract shall be used for the performance of the Construction Contract and to satisfy claims, if any, under any construction performance bond. By the Contractor furnishing and the Owner accepting this Bond, they agree that all funds earned by the Contractor in the performance of the Construction Contract are dedicated to satisfy obligations of the Contractor and Surety under this Bond, subject to the Owner's priority to use the funds for the completion of the work.
10. The Surety shall not be liable to the Owner, Claimants, or others for obligations of the Contractor that are unrelated to the Construction Contract. The Owner shall not be liable for the payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligation to make payments to or give notice on behalf of Claimants, or otherwise have any obligations to Claimants under this Bond.
11. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.

12. No suit or action shall be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the state in which the project that is the subject of the Construction Contract is located or after the expiration of one year from the date (1) on which the Claimant sent a Claim to the Surety pursuant to Paragraph 5.1.2 or 5.2, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.
13. Notice and Claims to the Surety, the Owner, or the Contractor shall be mailed or delivered to the address shown on the page on which their signature appears. Actual receipt of notice or Claims, however accomplished, shall be sufficient compliance as of the date received.
14. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.
15. Upon requests by any person or entity appearing to be a potential beneficiary of this Bond, the Contractor and Owner shall promptly furnish a copy of this Bond or shall permit a copy to be made.

16. Definitions

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

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

8. The total amount due and unpaid to the Claimant for labor, materials, or equipment furnished as of the date of the Claim.

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

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

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

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

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

18. Modifications to this Bond are as follows:

PERFORMANCE BOND

CONTRACTOR *(name and address):*

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

OWNER *(name and address):*

CONSTRUCTION CONTRACT

Effective Date of the Agreement:

Amount:

Description *(name and location):*

BOND

Bond Number:

Date *(not earlier than the Effective Date of the Agreement of the Construction Contract):*

Amount:

Modifications to this Bond Form: ☐ None ☐ See Paragraph 16

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

CONTRACTOR AS PRINCIPAL

SURETY

Contractor's Name and Corporate Seal

Surety's Name and Corporate Seal

By: _____
Signature

By: _____
Signature *(attach power of attorney)*

Print Name

Print Name

Title

Title

Attest: _____
Signature

Attest: _____
Signature

Title

Title

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

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

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

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

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

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

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

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

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

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

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

5.3 Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Construction Contract, arrange for a contract to be prepared for execution by the Owner and a contractor selected with the Owners concurrence,

to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract, and pay to the Owner the amount of damages as described in Paragraph 7 in excess of the Balance of the Contract Price incurred by the Owner as a result of the Contractor Default; or

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

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

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

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

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

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

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

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

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

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

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

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

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

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

14. Definitions

14.1 Balance of the Contract Price: The total amount payable by the Owner to the Contractor under the Construction Contract after all proper adjustments have been made including allowance for the Contractor for any amounts received or to be received by the Owner in settlement of insurance or other claims

for damages to which the Contractor is entitled, reduced by all valid and proper payments made to or on behalf of the Contractor under the Construction Contract.

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

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

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

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

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

16. Modifications to this Bond are as follows:

NOTICE TO PROCEED

Owner:	Owner's Contract No.: City of Alexandria
Contractor:	Contractor's Project No.
Engineer:	Engineer's Proj. No. 23-74
Project:	Contract Name: Jackson St. Gas Main Replacement
	Effective Date of Contract:

TO CONTRACTOR:

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

On that date, Contractor shall start performing its obligations under the Contract Documents. No Work shall be done at the Site prior to such date. In accordance with the Agreement, the number of days to achieve Substantial Completion is _____ , and the number of days to achieve readiness for final payment is _____ .

Owner:

Authorized Signature

By:

Title:

Date Issued:

Copy: Engineer

Contractor's Application for Payment No. _____

	Application Period:	Application Date:
To (Owner):	From (Contractor):	Via (Engineer):
Project:	Contract:	
Owner's Contract No.:	Contractor's Project No.:	Engineer's Project No.:

Application For Payment Change Order Summary

Approved Change Orders		
Number	Additions	Deductions
TOTALS		
NET CHANGE BY		
CHANGE ORDERS		

1. ORIGINAL CONTRACT PRICE.....	\$ _____
2. Net change by Change Orders.....	\$ _____
3. Current Contract Price (Line 1 ± 2).....	\$ _____
4. TOTAL COMPLETED AND STORED TO DATE (Column F total on Progress Estimates).....	\$ _____
5. RETAINAGE:	
a. X Work Completed.....	\$ _____
b. X Stored Material.....	\$ _____
c. Total Retainage (Line 5.a + Line 5.b).....	\$ _____
6. AMOUNT ELIGIBLE TO DATE (Line 4 - Line 5.c).....	\$ _____
7. LESS PREVIOUS PAYMENTS (Line 6 from prior Application).....	\$ _____
8. AMOUNT DUE THIS APPLICATION.....	\$ _____
9. BALANCE TO FINISH, PLUS RETAINAGE (Column G total on Progress Estimates + Line 5.c above).....	\$ _____

Contractor's Certification

The undersigned Contractor certifies, to the best of its knowledge, the following:
 (1) All previous progress payments received from Owner on account of Work done under the Contract have been applied on account to discharge Contractor's legitimate obligations incurred in connection with the Work covered by prior Applications for Payment;
 (2) Title to all Work, materials and equipment incorporated in said Work, or otherwise listed in or covered by this Application for Payment, will pass to Owner at time of payment free and clear of all Liens, security interests, and encumbrances (except such as are covered by a bond acceptable to Owner indemnifying Owner against any such Liens, security interest, or encumbrances); and
 (3) All the Work covered by this Application for Payment is in accordance with the Contract Documents and is not defective.

Contractor Signature

By:	Date:
-----	-------

Payment of: \$ _____
 (Line 8 or other - attach explanation of the other amount)

is recommended by: _____
 (Engineer) (Date)

Payment of: \$ _____
 (Line 8 or other - attach explanation of the other amount)

is approved by: _____
 (Owner) (Date)

Approved by: _____
 Funding or Financing Entity (if applicable) (Date)

CHANGE ORDER

PROJECT NAME: Jackson Street Gas Main Replacement
PROJECT NUMBER: 23-74 WBS No. _____
CONTRACTOR: _____
SITE CODE: _____ STATE ID: _____

CHANGE ORDER No. _____
CONTRACT DATE: _____
CFMS / SRM No(s). _____
NOTICE TO PROCEED DATE: _____

You are directed to make the following change(s) in this contract. Attach SUMMARY, BREAKDOWN and/or UNIT PRICE BREAKDOWN forms as required and give a brief description of the change(s) below.

The Original Contract Sum _____
Total Changes by Previous Change Order(s) _____
Current Contract Sum _____
Contract Sum will be unchanged by this Change Order _____
New Contract Sum _____

The Original Contract Completion Date and Contract Time. Date: _____ DAYS
Total Time extended by Previous Change Order(s) _____ DAYS
Contract Time will be increased by this Change Order _____ DAYS
New Contract Completion Date & Revised Contract Time Date: _____ DAYS

Added Building Area _____ (Sq. Ft.)

NOTE: No additional increase in time or money will be considered for a Change Order item after it has been executed.

RECOMMENDED	ACCEPTED	APPROVED
Designer's Name:	Contractor's Name:	Project Manager:
Monceaux-Buller & Associates, LLC		
Address:	Address:	City of Alexandria
610 Desoto St. Alexandria, LA. 71301		
Email Address:	Email Address:	
Brandon@monceauxbuller.com		
By:	By:	By:
Brandon Monceaux		
Date:	Date:	Date:

OWNERS USE ONLY

Classification	Amount	Classification	Amount
Omission (Type "O")*	_____	Miscellaneous (Type "M")	_____
Error (Type "E")*	_____	Owner Requested (Type "R")	_____

*See Section 5.1.3(2) of the Louisiana Capital Improvement Projects Procedure Manual for Design and Construction, 2020 Edition

Senior Manager/Assistant Director approval: _____

COMMENTS:

III. CONDITIONS OF THE CONTRACT

GENERAL CONDITIONS

SUPPLEMENTARY CONDITIONS

CONDITIONS OF THE CONTRACT

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

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ARTICLE 1 – DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

- A. Wherever used in the Bidding Requirements or Contract Documents, a term printed with initial capital letters, including the term's singular and plural forms, will have the meaning indicated in the definitions below. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.
1. *Addenda*—Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.
 2. *Agreement*—The written instrument, executed by Owner and Contractor, that sets forth the Contract Price and Contract Times, identifies the parties and the Engineer, and designates the specific items that are Contract Documents.
 3. *Application for Payment*—The form acceptable to Engineer which is to be used by Contractor during the course of the Work in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Contract Documents.
 4. *Bid*—The offer of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.
 5. *Bidder*—An individual or entity that submits a Bid to Owner.
 6. *Bidding Documents*—The Bidding Requirements, the proposed Contract Documents, and all Addenda.
 7. *Bidding Requirements*—The advertisement or invitation to bid, Instructions to Bidders, Bid Bond or other Bid security, if any, the Bid Form, and the Bid with any attachments.
 8. *Change Order*—A document which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, or other revision to the Contract, issued on or after the Effective Date of the Contract.
 9. *Change Proposal*—A written request by Contractor, duly submitted in compliance with the procedural requirements set forth herein, seeking an adjustment in Contract Price or Contract Times, or both; contesting an initial decision by Engineer concerning the requirements of the Contract Documents or the acceptability of Work under the Contract Documents; challenging a set-off against payments due; or seeking other relief with respect to the terms of the Contract.
 10. *Claim*—(a) A demand or assertion by Owner directly to Contractor, duly submitted in compliance with the procedural requirements set forth herein: seeking an adjustment of Contract Price or Contract Times, or both; contesting an initial decision by Engineer concerning the requirements of the Contract Documents or the acceptability of Work under the Contract Documents; contesting Engineer's decision regarding a Change Proposal; seeking resolution of a contractual issue that Engineer has declined to address; or seeking other relief with respect to the terms of the Contract; or (b) a demand or assertion by Contractor directly to Owner, duly submitted in compliance with the procedural requirements set forth herein, contesting Engineer's decision regarding a Change Proposal; or seeking resolution of a contractual issue that Engineer

has declined to address. A demand for money or services by a third party is not a Claim.

11. *Constituent of Concern*—Asbestos, petroleum, radioactive materials, polychlorinated biphenyls (PCBs), hazardous waste, and any substance, product, waste, or other material of any nature whatsoever that is or becomes listed, regulated, or addressed pursuant to (a) the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. §§9601 et seq. (“CERCLA”); (b) the Hazardous Materials Transportation Act, 49 U.S.C. §§5101 et seq.; (c) the Resource Conservation and Recovery Act, 42 U.S.C. §§6901 et seq. (“RCRA”); (d) the Toxic Substances Control Act, 15 U.S.C. §§2601 et seq.; (e) the Clean Water Act, 33 U.S.C. §§1251 et seq.; (f) the Clean Air Act, 42 U.S.C. §§7401 et seq.; or (g) any other federal, state, or local statute, law, rule, regulation, ordinance, resolution, code, order, or decree regulating, relating to, or imposing liability or standards of conduct concerning, any hazardous, toxic, or dangerous waste, substance, or material.
12. *Contract*—The entire and integrated written contract between the Owner and Contractor concerning the Work.
13. *Contract Documents*—Those items so designated in the Agreement, and which together comprise the Contract.
14. *Contract Price*—The money that Owner has agreed to pay Contractor for completion of the Work in accordance with the Contract Documents. .
15. *Contract Times*—The number of days or the dates by which Contractor shall: (a) achieve Milestones, if any; (b) achieve Substantial Completion; and (c) complete the Work.
16. *Contractor*—The individual or entity with which Owner has contracted for performance of the Work.
17. *Cost of the Work*—See Paragraph 13.01 for definition.
18. *Drawings*—The part of the Contract that graphically shows the scope, extent, and character of the Work to be performed by Contractor.
19. *Effective Date of the Contract*—The date, indicated in the Agreement, on which the Contract becomes effective.
20. *Engineer*—The individual or entity named as such in the Agreement.
21. *Field Order*—A written order issued by Engineer which requires minor changes in the Work but does not change the Contract Price or the Contract Times.
22. *Hazardous Environmental Condition*—The presence at the Site of Constituents of Concern in such quantities or circumstances that may present a danger to persons or property exposed thereto. The presence at the Site of materials that are necessary for the execution of the Work, or that are to be incorporated in the Work, and that are controlled and contained pursuant to industry practices, Laws and Regulations, and the requirements of the Contract, does not establish a Hazardous Environmental Condition.
23. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, statutes, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.

24. *Liens*—Charges, security interests, or encumbrances upon Contract-related funds, real property, or personal property.
25. *Milestone*—A principal event in the performance of the Work that the Contract requires Contractor to achieve by an intermediate completion date or by a time prior to Substantial Completion of all the Work.
26. *Notice of Award*—The written notice by Owner to a Bidder of Owner's acceptance of the Bid.
27. *Notice to Proceed*—A written notice by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work.
28. *Owner*—The individual or entity with which Contractor has contracted regarding the Work, and which has agreed to pay Contractor for the performance of the Work, pursuant to the terms of the Contract.
29. *Progress Schedule*—A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising the Contractor's plan to accomplish the Work within the Contract Times.
30. *Project*—The total undertaking to be accomplished for Owner by engineers, contractors, and others, including planning, study, design, construction, testing, commissioning, and start-up, and of which the Work to be performed under the Contract Documents is a part.
31. *Project Manual*—The written documents prepared for, or made available for, procuring and constructing the Work, including but not limited to the Bidding Documents or other construction procurement documents, geotechnical and existing conditions information, the Agreement, bond forms, General Conditions, Supplementary Conditions, and Specifications. The contents of the Project Manual may be bound in one or more volumes.
32. *Resident Project Representative*—The authorized representative of Engineer assigned to assist Engineer at the Site. As used herein, the term Resident Project Representative or "RPR" includes any assistants or field staff of Resident Project Representative.
33. *Samples*—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and that establish the standards by which such portion of the Work will be judged.
34. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements for Engineer's review of the submittals and the performance of related construction activities.
35. *Schedule of Values*—A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.
36. *Shop Drawings*—All drawings, diagrams, illustrations, schedules, and other data or information that are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work. Shop Drawings, whether approved or not, are not Drawings and are not Contract Documents.

37. *Site*—Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements, and such other lands furnished by Owner which are designated for the use of Contractor.
38. *Specifications*—The part of the Contract that consists of written requirements for materials, equipment, systems, standards, and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable to the Work.
39. *Subcontractor*—An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work.
40. *Substantial Completion*—The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms “substantially complete” and “substantially completed” as applied to all or part of the Work refer to Substantial Completion thereof.
41. *Successful Bidder*—The Bidder whose Bid the Owner accepts, and to which the Owner makes an award of contract, subject to stated conditions.
42. *Supplementary Conditions*—The part of the Contract that amends or supplements these General Conditions.
43. *Supplier*—A manufacturer, fabricator, supplier, distributor, materialman, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or a Subcontractor.
44. *Technical Data*—Those items expressly identified as Technical Data in the Supplementary Conditions, with respect to either (a) subsurface conditions at the Site, or physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities) or (b) Hazardous Environmental Conditions at the Site. If no such express identifications of Technical Data have been made with respect to conditions at the Site, then the data contained in boring logs, recorded measurements of subsurface water levels, laboratory test results, and other factual, objective information regarding conditions at the Site that are set forth in any geotechnical or environmental report prepared for the Project and made available to Contractor are hereby defined as Technical Data with respect to conditions at the Site under Paragraphs 5.03, 5.04, and 5.06.
45. *Underground Facilities*—All underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities, including but not limited to those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, fiber optic transmissions, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.
46. *Unit Price Work*—Work to be paid for on the basis of unit prices.
47. *Work*—The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction; furnishing, installing, and incorporating all materials and equipment into such construction; and may include related services such as testing, start-up, and commissioning, all as required by the Contract Documents.

48. *Work Change Directive*—A written directive to Contractor issued on or after the Effective Date of the Contract, signed by Owner and recommended by Engineer, ordering an addition, deletion, or revision in the Work.

1.02 Terminology

- A. The words and terms discussed in the following paragraphs are not defined but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.
- B. *Intent of Certain Terms or Adjectives:*
1. The Contract Documents include the terms “as allowed,” “as approved,” “as ordered,” “as directed” or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives “reasonable,” “suitable,” “acceptable,” “proper,” “satisfactory,” or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action, or determination will be solely to evaluate, in general, the Work for compliance with the information in the Contract Documents and with the design concept of the Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility contrary to the provisions of Article 10 or any other provision of the Contract Documents.
- C. *Day:*
1. The word “day” means a calendar day of 24 hours measured from midnight to the next midnight.
- D. *Defective:*
1. The word “defective,” when modifying the word “Work,” refers to Work that is unsatisfactory, faulty, or deficient in that it:
 - a. does not conform to the Contract Documents; or
 - b. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or
 - c. has been damaged prior to Engineer’s recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 15.03 or 15.04).
- E. *Furnish, Install, Perform, Provide:*
1. The word “furnish,” when used in connection with services, materials, or equipment, shall mean to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.
 2. The word “install,” when used in connection with services, materials, or equipment, shall mean to put into use or place in final position said services, materials, or equipment complete and ready for intended use.

3. The words “perform” or “provide,” when used in connection with services, materials, or equipment, shall mean to furnish and install said services, materials, or equipment complete and ready for intended use.
 4. If the Contract Documents establish an obligation of Contractor with respect to specific services, materials, or equipment, but do not expressly use any of the four words “furnish,” “install,” “perform,” or “provide,” then Contractor shall furnish and install said services, materials, or equipment complete and ready for intended use.
- F. Unless stated otherwise in the Contract Documents, words or phrases that have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

ARTICLE 2 – PRELIMINARY MATTERS

2.01 *Delivery of Bonds and Evidence of Insurance*

- A. *Bonds*: When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner such bonds as Contractor may be required to furnish.
- B. *Evidence of Contractor’s Insurance*: When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner, with copies to each named insured and additional insured (as identified in the Supplementary Conditions or elsewhere in the Contract), the certificates and other evidence of insurance required to be provided by Contractor in accordance with Article 6.
- C. *Evidence of Owner’s Insurance*: After receipt of the executed counterparts of the Agreement and all required bonds and insurance documentation, Owner shall promptly deliver to Contractor, with copies to each named insured and additional insured (as identified in the Supplementary Conditions or otherwise), the certificates and other evidence of insurance required to be provided by Owner under Article 6.

2.02 *Copies of Documents*

- A. Owner shall furnish to Contractor four printed copies of the Contract (including one fully executed counterpart of the Agreement), and one copy in electronic portable document format (PDF). Additional printed copies will be furnished upon request at the cost of reproduction.
- B. Owner shall maintain and safeguard at least one original printed record version of the Contract, including Drawings and Specifications signed and sealed by Engineer and other design professionals. Owner shall make such original printed record version of the Contract available to Contractor for review. Owner may delegate the responsibilities under this provision to Engineer.

2.03 *Before Starting Construction*

- A. *Preliminary Schedules*: Within 10 days after the Effective Date of the Contract (or as otherwise specifically required by the Contract Documents), Contractor shall submit to Engineer for timely review:
 1. a preliminary Progress Schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract;
 2. a preliminary Schedule of Submittals; and

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

2.04 *Preconstruction Conference; Designation of Authorized Representatives*

- A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Engineer, and others as appropriate will be held to establish a working understanding among the parties as to the Work and to discuss the schedules referred to in Paragraph 2.03.A, procedures for handling Shop Drawings, Samples, and other submittals, processing Applications for Payment, electronic or digital transmittals, and maintaining required records.
- B. At this conference Owner and Contractor each shall designate, in writing, a specific individual to act as its authorized representative with respect to the services and responsibilities under the Contract. Such individuals shall have the authority to transmit and receive information, render decisions relative to the Contract, and otherwise act on behalf of each respective party.

2.05 *Initial Acceptance of Schedules*

- A. At least 10 days before submission of the first Application for Payment a conference, attended by Contractor, Engineer, and others as appropriate, will be held to review for acceptability to Engineer as provided below the schedules submitted in accordance with Paragraph 2.03.A. Contractor shall have an additional 10 days to make corrections and adjustments and to complete and resubmit the schedules. No progress payment shall be made to Contractor until acceptable schedules are submitted to Engineer.
 1. The Progress Schedule will be acceptable to Engineer if it provides an orderly progression of the Work to completion within the Contract Times. Such acceptance will not impose on Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work, nor interfere with or relieve Contractor from Contractor's full responsibility therefor.
 2. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.
 3. Contractor's Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to the component parts of the Work.

2.06 *Electronic Transmittals*

- A. Except as otherwise stated elsewhere in the Contract, the Owner, Engineer, and Contractor may transmit, and shall accept, Project-related correspondence, text, data, documents, drawings, information, and graphics, including but not limited to Shop Drawings and other submittals, in electronic media or digital format, either directly, or through access to a secure Project website.
- B. If the Contract does not establish protocols for electronic or digital transmittals, then Owner, Engineer, and Contractor shall jointly develop such protocols.
- C. When transmitting items in electronic media or digital format, the transmitting party makes no representations as to long term compatibility, usability, or readability of the items resulting from the recipient's use of software application packages, operating systems, or

computer hardware differing from those used in the drafting or transmittal of the items, or from those established in applicable transmittal protocols.

ARTICLE 3 – DOCUMENTS: INTENT, REQUIREMENTS, REUSE

3.01 *Intent*

- A. The Contract Documents are complementary; what is required by one is as binding as if required by all.
- B. It is the intent of the Contract Documents to describe a functionally complete project (or part thereof) to be constructed in accordance with the Contract Documents.
- C. Unless otherwise stated in the Contract Documents, if there is a discrepancy between the electronic or digital versions of the Contract Documents (including any printed copies derived from such electronic or digital versions) and the printed record version, the printed record version shall govern.
- D. The Contract supersedes prior negotiations, representations, and agreements, whether written or oral.
- E. Engineer will issue clarifications and interpretations of the Contract Documents as provided herein.

3.02 *Reference Standards*

- A. Standards Specifications, Codes, Laws and Regulations
 - 1. Reference in the Contract Documents to standard specifications, manuals, reference standards, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, shall mean the standard specification, manual, reference standard, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Contract if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.
 - 2. No provision of any such standard specification, manual, reference standard, or code, or any instruction of a Supplier, shall be effective to change the duties or responsibilities of Owner, Contractor, or Engineer, or any of their subcontractors, consultants, agents, or employees, from those set forth in the part of the Contract Documents prepared by or for Engineer. No such provision or instruction shall be effective to assign to Owner, Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility inconsistent with the provisions of the part of the Contract Documents prepared by or for Engineer.

3.03 *Reporting and Resolving Discrepancies*

- A. *Reporting Discrepancies:*
 - 1. *Contractor's Verification of Figures and Field Measurements:* Before undertaking each part of the Work, Contractor shall carefully study the Contract Documents, and check and verify pertinent figures and dimensions therein, particularly with respect to applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy that Contractor discovers, or has actual knowledge of, and shall not proceed with any Work affected thereby until the conflict,

error, ambiguity, or discrepancy is resolved, by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract Documents issued pursuant to Paragraph 11.01.

2. *Contractor's Review of Contract Documents:* If, before or during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents, or between the Contract Documents and (a) any applicable Law or Regulation, (b) actual field conditions, (c) any standard specification, manual, reference standard, or code, or (d) any instruction of any Supplier, then Contractor shall promptly report it to Engineer in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 7.15) until the conflict, error, ambiguity, or discrepancy is resolved, by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract Documents issued pursuant to Paragraph 11.01.
3. Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Contractor had actual knowledge thereof.

B. *Resolving Discrepancies:*

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the part of the Contract Documents prepared by or for Engineer shall take precedence in resolving any conflict, error, ambiguity, or discrepancy between such provisions of the Contract Documents and:
 - a. the provisions of any standard specification, manual, reference standard, or code, or the instruction of any Supplier (whether or not specifically incorporated by reference as a Contract Document); or
 - b. the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

3.04 *Requirements of the Contract Documents*

- A. During the performance of the Work and until final payment, Contractor and Owner shall submit to the Engineer all matters in question concerning the requirements of the Contract Documents (sometimes referred to as requests for information or interpretation—RFIs), or relating to the acceptability of the Work under the Contract Documents, as soon as possible after such matters arise. Engineer will be the initial interpreter of the requirements of the Contract Documents, and judge of the acceptability of the Work thereunder.
- B. Engineer will, with reasonable promptness, render a written clarification, interpretation, or decision on the issue submitted, or initiate an amendment or supplement to the Contract Documents. Engineer's written clarification, interpretation, or decision will be final and binding on Contractor, unless it appeals by submitting a Change Proposal, and on Owner, unless it appeals by filing a Claim.
- C. If a submitted matter in question concerns terms and conditions of the Contract Documents that do not involve (1) the performance or acceptability of the Work under the Contract Documents, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, then Engineer will promptly give written notice to Owner and Contractor that Engineer is unable to provide a decision or interpretation. If Owner and Contractor are unable to agree on resolution of such a matter in question, either party may pursue resolution as provided in Article 12.

3.05 *Reuse of Documents*

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

ARTICLE 4 – COMMENCEMENT AND PROGRESS OF THE WORK

4.01 *Commencement of Contract Times; Notice to Proceed*

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

4.02 *Starting the Work*

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

4.03 *Reference Points*

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

4.04 *Progress Schedule*

- A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.05 as it may be adjusted from time to time as provided below.
 - 1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.05) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times.

2. Proposed adjustments in the Progress Schedule that will change the Contract Times shall be submitted in accordance with the requirements of Article 11.
- B. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, or during any appeal process, except as permitted by Paragraph 16.04, or as Owner and Contractor may otherwise agree in writing.

4.05 *Delays in Contractor's Progress*

- A. If Owner, Engineer, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in the Contract Times and Contract Price. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.
- B. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delay, disruption, or interference caused by or within the control of Contractor. Delay, disruption, and interference attributable to and within the control of a Subcontractor or Supplier shall be deemed to be within the control of Contractor.
- C. If Contractor's performance or progress is delayed, disrupted, or interfered with by unanticipated causes not the fault of and beyond the control of Owner, Contractor, and those for which they are responsible, then Contractor shall be entitled to an equitable adjustment in Contract Times. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times. Such an adjustment shall be Contractor's sole and exclusive remedy for the delays, disruption, and interference described in this paragraph. Causes of delay, disruption, or interference that may give rise to an adjustment in Contract Times under this paragraph include but are not limited to the following:
 1. severe and unavoidable natural catastrophes such as fires, floods, epidemics, and earthquakes;
 2. abnormal weather conditions;
 3. acts or failures to act of utility owners (other than those performing other work at or adjacent to the Site by arrangement with the Owner, as contemplated in Article 8); and
 4. acts of war or terrorism.
- D. Delays, disruption, and interference to the performance or progress of the Work resulting from the existence of a differing subsurface or physical condition, an Underground Facility that was not shown or indicated by the Contract Documents, or not shown or indicated with reasonable accuracy, and those resulting from Hazardous Environmental Conditions, are governed by Article 5.
- E. Paragraph 8.03 governs delays, disruption, and interference to the performance or progress of the Work resulting from the performance of certain other work at or adjacent to the Site.
- F. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for any delay, disruption, or interference if such delay is concurrent with a delay, disruption, or interference caused by or within the control of Contractor.

- G. Contractor must submit any Change Proposal seeking an adjustment in Contract Price or Contract Times under this paragraph within 30 days of the commencement of the delaying, disrupting, or interfering event.

ARTICLE 5 – AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS

5.01 *Availability of Lands*

- A. Owner shall furnish the Site. Owner shall notify Contractor of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work.
- B. Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and legal description of the lands upon which permanent improvements are to be made and Owner's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.
- C. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

5.02 *Use of Site and Other Areas*

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

- 1. Contractor shall confine construction equipment, temporary construction facilities, the storage of materials and equipment, and the operations of workers to the Site, adjacent areas that Contractor has arranged to use through construction easements or otherwise, and other adjacent areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and such other adjacent areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for (a) damage to the Site; (b) damage to any such other adjacent areas used for Contractor's operations; (c) damage to any other adjacent land or areas; and (d) for injuries and losses sustained by the owners or occupants of any such land or areas; provided that such damage or injuries result from the performance of the Work or from other actions or conduct of the Contractor or those for which Contractor is responsible.
- 2. If a damage or injury claim is made by the owner or occupant of any such land or area because of the performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible, Contractor shall (a) take immediate corrective or remedial action as required by Paragraph 7.12, or otherwise; (b) promptly attempt to settle the claim as to all parties through negotiations with such owner or occupant, or otherwise resolve the claim by arbitration or other dispute resolution proceeding, or at law; and (c) to the fullest extent permitted by Laws and Regulations, indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against any such claim, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused directly or indirectly, in whole or in part

by, or based upon, Contractor's performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible.

- B. *Removal of Debris During Performance of the Work:* During the progress of the Work the Contractor shall keep the Site and other adjacent areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris shall conform to applicable Laws and Regulations.
- C. *Cleaning:* Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work Contractor shall remove from the Site and adjacent areas all tools, appliances, construction equipment and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.
- D. *Loading of Structures:* Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent structures or land to stresses or pressures that will endanger them.

5.03 *Subsurface and Physical Conditions*

- A. *Reports and Drawings:* The Supplementary Conditions identify:
 - 1. those reports known to Owner of explorations and tests of subsurface conditions at or adjacent to the Site;
 - 2. those drawings known to Owner of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities); and
 - 3. Technical Data contained in such reports and drawings.
- B. *Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely upon the accuracy of the Technical Data (as defined in Article 1) contained in any geotechnical or environmental report prepared for the Project and made available to Contractor. Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:
 - 1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto; or
 - 2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or
 - 3. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions, or information.

5.04 *Differing Subsurface or Physical Conditions*

- A. *Notice by Contractor:* If Contractor believes that any subsurface or physical condition that is uncovered or revealed at the Site either:
1. is of such a nature as to establish that any Technical Data on which Contractor is entitled to rely as provided in Paragraph 5.03 is materially inaccurate; or
 2. is of such a nature as to require a change in the Drawings or Specifications; or
 3. differs materially from that shown or indicated in the Contract Documents; or
 4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except with respect to an emergency) until receipt of a written statement permitting Contractor to do so.

- B. *Engineer's Review:* After receipt of written notice as required by the preceding paragraph, Engineer will promptly review the subsurface or physical condition in question; determine the necessity of Owner's obtaining additional exploration or tests with respect to the condition; conclude whether the condition falls within any one or more of the differing site condition categories in Paragraph 5.04.A above; obtain any pertinent cost or schedule information from Contractor; prepare recommendations to Owner regarding the Contractor's resumption of Work in connection with the subsurface or physical condition in question and the need for any change in the Drawings or Specifications; and advise Owner in writing of Engineer's findings, conclusions, and recommendations.
- C. *Owner's Statement to Contractor Regarding Site Condition:* After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the subsurface or physical condition in question, addressing the resumption of Work in connection with such condition, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations, in whole or in part.
- D. *Possible Price and Times Adjustments:*
1. Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times, or both, to the extent that the existence of a differing subsurface or physical condition, or any related delay, disruption, or interference, causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:
 - a. such condition must fall within any one or more of the categories described in Paragraph 5.04.A;
 - b. with respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03; and,

- c. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.
- 2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times with respect to a subsurface or physical condition if:
 - a. Contractor knew of the existence of such condition at the time Contractor made a commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract, or otherwise; or
 - b. the existence of such condition reasonably could have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas expressly required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such commitment; or
 - c. Contractor failed to give the written notice as required by Paragraph 5.04.A.
- 3. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, or both, then any such adjustment shall be set forth in a Change Order.
- 4. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, or both, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the subsurface or physical condition in question.

5.05 *Underground Facilities*

- A. *Contractor's Responsibilities:* The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or adjacent to the Site is based on information and data furnished to Owner or Engineer by the owners of such Underground Facilities, including Owner, or by others. Unless it is otherwise expressly provided in the Supplementary Conditions:
 - 1. Owner and Engineer do not warrant or guarantee the accuracy or completeness of any such information or data provided by others; and
 - 2. the cost of all of the following will be included in the Contract Price, and Contractor shall have full responsibility for:
 - a. reviewing and checking all information and data regarding existing Underground Facilities at the Site;
 - b. locating all Underground Facilities shown or indicated in the Contract Documents as being at the Site;
 - c. coordination of the Work with the owners (including Owner) of such Underground Facilities, during construction; and
 - d. the safety and protection of all existing Underground Facilities at the Site, and repairing any damage thereto resulting from the Work.
- B. *Notice by Contractor:* If Contractor believes that an Underground Facility that is uncovered or revealed at the Site was not shown or indicated in the Contract Documents, or was not shown or indicated with reasonable accuracy, then Contractor shall, promptly after

becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), identify the owner of such Underground Facility and give written notice to that owner and to Owner and Engineer.

- C. *Engineer's Review:* Engineer will promptly review the Underground Facility and conclude whether such Underground Facility was not shown or indicated in the Contract Documents, or was not shown or indicated with reasonable accuracy; obtain any pertinent cost or schedule information from Contractor; prepare recommendations to Owner regarding the Contractor's resumption of Work in connection with the Underground Facility in question; determine the extent, if any, to which a change is required in the Drawings or Specifications to reflect and document the consequences of the existence or location of the Underground Facility; and advise Owner in writing of Engineer's findings, conclusions, and recommendations. During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.
- D. *Owner's Statement to Contractor Regarding Underground Facility:* After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the Underground Facility in question, addressing the resumption of Work in connection with such Underground Facility, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations in whole or in part.
- E. *Possible Price and Times Adjustments:*
 - 1. Contractor shall be entitled to an equitable adjustment in the Contract Price or Contract Times, or both, to the extent that any existing Underground Facility at the Site that was not shown or indicated in the Contract Documents, or was not shown or indicated with reasonable accuracy, or any related delay, disruption, or interference, causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:
 - a. Contractor did not know of and could not reasonably have been expected to be aware of or to have anticipated the existence or actual location of the Underground Facility in question;
 - b. With respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03;
 - c. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times; and
 - d. Contractor gave the notice required in Paragraph 5.05.B.
 - 2. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, or both, then any such adjustment shall be set forth in a Change Order.
 - 3. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, or both, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the Underground Facility in question.

5.06 *Hazardous Environmental Conditions at Site*

- A. *Reports and Drawings:* The Supplementary Conditions identify:
1. those reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site; and
 2. Technical Data contained in such reports and drawings.
- B. *Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely on the accuracy of the Technical Data (as defined in Article 1) contained in any geotechnical or environmental report prepared for the Project and made available to Contractor. Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors with respect to:
1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by Contractor and safety precautions and programs incident thereto; or
 2. other data, interpretations, opinions and information contained in such reports or shown or indicated in such drawings; or
 3. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions or information.
- C. Contractor shall not be responsible for removing or remediating any Hazardous Environmental Condition encountered, uncovered, or revealed at the Site unless such removal or remediation is expressly identified in the Contract Documents to be within the scope of the Work.
- D. Contractor shall be responsible for controlling, containing, and duly removing all Constituents of Concern brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible, and for any associated costs; and for the costs of removing and remediating any Hazardous Environmental Condition created by the presence of any such Constituents of Concern.
- E. If Contractor encounters, uncovers, or reveals a Hazardous Environmental Condition whose removal or remediation is not expressly identified in the Contract Documents as being within the scope of the Work, or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, then Contractor shall immediately: (1) secure or otherwise isolate such condition; (2) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 7.15); and (3) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any. Promptly after consulting with Engineer, Owner shall take such actions as are necessary to permit Owner to timely obtain required permits and provide Contractor the written notice required by Paragraph 5.06.F. If Contractor or anyone for whom Contractor is responsible created the Hazardous Environmental Condition in question, then Owner may remove and remediate the Hazardous Environmental Condition, and impose a set-off against payments to account for the associated costs.

- F. Contractor shall not resume Work in connection with such Hazardous Environmental Condition or in any affected area until after Owner has obtained any required permits related thereto, and delivered written notice to Contractor either (1) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work, or (2) specifying any special conditions under which such Work may be resumed safely.
- G. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, or both, as a result of such Work stoppage or such special conditions under which Work is agreed to be resumed by Contractor, then within 30 days of Owner's written notice regarding the resumption of Work, Contractor may submit a Change Proposal, or Owner may impose a set-off.
- H. If after receipt of such written notice Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work, following the contractual change procedures in Article 11. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 8.
- I. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition (1) was not shown or indicated in the Drawings, Specifications, or other Contract Documents, identified as Technical Data entitled to limited reliance pursuant to Paragraph 5.06.B, or identified in the Contract Documents to be included within the scope of the Work, and (2) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.I shall obligate Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- J. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the failure to control, contain, or remove a Constituent of Concern brought to the Site by Contractor or by anyone for whom Contractor is responsible, or to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.J shall obligate Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- K. The provisions of Paragraphs 5.03, 5.04, and 5.05 do not apply to the presence of Constituents of Concern or to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 6 – BONDS AND INSURANCE

6.01 *Performance, Payment, and Other Bonds*

- A. Contractor shall furnish a performance bond and a payment bond, each in an amount at least equal to the Contract Price, as security for the faithful performance and payment of all of Contractor's obligations under the Contract. These bonds shall remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 15.08, whichever is later, except as provided otherwise by Laws or Regulations, the Supplementary Conditions, or other specific provisions of the Contract. Contractor shall also furnish such other bonds as are required by the Supplementary Conditions or other specific provisions of the Contract.
- B. All bonds shall be in the form prescribed by the Contract except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (as amended and supplemented) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. A bond signed by an agent or attorney-in-fact must be accompanied by a certified copy of that individual's authority to bind the surety. The evidence of authority shall show that it is effective on the date the agent or attorney-in-fact signed the accompanying bond.
- C. Contractor shall obtain the required bonds from surety companies that are duly licensed or authorized in the jurisdiction in which the Project is located to issue bonds in the required amounts.
- D. If the surety on a bond furnished by Contractor is declared bankrupt or becomes insolvent, or its right to do business is terminated in any state or jurisdiction where any part of the Project is located, or the surety ceases to meet the requirements above, then Contractor shall promptly notify Owner and Engineer and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which shall comply with the bond and surety requirements above.
- E. If Contractor has failed to obtain a required bond, Owner may exclude the Contractor from the Site and exercise Owner's termination rights under Article 16.
- F. Upon request, Owner shall provide a copy of the payment bond to any Subcontractor, Supplier, or other person or entity claiming to have furnished labor or materials used in the performance of the Work.

6.02 *Insurance—General Provisions*

- A. Owner and Contractor shall obtain and maintain insurance as required in this Article and in the Supplementary Conditions.
- B. All insurance required by the Contract to be purchased and maintained by Owner or Contractor shall be obtained from insurance companies that are duly licensed or authorized, in the state or jurisdiction in which the Project is located, to issue insurance policies for the required limits and coverages. Unless a different standard is indicated in the Supplementary Conditions, all companies that provide insurance policies required under this Contract shall have an A.M. Best rating of A-VII or better.
- C. Contractor shall deliver to Owner, with copies to each named insured and additional insured (as identified in this Article, in the Supplementary Conditions, or elsewhere in the Contract), certificates of insurance establishing that Contractor has obtained and is

maintaining the policies, coverages, and endorsements required by the Contract. Upon request by Owner or any other insured, Contractor shall also furnish other evidence of such required insurance, including but not limited to copies of policies and endorsements, and documentation of applicable self-insured retentions and deductibles. Contractor may block out (redact) any confidential premium or pricing information contained in any policy or endorsement furnished under this provision.

- D. Owner shall deliver to Contractor, with copies to each named insured and additional insured (as identified in this Article, the Supplementary Conditions, or elsewhere in the Contract), certificates of insurance establishing that Owner has obtained and is maintaining the policies, coverages, and endorsements required of Owner by the Contract (if any). Upon request by Contractor or any other insured, Owner shall also provide other evidence of such required insurance (if any), including but not limited to copies of policies and endorsements, and documentation of applicable self-insured retentions and deductibles. Owner may block out (redact) any confidential premium or pricing information contained in any policy or endorsement furnished under this provision.
- E. Failure of Owner or Contractor to demand such certificates or other evidence of the other party's full compliance with these insurance requirements, or failure of Owner or Contractor to identify a deficiency in compliance from the evidence provided, shall not be construed as a waiver of the other party's obligation to obtain and maintain such insurance.
- F. If either party does not purchase or maintain all of the insurance required of such party by the Contract, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage.
- G. If Contractor has failed to obtain and maintain required insurance, Owner may exclude the Contractor from the Site, impose an appropriate set-off against payment, and exercise Owner's termination rights under Article 16.
- H. Without prejudice to any other right or remedy, if a party has failed to obtain required insurance, the other party may elect to obtain equivalent insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and the Contract Price shall be adjusted accordingly.
- I. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor or Contractor's interests.
- J. The insurance and insurance limits required herein shall not be deemed as a limitation on Contractor's liability under the indemnities granted to Owner and other individuals and entities in the Contract.

6.03 *Contractor's Insurance*

- A. *Workers' Compensation:* Contractor shall purchase and maintain workers' compensation and employer's liability insurance for:
 - 1. claims under workers' compensation, disability benefits, and other similar employee benefit acts.
 - 2. United States Longshoreman and Harbor Workers' Compensation Act and Jones Act coverage (if applicable).
 - 3. claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor's employees (by stop-gap endorsement in monopolist worker's compensation states).

4. Foreign voluntary worker compensation (if applicable).
- B. *Commercial General Liability—Claims Covered:* Contractor shall purchase and maintain commercial general liability insurance, covering all operations by or on behalf of Contractor, on an occurrence basis, against:
1. claims for damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees.
 2. claims for damages insured by reasonably available personal injury liability coverage.
 3. claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom.
- C. *Commercial General Liability—Form and Content:* Contractor's commercial liability policy shall be written on a 1996 (or later) ISO commercial general liability form (occurrence form) and include the following coverages and endorsements:
1. Products and completed operations coverage:
 - a. Such insurance shall be maintained for three years after final payment.
 - b. Contractor shall furnish Owner and each other additional insured (as identified in the Supplementary Conditions or elsewhere in the Contract) evidence of continuation of such insurance at final payment and three years thereafter.
 2. Blanket contractual liability coverage, to the extent permitted by law, including but not limited to coverage of Contractor's contractual indemnity obligations in Paragraph 7.18.
 3. Broad form property damage coverage.
 4. Severability of interest.
 5. Underground, explosion, and collapse coverage.
 6. Personal injury coverage.
 7. Additional insured endorsements that include both ongoing operations and products and completed operations coverage through ISO Endorsements CG 20 10 10 01 and CG 20 37 10 01 (together); or CG 20 10 07 04 and CG 20 37 07 04 (together); or their equivalent.
 8. For design professional additional insureds, ISO Endorsement CG 20 32 07 04, "Additional Insured—Engineers, Architects or Surveyors Not Engaged by the Named Insured" or its equivalent.
- D. *Automobile liability:* Contractor shall purchase and maintain automobile liability insurance against claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance, or use of any motor vehicle. The automobile liability policy shall be written on an occurrence basis.
- E. *Umbrella or excess liability:* Contractor shall purchase and maintain umbrella or excess liability insurance written over the underlying employer's liability, commercial general liability, and automobile liability insurance described in the paragraphs above. Subject to industry-standard exclusions, the coverage afforded shall follow form as to each and every one of the underlying policies.
- F. *Contractor's pollution liability insurance:* Contractor shall purchase and maintain a policy covering third-party injury and property damage claims, including clean-up costs, as a result

of pollution conditions arising from Contractor's operations and completed operations. This insurance shall be maintained for no less than three years after final completion.

- G. *Additional insureds*: The Contractor's commercial general liability, automobile liability, umbrella or excess, and pollution liability policies shall include and list as additional insureds Owner and Engineer, and any individuals or entities identified in the Supplementary Conditions; include coverage for the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of all such additional insureds; and the insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby (including as applicable those arising from both ongoing and completed operations) on a non-contributory basis. Contractor shall obtain all necessary endorsements to support these requirements.
- H. *Contractor's professional liability insurance*: If Contractor will provide or furnish professional services under this Contract, through a delegation of professional design services or otherwise, then Contractor shall be responsible for purchasing and maintaining applicable professional liability insurance. This insurance shall provide protection against claims arising out of performance of professional design or related services, and caused by a negligent error, omission, or act for which the insured party is legally liable. It shall be maintained throughout the duration of the Contract and for a minimum of two years after Substantial Completion. If such professional design services are performed by a Subcontractor, and not by Contractor itself, then the requirements of this paragraph may be satisfied through the purchasing and maintenance of such insurance by such Subcontractor.
- I. *General provisions*: The policies of insurance required by this Paragraph 6.03 shall:
 - 1. include at least the specific coverages provided in this Article.
 - 2. be written for not less than the limits of liability provided in this Article and in the Supplementary Conditions, or required by Laws or Regulations, whichever is greater.
 - 3. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed, or renewal refused until at least 10 days prior written notice has been given to Contractor. Within three days of receipt of any such written notice, Contractor shall provide a copy of the notice to Owner, Engineer, and each other insured under the policy.
 - 4. remain in effect at least until final payment (and longer if expressly required in this Article) and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work as a warranty or correction obligation, or otherwise, or returning to the Site to conduct other tasks arising from the Contract Documents.
 - 5. be appropriate for the Work being performed and provide protection from claims that may arise out of or result from Contractor's performance of the Work and Contractor's other obligations under the Contract Documents, whether it is to be performed by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable.
- J. The coverage requirements for specific policies of insurance must be met by such policies, and not by reference to excess or umbrella insurance provided in other policies.

6.04 *Owner's Liability Insurance*

- A. In addition to the insurance required to be provided by Contractor under Paragraph 6.03, Owner, at Owner's option, may purchase and maintain at Owner's expense Owner's own liability insurance as will protect Owner against claims which may arise from operations under the Contract Documents.
- B. Owner's liability policies, if any, operate separately and independently from policies required to be provided by Contractor, and Contractor cannot rely upon Owner's liability policies for any of Contractor's obligations to the Owner, Engineer, or third parties.

6.05 *Property Insurance*

- A. *Builder's Risk:* Unless otherwise provided in the Supplementary Conditions, Contractor shall purchase and maintain builder's risk insurance upon the Work on a completed value basis, in the amount of the full insurable replacement cost thereof (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). This insurance shall:
 - 1. include the Owner and Contractor as named insureds, and all Subcontractors, and any individuals or entities required by the Supplementary Conditions to be insured under such builder's risk policy, as insureds or named insureds. For purposes of the remainder of this Paragraph 6.05, Paragraphs 6.06 and 6.07, and any corresponding Supplementary Conditions, the parties required to be insured shall collectively be referred to as "insureds."
 - 2. be written on a builder's risk "all risk" policy form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, falsework, and materials and equipment in transit, and shall insure against at least the following perils or causes of loss: fire; lightning; windstorm; riot; civil commotion; terrorism; vehicle impact; aircraft; smoke; theft; vandalism and malicious mischief; mechanical breakdown, boiler explosion, and artificially generated electric current; earthquake; volcanic activity, and other earth movement; flood; collapse; explosion; debris removal; demolition occasioned by enforcement of Laws and Regulations; water damage (other than that caused by flood); and such other perils or causes of loss as may be specifically required by the Supplementary Conditions. If insurance against mechanical breakdown, boiler explosion, and artificially generated electric current; earthquake; volcanic activity, and other earth movement; or flood, are not commercially available under builder's risk policies, by endorsement or otherwise, such insurance may be provided through other insurance policies acceptable to Owner and Contractor.
 - 3. cover, as insured property, at least the following: (a) the Work and all materials, supplies, machinery, apparatus, equipment, fixtures, and other property of a similar nature that are to be incorporated into or used in the preparation, fabrication, construction, erection, or completion of the Work, including Owner-furnished or assigned property; (b) spare parts inventory required within the scope of the Contract; and (c) temporary works which are not intended to form part of the permanent constructed Work but which are intended to provide working access to the Site, or to the Work under construction, or which are intended to provide temporary support for the Work under construction, including scaffolding, form work, fences, shoring, falsework, and temporary structures.
 - 4. cover expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects).

5. extend to cover damage or loss to insured property while in temporary storage at the Site or in a storage location outside the Site (but not including property stored at the premises of a manufacturer or Supplier).
 6. extend to cover damage or loss to insured property while in transit.
 7. allow for partial occupation or use of the Work by Owner, such that those portions of the Work that are not yet occupied or used by Owner shall remain covered by the builder's risk insurance.
 8. allow for the waiver of the insurer's subrogation rights, as set forth below.
 9. provide primary coverage for all losses and damages caused by the perils or causes of loss covered.
 10. not include a co-insurance clause.
 11. include an exception for ensuing losses from physical damage or loss with respect to any defective workmanship, design, or materials exclusions.
 12. include performance/hot testing and start-up.
 13. be maintained in effect, subject to the provisions herein regarding Substantial Completion and partial occupancy or use of the Work by Owner, until the Work is complete.
- B. *Notice of Cancellation or Change:* All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with this Paragraph 6.05 will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least 10 days prior written notice has been given to the purchasing policyholder. Within three days of receipt of any such written notice, the purchasing policyholder shall provide a copy of the notice to each other insured.
- C. *Deductibles:* The purchaser of any required builder's risk or property insurance shall pay for costs not covered because of the application of a policy deductible.
- D. *Partial Occupancy or Use by Owner:* If Owner will occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work as provided in Paragraph 15.04, then Owner (directly, if it is the purchaser of the builder's risk policy, or through Contractor) will provide notice of such occupancy or use to the builder's risk insurer. The builder's risk insurance shall not be canceled or permitted to lapse on account of any such partial use or occupancy; rather, those portions of the Work that are occupied or used by Owner may come off the builder's risk policy, while those portions of the Work not yet occupied or used by Owner shall remain covered by the builder's risk insurance.
- E. *Additional Insurance:* If Contractor elects to obtain other special insurance to be included in or supplement the builder's risk or property insurance policies provided under this Paragraph 6.05, it may do so at Contractor's expense.
- F. *Insurance of Other Property:* If the express insurance provisions of the Contract do not require or address the insurance of a property item or interest, such as tools, construction equipment, or other personal property owned by Contractor, a Subcontractor, or an employee of Contractor or a Subcontractor, then the entity or individual owning such property item will be responsible for deciding whether to insure it, and if so in what amount.

6.06 *Waiver of Rights*

- A. All policies purchased in accordance with Paragraph 6.05, expressly including the builder's risk policy, shall contain provisions to the effect that in the event of payment of any loss or damage the insurers will have no rights of recovery against any insureds thereunder, or against Engineer or its consultants, or their officers, directors, members, partners, employees, agents, consultants, or subcontractors. Owner and Contractor waive all rights against each other and the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Engineer, its consultants, all Subcontractors, all individuals or entities identified in the Supplementary Conditions as insureds, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, under such policies for losses and damages so caused. None of the above waivers shall extend to the rights that any party making such waiver may have to the proceeds of insurance held by Owner or Contractor as trustee or fiduciary, or otherwise payable under any policy so issued.
- B. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, for:
 - 1. loss due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other perils whether or not insured by Owner; and
 - 2. loss or damage to the completed Project or part thereof caused by, arising out of, or resulting from fire or other insured peril or cause of loss covered by any property insurance maintained on the completed Project or part thereof by Owner during partial occupancy or use pursuant to Paragraph 15.04, after Substantial Completion pursuant to Paragraph 15.03, or after final payment pursuant to Paragraph 15.06.
- C. Any insurance policy maintained by Owner covering any loss, damage or consequential loss referred to in Paragraph 6.06.B shall contain provisions to the effect that in the event of payment of any such loss, damage, or consequential loss, the insurers will have no rights of recovery against Contractor, Subcontractors, or Engineer, or the officers, directors, members, partners, employees, agents, consultants, or subcontractors of each and any of them.
- D. Contractor shall be responsible for assuring that the agreement under which a Subcontractor performs a portion of the Work contains provisions whereby the Subcontractor waives all rights against Owner, Contractor, all individuals or entities identified in the Supplementary Conditions as insureds, the Engineer and its consultants, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, relating to, or resulting from any of the perils or causes of loss covered by builder's risk insurance and any other property insurance applicable to the Work.

6.07 *Receipt and Application of Property Insurance Proceeds*

- A. Any insured loss under the builder's risk and other policies of insurance required by Paragraph 6.05 will be adjusted and settled with the named insured that purchased the

policy. Such named insured shall act as fiduciary for the other insureds, and give notice to such other insureds that adjustment and settlement of a claim is in progress. Any other insured may state its position regarding a claim for insured loss in writing within 15 days after notice of such claim.

- B. Proceeds for such insured losses may be made payable by the insurer either jointly to multiple insureds, or to the named insured that purchased the policy in its own right and as fiduciary for other insureds, subject to the requirements of any applicable mortgage clause. A named insured receiving insurance proceeds under the builder's risk and other policies of insurance required by Paragraph 6.05 shall distribute such proceeds in accordance with such agreement as the parties in interest may reach, or as otherwise required under the dispute resolution provisions of this Contract or applicable Laws and Regulations.
- C. If no other special agreement is reached, the damaged Work shall be repaired or replaced, the money so received applied on account thereof, and the Work and the cost thereof covered by Change Order, if needed.

ARTICLE 7 – CONTRACTOR'S RESPONSIBILITIES

7.01 *Supervision and Superintendence*

- A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction.
- B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who shall not be replaced without written notice to Owner and Engineer except under extraordinary circumstances.

7.02 *Labor; Working Hours*

- A. Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall at all times maintain good discipline and order at the Site.
- B. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site shall be performed during regular working hours, Monday through Friday. Contractor will not perform Work on a Saturday, Sunday, or any legal holiday. Contractor may perform Work outside regular working hours or on Saturdays, Sundays, or legal holidays only with Owner's written consent, which will not be unreasonably withheld.

7.03 *Services, Materials, and Equipment*

- A. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start up, and completion of the Work, whether or not such items are specifically called for in the Contract Documents.
- B. All materials and equipment incorporated into the Work shall be of good quality and new, except as otherwise provided in the Contract Documents. All special warranties and

guarantees required by the Specifications shall expressly run to the benefit of Owner. If required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.

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

7.04 "Or Equals"

- A. Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the Contract Price has been based upon Contractor furnishing such item as specified. The specification or description of such an item is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or equal" item is permitted, Contractor may request that Engineer authorize the use of other items of material or equipment, or items from other proposed suppliers under the circumstances described below.
 - 1. If Engineer in its sole discretion determines that an item of material or equipment proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, Engineer shall deem it an "or equal" item. For the purposes of this paragraph, a proposed item of material or equipment will be considered functionally equal to an item so named if:
 - a. in the exercise of reasonable judgment Engineer determines that:
 - 1) it is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;
 - 2) it will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole;
 - 3) it has a proven record of performance and availability of responsive service; and
 - 4) it is not objectionable to Owner.
 - b. Contractor certifies that, if approved and incorporated into the Work:
 - 1) there will be no increase in cost to the Owner or increase in Contract Times; and
 - 2) it will conform substantially to the detailed requirements of the item named in the Contract Documents.
- B. *Contractor's Expense:* Contractor shall provide all data in support of any proposed "or equal" item at Contractor's expense.
- C. *Engineer's Evaluation and Determination:* Engineer will be allowed a reasonable time to evaluate each "or-equal" request. Engineer may require Contractor to furnish additional data about the proposed "or-equal" item. Engineer will be the sole judge of acceptability. No "or-equal" item will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an "or-equal", which will be evidenced by an approved Shop Drawing or other written communication. Engineer will advise Contractor in writing of any negative determination.

- D. *Effect of Engineer's Determination:* Neither approval nor denial of an "or-equal" request shall result in any change in Contract Price. The Engineer's denial of an "or-equal" request shall be final and binding, and may not be reversed through an appeal under any provision of the Contract Documents.
- E. *Treatment as a Substitution Request:* If Engineer determines that an item of material or equipment proposed by Contractor does not qualify as an "or-equal" item, Contractor may request that Engineer consider the proposed item as a substitute pursuant to Paragraph 7.05.

7.05 Substitutes

- A. Unless the specification or description of an item of material or equipment required to be furnished under the Contract Documents contains or is followed by words reading that no substitution is permitted, Contractor may request that Engineer authorize the use of other items of material or equipment under the circumstances described below. To the extent possible such requests shall be made before commencement of related construction at the Site.
 - 1. Contractor shall submit sufficient information as provided below to allow Engineer to determine if the item of material or equipment proposed is functionally equivalent to that named and an acceptable substitute therefor. Engineer will not accept requests for review of proposed substitute items of material or equipment from anyone other than Contractor.
 - 2. The requirements for review by Engineer will be as set forth in Paragraph 7.05.B, as supplemented by the Specifications, and as Engineer may decide is appropriate under the circumstances.
 - 3. Contractor shall make written application to Engineer for review of a proposed substitute item of material or equipment that Contractor seeks to furnish or use. The application:
 - a. shall certify that the proposed substitute item will:
 - 1) perform adequately the functions and achieve the results called for by the general design,
 - 2) be similar in substance to that specified, and
 - 3) be suited to the same use as that specified.
 - b. will state:
 - 1) the extent, if any, to which the use of the proposed substitute item will necessitate a change in Contract Times,
 - 2) whether use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item, and
 - 3) whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty.
 - c. will identify:
 - 1) all variations of the proposed substitute item from that specified, and

- 2) available engineering, sales, maintenance, repair, and replacement services.
 - d. shall contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including but not limited to changes in Contract Price, shared savings, costs of redesign, and claims of other contractors affected by any resulting change.
- B. *Engineer's Evaluation and Determination:* Engineer will be allowed a reasonable time to evaluate each substitute request, and to obtain comments and direction from Owner. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No substitute will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an acceptable substitute. Engineer's determination will be evidenced by a Field Order or a proposed Change Order accounting for the substitution itself and all related impacts, including changes in Contract Price or Contract Times. Engineer will advise Contractor in writing of any negative determination.
 - C. *Special Guarantee:* Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.
 - D. *Reimbursement of Engineer's Cost:* Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor. Whether or not Engineer approves a substitute so proposed or submitted by Contractor, Contractor shall reimburse Owner for the reasonable charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the reasonable charges of Engineer for making changes in the Contract Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.
 - E. *Contractor's Expense:* Contractor shall provide all data in support of any proposed substitute at Contractor's expense.
 - F. *Effect of Engineer's Determination:* If Engineer approves the substitution request, Contractor shall execute the proposed Change Order and proceed with the substitution. The Engineer's denial of a substitution request shall be final and binding, and may not be reversed through an appeal under any provision of the Contract Documents. Contractor may challenge the scope of reimbursement costs imposed under Paragraph 7.05.D, by timely submittal of a Change Proposal.

7.06 *Concerning Subcontractors, Suppliers, and Others*

- A. Contractor may retain Subcontractors and Suppliers for the performance of parts of the Work. Such Subcontractors and Suppliers must be acceptable to Owner.
- B. Contractor shall retain specific Subcontractors, Suppliers, or other individuals or entities for the performance of designated parts of the Work if required by the Contract to do so.
- C. Subsequent to the submittal of Contractor's Bid or final negotiation of the terms of the Contract, Owner may not require Contractor to retain any Subcontractor, Supplier, or other individual or entity to furnish or perform any of the Work against which Contractor has reasonable objection.
- D. Prior to entry into any binding subcontract or purchase order, Contractor shall submit to Owner the identity of the proposed Subcontractor or Supplier (unless Owner has already deemed such proposed Subcontractor or Supplier acceptable, during the bidding process or otherwise). Such proposed Subcontractor or Supplier shall be deemed acceptable to Owner unless Owner raises a substantive, reasonable objection within five days.

- E. Owner may require the replacement of any Subcontractor, Supplier, or other individual or entity retained by Contractor to perform any part of the Work. Owner also may require Contractor to retain specific replacements; provided, however, that Owner may not require a replacement to which Contractor has a reasonable objection. If Contractor has submitted the identity of certain Subcontractors, Suppliers, or other individuals or entities for acceptance by Owner, and Owner has accepted it (either in writing or by failing to make written objection thereto), then Owner may subsequently revoke the acceptance of any such Subcontractor, Supplier, or other individual or entity so identified solely on the basis of substantive, reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor, Supplier, or other individual or entity.
- F. If Owner requires the replacement of any Subcontractor, Supplier, or other individual or entity retained by Contractor to perform any part of the Work, then Contractor shall be entitled to an adjustment in Contract Price or Contract Times, or both, with respect to the replacement; and Contractor shall initiate a Change Proposal for such adjustment within 30 days of Owner's requirement of replacement.
- G. No acceptance by Owner of any such Subcontractor, Supplier, or other individual or entity, whether initially or as a replacement, shall constitute a waiver of the right of Owner to the completion of the Work in accordance with the Contract Documents.
- H. On a monthly basis Contractor shall submit to Engineer a complete list of all Subcontractors and Suppliers having a direct contract with Contractor, and of all other Subcontractors and Suppliers known to Contractor at the time of submittal.
- I. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of the Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work just as Contractor is responsible for Contractor's own acts and omissions.
- J. Contractor shall be solely responsible for scheduling and coordinating the work of Subcontractors, Suppliers, and all other individuals or entities performing or furnishing any of the Work.
- K. Contractor shall restrict all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work from communicating with Engineer or Owner, except through Contractor or in case of an emergency, or as otherwise expressly allowed herein.
- L. The divisions and sections of the Specifications and the identifications of any Drawings shall not control Contractor in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.
- M. All Work performed for Contractor by a Subcontractor or Supplier shall be pursuant to an appropriate contractual agreement that specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of Owner and Engineer.
- N. Owner may furnish to any Subcontractor or Supplier, to the extent practicable, information about amounts paid to Contractor on account of Work performed for Contractor by the particular Subcontractor or Supplier.

O. Nothing in the Contract Documents:

1. shall create for the benefit of any such Subcontractor, Supplier, or other individual or entity any contractual relationship between Owner or Engineer and any such Subcontractor, Supplier, or other individual or entity; nor
2. shall create any obligation on the part of Owner or Engineer to pay or to see to the payment of any money due any such Subcontractor, Supplier, or other individual or entity except as may otherwise be required by Laws and Regulations.

7.07 *Patent Fees and Royalties*

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

7.08 *Permits*

- A. Unless otherwise provided in the Contract Documents, Contractor shall obtain and pay for all construction permits and licenses. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of the submission of Contractor's Bid (or when Contractor became bound under a negotiated contract). Owner shall pay all charges of utility owners for connections for providing permanent service to the Work

7.09 *Taxes*

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

7.10 *Laws and Regulations*

- A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.
- B. If Contractor performs any Work or takes any other action knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all resulting costs and losses, and shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work or other action. It shall not be Contractor's responsibility to make certain that the Work described in the Contract Documents is in accordance with Laws and Regulations, but this shall not relieve Contractor of Contractor's obligations under Paragraph 3.03.
- C. Owner or Contractor may give notice to the other party of any changes after the submission of Contractor's Bid (or after the date when Contractor became bound under a negotiated contract) in Laws or Regulations having an effect on the cost or time of performance of the Work, including but not limited to changes in Laws or Regulations having an effect on procuring permits and on sales, use, value-added, consumption, and other similar taxes. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times resulting from such changes, then within 30 days of such notice Contractor may submit a Change Proposal, or Owner may initiate a Claim.

7.11 *Record Documents*

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

7.12 *Safety and Protection*

- A. Contractor shall be solely responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work. Such responsibility does not relieve Subcontractors of their responsibility for the safety of persons or property in the performance of their work, nor for compliance with applicable safety Laws and Regulations. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury, or loss to:
 - 1. all persons on the Site or who may be affected by the Work;

2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and
 3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, other work in progress, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.
- B. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection. Contractor shall notify Owner; the owners of adjacent property, Underground Facilities, and other utilities; and other contractors and utility owners performing work at or adjacent to the Site, when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property or work in progress.
 - C. Contractor shall comply with the applicable requirements of Owner's safety programs, if any. The Supplementary Conditions identify any Owner's safety programs that are applicable to the Work.
 - D. Contractor shall inform Owner and Engineer of the specific requirements of Contractor's safety program with which Owner's and Engineer's employees and representatives must comply while at the Site.
 - E. All damage, injury, or loss to any property referred to in Paragraph 7.12.A.2 or 7.12.A.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor at its expense (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).
 - F. Contractor's duties and responsibilities for safety and protection shall continue until such time as all the Work is completed and Engineer has issued a notice to Owner and Contractor in accordance with Paragraph 15.06.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).
 - G. Contractor's duties and responsibilities for safety and protection shall resume whenever Contractor or any Subcontractor or Supplier returns to the Site to fulfill warranty or correction obligations, or to conduct other tasks arising from the Contract Documents.

7.13 *Safety Representative*

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

7.14 *Hazard Communication Programs*

- A. Contractor shall be responsible for coordinating any exchange of material safety data sheets or other hazard communication information required to be made available to or

exchanged between or among employers at the Site in accordance with Laws or Regulations.

7.15 *Emergencies*

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

7.16 *Shop Drawings, Samples, and Other Submittals*

A. *Shop Drawing and Sample Submittal Requirements:*

- 1. Before submitting a Shop Drawing or Sample, Contractor shall have:
 - a. reviewed and coordinated the Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;
 - b. determined and verified all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;
 - c. determined and verified the suitability of all materials and equipment offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and
 - d. determined and verified all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto.
- 2. Each submittal shall bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review of that submittal, and that Contractor approves the submittal.
- 3. With each submittal, Contractor shall give Engineer specific written notice of any variations that the Shop Drawing or Sample may have from the requirements of the Contract Documents. This notice shall be set forth in a written communication separate from the Shop Drawings or Sample submittal; and, in addition, in the case of Shop Drawings by a specific notation made on each Shop Drawing submitted to Engineer for review and approval of each such variation.

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

1. *Shop Drawings:*

- a. Contractor shall submit the number of copies required in the Specifications.
- b. Data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to

provide and to enable Engineer to review the information for the limited purposes required by Paragraph 7.16.D.

2. *Samples:*

- a. Contractor shall submit the number of Samples required in the Specifications.
- b. Contractor shall clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the submittal for the limited purposes required by Paragraph 7.16.D.

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

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

D. *Engineer's Review:*

1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the Schedule of Submittals acceptable to Engineer. Engineer's review and approval will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.
2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction or to safety precautions or programs incident thereto.
3. Engineer's review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.
4. Engineer's review and approval of a Shop Drawing or Sample shall not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 7.16.A.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer will document any such approved variation from the requirements of the Contract Documents in a Field Order.
5. Engineer's review and approval of a Shop Drawing or Sample shall not relieve Contractor from responsibility for complying with the requirements of Paragraph 7.16.A and B.
6. Engineer's review and approval of a Shop Drawing or Sample, or of a variation from the requirements of the Contract Documents, shall not, under any circumstances, change the Contract Times or Contract Price, unless such changes are included in a Change Order.
7. Neither Engineer's receipt, review, acceptance or approval of a Shop Drawing, Sample, or other submittal shall result in such item becoming a Contract Document.

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

E. *Resubmittal Procedures:*

1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous submittals.
2. Contractor shall furnish required submittals with sufficient information and accuracy to obtain required approval of an item with no more than three submittals. Engineer will record Engineer's time for reviewing a fourth or subsequent submittal of a Shop Drawings, sample, or other item requiring approval, and Contractor shall be responsible for Engineer's charges to Owner for such time. Owner may impose a set-off against payments due to Contractor to secure reimbursement for such charges.
3. If Contractor requests a change of a previously approved submittal item, Contractor shall be responsible for Engineer's charges to Owner for its review time, and Owner may impose a set-off against payments due to Contractor to secure reimbursement for such charges, unless the need for such change is beyond the control of Contractor.

7.17 *Contractor's General Warranty and Guarantee*

- A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer and its officers, directors, members, partners, employees, agents, consultants, and subcontractors shall be entitled to rely on Contractor's warranty and guarantee.
- B. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:
 1. abuse, modification, or improper maintenance or operation by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or
 2. normal wear and tear under normal usage.
- C. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents or a release of Contractor's obligation to perform the Work in accordance with the Contract Documents:
 1. observations by Engineer;
 2. recommendation by Engineer or payment by Owner of any progress or final payment;
 3. the issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;
 4. use or occupancy of the Work or any part thereof by Owner;
 5. any review and approval of a Shop Drawing or Sample submittal;
 6. the issuance of a notice of acceptability by Engineer;
 7. any inspection, test, or approval by others; or
 8. any correction of defective Work by Owner.

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

7.18 *Indemnification*

- A. To the fullest extent permitted by Laws and Regulations, and in addition to any other obligations of Contractor under the Contract or otherwise, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the performance of the Work, provided that any such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work or anyone for whose acts any of them may be liable.
- B. In any and all claims against Owner or Engineer or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 7.18.A shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.
- C. The indemnification obligations of Contractor under Paragraph 7.18.A shall not extend to the liability of Engineer and Engineer's officers, directors, members, partners, employees, agents, consultants and subcontractors arising out of:
 - 1. the preparation or approval of, or the failure to prepare or approve maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications; or
 - 2. giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage.

7.19 *Delegation of Professional Design Services*

- A. Contractor will not be required to provide professional design services unless such services are specifically required by the Contract Documents for a portion of the Work or unless such services are required to carry out Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. Contractor shall not be required to provide professional services in violation of applicable Laws and Regulations.
- B. If professional design services or certifications by a design professional related to systems, materials, or equipment are specifically required of Contractor by the Contract Documents, Owner and Engineer will specify all performance and design criteria that such services must satisfy. Contractor shall cause such services or certifications to be provided by a properly licensed professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, and other submittals prepared by such professional. Shop

Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to Engineer.

- C. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy, and completeness of the services, certifications, or approvals performed by such design professionals, provided Owner and Engineer have specified to Contractor all performance and design criteria that such services must satisfy.
- D. Pursuant to this paragraph, Engineer's review and approval of design calculations and design drawings will be only for the limited purpose of checking for conformance with performance and design criteria given and the design concept expressed in the Contract Documents. Engineer's review and approval of Shop Drawings and other submittals (except design calculations and design drawings) will be only for the purpose stated in Paragraph 7.16.D.1.
- E. Contractor shall not be responsible for the adequacy of the performance or design criteria specified by Owner or Engineer.

ARTICLE 8 – OTHER WORK AT THE SITE

8.01 *Other Work*

- A. In addition to and apart from the Work under the Contract Documents, the Owner may perform other work at or adjacent to the Site. Such other work may be performed by Owner's employees, or through contracts between the Owner and third parties. Owner may also arrange to have third-party utility owners perform work on their utilities and facilities at or adjacent to the Site.
- B. If Owner performs other work at or adjacent to the Site with Owner's employees, or through contracts for such other work, then Owner shall give Contractor written notice thereof prior to starting any such other work. If Owner has advance information regarding the start of any utility work at or adjacent to the Site, Owner shall provide such information to Contractor.
- C. Contractor shall afford each other contractor that performs such other work, each utility owner performing other work, and Owner, if Owner is performing other work with Owner's employees, proper and safe access to the Site, and provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering such work; provided, however, that Contractor may cut or alter others' work with the written consent of Engineer and the others whose work will be affected.
- D. If the proper execution or results of any part of Contractor's Work depends upon work performed by others under this Article 8, Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.

8.02 *Coordination*

- A. If Owner intends to contract with others for the performance of other work at or adjacent to the Site, to perform other work at or adjacent to the Site with Owner's employees, or to arrange to have utility owners perform work at or adjacent to the Site, the following will be set forth in the Supplementary Conditions or provided to Contractor prior to the start of any such other work:
 - 1. the identity of the individual or entity that will have authority and responsibility for coordination of the activities among the various contractors;
 - 2. an itemization of the specific matters to be covered by such authority and responsibility; 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 at or adjacent to the Site for Owner, the Owner's employees, any other contractor working for Owner, or any utility owner for whom the Owner is responsible causes damage to the Work or to the property of Contractor or its Subcontractors, or delays, disrupts, interferes with, or increases the scope or cost of the performance of the Work, through actions or inaction, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times, or both. Contractor must submit any Change Proposal seeking an equitable adjustment in the Contract Price or the Contract Times under this paragraph within 30 days of the damaging, delaying, disrupting, or interfering event. The entitlement to, and extent of, any such equitable adjustment shall take into account information (if any) regarding such other work that was provided to Contractor in the Contract Documents prior to the submittal of the Bid or the final negotiation of the terms of the Contract. When applicable, any such equitable adjustment in Contract Price shall be conditioned on Contractor assigning to Owner all Contractor's rights against such other contractor or utility owner with respect to the damage, delay, disruption, or interference that is the subject of the adjustment. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.
- B. Contractor shall take reasonable and customary measures to avoid damaging, delaying, disrupting, or interfering with the work of Owner, any other contractor, or any utility owner performing other work at or adjacent to the Site. If Contractor fails to take such measures and as a result damages, delays, disrupts, or interferes with the work of any such other contractor or utility owner, then Owner may impose a set-off against payments due to Contractor, and assign to such other contractor or utility owner the Owner's contractual rights against Contractor with respect to the breach of the obligations set forth in this paragraph.
- C. When Owner is performing other work at or adjacent to the Site with Owner's employees, Contractor shall be liable to Owner for damage to such other work, and for the reasonable direct delay, disruption, and interference costs incurred by Owner as a result of Contractor's failure to take reasonable and customary measures with respect to Owner's other work. In response to such damage, delay, disruption, or interference, Owner may impose a set-off against payments due to Contractor.

- D. If Contractor damages, delays, disrupts, or interferes with the work of any other contractor, or any utility owner performing other work at or adjacent to the Site, through Contractor's failure to take reasonable and customary measures to avoid such impacts, or if any claim arising out of Contractor's actions, inactions, or negligence in performance of the Work at or adjacent to the Site is made by any such other contractor or utility owner against Contractor, Owner, or Engineer, then Contractor shall (1) promptly attempt to settle the claim as to all parties through negotiations with such other contractor or utility owner, or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law, and (2) indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against any such claims, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such damage, delay, disruption, or interference.

ARTICLE 9 – OWNER'S RESPONSIBILITIES

9.01 *Communications to Contractor*

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

9.02 *Replacement of Engineer*

- A. Owner may at its discretion appoint an engineer to replace Engineer, provided Contractor makes no reasonable objection to the replacement engineer. The replacement engineer's status under the Contract Documents shall be that of the former Engineer.

9.03 *Furnish Data*

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

9.04 *Pay When Due*

- A. Owner shall make payments to Contractor when they are due as provided in the Agreement.

9.05 *Lands and Easements; Reports, Tests, and Drawings*

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

9.06 *Insurance*

- A. Owner's responsibilities, if any, with respect to purchasing and maintaining liability and property insurance are set forth in Article 6.

9.07 *Change Orders*

- A. Owner's responsibilities with respect to Change Orders are set forth in Article 11.

9.08 *Inspections, Tests, and Approvals*

- A. Owner's responsibility with respect to certain inspections, tests, and approvals is set forth in Paragraph 14.02.B.

9.09 *Limitations on Owner's Responsibilities*

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

9.10 *Undisclosed Hazardous Environmental Condition*

- A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 5.06.

9.11 *Evidence of Financial Arrangements*

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

9.12 *Safety Programs*

- A. While at the Site, Owner's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Owner has been informed.
- B. Owner shall furnish copies of any applicable Owner safety programs to Contractor.

ARTICLE 10 – ENGINEER'S STATUS DURING CONSTRUCTION

10.01 *Owner's Representative*

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

10.02 *Visits to Site*

- A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe as an experienced and qualified design professional the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.
- B. Engineer's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in Paragraph 10.08. Particularly, but without limitation, during

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

10.03 *Project Representative*

- A. If Owner and Engineer have agreed that Engineer will furnish a Resident Project Representative to represent Engineer at the Site and assist Engineer in observing the progress and quality of the Work, then the authority and responsibilities of any such Resident Project Representative will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in Paragraph 10.08. If Owner designates another representative or agent to represent Owner at the Site who is not Engineer's consultant, agent, or employee, the responsibilities and authority and limitations thereon of such other individual or entity will be as provided in the Supplementary Conditions.

10.04 *Rejecting Defective Work*

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

10.05 *Shop Drawings, Change Orders and Payments*

- A. Engineer's authority, and limitations thereof, as to Shop Drawings and Samples, are set forth in Paragraph 7.16.
- B. Engineer's authority, and limitations thereof, as to design calculations and design drawings submitted in response to a delegation of professional design services, if any, are set forth in Paragraph 7.19.
- C. Engineer's authority as to Change Orders is set forth in Article 11.
- D. Engineer's authority as to Applications for Payment is set forth in Article 15.

10.06 *Determinations for Unit Price Work*

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

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

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

10.08 *Limitations on Engineer's Authority and Responsibilities*

- A. Neither Engineer's authority or responsibility under this Article 10 or under any other provision of the Contract, nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer, shall create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.

- B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.
- C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.
- D. Engineer's review of the final Application for Payment and accompanying documentation and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Paragraph 15.06.A will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals, that the results certified indicate compliance with the Contract Documents.
- E. The limitations upon authority and responsibility set forth in this Paragraph 10.08 shall also apply to the Resident Project Representative, if any.

10.09 *Compliance with Safety Program*

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

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

11.01 *Amending and Supplementing Contract Documents*

- A. The Contract Documents may be amended or supplemented by a Change Order, a Work Change Directive, or a Field Order.
 - 1. *Change Orders:*
 - a. If an amendment or supplement to the Contract Documents includes a change in the Contract Price or the Contract Times, such amendment or supplement must be set forth in a Change Order. A Change Order also may be used to establish amendments and supplements of the Contract Documents that do not affect the Contract Price or Contract Times.
 - b. Owner and Contractor may amend those terms and conditions of the Contract Documents that do not involve (1) the performance or acceptability of the Work, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, without the recommendation of the Engineer. Such an amendment shall be set forth in a Change Order.
 - 2. *Work Change Directives:* A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the modification ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order, following negotiations by the parties as to the Work Change Directive's effect, if any, on the Contract Price and Contract Times; or, if negotiations are unsuccessful, by a determination under the terms of the Contract Documents governing adjustments, expressly including Paragraph 11.04 regarding change of Contract Price. Contractor must submit any Change Proposal seeking an

adjustment of the Contract Price or the Contract Times, or both, no later than 30 days after the completion of the Work set out in the Work Change Directive. Owner must submit any Claim seeking an adjustment of the Contract Price or the Contract Times, or both, no later than 60 days after issuance of the Work Change Directive.

3. *Field Orders*: Engineer may authorize minor changes in the Work if the changes do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Such changes will be accomplished by a Field Order and will be binding on Owner and also on Contractor, which shall perform the Work involved promptly. If Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, or both, then before proceeding with the Work at issue, Contractor shall submit a Change Proposal as provided herein.

11.02 *Owner-Authorized Changes in the Work*

- A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work. Such changes shall be supported by Engineer's recommendation, to the extent the change involves the design (as set forth in the Drawings, Specifications, or otherwise), or other engineering or technical matters. Such changes may be accomplished by a Change Order, if Owner and Contractor have agreed as to the effect, if any, of the changes on Contract Times or Contract Price; or by a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved; or, in the case of a deletion in the Work, promptly cease construction activities with respect to such deleted Work. Added or revised Work shall be performed under the applicable conditions of the Contract Documents. Nothing in this paragraph shall obligate Contractor to undertake work that Contractor reasonably concludes cannot be performed in a manner consistent with Contractor's safety obligations under the Contract Documents or Laws and Regulations.

11.03 *Unauthorized Changes in the Work*

- A. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents, as amended, modified, or supplemented, except in the case of an emergency as provided in Paragraph 7.15 or in the case of uncovering Work as provided in Paragraph 14.05.

11.04 *Change of Contract Price*

- A. The Contract Price may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Price shall comply with the provisions of Paragraph 11.06. Any Claim for an adjustment of Contract Price shall comply with the provisions of Article 12.
- B. An adjustment in the Contract Price will be determined as follows:
 1. where the Work involved is covered by unit prices contained in the Contract Documents, then by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 13.03); or
 2. where the Work involved is not covered by unit prices contained in the Contract Documents, then by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 11.04.C.2); or
 3. where the Work involved is not covered by unit prices contained in the Contract Documents and the parties do not reach mutual agreement to a lump sum, then on

the basis of the Cost of the Work (determined as provided in Paragraph 13.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 11.04.C).

- C. *Contractor's Fee*: When applicable, the Contractor's fee for overhead and profit shall be determined as follows:
1. a mutually acceptable fixed fee; or
 2. if a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:
 - a. for costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2, the Contractor's fee shall be 15 percent;
 - b. for costs incurred under Paragraph 13.01.B.3, the Contractor's fee shall be five percent;
 - c. where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraphs 11.04.C.2.a and 11.04.C.2.b is that the Contractor's fee shall be based on: (1) a fee of 15 percent of the costs incurred under Paragraphs 13.01.A.1 and 13.01.A.2 by the Subcontractor that actually performs the Work, at whatever tier, and (2) with respect to Contractor itself and to any Subcontractors of a tier higher than that of the Subcontractor that actually performs the Work, a fee of five percent of the amount (fee plus underlying costs incurred) attributable to the next lower tier Subcontractor; provided, however, that for any such subcontracted work the maximum total fee to be paid by Owner shall be no greater than 27 percent of the costs incurred by the Subcontractor that actually performs the work;
 - d. no fee shall be payable on the basis of costs itemized under Paragraphs 13.01.B.4, 13.01.B.5, and 13.01.C;
 - e. the amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in cost will be the amount of the actual net decrease in cost plus a deduction in Contractor's fee by an amount equal to five percent of such net decrease; and
 - f. when both additions and credits are involved in any one change, the adjustment in Contractor's fee shall be computed on the basis of the net change in accordance with Paragraphs 11.04.C.2.a through 11.04.C.2.e, inclusive.

11.05 *Change of Contract Times*

- A. The Contract Times may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Times shall comply with the provisions of Paragraph 11.06. Any Claim for an adjustment in the Contract Times shall comply with the provisions of Article 12.
- B. An adjustment of the Contract Times shall be subject to the limitations set forth in Paragraph 4.05, concerning delays in Contractor's progress.

11.06 *Change Proposals*

- A. Contractor shall submit a Change Proposal to Engineer to request an adjustment in the Contract Times or Contract Price; appeal an initial decision by Engineer concerning the requirements of the Contract Documents or relating to the acceptability of the Work under the Contract Documents; contest a set-off against payment due; or seek other relief under

the Contract. The Change Proposal shall specify any proposed change in Contract Times or Contract Price, or both, or other proposed relief, and explain the reason for the proposed change, with citations to any governing or applicable provisions of the Contract Documents.

1. *Procedures:* Contractor shall submit each Change Proposal to Engineer promptly (but in no event later than 30 days) after the start of the event giving rise thereto, or after such initial decision. The Contractor shall submit supporting data, including the proposed change in Contract Price or Contract Time (if any), to the Engineer and Owner within 15 days after the submittal of the Change Proposal. The supporting data shall be accompanied by a written statement that the supporting data are accurate and complete, and that any requested time or price adjustment is the entire adjustment to which Contractor believes it is entitled as a result of said event. Engineer will advise Owner regarding the Change Proposal, and consider any comments or response from Owner regarding the Change Proposal.
 2. *Engineer's Action:* Engineer will review each Change Proposal and, within 30 days after receipt of the Contractor's supporting data, either deny the Change Proposal in whole, approve it in whole, or deny it in part and approve it in part. Such actions shall be in writing, with a copy provided to Owner and Contractor. If Engineer does not take action on the Change Proposal within 30 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of Engineer's inaction the Change Proposal is deemed denied, thereby commencing the time for appeal of the denial under Article 12.
 3. *Binding Decision:* Engineer's decision will be final and binding upon Owner and Contractor, unless Owner or Contractor appeals the decision by filing a Claim under Article 12.
- B. *Resolution of Certain Change Proposals:* If the Change Proposal does not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters, then Engineer will notify the parties that the Engineer is unable to resolve the Change Proposal. For purposes of further resolution of such a Change Proposal, such notice shall be deemed a denial, and Contractor may choose to seek resolution under the terms of Article 12.

11.07 *Execution of Change Orders*

- A. Owner and Contractor shall execute appropriate Change Orders covering:
1. changes in the Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive;
 2. changes in Contract Price resulting from an Owner set-off, unless Contractor has duly contested such set-off;
 3. changes in the Work which are: (a) ordered by Owner pursuant to Paragraph 11.02, (b) required because of Owner's acceptance of defective Work under Paragraph 14.04 or Owner's correction of defective Work under Paragraph 14.07, or (c) agreed to by the parties, subject to the need for Engineer's recommendation if the change in the Work involves the design (as set forth in the Drawings, Specifications, or otherwise), or other engineering or technical matters; and
 4. changes in the Contract Price or Contract Times, or other changes, which embody the substance of any final and binding results under Paragraph 11.06, or Article 12.

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

11.08 *Notification to Surety*

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

ARTICLE 12 – CLAIMS

12.01 *Claims*

- A. *Claims Process:* The following disputes between Owner and Contractor shall be submitted to the Claims process set forth in this Article:
 - 1. Appeals by Owner or Contractor of Engineer's decisions regarding Change Proposals;
 - 2. Owner demands for adjustments in the Contract Price or Contract Times, or other relief under the Contract Documents; and
 - 3. Disputes that Engineer has been unable to address because they do not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters.
- B. *Submittal of Claim:* The party submitting a Claim shall deliver it directly to the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto; in the case of appeals regarding Change Proposals within 30 days of the decision under appeal. The party submitting the Claim shall also furnish a copy to the Engineer, for its information only. The responsibility to substantiate a Claim shall rest with the party making the Claim. In the case of a Claim by Contractor seeking an increase in the Contract Times or Contract Price, or both, Contractor shall certify that the Claim is made in good faith, that the supporting data are accurate and complete, and that to the best of Contractor's knowledge and belief the amount of time or money requested accurately reflects the full amount to which Contractor is entitled.
- C. *Review and Resolution:* The party receiving a Claim shall review it thoroughly, giving full consideration to its merits. The two parties shall seek to resolve the Claim through the exchange of information and direct negotiations. The parties may extend the time for resolving the Claim by mutual agreement. All actions taken on a Claim shall be stated in writing and submitted to the other party, with a copy to Engineer.
- D. *Mediation:*
 - 1. At any time after initiation of a Claim, Owner and Contractor may mutually agree to mediation of the underlying dispute. The agreement to mediate shall stay the Claim submittal and response process.
 - 2. If Owner and Contractor agree to mediation, then after 60 days from such agreement, either Owner or Contractor may unilaterally terminate the mediation process, and the Claim submittal and decision process shall resume as of the date of the termination. If the mediation proceeds but is unsuccessful in resolving the dispute, the Claim

submittal and decision process shall resume as of the date of the conclusion of the mediation, as determined by the mediator.

3. Owner and Contractor shall each pay one-half of the mediator's fees and costs.
- E. *Partial Approval*: If the party receiving a Claim approves the Claim in part and denies it in part, such action shall be final and binding unless within 30 days of such action the other party invokes the procedure set forth in Article 17 for final resolution of disputes.
- F. *Denial of Claim*: If efforts to resolve a Claim are not successful, the party receiving the Claim may deny it by giving written notice of denial to the other party. If the receiving party does not take action on the Claim within 90 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of the inaction, the Claim is deemed denied, thereby commencing the time for appeal of the denial. A denial of the Claim shall be final and binding unless within 30 days of the denial the other party invokes the procedure set forth in Article 17 for the final resolution of disputes.
- G. *Final and Binding Results*: If the parties reach a mutual agreement regarding a Claim, whether through approval of the Claim, direct negotiations, mediation, or otherwise; or if a Claim is approved in part and denied in part, or denied in full, and such actions become final and binding; then the results of the agreement or action on the Claim shall be incorporated in a Change Order to the extent they affect the Contract, including the Work, the Contract Times, or the Contract Price.

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

13.01 Cost of the Work

- A. *Purposes for Determination of Cost of the Work*: The term Cost of the Work means the sum of all costs necessary for the proper performance of the Work at issue, as further defined below. The provisions of this Paragraph 13.01 are used for two distinct purposes:
 1. To determine Cost of the Work when Cost of the Work is a component of the Contract Price, under cost-plus-fee, time-and-materials, or other cost-based terms; or
 2. To determine the value of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price. When the value of any such adjustment is determined on the basis of Cost of the Work, Contractor is entitled only to those additional or incremental costs required because of the change in the Work or because of the event giving rise to the adjustment.
- B. *Costs Included*: Except as otherwise may be agreed to in writing by Owner, costs included in the Cost of the Work shall be in amounts no higher than those prevailing in the locality of the Project, shall not include any of the costs itemized in Paragraph 13.01.C, and shall include only the following items:
 1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor. Such employees shall include, without limitation, superintendents, foremen, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits, which shall include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, bonuses, sick leave, and vacation and holiday pay applicable

thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, shall be included in the above to the extent authorized by Owner.

2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts shall accrue to Owner. All trade discounts, rebates, and refunds and returns from sale of surplus materials and equipment shall accrue to Owner, and Contractor shall make provisions so that they may be obtained.
3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, who will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee shall be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 13.01.
4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed for services specifically related to the Work.
5. Supplemental costs including the following:
 - a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.
 - b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.
 - c. Rentals of all construction equipment and machinery, and the parts thereof, whether rented from Contractor or others in accordance with rental agreements approved by Owner with the advice of Engineer, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the Work.
 - d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, as imposed by Laws and Regulations.
 - e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.
 - f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of property insurance established in accordance with Paragraph 6.05), provided such losses and damages have resulted from causes

other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses shall be included in the Cost of the Work for the purpose of determining Contractor's fee.

- g. The cost of utilities, fuel, and sanitary facilities at the Site.
- h. Minor expenses such as communication service at the Site, express and courier services, and similar petty cash items in connection with the Work.
- i. The costs of premiums for all bonds and insurance that Contractor is required by the Contract Documents to purchase and maintain.

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

- 1. Payroll costs and other compensation of Contractor's officers, executives, principals (of partnerships and sole proprietorships), general managers, safety managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, 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. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.
- 3. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.
- 4. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.
- 5. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraph 13.01.B.

D. *Contractor's Fee:* When the Work as a whole is performed on the basis of cost-plus, Contractor's fee shall be determined as set forth in the Agreement. When the value of any Work covered by a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price is determined on the basis of Cost of the Work, Contractor's fee shall be determined as set forth in Paragraph 11.04.C.

E. *Documentation:* Whenever the Cost of the Work for any purpose is to be determined pursuant to this Article 13, Contractor will establish and maintain records thereof in accordance with generally accepted accounting practices and submit in a form acceptable to Engineer an itemized cost breakdown together with supporting data.

13.02 Allowances

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

- B. *Cash Allowances*: Contractor agrees that:
 - 1. the cash allowances include the cost to Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and
 - 2. Contractor's costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the cash allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment on account of any of the foregoing will be valid.
- C. *Contingency Allowance*: Contractor agrees that a contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.
- D. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

13.03 *Unit Price Work*

- A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.
- B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Payments to Contractor for Unit Price Work will be based on actual quantities.
- C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.
- D. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Engineer will review with Contractor the Engineer's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, subject to the provisions of the following paragraph.
- E. Within 30 days of Engineer's written decision under the preceding paragraph, Contractor may submit a Change Proposal, or Owner may file a Claim, seeking an adjustment in the Contract Price if:
 - 1. the quantity of any item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement;
 - 2. there is no corresponding adjustment with respect to any other item of Work; and
 - 3. Contractor believes that it is entitled to an increase in Contract Price as a result of having incurred additional expense or Owner believes that Owner is entitled to a decrease in Contract Price, and the parties are unable to agree as to the amount of any such increase or decrease.

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

14.01 *Access to Work*

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

14.02 *Tests, Inspections, and Approvals*

- A. Contractor shall give Engineer timely notice of readiness of the Work (or specific parts thereof) for all required inspections and tests, and shall cooperate with inspection and testing personnel to facilitate required inspections and tests.
- B. Owner shall retain and pay for the services of an independent inspector, testing laboratory, or other qualified individual or entity to perform all inspections and tests expressly required by the Contract Documents to be furnished and paid for by Owner, except that costs incurred in connection with tests or inspections of covered Work shall be governed by the provisions of Paragraph 14.05.
- C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.
- D. Contractor shall be responsible for arranging, obtaining, and paying for all inspections and tests required:
 - 1. by the Contract Documents, unless the Contract Documents expressly allocate responsibility for a specific inspection or test to Owner;
 - 2. to attain Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work;
 - 3. by manufacturers of equipment furnished under the Contract Documents;
 - 4. for testing, adjusting, and balancing of mechanical, electrical, and other equipment to be incorporated into the Work; and
 - 5. for acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work.

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

- E. If the Contract Documents require the Work (or part thereof) to be approved by Owner, Engineer, or another designated individual or entity, then Contractor shall assume full responsibility for arranging and obtaining such approvals.
- F. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, Contractor shall, if requested by Engineer, uncover such Work for observation. Such uncovering shall be at Contractor's expense unless Contractor had given Engineer timely notice of Contractor's intention to

cover the same and Engineer had not acted with reasonable promptness in response to such notice.

14.03 *Defective Work*

- A. *Contractor's Obligation:* It is Contractor's obligation to assure that the Work is not defective.
- B. *Engineer's Authority:* Engineer has the authority to determine whether Work is defective, and to reject defective Work.
- C. *Notice of Defects:* Prompt notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor.
- D. *Correction, or Removal and Replacement:* Promptly after receipt of written notice of defective Work, Contractor shall correct all such defective Work, whether or not fabricated, installed, or completed, or, if Engineer has rejected the defective Work, remove it from the Project and replace it with Work that is not defective.
- E. *Preservation of Warranties:* When correcting defective Work, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.
- F. *Costs and Damages:* In addition to its correction, removal, and replacement obligations with respect to defective Work, Contractor shall pay all claims, costs, losses, and damages arising out of or relating to defective Work, including but not limited to the cost of the inspection, testing, correction, removal, replacement, or reconstruction of such defective Work, fines levied against Owner by governmental authorities because the Work is defective, and the costs of repair or replacement of work of others resulting from defective Work. Prior to final payment, if Owner and Contractor are unable to agree as to the measure of such claims, costs, losses, and damages resulting from defective Work, then Owner may impose a reasonable set-off against payments due under Article 15.

14.04 *Acceptance of Defective Work*

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

14.05 *Uncovering Work*

- A. Engineer has the authority to require 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, or both, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, then Contractor may submit a Change Proposal within 30 days of the determination that the Work is not defective.

14.06 *Owner May Stop the Work*

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

14.07 *Owner May Correct Defective Work*

- A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work, or to remove and replace rejected Work as required by Engineer, or if Contractor fails to perform the Work in accordance with the Contract Documents, or if Contractor fails to comply with any other provision of the Contract Documents, then Owner may, after seven days written notice to Contractor, correct or remedy any such deficiency.
- B. In exercising the rights and remedies under this Paragraph 14.07, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this paragraph.
- C. All claims, costs, losses, and damages incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 14.07 will be charged against Contractor as set-offs against payments due under Article 15. Such claims, costs, losses and damages will

include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.

- D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 14.07.

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

15.01 Progress Payments

- A. *Basis for Progress Payments:* The Schedule of Values established as provided in Article 2 will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments on account of Unit Price Work will be based on the number of units completed during the pay period, as determined under the provisions of Paragraph 13.03. Progress payments for cost-based Work will be based on Cost of the Work completed by Contractor during the pay period.
- B. *Applications for Payments:*
1. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice, or other documentation warranting that Owner has received the materials and equipment free and clear of all Liens, and evidence that the materials and equipment are covered by appropriate property insurance, a warehouse bond, or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.
 2. Beginning with the second Application for Payment, each Application shall include an affidavit of Contractor stating that all previous progress payments received on account of the Work have been applied on account to discharge Contractor's legitimate obligations associated with prior Applications for Payment.
 3. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.
- C. *Review of Applications:*
1. Engineer will, within 10 days after receipt of each Application for Payment, including each resubmittal, either indicate in writing a recommendation of payment and present the Application to Owner, or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.
 2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations of the executed Work as an experienced and qualified design professional, and on Engineer's review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:

- a. the Work has progressed to the point indicated;
 - b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, the results of any subsequent tests called for in the Contract Documents, a final determination of quantities and classifications for Unit Price Work under Paragraph 13.03, and any other qualifications stated in the recommendation); and
 - c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.
3. By recommending any such payment Engineer will not thereby be deemed to have represented that:
 - a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract; or
 - b. there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.
 4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:
 - a. to supervise, direct, or control the Work, or
 - b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or
 - c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work, or
 - d. to make any examination to ascertain how or for what purposes Contractor has used the money paid on account of the Contract Price, or
 - e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.
 5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 15.01.C.2.
 6. Engineer will recommend reductions in payment (set-offs) necessary in Engineer's opinion to protect Owner from loss because:
 - a. the Work is defective, requiring correction or replacement;
 - b. the Contract Price has been reduced by Change Orders;
 - c. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;
 - d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible; or

- e. Engineer has actual knowledge of the occurrence of any of the events that would constitute a default by Contractor and therefore justify termination for cause under the Contract Documents.

D. *Payment Becomes Due:*

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

E. *Reductions in Payment by Owner:*

- 1. In addition to any reductions in payment (set-offs) recommended by Engineer, Owner is entitled to impose a set-off against payment based on any of the following:
 - a. claims have been made against Owner on account of Contractor's conduct in the performance or furnishing of the Work, or Owner has incurred costs, losses, or damages on account of Contractor's conduct in the performance or furnishing of the Work, including but not limited to claims, costs, losses, or damages from workplace injuries, adjacent property damage, non-compliance with Laws and Regulations, and patent infringement;
 - b. Contractor has failed to take reasonable and customary measures to avoid damage, delay, disruption, and interference with other work at or adjacent to the Site;
 - c. Contractor has failed to provide and maintain required bonds or insurance;
 - d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible;
 - e. Owner has incurred extra charges or engineering costs related to submittal reviews, evaluations of proposed substitutes, tests and inspections, or return visits to manufacturing or assembly facilities;
 - f. the Work is defective, requiring correction or replacement;
 - g. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;
 - h. the Contract Price has been reduced by Change Orders;
 - i. an event that would constitute a default by Contractor and therefore justify a termination for cause has occurred;
 - j. liquidated damages have accrued as a result of Contractor's failure to achieve Milestones, Substantial Completion, or final completion of the Work;
 - k. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens;
 - l. there are other items entitling Owner to a set off against the amount recommended.
- 2. If Owner imposes any set-off against payment, whether based on its own knowledge or on the written recommendations of Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and the specific amount of the reduction, and promptly pay Contractor any amount

remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, if Contractor remedies the reasons for such action. The reduction imposed shall be binding on Contractor unless it duly submits a Change Proposal contesting the reduction.

3. Upon a subsequent determination that Owner's refusal of payment was not justified, the amount wrongfully withheld shall be treated as an amount due as determined by Paragraph 15.01.C.1 and subject to interest as provided in the Agreement.

15.02 *Contractor's Warranty of Title*

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

15.03 *Substantial Completion*

- A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete and request that Engineer issue a certificate of Substantial Completion. Contractor shall at the same time submit to Owner and Engineer an initial draft of punch list items to be completed or corrected before final payment.
- B. Promptly after Contractor's notification, Owner, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.
- C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a preliminary certificate of Substantial Completion which shall fix the date of Substantial Completion. Engineer shall attach to the certificate a punch list of items to be completed or corrected before final payment. Owner shall have seven days after receipt of the preliminary certificate during which to make written objection to Engineer as to any provisions of the certificate or attached punch list. If, after considering the objections to the provisions of the preliminary certificate, Engineer concludes that the Work is not substantially complete, Engineer will, within 14 days after submission of the preliminary certificate to Owner, notify Contractor in writing 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 E for that part of the Work.
 - 2. At any time Contractor may notify Owner and Engineer in writing that Contractor considers any such part of the Work substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.
 - 3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 15.03 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.
 - 4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 6.05 regarding builder's risk or other property insurance.

15.05 *Final Inspection*

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

15.06 *Final Payment*

- A. *Application for Payment:*
 - 1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance, certificates of

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

2. The final Application for Payment shall be accompanied (except as previously delivered) by:
 - a. all documentation called for in the Contract Documents;
 - b. consent of the surety, if any, to final payment;
 - c. satisfactory evidence that all title issues have been resolved such that title to all Work, materials, and equipment has passed to Owner free and clear of any Liens or other title defects, or will so pass upon final payment.
 - d. a list of all disputes that Contractor believes are unsettled; and
 - e. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of the Work, and of Liens filed in connection with the Work.
3. In lieu of the releases or waivers of Liens specified in Paragraph 15.06.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (a) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (b) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner might in any way be responsible, or which might in any way result in liens or other burdens on Owner's property, have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien, or Owner at its option may issue joint checks payable to Contractor and specified Subcontractors and Suppliers.

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

1. If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract have been fulfilled, Engineer will, within ten days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of final payment and present the Application for Payment to Owner for payment. Such recommendation shall account for any set-offs against payment that are necessary in Engineer's opinion to protect Owner from loss for the reasons stated above with respect to progress payments. At the same time Engineer will also give written notice to Owner and Contractor that the Work is acceptable, subject to the provisions of Paragraph 15.07. Otherwise, Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.

- C. *Completion of Work:* The Work is complete (subject to surviving obligations) when it is ready for final payment as established by the Engineer's written recommendation of final payment.
- D. *Payment Becomes Due:* Thirty days after the presentation to Owner of the final Application for Payment and accompanying documentation, the amount recommended by Engineer (less any further sum Owner is entitled to set off against Engineer's recommendation,

including but not limited to set-offs for liquidated damages and set-offs allowed under the provisions above with respect to progress payments) will become due and shall be paid by Owner to Contractor.

15.07 *Waiver of Claims*

- A. The making of final payment will not constitute a waiver by Owner of claims or rights against Contractor. Owner expressly reserves claims and rights arising from unsettled Liens, from defective Work appearing after final inspection pursuant to Paragraph 15.05, from Contractor's failure to comply with the Contract Documents or the terms of any special guarantees specified therein, from outstanding Claims by Owner, or from Contractor's continuing obligations under the Contract Documents.
- B. The acceptance of final payment by Contractor will constitute a waiver by Contractor of all claims and rights against Owner other than those pending matters that have been duly submitted or appealed under the provisions of Article 17.

15.08 *Correction Period*

- A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the terms of any applicable special guarantee required by the Contract Documents, or by any specific provision of the Contract Documents), any Work is found to be defective, or if the repair of any damages to the Site, adjacent areas that Contractor has arranged to use through construction easements or otherwise, and other adjacent areas used by Contractor as permitted by Laws and Regulations, is found to be defective, then Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:
 - 1. correct the defective repairs to the Site or such other adjacent areas;
 - 2. correct such defective Work;
 - 3. if the defective Work has been rejected by Owner, remove it from the Project and replace it with Work that is not defective, and
 - 4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others, or to other land or areas resulting therefrom.
- B. If Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others).
- C. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications.
- D. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this paragraph, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.

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

ARTICLE 16 – SUSPENSION OF WORK AND TERMINATION

16.01 *Owner May Suspend Work*

- A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by written notice to Contractor and Engineer. Such notice will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be entitled to an adjustment in the Contract Price or an extension of the Contract Times, or both, directly attributable to any such suspension. Any Change Proposal seeking such adjustments shall be submitted no later than 30 days after the date fixed for resumption of Work.

16.02 *Owner May Terminate for Cause*

- A. The occurrence of any one or more of the following events will constitute a default by Contractor and justify termination for cause:
 - 1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the Progress Schedule);
 - 2. Failure of Contractor to perform or otherwise to comply with a material term of the Contract Documents;
 - 3. Contractor's disregard of Laws or Regulations of any public body having jurisdiction; or
 - 4. Contractor's repeated disregard of the authority of Owner or Engineer.
- B. If one or more of the events identified in Paragraph 16.02.A occurs, then after giving Contractor (and any surety) ten days written notice that Owner is considering a declaration that Contractor is in default and termination of the contract, Owner may proceed to:
 - 1. declare Contractor to be in default, and give Contractor (and any surety) notice that the Contract is terminated; and
 - 2. enforce the rights available to Owner under any applicable performance bond.
- C. Subject to the terms and operation of any applicable performance bond, if Owner has terminated the Contract for cause, Owner may exclude Contractor from the Site, take possession of the Work, incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere, and complete the Work as Owner may deem expedient.
- D. Owner may not proceed with termination of the Contract under Paragraph 16.02.B if Contractor within seven days of receipt of notice of intent to terminate begins to correct its failure to perform and proceeds diligently to cure such failure.
- E. If Owner proceeds as provided in Paragraph 16.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds the cost to complete the Work, including all related claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals) sustained by Owner, such excess will be paid to Contractor. If the cost to complete the Work including such related claims, costs, losses,

and damages exceeds such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, when so approved by Engineer, incorporated in a Change Order. When exercising any rights or remedies under this paragraph, Owner shall not be required to obtain the lowest price for the Work performed.

- F. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue, or any rights or remedies of Owner against Contractor or any surety under any payment bond or performance bond. Any retention or payment of money due Contractor by Owner will not release Contractor from liability.
- G. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 6.01.A, the provisions of that bond shall govern over any inconsistent provisions of Paragraphs 16.02.B and 16.02.D.

16.03 *Owner May Terminate For Convenience*

- A. Upon seven days written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):
 - 1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;
 - 2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses; and
 - 3. other reasonable expenses directly attributable to termination, including costs incurred to prepare a termination for convenience cost proposal.
- B. Contractor shall not be paid on account of loss of anticipated overhead, profits, or revenue, or other economic loss arising out of or resulting from such termination.

16.04 *Contractor May Stop Work or Terminate*

- A. If, through no act or fault of Contractor, (1) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (2) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (3) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon seven days written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the contract and recover from Owner payment on the same terms as provided in Paragraph 16.03.
- B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, seven days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The provisions of this paragraph are not intended to preclude Contractor from submitting a Change Proposal for an adjustment in Contract Price or Contract Times or otherwise for

expenses or damage directly attributable to Contractor's stopping the Work as permitted by this paragraph.

ARTICLE 17 – FINAL RESOLUTION OF DISPUTES

17.01 *Methods and Procedures*

- A. *Disputes Subject to Final Resolution:* The following disputed matters are subject to final resolution under the provisions of this Article:
 - 1. A timely appeal of an approval in part and denial in part of a Claim, or of a denial in full; and
 - 2. Disputes between Owner and Contractor concerning the Work or obligations under the Contract Documents, and arising after final payment has been made.
- B. *Final Resolution of Disputes:* For any dispute subject to resolution under this Article, Owner or Contractor may:
 - 1. elect in writing to invoke the dispute resolution process provided for in the Supplementary Conditions; or
 - 2. agree with the other party to submit the dispute to another dispute resolution process; or
 - 3. if no dispute resolution process is provided for in the Supplementary Conditions or mutually agreed to, give written notice to the other party of the intent to submit the dispute to a court of competent jurisdiction.

ARTICLE 18 – MISCELLANEOUS

18.01 *Giving Notice*

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

18.02 *Computation of Times*

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

18.03 *Cumulative Remedies*

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

18.04 *Limitation of Damages*

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

18.05 *No Waiver*

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

18.06 *Survival of Obligations*

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

18.07 *Controlling Law*

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

18.08 *Headings*

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

I. SUPPLEMENTARY CONDITIONS

Supplementary Conditions

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

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

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

ARTICLE 4 – COMMENCEMENT AND PROGRESS OF WORK

SC-4.05 *Delays in Contractor's Progress*

SC-2.05.C.2 abnormal weather conditions, which include any rain days on which Contractor is unable to work due to rain, flood, tornado, wind, wet site conditions or abnormal cold weather;

ARTICLE 6 – BONDS AND INSURANCE

SC-6.01 *Performance, Payment and Other Bonds*

SC 6.01.A Contractor shall furnish a performance and a payment bond, each in an amount at least the amount of the contract amount.

SC-6.03 *Contractor's Insurance*

SC 6.03 Add the following new paragraph immediately after Paragraph 6.03.J:

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

1. Workers' Compensation, and related coverages under Paragraphs 6.03.A.1 and A.2 of the General Conditions:

State:	<u>Statutory</u>
Federal, if applicable (e.g., Longshoreman's):	<u>Statutory</u>
Jones Act coverage, if applicable:	

Bodily injury by accident, each accident	\$ <u>N/A</u>
Bodily injury by disease, aggregate	\$ <u>N/A</u>

Employer's Liability:

Bodily injury, each accident	\$ <u>1,000,000</u>
Bodily injury by disease, each employee	\$ <u>1,000,000</u>
Bodily injury/disease aggregate	\$ <u>1,000,000</u>

For work performed in monopolistic states, stop-gap liability coverage shall be endorsed to either the worker's compensation or commercial general liability policy with a minimum limit of: \$ N/A

Foreign voluntary worker compensation	<u>Statutory</u>
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2. Contractor's Commercial General Liability under Paragraphs 6.03.B and 6.03.C of the General Conditions:

General Aggregate	\$ <u>2,000,000</u>
Products - Completed Operations Aggregate	\$ <u>2,000,000</u>
Personal and Advertising Injury	\$ <u>1,000,000</u>
Each Occurrence (Bodily Injury and Property Damage)	\$ <u>1,000,000</u>

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

Combined Single Limit of	\$ <u>1,000,000</u>
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4. Excess or Umbrella Liability:

Per Occurrence	\$ <u>5,000,000</u>
General Aggregate	\$ <u>5,000,000</u>

5. Contractor's Pollution Liability:

Each Occurrence	\$ _____
General Aggregate	\$ _____



If box is checked, Contractor is not required to provide Contractor's Pollution Liability insurance under this Contract

6. Additional Insureds: In addition to Owner and Engineer, include as additional insureds the following: N/A
-

ARTICLE 7 – CONTRACTOR’S RESPONSIBILITIES

SC-7.02 Labor; Working Hours

SC-7.02.B. Delete Paragraph 7.02 B. in its entirety, and insert the following:

- B. In the absence of any Laws or Regulations to the contrary, Contractor may perform the Work on holidays, during any or all hours of the day, and on any or all days of the week, at Contractor's sole discretion.

SC-7.02.C. Add the following new paragraph immediately after Paragraph 7.02.B:

Contractor shall be responsible for the cost of any overtime pay or other expense incurred by the Owner for Engineer’s services (including those of the Resident Project Representative, if any), Owner's representative, and construction observation services, occasioned by the performance of Work on Saturday, Sunday, any legal holiday, or as overtime on any regular work day. If Contractor is responsible but does not pay, or if the parties are unable to agree as to the amount owed, then Owner may impose a reasonable set-off against payments due under Article 15.

ARTICLE 10 – ENGINEER’S STATUS DURING CONSTRUCTION

SC-10.03 Project Representative

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

- B. The Resident Project Representative (RPR) will be Engineer's representative at the Site, will act as directed by and under the supervision of Engineer, and will confer with Engineer regarding RPR's actions.
1. General: RPR's dealings in matters pertaining to the Work in general shall be with Engineer and Contractor. RPR's dealings with Subcontractors shall only be through or with the full knowledge and approval of Contractor. RPR shall generally communicate with Owner only with the knowledge of and under the direction of Engineer.
 2. Schedules: Review the progress schedule, schedule of Shop Drawing and Sample submittals, and Schedule of Values prepared by Contractor and consult with Engineer concerning acceptability.
 3. Conferences and Meetings: Attend meetings with Contractor, such as preconstruction conferences, progress meetings, job conferences, and other Project-related meetings, and prepare and circulate copies of minutes thereof.
 4. 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 proper execution of the Work.
- 5. Interpretation of Contract Documents: Report to Engineer when clarifications and interpretations of the Contract Documents are needed and transmit to Contractor clarifications and interpretations as issued by Engineer.
- 6. Shop Drawings and Samples:
 - a. Record date of receipt of Samples and Contractor-approved Shop Drawings.
 - b. Receive Samples which are furnished at the Site by Contractor, and notify Engineer of availability of Samples for examination.
 - c. Advise Engineer and Contractor of the commencement of any portion of the Work requiring a Shop Drawing or Sample submittal for which RPR believes that the submittal has not been approved by Engineer.
- 7. Modifications: Consider and evaluate Contractor's suggestions for modifications in Drawings or Specifications and report such suggestions, together with RPR's recommendations, if any, to Engineer. Transmit to Contractor in writing decisions as issued by Engineer.
- 8. Review of Work and Rejection of Defective Work:
 - a. Conduct on-Site observations of Contractor's work in progress to assist Engineer in determining if the Work is in general proceeding in accordance with the Contract Documents.
 - b. Report to Engineer whenever RPR believes that any part of Contractor's work in progress is defective, will not produce a completed Project that conforms generally to the Contract Documents, or will imperil the integrity of the design concept of the completed Project as a functioning whole as indicated in the Contract Documents, or has been damaged, or does not meet the requirements of any inspection, test or approval required to be made; and advise Engineer of that part of work in progress that RPR believes should be corrected or rejected or should be uncovered for observation, or requires special testing, inspection or approval.
- 9. Inspections, Tests, and System Start-ups:
 - a. Verify that tests, equipment, and systems start-ups and operating and maintenance training are conducted in the presence of appropriate Owner's personnel, and that Contractor maintains adequate records thereof.
 - b. Observe, record, and report to Engineer appropriate details relative to the test procedures and systems start-ups.

10. Records:

- a. Prepare a daily report or keep a diary or log book, recording Contractor's hours on the Site, Subcontractors present at the Site, weather conditions, data relative to questions of Change Orders, Field Orders, Work Change Directives, or changed conditions, Site visitors, deliveries of equipment or materials, daily activities, decisions, observations in general, and specific observations in more detail as in the case of observing test procedures; and send copies to Engineer.
- b. Record names, addresses, fax numbers, e-mail addresses, web site locations, and telephone numbers of all Contractors, Subcontractors, and major Suppliers of materials and equipment.
- c. Maintain records for use in preparing Project documentation.

11. Reports:

- a. Furnish to Engineer periodic reports as required of progress of the Work and of Contractor's compliance with the Progress Schedule and schedule of Shop Drawing and Sample submittals.
- b. Draft and recommend to Engineer proposed Change Orders, Work Change Directives, and Field Orders. Obtain backup material from Contractor.
- c. Immediately notify Engineer of the occurrence of any Site accidents, emergencies, acts of God endangering the Work, force majeure or delay events, damage to property by fire or other causes, or the discovery of any Constituent of Concern or Hazardous Environmental Condition.

12. Payment Requests: Review applications for payment with Contractor for compliance with the established procedure for their submission and forward with recommendations to Engineer, noting particularly the relationship of the payment requested to the Schedule of Values, Work completed, and materials and equipment delivered at the Site but not incorporated in the Work.

13. Certificates, Operation and Maintenance Manuals: During the course of the Work, verify that materials and equipment certificates, operation and maintenance manuals and other data required by the Contract Documents to be assembled and furnished by Contractor are applicable to the items actually installed and in accordance with the Contract Documents, and have these documents delivered to Engineer for review and forwarding to Owner prior to payment for that part of the Work.

14. Completion:

- a. Participate in Engineer's visits to the Site to determine Substantial Completion, assist in the determination of Substantial Completion and the preparation of a punch list of items to be completed or corrected.
- b. Participate in Engineer's final visit to the Site to determine completion of the Work, in the company of Owner and Contractor, and prepare a

final punch list of items to be completed and deficiencies to be remedied.

- c. Observe whether all items on the final list have been completed or corrected and make recommendations to Engineer concerning acceptance and issuance of the notice of acceptability of the work.

C. The RPR shall 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 Contractor’s work.
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. Accept Shop Drawing or Sample submittals from anyone other than Contractor.
8. Authorize Owner to occupy the Project in whole or in part.

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

SC-15.03 Substantial Completion

SC 15.03.B 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, shall be paid by Contractor to Owner. If Contractor does not pay, or the parties are unable to agree as to the amount owed, then Owner may impose a reasonable set-off against payments due under Article 15.

ARTICLE 17 – FINAL RESOLUTION OF DISPUTES

The arbitration option is as follows:

SC-17.02 Add the following new paragraph immediately after Paragraph 17.01.

SC-17.02 Arbitration

- A. All matters subject to final resolution under this Article will be decided by arbitration in accordance with the rules of American Arbitration Association in

accordance with Construction Industry Rules, subject to the conditions and limitations of this paragraph. This agreement to arbitrate and any other agreement or consent to arbitrate entered into will be specifically enforceable under the prevailing law of any court having jurisdiction.

- B. The demand for arbitration will be filed in writing with the other party to the Contract and with the selected arbitrator or arbitration provider, and a copy will be sent to Engineer for information. The demand for arbitration will be made within the specific time required in this Article, or if no specified time is applicable within a reasonable time after the matter in question has arisen, and in no event shall any such demand be made after the date when institution of legal or equitable proceedings based on such matter in question would be barred by the applicable statute of limitations. The demand for arbitration should include specific reference to Paragraph SC-17.02.D below.
- C. No arbitration arising out of or relating to the Contract shall include by consolidation, joinder, or in any other manner any other individual or entity (including Engineer, and Engineer's consultants and the officers, directors, partners, agents, employees or consultants of any of them) who is not a party to this Contract unless:
 - 1. the inclusion of such other individual or entity is necessary if complete relief is to be afforded among those who are already parties to the arbitration; and
 - 2. such other individual or entity is substantially involved in a question of law or fact which is common to those who are already parties to the arbitration and which will arise in such proceedings.
- D. The award rendered by the arbitrator(s) shall be consistent with the agreement of the parties, in writing, and include a concise breakdown of the award, and a written explanation of the award specifically citing the Contract provisions deemed applicable and relied on in making the award.
- E. The award will be final. Judgment may be entered upon it in any court having jurisdiction thereof, and it will not be subject to modification or appeal, subject to provisions of the Laws and Regulations relating to vacating or modifying an arbitral award.
- F. The fees and expenses of the arbitrators and any arbitration service shall be shared equally by Owner and Contractor.

SC-17.03 Attorneys' Fees

SC-17.03 Add the following new paragraph immediately after Paragraph 17.02

SC-17.03 Attorneys' Fees: For any matter subject to final resolution under this Article, the prevailing party shall be entitled to an award of its attorneys' fees incurred in the final resolution proceedings, in an equitable amount to be determined in the discretion of the court, arbitrator, arbitration panel, or other arbiter of the matter subject to final resolution, taking into account the parties' initial demand or defense positions in comparison with the final result.

IV. DRAWINGS

THE CONSTRUCTION PLAN DRAWINGS ENTITLED "JACKSON STREET GAS MAIN REPLACEMENT, *ALEXANDRIA, LOUISIANA PROJECT NO. 23-74*" HEREBY MADE A PART OF THE CONTRACT DOCUMENTS AS IF THEY WERE INCLUDED HEREIN.

DRAWINGS

V. SPECIFICATIONS

DIVISION 1 – GENERAL REQUIREMENTS
CITY OF ALEXANDRIA – GAS SPECIFICATIONS

SPECIFICATIONS

DIVISION 1 – GENERAL REQUIREMENTS

SECTION	01 11 00	SUMMARY OF THE WORK
SECTION	01 33 00	SUBMITTAL PROCEDURES
SECTION	01 40 00	QUALITY REQUIREMENTS
SECTION	01 50 00	TEMPORARY FACILITIES AND CONTROLS
SECTION	01 74 19	ENVIRONMENTAL PROTECTION
SECTION	01 74 23	FINAL CLEANING
SECTION	01 77 00	EXECUTION & CLOSEOUT REQUIREMENTS
SECTION	01 78 39	RECORD DOCUMENTS

GENERAL REQUIREMENTS

SECTION 01 11 00

SUMMARY OF WORK

PART 1 - GENERAL

1.1 SUMMARY

- A. Project identification: Jackson Street Gas Main Replacement
- B. Project summary:
 - 1. New 4" PE gas main replacing an existing 4" steel gas main along Jackson St. from McNutt Drive to Peterman Drive in Alexandria, Louisiana.
- C. Permits and Fees: Apply for, obtain, and pay for permits, fees, and all utility company charges required to perform the work. Submit copies to Owner.
- E. Codes: Comply with applicable codes and regulations of authorities having jurisdiction. Submit copies of inspection reports, notices and similar communications to Owner.
- F. Dimensions: Verify dimensions indicated on drawings with field dimensions before fabrication or ordering of materials. Do not scale drawings.
- G. Existing Conditions: Notify Owner of existing conditions differing from those indicated on the drawings. Do not remove or alter structural components without prior written approval.
- H. Coordination:
 - 1. Coordinate the work of all trades.
 - 2. Prepare coordination drawings for areas above ceilings where close tolerances are required between building elements and mechanical and electrical work.
 - 3. Verify location of utilities and existing conditions.
- I. Installation Requirements, General:
 - 1. Inspect substrates and report unsatisfactory conditions in writing.
 - 2. Do not proceed until unsatisfactory conditions have been corrected.
 - 3. Take field measurements prior to fabrication where practical. Form to required shapes and sizes with true edges, lines and angles. Provide inserts and templates as needed for work of other trades.
 - 4. Install materials in exact accordance with manufacturer's instructions and approved submittals.
 - 5. Install materials in proper relation with adjacent construction and with proper appearance.
 - 6. Restore units damaged during installation. Replace units which cannot be restored at

no additional expense to the Owner.

7. Refer to additional installation requirements and tolerances specified under individual specification sections.

J. Definitions:

1. Provide: Furnish and install, complete with all necessary accessories, ready for intended use. Pay for all related costs.
2. Approved: Acceptance of item submitted for approval. Not a limitation or release for compliance with the Contract Documents or regulatory requirements. Refer to limitations of 'Approved' in General and Supplementary Conditions.
3. Match Existing: Match existing as acceptable to the Owner.

- K. Intent: Drawings and specifications are intended to provide the basis for proper completion of the work suitable for the intended use of the Owner. Anything not expressly set forth but which is reasonable implied or necessary for proper performance of the project shall be included.

- L. Writing style: Specifications are written in the imperative mode. Except where specifically intended otherwise, the subject of all imperative statements is the Contractor. For example, 'Provide tile' means 'Contractor shall provide tile.'

PART 2 - PRODUCTS - Not Applicable To This Section

PART 3 - EXECUTION - Not Applicable To This Section

END OF SECTION

SECTION 01 33 00

SUBMITTAL PROCEDURES

PART 1 GENERAL

1.1 SUMMARY

This section expands administrative and procedural requirements for submittals for review, information, or for project closeout; each described to permit direct reference from individual specification sections.

1.2 SECTION INCLUDES

- A. Submittal procedures.
- B. Construction progress schedules.
- C. Proposed products list.
- D. Product data.
- E. Shop drawings.
- F. Samples.
- G. Design data.
- H. Test reports.
- I. Certificates.
- J. Manufacturer's instructions.
- K. Manufacturer's field reports.
- L. Erection drawings.
- M. Construction photographs.

1.3 SUBMITTAL PROCEDURES

- A. Transmit each submittal with Architect/Engineer accepted form.
- B. Sequentially number transmittal forms. Mark revised submittals with original number and sequential alphabetic suffix.

- C. Identify Project, Contractor, subcontractor and supplier; pertinent drawing and detail number, and specification section number, appropriate to submittal.
- D. Apply Contractor's stamp, signed or initialed certifying that review, approval, verification of products required, field dimensions, adjacent construction Work, and coordination of information is in accordance with requirements of the Work and Contract Documents.
- E. Schedule submittals to expedite Project, and deliver to Architect/Engineer at 610 Desoto Street, Alexandria, Louisiana 71301. Coordinate submission of related items.
- F. For each submittal for review, allow 15 days excluding delivery time to and from Contractor.
- G. Identify variations from Contract Documents and product or system limitations which may be detrimental to successful performance of completed Work.
- H. Allow space on submittals for Contractor and Architect/Engineer review stamps.
- I. When revised for resubmission, identify changes made since previous submission.
- J. Distribute copies of reviewed submittals as appropriate. Instruct parties to promptly report inability to comply with requirements.
- K. Submittals not requested will not be recognized or processed.

1.4 CONSTRUCTION PROGRESS SCHEDULES

- A. Submit initial schedules within 15 days after date established in Notice to Proceed. After review, resubmit required revised data within ten days.
- B. Submit revised Progress Schedules with each Application for Payment.
- C. Distribute copies of reviewed schedules to Project site file, subcontractors, suppliers, and other concerned parties.
- D. Instruct recipients to promptly report, in writing, problems anticipated by projections indicated in schedules.
- E. Submit computer generated horizontal bar chart with separate line for each major portion of Work or operation, identifying first workday of each week.
- F. Sequence of construction by activity, identifying Work of separate stages and other logically grouped activities. Indicate early and late start, early and late finish, float dates, and duration.
- G. Indicate estimated percentage of completion for each item of Work at each submission.
- H. Revisions To Schedules:

1. Indicate progress of each activity to date of submittal, and projected completion date of each activity.
2. Identify activities modified since previous submittal, major changes in scope, and other identifiable changes.
3. Prepare narrative report to define problem areas, anticipated delays, and impact on Schedule. Report corrective action taken, or proposed, and its effect including effect of changes on schedules of separate contractors.

1.5 PROPOSED PRODUCTS LIST

- A. Within 15 days after date of Owner-Contractor Agreement, submit list of major products proposed for use, with name of manufacturer, trade name, and model number of each product.
- B. For products specified only by reference standards, give manufacturer, trade name, model or catalog designation, and reference standards.

1.6 PRODUCT DATA

- A. Product Data: Submit to Architect/Engineer for review for limited purpose of checking for conformance with information given and design concept expressed in Contract Documents.
- B. Submit number of copies Contractor requires, plus three (3) copies Architect/Engineer will retain.
- C. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information specific to this Project.
- D. Indicate product utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.
- E. After review, produce copies and distribute in accordance with SUBMITTAL PROCEDURES article and for record documents described in Section 01 78 39 – Record Documents.

1.7 SHOP DRAWINGS

- A. Shop Drawings: Submit to Architect/Engineer for review for limited purpose of checking for conformance with information given and design concept expressed in Contract Documents.
- B. Indicate special utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.
- C. When required by individual specification sections, provide shop drawings signed and sealed by professional engineer responsible for designing components shown on shop drawings.
 1. Include signed and sealed calculations to support design.

2. Submit drawings and calculations in form suitable for submission to and approval by authorities having jurisdiction.
 3. Make revisions and provide additional information when required by authorities having jurisdiction.
- D. Submit number of opaque reproductions Contractor requires, plus two (2) copies Architect/Engineer will retain.
- E. After review, produce copies and distribute in accordance with SUBMITTAL PROCEDURES article and for record documents described in Section 01 78 39 - Record Documents.

1.8 SAMPLES

- A. Samples: Submit to Architect/Engineer for review for limited purpose of checking for conformance with information given and design concept expressed in Contract Documents.
- B. Samples For Selection as Specified in Product Sections:
1. Submit to Architect/Engineer for aesthetic, color, or finish selection.
 2. Submit samples of finishes from full range of manufacturers' standard colors, in custom colors selected, textures, and patterns for Architect/Engineer selection.
- C. Submit samples to illustrate functional and aesthetic characteristics of Products, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.
- D. Include identification on each sample, with full Project information.
- E. Submit number of samples specified in individual specification sections; Architect/Engineer will retain one sample.
- F. Reviewed samples which may be used in the Work are indicated in individual specification sections.
- G. Samples will not be used for testing purposes unless specifically stated in specification section.
- H. After review, produce duplicates and distribute in accordance with SUBMITTAL PROCEDURES article and for record documents purposes described in Section 01 78 39 - Record Documents.

1.9 DESIGN DATA

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

1.10 TEST REPORTS

- A. Submit for Architect/Engineer's knowledge as contract administrator or for Owner.
- B. Submit test reports for information for limited purpose of assessing conformance with information given and design concept expressed in Contract Documents.

1.11 CERTIFICATES

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

1.12 MANUFACTURER'S INSTRUCTIONS

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

1.13 MANUFACTURER'S FIELD REPORTS

- A. Submit reports for Architect/Engineer's benefit as contract administrator or for Owner.
- B. Submit report in duplicate within five (5) days of observation to Architect/Engineer for information.
- C. Submit for information for limited purpose of assessing conformance with information given and design concept expressed in Contract Documents.

1.14 ERECTION DRAWINGS

- A. Submit drawings for Architect/Engineer's benefit as contract administrator or for Owner.
- B. Submit for information for limited purpose of assessing conformance with information given and design concept expressed in Contract Documents.
- C. Data indicating inappropriate or unacceptable Work may be subject to action by Architect/Engineer or Owner.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

END OF SECTION

QUALITY REQUIREMENTS

PART 1 GENERAL

1.1 SUMMARY

- A. All workmanship and materials shall be subjected to inspection by the Engineer, who may select samples of materials in such number and quantities as he/she may deem necessary to determine their conformance with the specifications and project intent.
- B. All rejected materials and work shall be promptly removed by the Contractor from the premises and adjacent surroundings.
- C. All rejected work or materials shall be promptly replaced to the satisfaction of the Engineer.
- D. The Engineer reserves the right to inspect any component of the work at any time. The items of work are being reviewed for conformance with the design intent as well as workmanship and quality of materials. The Contractor shall cooperate with the Engineer's inspections. When identified in Technical Specifications, notification shall be provided to the Engineer 48 hours in advance of the time the inspections are needed.

1.2 SECTION INCLUDES

- A. Quality control and control of installation.
- B. Tolerances.
- C. References.
- D. Labeling.
- E. Mock-up requirements.
- F. Testing and inspection services.
- G. Manufacturers' field services.
- H. Examination.
- I. Preparation.

1.3 QUALITY CONTROL AND CONTROL OF INSTALLATION

- A. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce Work of specified quality.

- B. Comply with manufacturers' instructions, including each step in sequence.
- C. When manufacturers' instructions conflict with Contract Documents, request clarification from Architect/Engineer before proceeding.
- D. Comply with specified standards as minimum quality for the Work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
- E. Perform Work by persons qualified to produce required and specified quality.
- F. Verify field measurements are as indicated on Shop Drawings or as instructed by manufacturer.
- G. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, or disfigurement.

1.4 TOLERANCES

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

1.5 REFERENCES

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

1.6 LABELING

- A. Attach label from agency approved by authority having jurisdiction for products, assemblies, and systems required to be labeled by applicable code.

- B. Label Information: Include manufacturer's or fabricator's identification, approved agency identification, and the following information, as applicable, on each label.
 - 1. Model number.
 - 2. Serial number.
 - 3. Performance characteristics.

1.7 TESTING AND INSPECTION SERVICES

- A. The Contractor shall furnish samples of materials for testing, if requested by the Engineer, at no additional cost. Tests by the Engineer will be made in accordance with commonly recognized standards of national materials testing organizations and any such other special methods as deemed necessary.
- B. Any and all materials necessary for the construction of any part of the work and associated improvements not specified shall be of the best available quality acceptable to the Engineer.
- C. Employ and pay for services of an independent testing agency or laboratory acceptable to Owner to perform specified testing.
 - 1. Prior to start of Work, submit testing laboratory name, address, and telephone number, and names of full time registered Engineer specialist and responsible officer.
 - 2. Submit copy of report of laboratory facilities inspection made by Materials Reference Laboratory of National Bureau of Standards during most recent inspection, with memorandum of remedies of deficiencies reported by inspection.
- D. The independent firm will perform tests, inspections and other services specified in individual specification sections and as required by Architect/Engineer. Owner. Authority having jurisdiction.
 - 1. Laboratory: Authorized to operate at Project location. in State of.
 - 2. Laboratory Staff: Maintain full time registered Engineer specialist on staff to review services.
 - 3. Testing Equipment: Calibrated at reasonable intervals with devices of accuracy traceable to National Bureau of Standards or accepted values of natural physical constants.
- E. Testing, inspections and source quality control may occur on or off project site. Perform off-site testing as required by Architect/Engineer or Owner.
- F. Reports will be submitted by independent firm to Architect/Engineer, Contractor, and authority having jurisdiction, in duplicate, indicating observations and results of tests and indicating compliance or non-compliance with Contract Documents.
 - 1. Submit final report indicating correction of Work previously reported as non-compliant.
- G. Cooperate with independent firm; furnish samples of materials, design mix, equipment, tools, storage, safe access, and assistance by incidental labor as requested.
 - 1. Notify Architect/Engineer and independent firm 24 hours prior to expected time for operations requiring services.

2. Make arrangements with independent firm and pay for additional samples and tests required for Contractor's use.
- H. Testing and employment of testing agency or laboratory shall not relieve Contractor of obligation to perform Work in accordance with requirements of Contract Documents.
- I. Re-testing or re-inspection required because of non-conformance to specified requirements shall be performed by same independent firm on instructions by Architect/Engineer. Payment for re-testing or re-inspection will be charged to Contractor by deducting testing charges from Contract Sum/Price.
- J. Agency Responsibilities:
1. Test samples of mixes submitted by Contractor.
 2. Provide qualified personnel at site. Cooperate with Architect/Engineer and Contractor in performance of services.
 3. Perform specified sampling and testing of products in accordance with specified standards.
 4. Ascertain compliance of materials and mixes with requirements of Contract Documents.
 5. Promptly notify Architect/Engineer and Contractor of observed irregularities or non-conformance of Work or products.
 6. Perform additional tests required by Architect/Engineer.
 7. Attend preconstruction meetings and progress meetings.
- K. Agency Reports: After each test, promptly submit two copies of report to Architect/Engineer, Contractor, and authority having jurisdiction. When requested by Architect/Engineer, provide interpretation of test results. Include the following:
1. Date issued.
 2. Project title and number.
 3. Name of inspector.
 4. Date and time of sampling or inspection.
 5. Identification of product and specifications section.
 6. Location in Project.
 7. Type of inspection or test.
 8. Date of test.
 9. Results of tests.
 10. Conformance with Contract Documents.
- L. Limits On Testing Authority:
1. Agency or laboratory may not release, revoke, alter, or enlarge on requirements of Contract Documents.
 2. Agency or laboratory may not approve or accept any portion of the Work.
 3. Agency or laboratory may not assume duties of Contractor.
 4. Agency or laboratory has no authority to stop the Work.

1.8 MANUFACTURERS' FIELD SERVICES

- A. When specified in individual specification sections, require material or product suppliers or manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, quality of workmanship, start-

up of equipment, test, adjust and balance of equipment and as applicable, and to initiate instructions when necessary.

- B. Submit qualifications of observer to Architect/Engineer 30 days in advance of required observations. Observer subject to approval of Architect/Engineer. Owner.
- C. Report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturers' written instructions.
- D. Refer to Section 01 33 00 - Submittal Procedures, MANUFACTURERS' FIELD REPORTS article.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION

3.1 EXAMINATION

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

3.2 PREPARATION

- A. Clean substrate surfaces prior to applying next material or substance.
- B. Seal cracks or openings of substrate prior to applying next material or substance.
- C. Apply manufacturer required or recommended substrate primer, sealer, or conditioner prior to applying new material or substance in contact or bond.

3.3 FINAL INSPECTION:

Final inspection shall take place after all requirements for Substantial Completion have been completed, including all punch list items outlined in other Sections of these specifications. Final inspection of the work by the Engineer will be made no later than five (5) Working Days after receipt of Contractor's written request for final inspection.

Before Final Payment will be made, defects or omissions noted on the final inspection must be corrected by the Contractor without additional cost to the Owner. See Section 01 77 00 "Execution & Closeout Requirements."

END OF SECTION

TEMPORARY FACILITIES AND CONTROLS

PART 1 GENERAL

1.1 SUMMARY

This work includes furnishing, installing, operating, maintaining, and removal of temporary construction facilities.

1.2 SECTION INCLUDES

A. Temporary Facilities:

1. Temporary electricity.
2. Telephone service.
3. Temporary water service.
4. Temporary sanitary facilities.

B. Temporary Controls:

1. Barriers.
2. Enclosures and fencing.
3. Security.
4. Water control.
5. Dust control.
6. Erosion and sediment control.
7. Noise control.
8. Pest control.
9. Pollution control.
10. Rodent control.

C. Removal of utilities, facilities, and controls.

1.3 TEMPORARY FACILITIES:

A. Meals and Lodging: The Owner will not provide meal and lodging facilities for the Contractor's personnel.

B. The Contractor shall make all necessary arrangements for temporary water service. All costs thereof shall be borne by the Contractor.

C. Electric Power: The Contractor shall make all necessary arrangements for temporary electrical service. All costs thereof shall be borne by the Contractor.

D. Sanitary Facilities:

1. The Contractor shall provide and maintain adequate chemical toilet facilities for all individuals connected with the work, with separate facilities for men and women.
2. The Contractor shall keep the toilet facilities in sanitary condition in accordance with the Governing Health Department.

- E. The Contractor shall remove the toilet facilities at completion of the contract and shall disinfect the premises.
- F. Telephone Service: The Contractor shall make arrangements for temporary telephone service. All costs thereof shall be borne by the Contractor.
- G. The Contractor shall maintain the construction area in a neat and orderly condition throughout the contract. Food and garbage shall be stored properly to prevent attracting animals. Remove food and garbage from the site during non-work hours. Practice controls to stop rodent infestation of temporary facilities and the job site.
- H. Staging and stockpiling areas will be determined in the pre-construction conference.
- I. Temporary Buildings: The Contractor may construct or provide temporary buildings, at an approved or designated location, as may be necessary for the performance of the work. At the completion of the work, the Contractor shall remove all temporary buildings.
- J. Hydrant Use Permits: The Contractor shall obtain required hydrant use permits from the Water Utility having control over fire hydrants. All costs thereof shall be borne by the Contractor.
- K. After completion of Work the Contractor shall remove all temporary facilities and shall restore the temporary facilities area to its original state.

1.4 MATERIAL DELIVERY AND STORAGE:

- A. Delivery of materials shall be made only during the Contractor's working hours and at such times as they have a representative available.
- B. The Contractor shall store materials within the work site area at an area determined in pre-construction conference or designated by the Engineer.

1.5 VEHICULAR ACCESS

- A. Construct temporary all-weather access roads from public thoroughfares to serve construction area, of width and load bearing capacity to accommodate unimpeded traffic for construction purposes.
- B. Construct temporary bridges and culverts to span low areas and allow unimpeded drainage.
- C. Extend and relocate vehicular access as Work progress requires, provide detours as necessary for unimpeded traffic flow.
- D. Location as indicated on Drawings approved by Architect/Engineer approved by Owner.
- E. Provide unimpeded access for emergency vehicles. Maintain 20 feet wide driveways with turning space between and around combustible materials.

F. Provide and maintain access to fire hydrants and control valves free of obstructions.

G. Provide means of removing mud from vehicle wheels before entering streets.

H. Use only designated existing on-site roads for construction traffic.

1.6 PARKING

A. Arrange for Provide Construct temporary gravel paved surface parking areas to accommodate construction personnel.

B. Locate as indicated on Drawings approved by Architect/Engineer approved by Owner.

C. When site space is not adequate, provide additional off-site parking.

D. Use of designated existing on-site streets and driveways used for construction traffic is not permitted. Tracked vehicles not allowed on paved areas.

E. Use of designated areas of existing parking facilities used by construction personnel is not permitted.

F. Do not allow heavy vehicles or construction equipment in parking areas.

G. Do not allow vehicle parking on existing pavement.

H. Designate one parking space for Owner Architect/Engineer.

I. Mud From Site Vehicles: Provide means of removing mud from vehicle wheels before entering streets.

1.7 PROGRESS CLEANING AND WASTE REMOVAL

A. Maintain areas free of waste materials, debris, and rubbish. Maintain site in clean and orderly condition.

B. Open free-fall chutes are not permitted. Terminate closed chutes into appropriate containers with lids.

1.8 TRAFFIC REGULATION

A. Signs, Signals, And Devices:

1. Post Mounted Signs: As approved by authority having jurisdiction.
2. Automatic Traffic Control Signals: As approved by local jurisdictions.
3. Traffic Cones and Drums, Flares and Lights: As approved by authority having jurisdiction.
4. Flagperson Equipment: As required by authority having jurisdiction.

B. Flag Persons: Provide trained and equipped flag persons to regulate traffic when construction operations or traffic encroach on public traffic lanes.

C. Flares and Lights: Use flares and lights during hours of low visibility to delineate traffic lanes and to guide traffic.

D. Haul Routes:

1. Consult with authority having jurisdiction, establish public thoroughfares to be used for haul routes and site access.

E. Traffic Signs And Signals:

F. Removal:

1. Remove equipment and devices when no longer required at Substantial Completion.
2. Repair damage caused by installation.
3. Remove post settings to depth of 2 feet.

1.9 BARRIERS

A. Provide barriers to prevent unauthorized entry to construction areas to allow for Owner's use of site, and to protect existing facilities and adjacent properties from damage from construction operations and demolition.

B. Provide protection for plants designated to remain. Replace damaged plants.

C. Protect non-owned vehicular traffic, stored materials, site, and structures from damage.

1.10 ENCLOSURES AND FENCING

A. Construction: Plastic construction netting at a minimum to prevent access to site areas which are of public safety concerns or as directed by ENGINEER.

1.11 WATER CONTROL

A. Grade site to drain. Maintain excavations free of water. Provide, operate, and maintain pumping equipment.

B. Protect site from puddling or running water. Provide water barriers as required to protect site from soil erosion.

1.12 DUST CONTROL

A. Execute Work by methods to minimize raising dust from construction operations.

B. Provide positive means to prevent air-borne dust from dispersing into atmosphere.

1.13 EROSION AND SEDIMENT CONTROL

A. Plan and execute construction by methods to control surface drainage from cuts and fills, from borrow and waste disposal areas. Prevent erosion and sedimentation.

B. Minimize surface area of bare soil exposed at one time.

- C. Provide temporary measures including berms, dikes, and drains, and other devices to prevent water flow.
- D. Construct fill and waste areas by selective placement to avoid erosive surface silts or clays.
- E. Periodically inspect earthwork to detect evidence of erosion and sedimentation; promptly apply corrective measures.

1.14 NOISE CONTROL

- A. Provide methods, means, and facilities to minimize noise from and noise produced by construction operations.

1.15 POLLUTION CONTROL

- A. Provide methods, means, and facilities to prevent contamination of soil, water, and atmosphere from discharge of noxious, toxic substances, and pollutants produced by construction operations.
- B. Comply with pollution and environmental control requirements of authorities having jurisdiction.

1.16 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS

- A. Remove temporary utilities, equipment, facilities, materials, prior to Substantial Completion Final Application for Payment inspection.
- B. Remove underground installations to minimum depth of 2 feet. Grade site as indicated on Drawings.
- C. Clean and repair damage caused by installation or use of temporary work.
- D. Restore existing and permanent facilities used during construction to original condition. Restore permanent facilities used during construction to specified condition.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

END OF SECTION

ENVIRONMENTAL PROTECTION

PART 1- GENERAL

1.1 RELATED WORK (Not Applicable)

1.2 QUALITY CONTROL

- A. Notify **Engineer** immediately, when items of archaeological value, antiques or relics are discovered.
 - 1. Suspend work immediately.
 - 2. Resume the Work only after salvage is complete and when authorized to proceed.
 - 3. Recovery and salvage of items of archaeological value, antiques or relics is governed by federal, provincial and municipal statutes.

1.3 ARCHAEOLOGY, ANTIQUES AND RELICS

- A. Items of archaeological value include all artifacts of prehistoric origin, of historic origin, and all human and animal remains.
- B. Relics and antiques may include such items as cornerstones of old buildings, contents of buildings and similar objects found on site or in buildings to be demolished.
- C. All items of suspected value remain the property of the Owner.

1.4 FIRES

- A. Fires and burning of rubbish on site are not permitted.

1.5 DISPOSAL OF WASTES

- A. Do not dispose of waste or volatile materials, such as mineral spirits, oil or paint thinner into waterways, storm or sanitary sewers.
- B. Do not bury rubbish and waste materials on site.

1.6 DRAINAGE

- A. Provide temporary drainage pumping to keep excavations and site free of water.
- B. Do not pump water containing suspended materials into waterways, sewer or drainage systems.
- C. Control disposal or runoff of water containing suspended materials or other harmful substances in accordance with local authority requirements.

2 Products (not applicable)

3 Execution (not applicable)

END OF SECTION

SECTION 01 74 23

FINAL CLEANING

PART 1 - GENERAL

1.01 SUMMARY:

- A. This section includes administrative and procedural requirements for final cleaning of the Work prior to Substantial Completion, including but not limited to:
 - 1. Cleaning procedures
 - 2. Inspection
- B. Do not use cleaning materials that may damage finished surfaces.
- C. Do not use cleaning materials hazardous to health or property.
- D. Use only cleaning materials and methods recommended by manufacturer of item or material to be cleaned.

PART 2 - PRODUCTS: *Not Used*

PART 3 - EXECUTION

3.01 FINAL CLEANING:

- A. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to the condition expected in a typical commercial building/site cleaning and maintenance program. Comply with manufacturer's instructions. Final cleaning includes but is not limited to the following procedures:
 - 1. Remove dust and dirt in corners.
 - 2. Remove grease, mastic, adhesives, glazing compounds, dust, dirt, stains, fingerprints, non-permanent labels, and other foreign materials from interior and exterior surfaces exposed to view.
 - a) Clean hard-surface finishes to dirt-free condition, free of dust, stains, films and similar noticeable distracting substances.
 - b) Except as otherwise indicated, avoid disturbance of natural weathering of exterior surfaces.
 - c) Restore reflective surfaces to original reflective conditions.
 - d) Replace chipped or broken glass and other damaged transparent materials.
 - e) Remove excess lubrication and other substances from mechanical and electrical equipment. Clean plumbing fixtures to a sanitary condition. Clean light fixtures and lamps.
 - 3. Remove debris and surface dust from limited-access spaces including trenches, equipment vaults, manholes, catch basins, and similar spaces.

- a) Clean project site (yard and grounds), including landscape development areas, of litter and foreign substances. Sweep paved areas to a broom-clean condition. Remove stains, petrol-chemical spills and other foreign deposits. Rake grounds which are neither planted nor paved to a smooth, even-textured surface.
 - b) Leave concrete floors broom-clean. Vacuum carpeted surfaces.
- B. Pest Control: Engage an experienced, licensed exterminator to make a final inspection and rid the Work of rodents, insects, and other pests.
- C. Removal of Protection: Except as otherwise indicated or requested by the Consultant or the Engineer, remove temporary protection devices and facilities installed to protect previously completed work during the remainder of the construction period.
- D. Extra Materials: Where excess materials of value remain after completion of associated work, these materials become the property of the Engineer. If declined by the Engineer, the Contractor shall dispose of these materials as directed by the Engineer.

3.02 INSPECTION:

- A. Prior to requesting inspection for certification of Substantial Completion, inspect exposed surfaces. Verify entire Work is clean.
- B. Prior to certifying Substantial Completion, the Engineer will make a detailed inspection of buildings and site, and will prepare a check list of cleaning and debris removal remaining to be completed before certification of Substantial Completion. Complete items on the Engineer's check list, so that entire Project is clean and ready for occupancy by staff and public.

END OF SECTION

EXECUTION REQUIREMENTS

PART 1 GENERAL

1.1 SUMMARY

Supplemental requirements to the Conditions of the Contract and Specifications for administrative procedures in closing out the Work.

1.2 SECTION INCLUDES

- A. Closeout procedures.
- B. Final cleaning.
- C. Starting of systems.
- D. Demonstration and instructions.
- E. Testing, adjusting and balancing.
- F. Protecting installed construction.
- G. Project record documents.
- H. Operation and maintenance data.
- I. Manual for materials and finishes.
- J. Manual for equipment and systems.
- K. Spare parts and maintenance products.
- L. Product warranties and product bonds.
- M. Maintenance service.

1.3 CLOSEOUT PROCEDURES

- A. Submit written certification that Contract Documents have been reviewed, Work has been inspected, and that Work is complete in accordance with Contract Documents and ready for Architect/Engineer's review.
- B. Provide submittals to Architect/Engineer Owner required by authorities having jurisdiction.
- C. Submit final Application for Payment identifying total adjusted Contract Sum, previous payments, and sum remaining due.

1.4 FINAL CLEANING

- A. Execute final cleaning prior to final project assessment.
- B. Clean site; sweep paved areas, rake clean landscaped surfaces.
- C. Remove waste and surplus materials, rubbish, and construction facilities from site.

1.5 STARTING OF SYSTEMS

- A. Coordinate schedule for start-up of various equipment and systems.
- B. Notify Architect/Engineer Owner seven days prior to start-up of each item.
- C. Verify each piece of equipment or system has been checked for proper lubrication, drive rotation, belt tension, control sequence, and for conditions which may cause damage.
- D. Verify tests, meter readings, and specified electrical characteristics agree with those required by equipment or system manufacturer.
- E. Verify wiring and support components for equipment are complete and tested.
- F. Execute start-up under supervision of applicable manufacturer's representative Contractors' personnel in accordance with manufacturers' instructions.
- G. When specified in individual specification Sections, require manufacturer to provide authorized representative to be present at site to inspect, check, and approve equipment or system installation prior to start-up, and to supervise placing equipment or system in operation.
- H. Submit a written report in accordance with Section 01 33 00 - Submittal Procedures that equipment or system has been properly installed and is functioning correctly.

1.6 DEMONSTRATION AND INSTRUCTIONS

- A. Demonstrate operation and maintenance of products to Owner's personnel two weeks prior to date of final inspection.

1.7 PROTECTING INSTALLED CONSTRUCTION

- A. Protect installed Work and provide special protection where specified in individual specification sections.
- B. Provide temporary and removable protection for installed products. Control activity in immediate work area to prevent damage.
- C. Prohibit traffic from landscaped areas.

1.8 PROJECT RECORD DOCUMENTS

- A. Maintain on site one set of the following record documents; record actual revisions to the Work:
 - 1. Drawings.
 - 2. Specifications.
 - 3. Addenda.
 - 4. Change Orders and other modifications to the Contract.
 - 5. Reviewed Shop Drawings, Product Data, and Samples.
 - 6. Manufacturer's instruction for assembly, installation, and adjusting.
- B. Ensure entries are complete and accurate, enabling future reference by Owner.
- C. Store record documents separate from documents used for construction.
- D. Record information concurrent with construction progress, not less than weekly.
- E. Specifications: Legibly mark and record at each product section description of actual products installed, including the following:
 - 1. Manufacturer's name and product model and number.
 - 2. Product substitutions or alternates utilized.
 - 3. Changes made by Addenda and modifications.
- F. Record Drawings and Shop Drawings: Legibly mark each item to record actual construction including:
 - 1. Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
 - 2. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the Work.
 - 3. Field changes of dimension and detail.
 - 4. Details not on original Contract drawings.
- G. Submit documents to Architect/Engineer with claim for final Application for Payment.

1.9 OPERATION AND MAINTENANCE DATA

- A. Submit data bound in 8-1/2 x 11 inch (A4) text pages, three D side ring capacity expansion binders with durable plastic cloth covers.
- B. Prepare binder cover with printed title "OPERATION AND MAINTENANCE INSTRUCTIONS", title of project, and subject matter of binder when multiple binders are required.
- C. Internally subdivide binder contents with permanent page dividers, logically organized as described below; with tab titling clearly printed under reinforced laminated plastic tabs.
- D. Drawings: Provide with reinforced punched binder tab. Bind in with text; fold larger drawings to size of text pages.

- E. Contents: Prepare Table of Contents for each volume, with each product or system description identified, typed on white paper, in three parts as follows:
 - 1. Part 1: Directory, listing names, addresses, and telephone numbers of Architect/Engineer, Contractor, Subcontractors, and major equipment suppliers.
 - 2. Part 2: Operation and maintenance instructions arranged by system process flow and subdivided by specification section. For each category, identify names, addresses, and telephone numbers of Subcontractors and suppliers. Identify the following:
 - a. Significant design criteria.
 - b. List of equipment.
 - c. Parts list for each component.
 - d. Operating instructions.
 - e. Maintenance instructions for equipment and systems.
 - f. Maintenance instructions for special finishes, including recommended cleaning methods and materials, and special precautions identifying detrimental agents.
 - 3. Part 3: Project documents and certificates, including the following:
 - a. Shop drawings and product data.
 - b. Air and water balance reports.
 - c. Certificates.
 - d. Originals Photocopies of warranties and bonds.

1.10 MANUAL FOR MATERIALS AND FINISHES

- A. Submit two copies of preliminary draft or proposed formats and outlines of contents before start of Work. Architect/Engineer will review draft and return one copy with comments.
- B. For equipment, or component parts of equipment put into service during construction and operated by Owner, submit documents prior to acceptance.
- C. Submit one copy of completed volumes 15 days prior to final inspection. Draft copy be reviewed and returned after final inspection, with Architect/Engineer comments. Revise content of document sets as required prior to final submission.
- D. Submit two sets of revised final volumes in final form within 10 days after final inspection and prior to final acceptance.
- E. Building Products, Applied Materials, and Finishes: Include product data, with catalog number, size, composition, and color and texture designations. Include information for re-ordering custom manufactured products.
- F. Instructions for Care and Maintenance: Include manufacturer's recommendations for cleaning agents and methods, precautions against detrimental agents and methods, and recommended schedule for cleaning and maintenance.
- G. Moisture Protection and Weather Exposed Products: Include product data listing applicable reference standards, chemical composition, and details of installation. Include recommendations for inspections, maintenance, and repair.
- H. Additional Requirements: As specified in individual product specification sections.

- I. Include listing in Table of Contents for design data, with tabbed fly sheet and space for insertion of data.

1.11 MANUAL FOR EQUIPMENT AND SYSTEMS

- A. Submit two copies of preliminary draft or proposed formats and outlines of contents before start of Work. Architect/Engineer will review draft and return one copy with comments.
- B. For equipment, or component parts of equipment put into service during construction and operated by Owner, submit documents within ten days after acceptance.
- C. Submit one copy of completed volumes 15 days prior to final inspection. Draft copy be reviewed and returned after final inspection, with Architect/Engineer comments. Revise content of document sets as required prior to final submission.
- D. Submit two sets of revised final volumes in final form within 10 days after final inspection.
- E. Each Item of Equipment and Each System: Include description of unit or system, and component parts. Identify function, normal operating characteristics, and limiting conditions. Include performance curves, with engineering data and tests, and complete nomenclature and model number of replaceable parts.
- F. Panel board Circuit Directories: Provide electrical service characteristics, controls, and communications; typed.
- G. Include color coded wiring diagrams as installed.
- H. Operating Procedures: Include start-up, break-in, and routine normal operating instructions and sequences. Include regulation, control, stopping, shut-down, and emergency instructions. Include summer, winter, and special operating instructions.
- I. Maintenance Requirements: Include routine procedures and guide for preventative maintenance and troubleshooting; disassembly, repair, and reassembly instructions; and alignment, adjusting, balancing, and checking instructions.
- J. Include servicing and lubrication schedule, and list of lubricants required.
- K. Include manufacturer's printed operation and maintenance instructions.
- L. Include sequence of operation by controls manufacturer.
- M. Include original manufacturer's parts list, illustrations, assembly drawings, and diagrams required for maintenance.
- N. Include control diagrams by controls manufacturer as installed.
- O. Include Contractor's coordination drawings, with color coded piping diagrams as installed.

- P. Include charts of valve tag numbers, with location and function of each valve, keyed to flow and control diagrams.
- Q. Include list of original manufacturer's spare parts, current prices, and recommended quantities to be maintained in storage.
- R. Include test and balancing reports as specified in Section 01 40 00 - Quality Requirements.
- S. Additional Requirements: As specified in individual product specification sections.
- T. Include listing in Table of Contents for design data, with tabbed dividers and space for insertion of data.

1.12 SPARE PARTS AND MAINTENANCE PRODUCTS

- A. Furnish spare parts, maintenance, and extra products in quantities specified in individual specification sections.
- B. Deliver to Project site and place in location as directed by Owner; obtain receipt prior to final payment.

1.13 PRODUCT WARRANTIES AND PRODUCT BONDS

- A. Obtain warranties and bonds executed in duplicate by responsible subcontractors, suppliers, and manufacturers, within ten days after completion of applicable item of work.
- B. Execute and assemble transferable warranty documents and bonds from subcontractors, suppliers, and manufacturers.
- C. Verify documents are in proper form, contain full information, and are notarized.
- D. Co-execute submittals when required.
- E. Include Table of Contents and assemble in three D side ring binder with durable plastic cloth cover.
- F. Submit prior to final Application for Payment.
- G. Time Of Submittals:
 1. For equipment or component parts of equipment put into service during construction with Owner's permission, submit documents within ten days after acceptance.
 2. Make other submittals within ten days after Date of Substantial Completion, prior to final acceptance and Application for final Payment.
 3. For items of Work for which acceptance is delayed beyond Date of Substantial Completion, submit within ten days after acceptance, listing date of acceptance as beginning of warranty or bond period.

1.14 MAINTENANCE SERVICE

- A. Furnish service and maintenance of components indicated in specification sections for a year from date of final acceptance.
- B. Examine system components at frequency consistent with reliable operation. Clean, adjust, and lubricate as required.
- C. Include systematic examination, adjustment, and lubrication of components. Repair or replace parts whenever required. Use parts produced by manufacturer of original component.
- D. Do not assign or transfer maintenance service to agent or Subcontractor without prior written consent of Owner.

1.15 REQUIREMENTS FOR ACHIEVING SUBSTANTIAL COMPLETION:

- A. Prior to requesting Engineer's inspection for certification of Substantial Completion, the Contractor must meet the following requirements:
 - 1. The facility shall be sufficiently complete and cleaned with all construction material removed, to allow the unrestricted use of the facility including installation of permanent cores in locks, and transmittal of keys to Engineer.
 - 2. Submittal of pay request for all items completed in order to satisfy the requirements of Substantial Completion.
 - 3. Complete and submit a release, granting the Engineer's staff and facility users' full and unrestricted use of the Work and access to services and utilities including final building permit inspection and occupancy or temporary occupancy permits as required.
 - 4. Complete start-up of systems and provide copies of initial balancing reports.
 - 5. Record Documents have been submitted to and approved by the Consultant in accordance with the requirements of Section 01 78 39 – Record Documents.
 - 6. Operating and Maintenance Manuals have been submitted to and approved by the Consultant.
 - 7. Warranties and Bonds Manual, including but not limited to special guarantees, workmanship and maintenance agreements, final certifications and similar documents have been provided and warranties inserted into the O & M Manuals.
 - 8. Write a letter to the Engineer on the attached form requesting that a Substantial Completion Date be established.
- B. Process to achieve Substantial Completion:
 - 1. Upon receipt of Contractor's request, Engineer shall request that the Consultant conduct a preliminary inspection to verify if the project meets the requirements for substantial completion. If the Consultant concurs that substantial completion has been met, the Engineer will be so notified and a punch list inspection will be scheduled within ten (10) working days of

the notification. If the Consultant determines that the project is not Substantially Complete, the Engineer will be so notified and the Engineer will notify the Contractor of the portions of the Work that must be completed before a punch list inspection can be scheduled.

2. The Consultant shall be responsible for preparing the punch list based upon the results of the inspection. The Engineer's designated representative will also inspect the project and provide a written punch list to the Consultant. These lists will be compiled into a single list by the Consultant and issued to the Contractor. If the inspection reveals that the Work is not Substantially Complete, the process in 1.02.B.1 shall be repeated.
3. After inspection confirms that the Work is Substantially Complete, the Engineer shall prepare certificate of Substantial Completion establishing the date of Substantial Completion and provide a copy to the Contractor with a copy of the punch list. The date of Substantial Completion shall be used to determine the cut-off date for liquidated damages.
4. Re-inspection Fees: When inspection shows that the Work has not attained the completion status claimed, the Contractor shall compensate the Engineer for additional time expended in subsequent inspections at the Engineer's standard hourly billing rate.

1.16 REQUIREMENTS FOR ACHIEVING PHYSICAL COMPLETION:

- A. The Contractor shall show evidence of compliance with requirements of the following:
 1. All permits required by regulatory agencies that have been issued.
 2. Discontinue (or change over) and remove from project site temporary facilities and services, along with construction tools and facilities, mock-ups, and similar elements.
 3. Testing of the operations of all systems has been completed and copies of the final balancing report submitted to the Engineer.
 4. All deficiencies identified on the punch list have been corrected.
 5. Upon correction of all punch list items, the Contractor shall notify the Engineer on the attached form that physical completion has been achieved and request scheduling of the a final punch list inspection.
- B. Process to Achieve Physical Completion:
 1. Upon receipt of the Contractor's request for final inspection, the Engineer shall request that the Consultant verify that all punch list items have been corrected. If the Consultant concurs, the Engineer will be so notified and a final punch list inspection will be scheduled within five (5) working days of the notification. If the Consultant determines that the punch list items remain to be corrected, the Engineer will be notified and the Engineer will notify the Contractor of the items that must be corrected before a final punch list inspection can be scheduled.
 2. The Consultant shall prepare the final punch list inspection report based upon the results of the inspection. If the final inspection reveals that punch list items remain to be corrected, the process in 1.03.B.1 shall be repeated.

3. After inspection shows that all punch list items have been corrected, the Engineer shall prepare the certificate of Physical Completion establishing the Physical Completion Date and provide a copy to the Contractor. The date of Physical Completion shall be used to determine the start of the one-year and extended warranties period.
4. Re-inspection Fees: When inspection reveals that the Work has not attained the completion status claimed, the Contractor shall compensate Engineer for additional time expended in subsequent inspections at Engineer's standard hourly billing rate.

1.17 ENGINEER'S RECOMMENDATION FOR CONTRACT COMPLETION DATE:

- A. The Engineer's written recommendation for Contract Completion Date initiates the contract completion approval process. The Engineer will issue the written recommendation for contract completion date to the Owner upon the Engineer's determination that the following requirements have been fulfilled:
 1. Terms and requirements of all permits issued by regulatory agencies have been satisfied.
 2. All required special testing has been completed and approved.
 3. All changes to the Work have been completed and approved by Change Order, with associated changes to contract price, time, and bonding requirements incorporated in the final pay request.
 4. Dates for Substantial and Physical Completion have been established in writing by the Engineer.
 5. Contractor's performance evaluation by the Engineer has been filed.
 6. Requirements for training of Engineer's personnel and final testing of operating systems have been satisfied.

PART 2 - PRODUCTS: *Not Use*

PART 3 - EXECUTION: *Not Used*

END OF SECTION 01 77 00

SUBSTANTIAL COMPLETION

Date:

Monceaux-Buller and Associates, Engineer
610 Desoto Street
Alexandria, La. 71301

Re: _____

The Work performed under this Contract has been substantially completed. The Contractor, *(Name)*, hereby requests a Punch List Inspection of Substantial Completion and establishment of the date of Substantial Completion.

The Contractor will complete or correct the Work on the punch list within (30 of days) working days from the date of Substantial Completion established by the Engineer.

Contractor

By

Date

PHYSICAL COMPLETION

Date: _____

Monceaux-Buller and Associates, Engineer
610 Desoto Street
Alexandria, La. 71301

Re: _____

The Work items identified in the inspection punch list have been completed. The Contractor, _____, hereby requests certification of Physical Completion and establishment of the date of Physical Completion and the beginning of the warranty period.

The Contractor understands that the OWNER will assume all maintenance of the facility upon Physical Completion which is at the end of any warranty or extended warranty periods.

Contractor

By

Date

RECORD DOCUMENTS

PART 1 - GENERAL

1.01 AS-BUILT DRAWINGS:

- A. Maintain a clean, undamaged set of Contract Drawings. Clearly identify the set as "AS-BUILT DRAWINGS". Mark the set to show the actual installation of materials and systems wherever the installation varies substantially from the Work as originally shown in the contract documents. Mark whichever drawing is most capable of showing conditions fully and accurately; where Shop Drawings are used, record a cross-reference at the corresponding location on the Contract Drawings and affix the shop drawings to the prints. Clearly mark and number the work in each Change Order. Give particular attention to concealed elements that would be difficult to measure and record at a later date.

1.02 USE AND PROTECTION:

- A. Do not use Record Documents for construction purposes; protect from deterioration and loss in a secure, fire-resistive location; provide access to record documents for the Consultant's reference during normal working hours.

1.03 QUALITY ASSURANCE:

- A. Delegate the responsibility for maintenance of record prints to one person on the Contractor's staff, as approved by the Engineer.
- B. Make entries on the record prints clearly showing as-built conditions within 24 hours after completing any element of work.
- C. Accuracy of records:
 - 1. Coordinate changes and additions within the record prints, making adequate and proper entries on each page of specifications and each sheet of drawings and other documents where such entry is required to show the change properly.
 - 2. Accuracy of records shall be such that future search for items shown in the contract documents may rely reasonably on information obtained from the approved project record documents,

1.04 MAINTENANCE OF RECORD DOCUMENTS:

- A. Maintain and store in field office apart from documents used for construction, the following documents:
 - 1. Permit drawings, bearing building permit approval from regulatory agency having jurisdiction, if any.
 - 2. Project Manual, bearing building permit approval from regulatory agency having jurisdiction, if any.

3. The Signed Contract, Bonds, Insurance, Addenda, Design Clarifications, Field Directives, Modification Proposals, Change Orders, and approved Substitutions.
 4. Approved shop drawings and all other submittals.
 5. Field test records.
- B. Provide files and racks for storage of documents
 - C. File documents in accordance with Project Manual table of contents.
 - D. Maintain documents in orderly, clean and legible conditions. *Do not use record documents for construction purposes.*
 - E. Make documents available for weekly progress meeting and at all times for inspection by Consultant.
 - F. In the event of loss of recorded data, the Contractor shall use all means necessary to again secure the data to the Engineer's satisfaction.
 - G. Payment may be withheld or pay requests modified for incomplete recording of as-built data.
 - H. The Engineer may request confirmation of recorded work by independent survey. If inaccuracies are found, Engineer may order hidden elements to be exposed for recording. All costs associated with this work may be deducted from the Contractor's contract amount if the information has either not been recorded or has been recorded incorrectly.

1.05 SUBMITTALS:

- A. Before Substantial Completion the Contractor shall deliver a complete set of Record Documents to the Consultant for review and approval. The Record Documents will consist of one black line As-built Drawing set; annotated Project Manual; Change Orders; and approved shop drawings, product data, and samples which clearly and legibly show all deviations from the Contract Documents with colored pencil. The Record Documents must be approved by the Consultant prior to the Contractor requesting a Substantially Completion date from the Engineer. At completion of project the Contractor shall furnish a complete listing of all material items utilized with the manufacturer's name, the item model or part number along with the pertinent material and classification.
- B. At the time of the final record drawing submittal, the final record drawing prints shall be completed before final payment is made to the contractor. The record drawing prints shall be complete and correct when submitted. If record drawing prints are not submitted complete and correct with the signature of the contractor certifying completeness, the amount of value of the record drawing prints will be withheld from the final payment. The amount withheld from final payment shall be the total cost for the engineer to develop and complete the record drawing prints to the satisfaction of the governing body.

PART 2 - PRODUCTS: *Not Used*

PART 3 - EXECUTION

3.01 RECORDING:

- A. Mark Record Documents with red erasable pencil; use other colors to distinguish between variations in separate categories of the Work.
- B. Mark new information that was not shown on Contract Drawings or Shop Drawings, and as directed by the Engineer.
- C. Indicate changes to the work and/or the project site that were not known prior to beginning the work but were visible as part of the project implementation that did not result in a change order.
- D. Note all changes resulting from Modification Proposals by MP# and including approved substitutions.
- E. Record information concurrently with construction progress. Do not conceal any work until required information is recorded.
- F. The Contractor and its subcontractors shall coordinate recording of information as follows:
 - 1. Each subcontractor is responsible for making record notations for his/her own work and forwarding these not less than weekly to the general Contractor. The general Contractor will transfer each subcontractor's notations as well as record its own notations of the general Work to a single set of record documents.
 - 2. Legibly mark record set of drawings and addenda to show the following:
 - a) Accurate measurements and locations of underground services and utilities, referenced to the building or other permanent above ground construction as directed by the Engineer.
 - b) Note changes of direction and locations, by horizontal dimension and vertical elevations, as utilities are actually installed.
 - c) Note deviations from the contract documents, and reference reason for change (e.g., construction meeting minutes, telephone call report, field order, etc).
 - d) Show details and locations not on original contract drawings.
 - e) Indicate field changes of dimensions and details.
 - f) measurements to locate new utilities from street centerlines including (3) three distances to all new above ground items such as valves, manholes, catch basins, power poles, meters. Underground utilities such as water lines, gas lines, sewer lines, etc. shall be referenced on the drawings and tied to the centerline of the road at all street intersections and also at any point where the utility changes location with relation to the centerline of roadway. Distances from roadway centerline and depth of any utility on a state or federal route shall be referenced at 100 foot maximum intervals on the plans.

- g) The record drawing prints shall indicate all correct grades and alignment for roadways, drainage structures, sewer manholes, including rim elevations, invert elevations, incoming pipe inverts and any other changes from the contract plans.
- h) Contractor shall record the location, size, depth and type of material encountered for any existing utility whether shown or not shown on plans. Any utility which is relocated or modified due to new construction shall be referenced from new construction and shall indicate any change in direction or other information concerning such relocation including type of connection, size, type of material, and depth.
- i) Sewer service connections shall be measured from the downstream manhole along with the correct station of the manhole.

G. Shop drawings, product data sheets and samples: Maintain one complete set as Record Documents and legibly annotate to record all approved changes.

3.02 ORGANIZATION OF RECORD DOCUMENTS:

Organize all Record Documents into a manageable set, and print suitable titles, dates and other identification on the cover sheet.

END OF SECTION

CITY OF ALEXANDRIA – GAS SPECIFICATIONS

SECTION 1210 GAS DISTRIBUTION SYSTEM

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SECTION 1210 GAS DISTRIBUTION SYSTEM

- | | |
|-----------------------------|-----------------------------|
| 1.1 Description | 1.8 Applicable Publications |
| 1.2 Location of Lines | 2.1 Materials |
| 1.3 Layout of Work | 3.1 Construction Methods |
| 1.4 Operator Qualifications | 4.1 Measurement |
| 1.5 LA DOTD Permit | 5.1 Payment |
| 1.6 Parish Permit | 5.2 Payment Items |
| 1.7 Rail Road Permit | |

- 1.1 DESCRIPTION.** This item shall consist of gas pipe, including service lines to a point shown on the PLANS, and fittings, together with valves, valve boxes, regulators, and other appurtenances necessary to construct the gas distribution system project. Included shall be the furnishing and installation of all materials, testing, purging, and odorizing at such places as are designated on the PLANS or by the ENGINEER, in accordance with these SPECIFICATIONS and in conformity with the lines and grades given.

This item shall include, in the bid prices per unit requested, the cost of common excavation and backfill, the cost of furnishing and installing all trench bracing and dewatering, and the material for and the making of all joints.

- 1.2 LOCATION OF LINES.** The approximate location of lines, valves, regulators and other appurtenances has been indicated on the PLANS as being within the bounds of street, highway or easement rights-of-ways. Final location of the various items of construction shall be approved in the field by the ENGINEER. All costs not specifically listed, as a pay item shall be included in the price bid for the item of which the costs are a part.

- 1.2.1 LOUISIANA ONE CALL.** R.S. 1749.13 requires excavators and demolishers are to notify a Regional Notification Center of their excavation activity. Telephonic notice must be given to the Notification Center at least 48 hours, but no more than 120 hours, in advance, excluding weekends and holidays. The owner/operator of an underground facility must mark the location or provide information to enable an excavator or demolisher using reasonable means to determine the location of the underground facility. Contact **Louisiana One Call** (1-800-272-3020) prior to digging. Locate existing underground utilities by careful probing and hand excavation. Where utilities are to remain in place, protect them from damage during construction operations.

- 1.2.2** Should uncharted or incorrectly charted piping or other utilities be encountered during excavation, the CONTRACTOR shall consult the ENGINEER immediately for directions prior to proceeding. All uncharted or incorrectly charted piping or other utilities that are encountered, by the CONTRACTOR, shall be denoted on

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the Record DRAWINGS with the type and location of the piping or utilities found. In the event that the CONTRACTOR damages uncharted or incorrectly charted piping or other utility, the CONTRACTOR shall contact the affected piping or utility company for repairs.

1.3 LAYOUT OF WORK. The CONTRACTOR shall, at his own expense, layout the WORK. The CONTRACTOR shall coordinate his activities with the ENGINEER, and the location of all lines, structures, etc. shall be subject to his concurrence prior to beginning construction.

1.4 OPERATOR QUALIFICATIONS. All operators shall meet qualification requirements as set forth in the U.S. Department of Transportation (DOT) Office of Pipe Line Safety, 49 CFR Part 192, Subpart N Section 192.801 through 192.809.

The CONTRACTOR shall comply with the drug testing regulations of the U.S. Department of Transportation (DOT) Title 49, Code of Federal Regulations (CFR) Part 40 and Part 199, latest revision.

All gas WORK performed shall be done by a licensed bonded person as per the City of Alexandria Gas Code.

All gas WORK shall be performed within the City of Alexandria gas OEM manual.

1.5 LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT PERMIT. The CONTRACTOR shall secure any necessary permit from the Louisiana Department of Transportation and Development for laying these lines, and installing driveways and culverts. Permits shall be obtained in the name of the OWNER; however, any refundable deposit for the permits shall be made by the CONTRACTOR. After completion of the project, deposits will be returned to the CONTRACTOR subject to any limitations of the permits not complied with by the CONTRACTOR.

1.6 PARISH PERMIT. The CONTRACTOR shall secure any necessary permit from the Parish. Permits shall be obtained in the name of the OWNER; however, any refundable deposit for permits shall be made by the CONTRACTOR. After completion of the project, deposits will be returned to the CONTRACTOR subject to any limitations of the permits not complied with by the CONTRACTOR.

1.7 RAILROAD PERMIT. The CONTRACTOR shall secure any necessary railroad permits. The permits shall be obtained in the name of the OWNER; however, the permit bond or deposit or special insurance required during construction shall be made by the CONTRACTOR.

After completion of the project, deposits will be returned to the CONTRACTOR subject to any limitations of the permits not complied with by the CONTRACTOR.

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Any annual or reoccurring rental charge will be paid by the OWNER.

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1.8 APPLICABLE PUBLICATIONS. The transportation of natural gas by pipeline shall conform to the Natural Gas Pipeline Safety Act of 1986. The Act required the U.S. Department of Transportation (DOT), Office of Pipeline Safety (OPS) to develop and enforce minimum safety regulations for the transportation of natural gas by pipeline. These regulations became effective in 1970 and are published in Title 49, Code of Federal Regulations, Parts 190, 191, and 192. Other publications (latest revisions), listed below, but referred to thereafter by basic designation only, form a part of this specification to the extent indicated by the references.

1.8.1 AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRAFFIC OFFICIALS (AASHTO) SPECIFICATIONS.

Designation: Bituminous Coated

M 190 Corrugated Metal Culvert Pipe and Pipe Arches

1.8.2 AMERICAN GAS ASSOCIATION (A.G.A.) PUBLICATIONS.

A.G.A. Plastic Pipe Manual for Gas Service, February, 1985.

1.8.3 AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI) STANDARDS.

ANSI B1.20.1 Pipe Threads, General Purpose (Inch)

ANSI B16.3 Malleable Iron Threaded Fittings,
Class 150 and 300

ANSI B16.5 Steel Pipe Flanges and Flanged Fittings

ANSI B16.9 Factory Made Wrought Steel Butt weld Fittings

ANSI B16.33 Manually Operated Metallic Gas Valves for use
in Gas Piping Systems Up to 125 psig

ANSI B31.8 Gas Transmission and Distribution Piping
Systems, 1989 Edition

ANSI B31.8a 1990 Addenda to ANSI B31.8

1.8.4 THE AMERICAN PETROLEUM INSTITUTE (API) SPECIFICATIONS.

5L Specification for Line Pipe

5LE Specification for Polyethylene Line Pipe

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6D Pipeline Valves, End Closures, Connectors and Swivels

Standard 1104 Standard for Welding Pipelines and Related Facilities

1.8.5 AMERICAN RAILWAY ENGINEERING ASSOCIATION (A.R.E.A.) SPECIFICATIONS.

A.R.E.A. Manual for Railway Engineering (Fixed Properties), Volume I.

1.8.6 AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME) PUBLICATIONS:

ASME Boiler and Pressure Vessel Code and Interpretation: Section IX, Welding Brazing Qualifications, 1983.

1.8.7 AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM) STANDARD SPECIFICATIONS.

A53 Black and Hot-Dipped, Zinc-Coated, Welded and Seamless Steel Pipe

A181 Carbon Steel Forgings for General Purpose Piping

A216 Carbon Steel Castings Suitable for High Temperature Service

A234 Piping Fittings of Wrought Carbon Steel and Alloy Steel for Moderate and High Temperature Service

D1598 Test Method for Time-to-Failure of Plastic Pipe Under Constant Internal Pressure

D2513 Thermoplastic Gas Pressure Pipe, Tubing, and Fittings

D3350 Polyethylene Plastics Pipe and Fittings Materials

1.8.8 LOUISIANA STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES, Latest Edition.

1.8.9 MANUFACTURES STANDARD SOCIETY (MSS) OF THE VALVE AND FITTINGS INDUSTRY PUBLICATIONS.

SP-25 Standard Marking System for Valves, Fittings, Flanges and Unions

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SP-44 Steel Pipe Line Flanges

SP-84 Steel Valves – Socket Welded and Threaded Ends

1.8.10 NATIONAL ASSOCIATION OF CORROSION ENGINEERS (NACE) STANDARDS.

RP-01-69 Recommended Practice – Control of External Corrosion on Underground or Submerged Metallic Piping Systems

RP-02-74 Recommended Practice – High Voltage Electrical Inspection of Pipeline Coatings Prior to Installation

RP-02-75 Application of Organic Coatings to the External Surface of Steel Pipe for Underground Service

1.8.11 NATIONAL ASSOCIATION OF PIPE COATING APPLICATORS (NAPCA) SPECIFICATIONS.

Bulletins 1-65-91 Pocket Edition of NAPCA Specifications
thru 15-83-90 and Plant Coating Guide

1.8.12 U.S. AMERICAN STANDARDS (USAS) INSTITUTE SPECIFICATIONS:

B 16.3 Malleable – Iron Screwed Fittings, 150 and 300 Pound Class

B 16.5 Steel Pipe Flanges and Flanged Fittings

B 31.8 Gas Transmission and Distribution Piping Systems

1.8.13 U. S. DEPARTMENT OF TRANSPORTATION (DOT), OFFICE OF PIPELINE SAFETY (OPS).

Title 49 Code of
Federal Regulations (CFR), Drug Testing
PARTS 40 and 199

2.1 MATERIALS. Pipe and other materials shall be of the type called for on the PLANS, and shall be in accordance with the following appropriate requirements.

Wherever it is necessary to join two pipes of dissimilar metals together, a method of insulating against the passage of electric current shall be provided and shall be approved by the ENGINEER.

2.1.1 PIPE SHIPPING AND DELIVERY. The pipe manufacturer shall take the necessary steps in handling and shipping the pipe as not to injure the pipe,

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coating, or lining. Each joint of new steel and/or polyethylene gas pipe shall be individually stacked on the truck or railroad car bed with adequate support under each joint of pipe and adequate support and protection between each layer of pipe stacked on the vehicle.

The entire stack shall be adequately and securely fastened to the truck or rail bed to prevent unnecessary vibrations, movements and stresses in the pipe during transportation.

Steel gas pipe shall be stacked using the timber supports, which were used in transporting the pipe. Polyethylene gas pipe shall be stacked into bundles (sized that the contractor can unload one bundle at a time) and the bundle shall be securely banded together with adequate wood boards around the bundle to protect it during shipment. The bundles shall then be stacked on the truck or rail bed for shipment to the job site. The load of bundles shall be securely attached to the shipping bed to prevent unnecessary stresses during transportation.

- 2.1.2 HANDLING OF ALL PIPE. The CONTRACTOR shall handle all pipes with handling and hauling equipment as not to injure the pipe, pipe lining, or pipe coating. Any pipe pushed off the truck bed will be rejected. Adequate equipment shall be used by the CONTRACTOR to remove the pipe from the truck bed and string it along the trench location.

If the pipe is to be stock piled before it is strung along the trench, the CONTRACTOR shall stack the pipe on a level site in neat stacks. Steel gas pipe shall be stacked using the timber supports, which were used in transporting the pipe. Polyethylene gas pipe shall be stacked in the bound bundles that the pipe was shipped in and the bundles shall not be broken until the stringing operation is started.

- 2.1.3 STEEL PIPE, JOINTS, FITTINGS.

- (A) Steel Gas Pipe. Steel gas pipe shall be new and conform to the requirements of ASTM A53, Grade B, Type E or S; or API Specifications 5L, Grade B, line pipe, seamless or electric-resistance welded, black; wall thickness as required to meet ANSI B31.8. New steel pipe shall be in lengths, not less than 20 feet long, with plain ends beveled for welding.

The exterior of the pipe shall have 11 mil minimum thickness "Scotchkote," type 3M 206N, Fostercoat, or approved equal, plant applied fusion bonded epoxy coating meeting the SPECIFICATIONS contained in NAPCA Bulletin 12-78-90, and subsequent revisions thereto.

Each length of steel pipe shall be marked in accordance with API Specifications 5L, namely to show name or mark of the manufacturer; pipe size (outside diameter) in inches; weight per foot; grade; API Monogram;

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pipe length; process of manufacturer; type of steel; heat treatment and hydrostatic test pressure.

All steel gas pipe shall be of domestic manufacture and shall be standard schedule 40, with a weight and wall thickness as follows:

Size (Inch)	Weight (lbs./L.F.)	Wall Thickness (Inches)
10	40.48	0.365
8	28.55	0.322
6	18.97	0.28
4	10.79	0.237
3	7.58	0.216
2	3.652	0.154
1-½	2.717	0.145
1	1.678	0.133

- (B) JOINTS. Joints for steel gas pipe shall be butt-welded to develop a joint that will result in complete fusion throughout the entire wall thickness of the pipe. All butt-welds shall be full penetration single butt-welds in accordance with D.O.T. Part 192 and API Standard 1104. Welded joints shall satisfactorily hold any pressure that the line will be subjected to in testing or during operations at maximum design pressure.

Mitre joints shall be limited to pipe connections where commercially fabricated welding fittings cannot be used and then shall be made in segments limiting the deflection in each section to angles agreed upon by the ENGINEER.

All threaded pipe, nipples, fittings, union, and couplings shall be made up tight to valves, regulators, meters using Rector Seal No. 5 pipe dope, graphite joint sealing compounds for gas service listed in Underwriters Laboratories, Inc. Gas and Oil Equipment Director, Class 20 or less, polytetrafluoroethylene tape, which conforms to Military (Mil.) Specifications (Spec.) Mil-T-27730, or approved equal.

- (C) FITTINGS. Steel gas pipe threaded fittings shall conform to ANSI B16.3 or B16.11, black. Steel gas pipe butt-welded fittings shall conform to ANSI B16.9 and shall be commercially fabricated steel fittings of pressure rating equal to or greater than ANSI Class 150 standards. All pipe bends shall be long radius type.

The exterior of all bends and fittings shall have the same coating as the pipe. Where reduction of size in pipes occur concentric swage fittings shall be used. Steel gas pipe flanged fittings shall conform to ANSI B1.20.1.

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- (1) P.E. to Steel Transition Fitting. The P.E. to steel transition fitting shall be manufactured by the same manufacturer of the P.E. piping supplied for the system.

The P.E. ends of the fitting shall conform to paragraph 2.1.4(C) of these SPECIFICATIONS. The fitting shall be manufactured by Wayne Manufacturing, Central Plastics, or approved equal.

Upon completion of welding operations for the transition fitting, the steel ends of the fitting shall be thoroughly coated as specified in paragraph 3.1.13(E) of these SPECIFICATIONS. The cost for installation of each such transition fitting shall be included in the unit price bid for associated items of work.

- (2) Stoppie Fitting. Stoppie fittings (short stop) shall be manufactured by T. D. Williamson, Inc., Mueller Co., or approved equal, and consist of a pipe cap, completion plug, and a shaped steel nipple.

The CONTRACTOR shall be required to provide all the necessary tapping and plugging equipment required to install the stoppie.

Unless shown otherwise on the PLANS, all stoppie fittings shall be welded connections. Where indicated, the stoppie shall be mechanically fitted.

The cost for installation of each stoppie fitting and the cost of any required tapping and plugging equipment shall be included in the unit price bid for hot tap connections, per each.

- (3) Three Way Tee Fitting. Three way tee fitting (3-way tee) shall be manufactured by T. D. Williamson, Inc., Mueller Co., or approved equal, and consist of a forged steel blind flange with gaskets, nuts and bolts; a cast iron completion plug, and a cast steel fitting meeting ASTM A216 Grade WCB for 4" and larger sizes and consist of a pipe cap, completion plug, and three way tee with external pipe threads, shaped to fit the pipe for 3" and smaller sizes. The fitting shall be designed to conform to ANSI Class 150 standards. The three-way tee shall be used to connect new lines to the existing steel lines that are to remain in service.

The CONTRACTOR shall be required to provide all the necessary tapping and plugging equipment required to install the three way tee fitting.

Unless shown otherwise on the PLANS, all three way tees shall be welded connections. Where indicated, the tees shall be mechanically fitted.

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The cost for installation of each three way tee and the cost of any required tapping and plugging equipment shall be included in the unit price bid for hot tap connections, per each.

- (D) BOLTS, NUTS, ETC. Bolts shall be as specified by the USAS B31.8 specifications for bolted joints or as recommended by the pipe manufacturer; all subject to approval of the ENGINEER. All bolts on flanged pipe installed underground shall be made from a non-corrosive metal subject to the approval of the ENGINEER.

2.1.4 THERMOPLASTIC GAS PRESSURE PIPE, JOINTS, FITTINGS.

- (A) Polyethylene (P.E.) Plastic Pipe. All thermoplastic gas pressure pipe furnished shall be polyethylene (P.E.) plastic pipe and shall conform in all respects to ASTM D2513.

Polyethylene plastic pipe shall be manufactured from a virgin polyethylene plastic compound material which meets ASTM D2513 for use with natural gas, and has the primary physical properties which are identified by cell classification P.E. 355434C in accordance with ASTM D3350 and has been listed by the Plastic Pipe Institute (P.P.I.) as a P.E. 3408 designated compound.

All P.E. pipes shall be of a single manufacturer. All P. E. plastic pipes shall be SDR 11, unless otherwise specified. The pipe must be furnished in the Iron Pipe Size (IPS).

All P. E. pipes shall have the manufacturer's name or trademark, the nominal pipe size, the PPI plastic pipe designation code, and the Standard Dimensional Ratio (SDR) or wall thickness conspicuously marked at intervals of not more than 2 feet.

- (B) Joints. Joints shall be made using butt heat-fusion equipment and instructions provided by or recommended by the pipe manufacturer.

Buss heat-fusion joints will require the use of a jointing device that holds the heater element square to the ends of the piping, can compress the heated ends together, and holds the piping in proper alignment while the plastic hardens.

- (C) Fittings. All polyethylene gas pipe fittings shall conform to ASTM D2513 and paragraph 2.1.4(A) of these SPECIFICATIONS.

P. E. to steel transition fittings shall be as specified in paragraph 2.1.3(C)(1) of these SPECIFICATIONS.

- (D) Polyethylene Plastic Pipe. Polyethylene plastic pipe shall be manufactured by Phillips Driscopipe, Inc. – Driscopipe 8100.

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2.1.5 SERVICE LINE. All gas service line (pipe) shall be a minimum of one-inch (1") diameter and shall conform to Paragraph 2.1.4(A) of these SPECIFICATIONS. All service line(s) shall extend from the gas main to, and including, the point of delivery. The point of delivery is the service meter stop. Service line shall be coated and wrapped from bottom of the service meter stop or from a point at least one foot (1') above ground level to a point at least one foot (1') below the ground level.

2.1.6 WELDED STEEL CASING PIPE. Steel casing pipe shall be new and conform to the requirements of ASTM A53, Grade 13, Type E or 5; or API Specification 5L, Grade B., line pipe, seamless or electric-resistance-welded, black. Steel casing pipe shall be in lengths, not less than 20 feet long, with plan ends beveled for welding. The size and wall thickness shall be as specified on the PLANS.

The interior and exterior of all casing pipe shall be cleaned, primed and lined with two coats of asphalt to achieve 0.05 inch minimum coating thickness, in accordance with AASHTO M190, Type A. All steel casing shall be butt-welded and all welds shall be full penetration single butt-welds in accordance with API Standard 1104.

2.1.7 STEEL VALVES.

(A) General. All steel valves shall be new and manufactured to conform to ASTM A216, Grade WCB. All steel valves furnished shall be from the same manufacturer. All steel valves shall operate so that the valve will open when turning the operating nut in a counterclockwise direction. All steel valves buried underground shall have butt weld ends and be factory coated with 11 mils minimum thickness Scotchkote 306 by the 3M Company, Fostercoat, or approved equal. Each steel valve buried underground shall be installed with a high head extension, a non-rising stem with a two-inch (2") square shank adapter wrench nut and cast iron valve box. The extension shall bring the operating nut and sealant fittings to within 6" of the ground surface. The CONTRACTOR shall furnish the OWNER with one (1) valve wrench to fit the operating nut furnished. All steel valves, for above ground installations, shall have raised face type flange ends and shall be installed with factory made locking devices. Suitable flanges for attaching above ground valves to pipe shall be furnished. Raised face flanged fittings shall be installed with a full face, neoprene-phenolic faced, type E gasket. The gasket shall fully seal the annular space between fitting faces to eliminate flange corrosion. Unless otherwise specified in the plans or the Proposal Form, all steel valves shall conform to ANSI Class 150 standards.

After installation, all valves will be furnished with the type and amount for the initial lubrication recommended by the manufacturer for natural gas service.

(B) Valve Requirements.

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(1) 4" and Smaller Distribution System Steel Valves.

The 4" and smaller above ground steel valves shall be Rockwell Nordstrom carbon steel plug valves, or Kerotest gate valve model EV-11, wrench operated, or approved equal.

The 4" and smaller steel valves buried underground shall be Rockwell-Nordstrom carbon steel plug valves, figure 1925 ½, wrench operated, or Kerotest gate valves, Model M-1, wrench operated, or approved equal.

(2) Six Inch Distribution System Steel Valves. The 6" above ground steel valves shall be Rockwell Dynamic Balance plug valves, figure 1945, wrench operated, or Kerotest gate valves, Model EV-11, wrench operated, or approved equal. The 6" steel valves buried underground shall be Rockwell Nordstrom plug valves, figure 4185 ½, wrench operated, or Kerotest gate valves, Model M-1, wrench operated, or approved equal.

(3) Pressure Reducing Assemblies, Regulator Stations, Etc.

Valves for special assemblies shall be as specified on the PLANS and shall have a sufficient rating to withstand the maximum line and test pressures.

(C) Valve Flanges. All companion flanges shall be raised face type. Companion flanges for ANSI Class 150 standard valves shall be forged steel slip-on or welding neck conforming to USAS 16.5.

2.1.8 POLYETHYLENE (P.E.) VALVES.

(A) General. All polyethylene (P.E.) valves shall be manufactured to conform to ASTM D-2513 and D-1598. All P.E. valves furnished shall be from the same manufacturer. All P. E. valves shall operate so that the valve will open when turning the operating nut in a counterclockwise direction.

All P. E. valves buried underground shall have a non-rising stem with built-in position indicator – standard 2" square adapter with deflector cone on top and a valve box made of cast iron collar and plastic bottom.

The CONTRACTOR shall furnish the OWNER with one (1) valve wrench to fit the P.E. valve operating nut. All P.E. valves shall have 18" length pipe stub ends which can be butt heat-fused to the pipe or other fittings, and be wrench operated.

All P.E. valves shall be made of cell classification P.E. 355434C, SDR 11 material, and shall be designed for an allowable service pressure of 100 pounds per square inch in a Class 4 location.

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(B) Valve Requirements.

- (1) 2", 3", 4", 6" & 8" Size Distribution System P.E. Valves. Distribution system P. E. valves shall be Kerotest Ply Plug Valves, Rockwell Poly Valves, Figure No. 8311, or approved equal, for 2" size; Kerotest Poly Plug Valves, Rockwell Poly Valves, Figure No 83211, or approved equal, for 3" and 4" sizes; and Rockwell Poly Valves, Figure No. 83211, Kerotest Poly Plug Valve, or approved equal, for 6" and 8" sizes.
- (2) Pressure Reducing Assemblies, Regulator Stations, Etc. Valves for special assemblies shall be as specified on the PLANS or on the Proposal Form.

2.1.9 SERVICE ASSEMBLIES. Materials, to complete the various types of service assemblies as detailed on the PLANS, shall meet the following SPECIFICATIONS:

- (A) SERVICE TAPS. Service taps on steel pipe distribution system mains shall be made using a Mueller Welding Inlet No-Blo valve tee #H-17650, Rockford Eclipse, or approved equal. Service taps on polyethylene pipe distribution system mains shall be made using appropriate sized service saddles and tapping tees as shown on the PLANS, which conform to ASTM D2513, and which are made of cell classification P.E. 355434C material. The service saddle and tapping tee shall be joined to the system main by heat fusion as specified in Paragraph 2.1.4(B) of these SPECIFICATIONS.
- (B) PROTECTIVE SLEEVES. All P.E. service tap outlets will be fitted with the appropriate protective P.E. sleeve to fit snugly over the pipe-fitting juncture and extend at least 12 inches over the pipe to limit pipe bending and exposure to mechanical damage at the joint.
- (C) CURB STOPS. The curb stop shall be made using a 1" size P.E. Kerotest Kerotite Service Valve, Part No. CS-1315, Rockwell Polyvalve, Figure No. 83211, plug valve, or approved equal, for 1" size service line. For 2", 3", and 4" size P.E. service lines, the curb stop shall be made using the appropriate sized P.E. valve as specified in paragraph 2.1.8(B) of these SPECIFICATIONS. For 1" size P.E. service lines only, the curb stop shall have a minimum inside diameter of three inches (3"), and the remaining SPECIFICATIONS contained in paragraph 2.1.10 (B) shall apply.

The curb stop boxes shall be manufactured by Handley Industries, Inc., P. O. Box 863, Jackson, Michigan, Mueller Co., or approved equal.

- (D) CURB STOP BOX. The curb stop box for 2", 3", and 4" size P.E. service lines shall be manufactured the same as for a P.E. valve box, as specified in paragraph 2.1.10 (B) of these SPECIFICATIONS. For 1" size P.E. service lines only, the curb stop box shall have a minimum inside diameter of three inches

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(3"), and the remaining specifications contained in paragraph 2.1.10 (B) shall apply.

The curb stop boxes shall be manufactured by Handley Industries, Inc., P. O. Box 863, Jackson Michigan, Mueller Co., or approved equal.

- (E) METER STOPS. Meter stops furnished shall be from the same manufacturer and shall be of the permanently lubricated iron body type. Meter stops on all types of service pipe shall be Mueller No. H11175, galvanized finish, with lock wing, Rockford Eclipse, or approved equal.
- (F) GAS SERVICE REGULATORS. Gas service regulators shall be aluminum case, aluminum painted Rockwell or approved equal, as specified below, and shall meet the following requirements.

INLET MODEL	ORFICE	CAPACITY PRESSURE	OUTLET PRESSURE	CF/HR
#043-182	1/4"	0-3lbs.	5" – 8 1/2" WC	350
#043-182	1/4"	0-10lbs.	5" – 8 1/2" WC	700
#143-80-2	1/4"	0-20lbs.	5" – 8 1/2" WC	1,500
#243-12-2	1/4"	0-25lbs.	6" – 14" WC	2,400

Low-pressure regulators shall be equipped with bug proof inverted vents and internal relief valves. Service regulators #043182 and #143802 shall be checked to 4-ounce outlet pressure in the field. Large capacity regulators will be as detailed in the PLANS.

- (G) GAS SERVICE METERS. Meters for gas service shall be aluminum case, aluminum painted Rockwell, as specified below, shall have a standard direct reading meter index and shall be capable of accurately measuring 0.6 specific gravity natural gas with pressure losses and capacities as specified below. Capacities indicated are at four (4) ounce base. Large capacity meters will be as detailed in the PLANS and/or as called for by the SPECIAL PROVISIONS. Prior to ordering any new meters, the CONTRACTOR shall ascertain from the Owner's Gas Superintendent the new meter numbers to be assigned to each new meter for stamping by the manufacturer.

METER	WATER COLUMN	COVER
MAXIMUM CAPACITY PRESSURE LOSE	(SIZE SPUD)	SIZE CUBIC FEET/HOUR
#275	1/2"	20 Lt. 275
#415	1/2"	20 Lt 415
#750	1/2"	45 Lt 750
#1,600	2"	45 Lt 1,600
Large Capacity	2"	2", 3" or 4" 3,000-10,000

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Meters 3,000

(side connection) 5,000
& 10,000

All gas meters with capacities greater than 800 CFH shall be Dresser Root Rotary Meters – size as specified on the PLANS.

- (H) INSULATED METER SWIVELS AND FLANGES. Insulated meter swivels and/or insulating flanges shall be installed as shown on the PLANS.
- (I) METER RISERS OR NON-CORRODIBLE METER RISERS. Meter risers or non-corrodible meter risers for P.E. service pipe shall be joined to the type service pipe using the method described in paragraph 2.1.4 (B) of these SPECIFICATIONS for P.E. pipe. Each meter riser shall be 24" long horizontally and 24" long vertically. Meter or non-corrodible meter risers shall have a 10" radius bend if P.E. pipe and a (1) 90° ell if pipe and then be coated and wrapped as necessary to provide built-in cathodic protection at least one (1) foot below ground level and at least one (1) foot above ground level or to the bottom of the existing or new meter stop, regulator or meter fitting.
- Meter or non-corrodible meter rise outlets shall be threaded with male I.P.S. threads to fit existing or new meter stop, regulator or meter fitting.
- Pipe size of meter or non-corrodible meter risers shall be determined by I.P.S. of pipe required to fit to the existing or new meter stop, regulator or meter fitting.
- (J) COSTUMER CONNECTIONS. Customer connections shall be installed as shown on the PLANS. The pipe size of adapter, coupling, fittings, etc., shall be determined by the I.P.S. of the pipe required to fit to the existing or new customer piping.
- (K) FITTINGS. Fittings for service assemblies shall be installed as shown on the PLANS. The pipe size of the meter bars, meter stops, nipples, street ells, couplings, fittings, etc., shall be determined by the I.P.S. required to fit to the existing or new regulator and/or meter fittings.
- (L) PRESSURE GAUGE. A pressure gauge shall be installed on certain service assembly set-ups as shown in the PLANS.
- (M) PROTECTIVE RAILINGS. Protective railing shall be installed for certain service assembly set-ups as shown on the PLANS.

2.1.10 VALVE BOXES.

- (A) For Steel Pipe. Valve boxes for welded steel pipe mains shall be made of cast iron and shall be of the heavy roadway typed with an inside diameter of no less

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than 5 inches. The valve boxes shall be adjustable for elevation range of 24" to 36" and shall be of the three-piece screw type.

The top of the valve box shall be installed flush with the ground surface or street surface and shall be supported by a 24 inch diameter round or square concrete foundation as shown on the PLANS.

The valve box shall be # H-10360, manufactured by Mueller Co., Decatur, IL 62525, Handley Industries, Inc., or approved equal.

- (B) For Polyethylene Pipe. Valve boxes for polyethylene pipe mains shall be made of cast iron collar and plastic bottom and shall be of the heavy roadway type with an inside diameter of not less than 5 inches. The valve boxes shall be adjustable for elevation range of 24" to 36" and shall be of the three-piece slide type.

The top of the valve box shall be installed flush with the ground surface or street surface and shall be supported by a 24 inch diameter round or square concrete foundation as shown on the PLANS.

The valve box cover shall be cast iron with the word "GAS" embossed on the topside and shall be of the bolt-down type. The valve box shall be manufactured by Handley Industries, Inc., P. O. Box 863, Jackson, Michigan 49204, Mueller Co., or approved equal.

- 2.1.11 PIPE LINE CROSSING MARKER SIGNS. Pipe line crossing marker signs shall be fabricated as shown on the PLANS and be installed by the CONTRACTOR as detailed on the PLANS in close proximity to all casing vents, canal or bayou crossings, field crossings, public road crossings, railroad crossings, and other locations as directed by the ENGINEER. Each crossing shall be provided with two (2) signs each.

Pipe line crossing marker signs shall be mounted on rigid flanged, vinyl coated channel type steel posts with drilled or punched 3/8" diameter holes centered at 1" intervals along its entire length. The vinyl coating shall be impregnated with high intensity yellow color and ultraviolet inhibitors to resist fading. The posts shall be 7 feet long, 2" wide channel type steel post with 2.5 feet minimum embedment, and weight 2.5 pounds per linear foot. The post shall be as distributed by Phillips Engineering Company, Inc., Clearwater, Florida (1-831-461-7711), Handley Industries, Inc. or approved equal.

Pipeline crossing marker signs shall be constructed of 0.090" thick fiberglass sheeting, 8" width x 12" height. The signs shall have a yellow and black lettering as detailed on the PLANS. The sign shall be secured to the post with 1/4" x 2" length round head steel stove bolts, washers and nuts as detailed on PLANS. The signs shall be as distributed by Phillips Engineering Co., Inc., Clearwater, Florida (1-800-237-9861), Handley Industries, Inc., or approved equal.

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Under this contract no special payment will be made for furnishing and installation of pipeline crossing marker signs. Cost shall be included in the pipeline crossing bid item, if applicable, or in the unit price bid per foot of pipe under paragraph 5.1.2.

2.1.12 VALVE WRENCHES. CONTRACTOR shall provide the Owner with one (1) each heavy tee handle 2" square socket wrench, Rockwell-Nordstrom Part No. 37213, Mueller Co., or approved equal. Valve wrenches for pressure reducing assemblies, regulator stations, etc., shall be provided as detailed in the PLANS or as called for by the SPECIAL PROVISIONS.

2.1.13 NON-CORROSIVE METALLIC WIRE OVER P.E. GAS PIPE. Non-corrosive metallic wire shall be installed directly over and on the center of all P.E. gas mains and service lines for detection purposes. This wire shall be continuous on all P.E. mains and service lines and shall be connected to all fixtures, appurtenances and pipe as detailed on the PLANS.

The non-corrosive metallic wire shall be Type TW, A.W.F. #10 gauge, insulated, stranded copper wire. Wire splices shall be made using splice kits similar or equal to Model DBR by 3M.

No special payment shall be made for installation of the wire. The cost of such shall be included in the unit price bid for gas pipe.

2.1.14 CORROSION PROTECTION. When indicated on the PLANS, the CONTRACTOR shall provide adequate cathodic protection to protect the facilities against corrosion. The CONTRACTOR shall furnish all items for the cathodic protection. The price for cathodic protection shall be included in other items of WORK. The cathodic protection shall have design life of 20 years and be installed in accordance with the National Association of Corrosion Engineers (NACE) Publication RP-01-69. The following minimum SPECIFICATIONS shall apply:

(A) Anodes and Leads. Each location where cathodic protection is to be installed shall be provided with a seventeen (17) pound packaged magnesium anode with a high efficiency backfill material for its cathodic protection. The anode and backfill material is to be manufactured by Allied Corrosion Industries, Inc., 6180 Atlantic Blvd., Suite O, Norcross, Georgia 30071, Telephone No. 1-800-241-0809; Harco Corporation, or approved equal.

Each anode shall be provided with a minimum 2 foot long, unspliced, Type TW insulated, A.W.G. #10 gauge solid copper connecting wire (lead). Each connecting wire shall be factory installed with the place of emergence from the anode in a cavity sealed flush with a dielectric sealing compound.

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- (B) Lead Bonding. Connection of the anode lead to the facilities shall be by use thermal welding equal to Calweld process. After the connection has been made, inspected and approved, the damaged area of the facilities and the metal portion of the connection shall be thoroughly coated as specified by NACE Specifications RP-01-75.

- 2.1.15 SERVICE LINE INSERTIONS. Where indicated on the PLANS, the CONTRACTOR shall insert new P.E. service line into existing steel service line. All new service line insertions shall be -.090" wall copper tubing size (CTS) P.E. gas service line.

All service line insertions shall maintain an annular space clearance of 10% between the outside diameter (O.D.) of the new service line inserted and the existing service line inside diameter (I.D.). The size of new service line inserted shall be as follows:

Existing Steel Service Line	New Service Line Insertion (O.D.)
2"	1 1/4"
1 1/2"	1"
1"	3/4"

Each service line insertion shall be provided with appropriate fittings to allow for meter reconnections to main with and/or without meter relocation.

Each service line inserted will be paid for at the contract price per lineal foot for service line inserted in the various sizes, types and classifications, which price and payment shall constitute full compensation for furnishing, hauling, installing and inserting complete, including furnishing fittings, testing the pipe; for excavation, preparation of bed and backfilling, compaction and removing excess earth; and for the furnishing of all equipment, tools, labor and incidentals necessary to complete the item in accordance with these SPECIFICATIONS.

- 2.1.16 CONCRETE. Concrete shall comply with Section ST-104 "Concrete" of these SPECIFICATIONS.

- 2.1.17 PAINTING. All steel pipe, valves, and equipment (Including service assemblies, protective railings, pressure reducing assemblies, meter/regulator stations, etc.) installed above ground shall be painted with an aluminum finish paint as manufactured by Pratt-Lambert, Tnemec, or approved equal, as follows:

Manufacturer:	Pratt-Lambert	Tnemec
Preparation:	SSPC-SP 1 & 2	Solvent & Hand tool Cleaning
First Coat:	Zinc Chromate Primer	77

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Second Coat:

Aluminum Enamel

Aluminum Enamel

Curb stop box covers, valve box covers, terminal box lid and associated pads shall be painted "safety yellow" with a good grade of exterior concrete paint. Under this contract, no special payment will be made for painting.

Cost will be included in the contract unit price of the item being painted.

- 2.1.18 CLEARING AND GRUBBING. Clearing and grubbing shall done in accordance with Section 201 "Clearing and Grubbing" of the Louisiana Standard Specifications for Roads and Bridges, latest edition. No payment will be made for clearing and grubbing, unless indicated in the SPECIAL PROVISIONS. The cost for clearing and grubbing will not be measured for payment, but shall be included in the contract bid price of other items.
- 2.1.19 CHAIN LINK FENCES. Chain link fences shall comply with Section CF-100 "Chain Link Fence" of these SPECIFICATIONS.
- 2.1.20 SEEDING. Broadcast seeding shall be in accordance with Section DR-104 "Seeding" of these SPECIFICATIONS.
- 2.1.21 GAS REGULATOR STATION INSTRUMENTATION, SCADA AND TELEMETRY REMOTE SYSTEM. The gas regulator station instrumentation, SCADA and Telemetry Remote System and associated appurtenances shall be in accordance with these SPECIFICATIONS.

3.1 CONSTRUCTION METHODS

- 3.1.1 General. This part of the work includes installation of gas mains, fittings, valve, valve boxes and appurtenances; excavation and backfill of trenches; cutting and replacing walks and roadway surfacing; and other miscellaneous items necessary to complete and make ready for operation a complete gas distribution system.
- 3.1.2 COOPERATION WITH UTILITY OFFICIALS. This work will be performed in the close proximity of existing utilities, streets, drainage structures, etc. The CONTRACTOR shall at all times cooperate with the various utility and street officials and shall notify the appropriate personnel prior to excavation in areas where known utilities are located.
- 3.1.3 CLEARING OF RIGHT OF WAY. The CONTRACTOR shall clear the right-of-way provided for the main of all objectionable debris and obstructions that will interfere with the installation of the mains. Wooded areas shall be cleared and

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grubbed and surface obstructions to remain shall be protected in accordance with paragraph 2.1.18 of these SPECIFICATIONS.

3.1.4 EXCAVATION OF TRENCH AND BACKFILL. Excavations, preparation of trenches, and backfill shall be in accordance with USAS B31.8, except where amended by these SPECIFICATIONS. Excavation shall be such that the pipe will have no less than 30 inches of minimum cover (measured from top of trench to top of the barrel of the pipe). Trench bedding and standard backfill shall be as specified for each individual pipe material and detailed on the PLANS.

3.1.5 OBSTRUCTION OF STREETS, PREMISES, ETC. All material shall be placed so as to interfere as little as possible with public travel. At street crossings and other points as directed by the ENGINEER, trenches shall be bridged in a manner so as to prevent any serious interruption of public travel; the closure of both sides of a double roadway to vehicular traffic will not be permitted except by special permission. Special care must be taken to give free access at all times to all fire hydrants, water valves, fire alarm boxes and Police Department and Fire Department driveways.

In case the CONTRACTOR shall fail to keep open streets, sidewalks, approaches to premises, etc., and shall refuse or neglect to open them within twelve (12) hours after written notification by the Owner; or shall the CONTRACTOR fail to afford proper and necessary access to fire hydrants, water valve, fire alarm boxes or Police Department or Fire Department driveways, and shall neglect or refuse to afford such access within one (1) hour of receiving oral or written notice to do so, the Owner shall be and is hereby authorized and empowered to put on such force as may be necessary and to do this WORK, deducting the actual cost thereof from any money which may be due or may become due the CONTRACTOR.

3.1.6 CONFLICT WITH SURFACE OBSTRUCTION. All shade trees, shrubbery, utility poles, etc., within the right-of-way provided shall be protected and any building or structure, which may be endangered during the WORK, shall be shored up and otherwise protected. Any properties disturbed or damaged by the CONTRACTOR shall be restored to original condition. No additional compensation will be made for corrective WORK.

3.1.7 CONFLICT WITH SUBSURFACE OBSTRUCTION.

The CONTRACTOR shall anticipate all underground obstructions such as water lines, gas lines, sewer lines, utility lines, concrete and debris.

Any such lines or obstructions indicated on the PLANS show only the approximate location and must be verified in the field by the CONTRACTOR. Neither the Owner nor the ENGINEER implies or guarantees the exact location of any existing underground utility; however, the Owner and ENGINEER will

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endeavor to familiarize the CONTRACTOR with all known underground obstructions.

The CONTRACTOR shall take the necessary precautions not to injure any gas or water pipe, sewer, drain or service pipes connected therewith or conduits or other underground structures, and the CONTRACTOR must repair or have repaired immediately, at his own cost, any public or private structure or pipe damaged by or in the course of his WORK. Should the CONTRACTOR fail to repair or have repaired such damage of injury within a reasonable time, the Owner may after 24 hours written notice, have such repairs made and deduct the cost thereof from any amounts due or to become due the CONTRACTOR.

The CONTRACTOR shall assume all risks and be responsible for all expense and damage attending the presence or proximity of any gas or water pipes, sewers, drains, conduits, or other underground structures where such pipes or other structures cross the trench or appear in the trench in such a manner as not to demand their rearrangement or realignment. The CONTRACTOR'S risks and responsibilities shall also apply to such structures as are approximately parallel with or adjacent to but outside of said trench.

The CONTRACTOR shall uncover known subsurface obstructions in advance of construction so that the method of avoiding same may be determined before pipe laying reaches the obstructions.

Should any pipe or other obstruction (so located as to interfere with the WORK) be encountered, the CONTRACTOR shall at once notify the ENGINEER of the locality and circumstances and the place shall be passed over until satisfactory arrangements are made.

Should the obstruction parallel the trench the ENGINEER may require the CONTRACTOR to offset or re-align his pipeline to miss the obstruction. This realignment may be made by the use of fittings, pipe deflection and/or valves as the case may dictate.

When the pipeline is offset, or to miss an obstruction, no claim for damages or extra compensation shall accrue to the CONTRACTOR from the presence of such pipe or other obstruction or from any delay due to its presence. However, should there be a change in quantity of any established pay item due to this relocation, the CONTRACTOR shall be paid for these changes at the unit price bid.

Where the minimum cover cannot be obtained the CONTRACTOR will be required to lay the pipe under the obstruction and maintain a 6-inch cushion between the top of the pipe and the bottom of the obstruction. No additional payment will be made for additional depth or over depth mains, required to miss an obstruction.

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Should the location or position of such obstruction within the limits of the trench be such, in the opinion of the ENGINEER, as to require removal, realignment or change of the obstruction in order that the work may proceed, such removal realignment or change shall be without expense to the CONTRACTOR. When, however, such obstruction shall come within the limits of the excavation for the work as located by the ENGINEER, such pipe, conduit, or other obstruction shall be stripped or uncovered by the CONTRACTOR, at his own expense, as constituting a part of his WORK in excavating. No claim for damages or extra compensation shall accrue to the CONTRACTOR for any delay due to the presence and adjustment of the obstructions.

The ENGINEER will in all cases render decisions on the necessity or expediency of any change or rearrangement of any underground structures, which may interfere with the construction of the WORK under this contract.

3.1.8 SPECIAL CROSSING.

- (A) GENERAL. Special crossings for which drawings have been made and on which a special price has been asked, whether a lump sum bid or otherwise, will be paid for according to the special specifications governing said crossings. Otherwise, no additional compensation will be paid for the construction of any utility line because of its crossing under or over any natural or man-made obstacle provided the route of the gas line as bid has not been changed so as to produce a crossing not to be anticipated by the bidder.
 - (B) PERMITS. The CONTRACTOR shall secure the necessary permit from the controlling agency for laying these lines. The permit shall be obtained in the name of the Owner; however, the CONTRACTOR shall make the refundable deposit for the permit.
After completion of the project, the deposit will be returned to the CONTRACTOR subject to any limitations of the permit not complied with by the CONTRACTOR.
 - (C) COOPERATION WITH CONTROLLING AGENCY: The CONTRACTOR shall submit to the ENGINEER and the representative of the controlling agency, all details concerning the method of construction and materials and shall have them approved prior to beginning construction.
 - (D) COOPERATION WITH CONTROLLING AGENCY: The CONTRACTOR shall submit to the ENGINEER and the representative of the controlling agency, all details concerning the method of construction and materials and shall have them approved prior to beginning construction.
- 3.1.9 HANDLING AND DISPOSAL OF WATER. The CONTRACTOR shall pump, bail, or otherwise remove any water, which may be found or may accumulate in the

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excavations, trenches, etc., and shall perform all WORK necessary to keep them clear of water while the work is in progress.

The cost of removing water by pumping or otherwise shall be included in the prices bid for the various item of the WORK; unless a specific bid item is asked for such. The CONTRACTOR shall keep his completed WORK reasonably free of water and shall completely remove all of it for the purpose of installations, inspections, etc.

The CONTRACTOR shall prevent any of his work from obstructing any drainage ditch, canal, etc., unless special permission is obtained.

- 3.1.10 SHEETING AND BRACING. Wherever necessary for protection of workmen, for security of adjacent utilities or structures, for stability of trench, or for proper installation and operation of gas pipe, the CONTRACTOR shall secure the trench to his satisfaction, to the extent of requiring close sheeting, or sheet piling and suitable bracing, including all nails, spikes and other fastenings.

Where the sheeting for a pipe is driven no lower than the top of the pipe, such sheeting may be withdrawn, provided that no sheeting is withdrawn until the trench has been refilled as hereinafter provided to a point not less than two (2) feet above the crown of the pipe.

Where it is necessary to drive sheeting below the top of the pipe, such sheeting shall be driven down to a point not less than two (2) feet below the bottom of the pipe and properly braced. Bracing above the pipe shall be placed as to allow at least one (1) foot clear space between the bottom of the bracing and the top of the pipe. Sheeting and bracing driven below the crown of the pipe shall be cut off two (2) feet above the crown before removal. Sheeting and bracing may be removed after the trench has been backfilled at least two (2) feet above the top of the pipe.

- 3.1.11 LOCATION OF EXISTING GAS SYSTEMS.

- (A) GENERAL. The attention of the CONTRACTOR is directed to the fact that existing gas mains or service lines may have to be tapped, cut, "killed", relocated, tied together and otherwise adjusted to completely perform all required work.

The CONTRACTOR shall not be permitted to indiscriminately shut off service. The CONTRACTOR shall cooperate with the Owner in order that lack of service will be reduced to a minimum. The CONTRACTOR shall arrange with representatives of the Owner and the ENGINEERS for a mutually acceptable time when service can be discontinued in the various sections of the system.

The CONTRACTOR shall place a "Gas Cut-Off Notice", furnished by the Owner, on the door of any customer whose gas service is interrupted.

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The general location, size and type of existing utilities have been taken from existing maps and/or surveys. The size of pipe indicated is the nominal diameter and the CONTRACTOR shall be responsible for obtaining the correct outside diameter of the pipe before ordering any valves, fittings, tapping sleeves, etc., to assure a proper fit.

- (B) LOCATION OF EXISTING UTILITIES. The approximate location of known existing utilities has been shown on the drawings and the final location of all tie-ins, taps, etc. shall be approved by the ENGINEER. The CONTRACTOR shall be responsible for physically locating all existing pipe and appurtenances. No additional compensation shall be paid for such WORK, but shall be included in the unit price bed per foot of pipe.

- 3.1.12 INSTALLING STEEL PIPE. All steel gas pipe installations shall be made in accordance with USAS B31.8-841.2, "American Standard Code for Pressure Piping". "Installation of Steel Pipe lines and Mains", except as amended by these SPECIFICATIONS.

The CONTRACTOR shall protect all coated pipe from exposure to the weather prior to backfilling. Coated pipe shall be handled at all times with equipment designed to prevent damage to the coating. The CONTRACTOR shall not string pipe in excess of the amount, which, in the opinion of the ENGINEER, may not be installed within 7 days.

The use of pinch bars, chain slings, or other pipe handling equipment found to be injurious to the coating will not be allowed. Sections of coated pipe being tied into the line shall not be dragged or pulled into position, and the length of such sections shall be regulated to allow their handling without damage to the coating. At stream crossings, or at any other locations where it may be necessary to pull, drag, or jack and bore sections of pipe into place, the coated pipe shall be protected as directed by the ENGINEER.

"Type 1 Standard Pipe Foundation" as detailed on the PLANS shall be used for the installation of all steel gas mains, unless otherwise specified on the PLANS.

- 3.1.13 WELDING AND FIELD COATING PROCEDURE FOR STEEL PIPE. Welding shall be in accordance with USAS B31.8, API Standard 1104, and ASME Section IX, except as modified herein.

- (A) Welding Process. Prior to performing any welding, the CONTRACTOR'S welding procedure SPECIFICATIONS shall be presented in writing and qualified to demonstrate that suitable sound welds can be made by each procedure required. The quality of each weld at every joint shall be determined by mechanical or radiographic testing, as appropriate.

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Certification of each acceptable written procedure and performance qualification test shall be made by a qualified testing laboratory and the results recorded. Evidence of recent experience making acceptable hot taps (taps on a pipe line under pressure) is also required.

The CONTRACTOR shall bear all of the costs associated with qualifying each welding procedure specification, performing each procedure qualification test, recording of the welding data and test results, certifications and retests and renewal of qualifications.

The CONTRACTOR shall furnish the necessary equipment and personnel to cut out and test welds. For such tests, the entire weld shall be cut from the line, cutting the pipe 4" back on each side of the weld. Coupons cut from this weld shall be tested for tensile strength, ductility and penetration.

Where welds are cut for testing, the line shall be tied back together with either a single weld, or by use of a piece of new pipe not less than 2 feet in length.

The entire cost of testing such welds and repairing the line where they were cut out to be borne by the CONTRACTOR.

Pipe shall be butt-welded to develop a joint that will result in complete fusion throughout the entire wall thickness of the pipe. The welded joint shall satisfactorily hold any pressure that the line will be subjected to in testing or during operation at maximum design pressure. At no time shall the pipe be rolled or turned during welding. Any defective joints resulting from poor welding technique, overlaps, under-cuts, convexity, or any other reason shall be cut out and replaced with a satisfactory joint.

Mitre joints shall be limited to pipe connections where commercially fabricated welding fittings cannot be used, and then shall be made in segments limiting the deflection in each section to angles agreed upon by the ENGINEER.

Where welding fittings are required, the welding fittings shall be commercially fabricated ASTM A234 steel fittings of pressure rating equal to or greater than ANSI Class 150 Standards. All bends shall be long radius type. Where reduction of size in pipes occurs swage fittings shall be used. Ninety degree saddle welding one pipe into another will not be permitted, except in special cases when prior approval of the ENGINEER has been obtained.

Each welder shall be furnished a stencil, a record being kept thereof, and each welder shall stencil all welds made by him. The CONTRACTOR shall furnish and use only such types and sizes of welding rods as are approved by the ENGINEER.

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- (B) Equipment. All pipe shall be electric welded by the “shielded Metal-Arch” process. Welding machines and appurtenances thereto shall be of size and type suitable for the work, and shall be maintained in such conditions as to insure acceptable welds, continuity of operation, and safety of personnel.

Welding machines shall be direct current and shall have reversed polarity, work negative and electrode positive, and shall be operated within the amperage and voltage ranges recommended for each size and type of electrode.

- (C) Materials. The filler metal for the shielded metal arc process shall be according to API Standard 1104 and shall be 5/32 inch or 3/16 inch in size.

- (D) Procedure Details. Surfaces to be welded shall be free from loose scale, slag, heavy rust, grease, paint, cement and other foreign material except tightly adherent mill scale.

A light film of linseed oil primer or spatter film compound may be disregarded. Joint surfaces shall be smooth, uniform and free from fins, tears and other defects, which adversely affect proper welding.

The number of filler beads should be such that the completed weld will have a reinforcement of not less than 1/32 inch and not more than 1/16 inch. After the root bead has been completed, the second and third beads shall be added immediately. There shall be not less than three beads.

Two beads shall not be started at the same location. The surface pass shall be substantially central to the seam and all surface passes shall be reasonable smooth and free from depressions. The face of the completed weld should be approximately 1/8-inch grater than the width of the original groove.

The completed weld shall be thoroughly brushed and cleaned. Peening of weld layers or passes may be used to prevent undue distortion. Surface layers and the first pass in groove welds shall not be peened. Peening, when required, shall be performed with light blows of a hammer, using a blunt nosed tool. Any chipping at the root of welds and chipping of welds to remove defects shall be performed with a round nosed tool or by gas gouging.

All field welds and test coupons must be clearly marked by stencils to identify the welder and the tests for which the coupons are intended. The CONTRACTOR shall keep a record of all symbols and numbers. All welds must present a neat and clean appearance free of cracks, inadequate penetration, burn through or other obvious defects. Undercutting adjacent to the final bead shall not exceed 1/32 inch.

Coupons for all tests may be flame cut from the weld, but all necessary notching and machining of coupons shall be done in the testing laboratory.

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The use of water for quenching any weld is prohibited.

The CONTRACTOR shall, at his expense, cut welds from the line, as directed by the ENGINEER, for the purpose of testing. After welds are removed from the line, coupons will be cut around the circumference of the pipe and tested as outlined in paragraph 3.1.13(A) above. The CONTRACTOR shall bear the cost of replacing defective welds discovered by test or radiographic inspection.

- (E) Field Coating of Welded Joints and Repair of Damaged Coating Areas. The field coating procedure for welded steel pipe, fittings, associated appurtenances, and joints installed underground shall be the procedure contained in NAPCA Bulletin 6-69-90-5, and any subsequent revisions thereto, using heat shrinkable materials, such as 3M "Scotchkote" Brand 206P hot melt patch compounds, or Raychem WPCT Thermofit, or approved equal; or a cold-applied coating in 3" wide tapeform, such as Tapecoat CT, manufactured by the Tapecoat Company, Evanston, Illinois 60204, Grace Servi-Wrap, or approved equal; or the following:
- (1) The pipe and weld shall be cleaned of any scale, dirt or foreign matter. All charred and damaged coating areas shall be abraded by hand filing or use of carborundum cloth.
 - (2) A two part, 100% solids, liquid epoxy compound specified by the manufacturer of the coating material shall be applied to the abraded areas. Application shall be made to a minimum thickness of 25 mils and shall overlap undamaged area a minimum of 0.5 inches.
 - (3) The liquid patch compounds shall not be applied when the pipe temperature is below 50°F unless provisions are made for heat curing the patch material using methods and temperatures in accordance with the procedures recommended by the coating manufacturer.
 - (4) The CONTRACTOR shall furnish low-pulse electronic Holiday Detectors of a type approved by the ENGINEER, and shall check all coating applications with the detector prior to lowering pipe into the trench. All holidays found shall be repaired and such repairs shall again be tested with the detector to make sure the repairs are effective.

The ENGINEER, at his discretion, will inspect both visually and with a Holiday Detector, the coating and repair areas. Any coating showing defects of "Holidays" shall be repaired according to the foregoing SPECIFICATIONS for repairing damaged coating areas.

- 3.1.14 INSTALLING P.E. PIPE. All P.E. gas mains shall be installed in strict accordance with the manufacturer's recommendation.

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The manufacturer of the type of pipe furnished shall furnish a qualified factor representative for a minimum of three full working days to train, observe and qualify the CONTRACTOR'S personnel on the proper method of joining and installing every size of pipe and the associated fittings to be used on the job in accordance with applicable Department of Transportation (DOT) regulations.

The CONTRACTOR and the factory representative shall coordinate these days in order to assure that the representative is on the job at the start of the laying of each different size pipe by the CONTRACTOR.

On P.E. service lines and mains, each valve will be supported by an 80-pound bag of "Sackrete" concrete mix.

Heat fused P.E. pipe shall be snaked in the trench. Backfill shall not be placed on any plastic pipe while it is in a heated condition. Cooling of the pipe by an approved method will be required by the ENGINEER, if necessary.

Set time for newly assembled heat fused joints shall be as follows:

10	Minutes minimum	@	60°F to 90°F
11	Minutes minimum	@	40°F to 60°F
12	Minutes minimum	@	25°F to 40°F

3.1.15 FIELD CUTTING OF PIPE. Field cutting of all pipes shall be accomplished by a method approved by the ENGINEER. Any section of pipe, which is damaged during the cutting cooperation, will be rejected.

3.1.16 SETTING OF VALVES AND FITTINGS. Settings of valves and fittings shall be in accordance with USAS B31.8, except as modified for P.E. pipe in Paragraph 3.1.14 of these SPECIFICATIONS.

3.1.17 INSTALLING SERVICE ASSEMBLIES. All essential details of construction of the service assemblies to be installed are indicated on the PLANS; these DRAWINGS shall be followed carefully. The labor, materials and equipment required to be furnished by the CONTRACTOR for each service assembly shall depend on the installation size, type and meter setting.

The CONTRACTOR shall set each service assembly where shown on the PLANS or as directed by the ENGINEER. The PLANS will indicate whether the existing meter and/or regulator in the proposed service assembly are to be refitted and used at the relocation point.

Existing meters and regulators, not to be refitted, used again or relocated, shall be delivered to the City of Alexandria Gas Department, accompanied by a "Gas Service Ticket", furnished by the CONTRACTOR, detailing the location from which it was removed, old meter number, new meter number, etc. All existing

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gas service lines, which are not to be re-used, shall be cut and capped below natural ground surface.

The CONTRACTOR shall not set the service assemblies until all the mains have been cleaned, tested, purged and approved by the ENGINEER.

- (A) SERVICE ASSEMBLY TYPE I. Service Assembly Type I as detailed on the PLANS shall be for those instances where an existing service assembly with a 275, 415, 750 and/or 1600 cubic feet per hour (CFH) meter setting is to be refitted, relocated, and/or replaced.

The CONTRACTOR shall disconnect and dismantle the existing service assembly. The CONTRACTOR shall furnish the materials; install the Owner's existing or new meter, regulator, and service assembly as shown on the PLANS.

Prior to ordering new meters, the CONTRACTOR shall ascertain from the City of Alexandria Gas Superintendent the new meter numbers to be assigned to each new meter for stamping by the manufacturer.

The Scope of Work for "Service Assembly Type I" shall include all the necessary labor, materials and equipment, field taps, tapping tees, saddles, curb stops, curb stop boxes, riser, regulator, meter or other incidental devices required to connect the service line to the distribution main; disconnect, refit and/or relocate, reassemble and connect the service assembly to the service line; and connect the customer's piping to the service line. All new service line required to complete the installation shall be paid for separately.

- (B) SERVICE ASSEMBLY TYPE II. Service assembly Type II as detailed on the PLANS shall be for those instances where no service assembly exists.

The CONTRACTOR shall furnish and install the components, fittings, etc. for the size and type of service assembly set up as detailed on the PLANS.

The Scope of Work for "Service Assembly Type II" shall include all the necessary labor, materials and equipment, field taps, tapping tees, saddlers, curb stops, curb stop boxes, or other incidental devices required to connect the service line to the distribution main; and to connect the service assembly set-up to the service line. All service line required to complete the installation shall be paid for separately.

- (C) SERVICE ASSEMBLY TYPE III. Service Assembly Type III as detailed on the PLANS shall be for those instance where a designated existing large capacity service assembly with a 3000, 5000 and/or 10,000 CFH meter setting is required to be reconnected, refitted and/or relocated.

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The CONTRACTOR shall disconnect designated existing large capacity service assemblies. The CONTRACTOR shall furnish and assemble the components, fittings, etc. for each proposed large capacity service assembly, as proposed and detailed on the PLANS.

The Scope of Work for "Service Assembly Type III" shall include all the necessary labor, materials and equipment, field taps, tapping tees, saddles, curb stops, curb stop boxes, risers, meters, regulators pressure gauges, needle valves, concrete blocks with reinforcing for meter supports, adjustable pipe supports or other incidental devices required to connect the service line to the distribution main, reassemble and relocate (if required) and connect the designated large capacity service assembly to the service line. All new service lines required to complete the installation shall be paid for separately.

3.1.18 HOT TAP CONNECTIONS OF MAINS. All gas main hot tap connections shall be for those instances where said gas mains to be tapped and/or connected are active and under existing gas system pressure. The CONTRACTOR shall furnish the labor, materials (Such as all P.E. and steel fittings, transition fittings, weld caps, stopple fittings, three way tees, etc.) and equipment required for each hot tap connection.

3.1.19 INSTALLING PIPE-BORING AND JACKING METHOD. When shown on the Plans, lines installed under this contract which require crossing under public highways, paved roads, streets, or driveways shall be installed by the jacking and boring method. The installation of utility pipe and the boring and jacking method shall be in accordance with A.R.E.A. Specifications, pages 1-4-18 thru 1-4-24.

The excavation of all approach pits and trenches within the right-of-way of the highway or railroad shall be of sufficient length from the street or railroad tracks to permit traffic to pass without interference. All backfill on the approach pits and trenches within the right-of-way shall be tamped in layers a maximum of six (6) inches thick for the entire length and depth of the trench or pit.

The backfill, in non-traffic areas, shall be compacted to 90% of maximum density obtained at optimum moisture as determined by AASHTO T180-57, Method A. Mechanical tampers may be used after a cover of six (6) inches has been obtained over the top of the barrel of the pipe.

The boring operation shall be accomplished using a commercial type boring rig and the hole made by the installation shall be of the same diameter (within two (2) inches) as the largest outside joint diameter of the pipe installed.

In the event sub-surface operations result in injury or damage to the pavement, repairs to this pavement shall be made by the CONTRACTOR, at no additional cost to the Owner. In the event paving cracks on either side of the pipeline, or is

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otherwise disturbed or broken due to the CONTRACTOR'S operations, he shall repair or replace same at his own expense without further compensation.

- 3.1.20 INSTALLING CASING PIPE. When shown on the PLANS, the CONTRACTOR shall furnish and install all utility mains perpendicular to and under railroad tracks and roadways in a casing pipe. This casing shall be complete with end seals, vent pipe, and other specials required to install the main in the casing. All installations shall be in accordance with these SPECIFICATIONS and the requirements of the railroad or roadway, as applicable.

Unless otherwise specified the casing pipe shall be installed by the boring and jacking method in conformance with Paragraph 3.1.19 of these SPECIFICATIONS.

- 3.1.21 FIELD CLEANING, TESTING AND PURGING. The field cleaning, testing and purging operations shall be applied to the whole or individual valved- off sections of the high pressure distribution mains (feeder mains), distribution mains and service lines either before or after the trench is backfilled, as directed by the ENGINEER.

The CONTRACTOR shall furnish the equipment, gauges, meter, gas and other material, tools, labor and other necessary assistance for conducting the field cleaning, testing and purging operations.

The ENGINEER shall be notified at least 48 hours in advance of the field cleaning, testing and purging operations. The cleaning, testing and purging of all lines shall conform to the requirements of USAS B31.8, except as modified below:

- (A) CLEANING. Prior to conducting the pressure tests, all gas mains, service assemblies, fittings and/or service lines to be connected thereto shall be blown clear by the use of compressed air and this cleaning operation shall continue until these lines and/or fittings are cleared to the satisfaction of the ENGINEER.

At no time will compressed air be used without a dehumidifier. The lines shall then be pigged with approved foam pigs to demonstrate unrestricted clearance of all 2" size and larger mains.

- (B) TESTING. All gas mains, services and service assemblies shall be tested as follows:

- (1) Distribution System Mains and Service Lines:
- (a) Gas mains larger than 1" IPS Diameter – 100 psi for 24 hours with no pressure loss.
 - (b) Piping from the gas main including the service line to the valve on the upstream side of the service assembly, 100 psi for 24 hours with no pressure loss.

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- (2) Any leak developing during any test shall be repaired, the lines and/or fittings made tight and the test repeated until successful.
 - (3) All tests on the gas mains larger than 1" IPS diameter and the service line from the gas main to the valve on the upstream side of the service assembly shall be recorded by a pressure recorder with 10 inch dial and 24 hour charts which will clearly indicate a differential on one (1) pound.
- (C) PURGING. Prior to delivery of natural gas to the system, all gas mains, service lines, service assemblies and/or the associated fittings shall be purged with natural gas. This is to be performed through the use of the Owner's Gas paid for by the CONTRACTOR in a manner of procedure as approved by the City of Alexandria Gas Department and the ENGINEER.

At no time shall any valve in the system be subjected to gas pressure on one side and air pressure on the other. Blind flanges shall be used to prevent this condition from occurring.

When gas is delivered to the system, all fittings shall be checked for tightness with a soap-water solution. No gas leaks will be allowed.

Results of the tightness tests shall be recorded and a copy given to the ENGINEER.

Should the amount of leakage exceed that specified, the CONTRACTOR shall, at his expense, locate and repair the defective joints until the leakage is within the specified limits.

The cost for field cleaning, testing and purging shall be included in the unit price bid per foot of pipe.

- 3.1.22 WITENSSING OF TESTS. The cost of witnessing a test by the ENGINEER shall be borne by the Owner one time. The cost of witnessing re-tests of sections which fail the initial test will be deducted from CONTRACTOR payments for compensation of the ENGINEER.

- 3.1.23 GAS SERVICE INTERRUPTIONS. WORK shall be performed such that gas service will not be interrupted, if possible, throughout this contract. Whenever it becomes necessary to "Kill" a section of line, the CONTRACTOR shall cooperate fully with the City of Alexandria Gas Department Personnel.

The CONTRACTOR shall be responsible for checking each house, store, building, etc. in advance to insure that its owner or occupant is or will be available during anticipated gas service interruptions.

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Prior to refitting and/or relocating the existing service assembly and connecting the service lines to said service assembly and the customer's piping, the CONTRACTOR shall turn off all pilot lights served by said service assembly.

After the customer's piping has been reconnected, the CONTRACTOR is responsible for determining that it is safe to turn on the gas, and re-lighting all pilot lights served by said service assembly.

The CONTRACTOR shall be responsible for coordinating his work with the City of Alexandria Gas Department personnel. Under no circumstances will the CONTRACTOR turn on the gas to a customer's piping until the CONTRACTOR has determined that it is safe to do so and without the full knowledge of the City of Alexandria Gas Department personnel. The CONTRACTOR shall align his WORK schedule to accommodate the City of Alexandria Gas Department.

- 3.1.24 GAS SYSTEM SWITCHOVER. CONTRACTOR shall schedule his work such that the switchover from the existing system to the new system shall be at minimum inconvenience to the Owner and its customers.

At no time will a new gas main be connected to existing customer until it has been tested and accepted by the Owner and the ENGINEER. Should the CONTRACTOR elect to connect customers to portions of the new system prior to completion of entire system, such connections shall not relieve him of the responsibility of completing his contract as required by the PLANS and SPECIFICATIONS. Portions so connected or turned over to the Owner will not relieve the CONTRACTOR of his responsibilities under the contract until the entire project is completed, tested and accepted.

- 3.1.25 PURGING, FLOODING AND ABANDONMENT OF EXISTING GAS LINES. Where noted on the Plans, existing gas lines are to be abandoned. At that time when all services have been transferred to the new main and all interconnections have been completed, the existing main to be abandoned shall be disconnected from the main feed point and gas purged from the line by flooding and filling with water. When all flooding is complete, the line shall be tightly capped.

No special payment will be made for installation of the wire. The cost of this item shall be included in the unit price bid for P.E. gas pipe.

- 3.1.26 "RED DIRT" BACKFILL. Where shown on the PLANS, the CONTRACTOR shall furnish and install "Red Dirt" backfill material. "Red Dirt" material shall conform to Section DR-103 "Embankment" of these SPECIFICATIONS. The degree of compaction shall be as specified in paragraph 3.1.28.

- 3.1.27 SPECIAL FOUNDATION (TYPE 2 STANDARD PIPE FOUNDATION). Where shown on the PLANS, all pipe shall be supported by a special foundation and

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bedding detailed as "Type 2" on the PLANS. The special foundation and bedding shall be 4" of washed gravel installed under the pipe.

The gravel shall be clean, free from clay, sticks, or other deleterious substances, meeting the following gradation:

<u>Sieve</u>	<u>Percent Passing by Weight</u>
3/4	100
5/8	95 -100
No. 4	0 - 7

3.1.28 TRENCH BACKFILL AND COMPACTION.

- (A) Outside Street Surfaces and Shoulders. The backfill in the trench above the pipe shall be placed in layers and compacted to prevent settlement of the trench. Prior to the final acceptance of the pipeline, the trench shall be level with the surrounding natural ground.
- (B) Inside Street Surfaces, Other Paved Areas and Street Shoulders. The backfill in the trench above the pipe zone and bedding shall be placed in lifts not to exceed six inch compacted layers and compacted to 95% of standard density when measured by AASHTO T99.

The trench shall be compacted for a depth of 2'-0" above the top of the pipe using hand tamps or hand mechanical tamps before the use of a wheel type device or a hydro-hammer is used for compaction purposes.

3.1.29 REPLACING STREET SURFACE AND SIDEWALKS. In all paved or unimproved streets, the surface of the trenches, shall be finished without any needless delay and in the best workmanlike manner with the same kind of roadway or sidewalk improvement that was removed in excavating the trench.

Should the CONTRACTOR fail or refuse to repair any such damage, the Owner may after twenty-four (24) hours written notice, employ such personnel and furnish such materials as may be necessary and do the WORK, deducting the actual cost thereof from any amounts due or to become due to the CONTRACTOR.

The CONTRACTOR shall be obligated to maintain and keep in good condition any replacement of base, street surfacing or sidewalks from the time of installation until final acceptance of the WORK.

The replacement of all street surfaces shall be in accordance with the Details shown on the PLANS.

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- 3.1.30 CLEANING UP, REMOVING SURPLUS EARTH, ETC. As soon as the backfilling of any excavation is completed, the CONTRACTOR must at once begin the removal of all surplus dirt. Except dirt that is necessary to correct settlement of the initial backfilling operations.

He shall remove all pipe and other material placed or left on the street or right of way by him except material needed for the replacement of the paving. The street shall be opened and made passable for traffic. Following the above WORK, the repairing and complete restoration of the street surfaces, bridges, crossings and all places affected by the WORK shall be done as promptly as possible.

Any surplus earth which may be left on the street or right of way after the excavations have been completely refilled shall be regarded as the property of the CONTRACTOR and must be removed as soon as possible at his own expense except that in un-graded streets, it shall be optional with the ENGINEER whether surplus material shall be removed or deposited on the surface and graded for the convenience of traffic.

4.1 MEASUREMENT.

- 4.1.1 GENERAL. Except the minor modifications, the following SPECIFICATIONS are developed by the Specifications Committee of the American Public Works Association, Louisiana Chapter and the Associated General Contractors, Louisiana Highway and Heavy Construction Branch.
- 4.1.2 GAS PIPE. Gas pipe will be paid for by the lineal foot according to size and type. Gas pipe will be measured by the lineal foot of pipe placed, tested, and accepted without deductions for the space occupied by valves, fittings or between either, and stub end of line being measured. No separate measurement will be made for gas pipe fittings.
- 4.1.3 STEEL PIPE FITTINGS. Steel pipe fitting will be paid for by the ton. Fittings other than steel will not be paid for separately, but will be included in the unit price bid per lineal foot of pipe, unless a specific bid price is requested on the Proposal Form. Steel fittings will be measured in units of tons of fittings installed, tested, and accepted, and payment for welded joint fittings shall be made on the basis of USAS B16.9 published body weights for welded joint fittings exclusive of weight of gaskets and linings, glands, and bolts.
- 4.1.4 VALVES AND VALVE BOXES. Valves and valve boxes will be paid for as a unit for valves with valve boxes together. Valves with valve boxes together, as a unit, will be measured by an actual count of each size, installed, tested, and accepted.

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The unit bid shall include any necessary joint adapters for connecting valves into the system, including the concrete pad around the valve box top.

- 4.1.5 GAS SERVICE ASSEMBLIES. Gas service assemblies will be paid for per each, according to size and type. Connectors and couplings shall be included in the unit price bid per foot of pipe. Gas service pipe will be measured by the linear foot according to size and type. This length of measurement shall be actual centerline length of pipe installed and accepted.
- 4.1.6 GAS SERVICE PIPE. Gas service pipe will be paid for, when specified, by the linear foot according to size and type. Connectors and couplings shall be included in the unit price bid per foot of pipe. Gas service pipe will be measured by the linear foot according to size and type. This length of measurement shall be actual centerline length of pipe installed and accepted.
- 4.1.7 CASING PIPE – JACKING AND BORING METHOD. According to the SPECIFICATIONS and as indicated on the PLANS, the CONTRACTOR shall install pipe casings by jacking and boring to receive the gas carrier line. The CONTRACTOR will be paid on the basis of the unit price for furnishing and installing the casing.

Casing pipe, installed and accepted, will be measured by the linear foot. The quantity obtained will be the centerline length of the casing installed and accepted.

- 4.1.8 CASING PIPE – LAID IN OPEN CUT. According to SPECIFICATIONS and as indicated on the PLANS, the CONTRACTOR will install pipe casings, laid in open cut, to receive the gas line. The CONTRACTOR will be paid on the basis of the unit price for furnishing and installing the gas pipe in addition to the unit price under this item for furnishing and installing the casing. Casing pipe installed and accepted, will be measured by the linear foot. The quantity obtained will be the centerline length of the casing installed and accepted.
- 4.1.9 INSTALLING PIPE – JACKING AND BORING METHOD. Installing pipe – jacking and boring method – will be paid for by the linear foot according to the size of pipe to be bored. The CONTRACTOR will be paid on the basis of the unit price for furnishing and installing the gas pipe in addition to the unit price under this item for installing pipe by the jacking and boring method.

Pipe installed by the jacking and boring method will be measured by the linear foot. The quantity obtained will be the centerline length of pipe so installed and accepted.

- 4.1.10 SPECIAL PIPE FOUNDATIONS. Special pipe foundations will be paid for by the cubic yard installed in accordance with the section shown on the PLANS.

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Special backfill material, placed and accepted, will be measured by the cubic yard in approved vehicles at the point of delivery as installed on the project.

No measurement for payment shall be made for additional material necessary to correct unauthorized over-width or over-depth excavation.

- 4.1.11 “RED DIRT” BACKFILL MATERIAL. “Red Dirt” backfill material shall be measured by the cubic yard (vehicular measurement) as specified in Section DR-103“Embankment” of these SPECIFICATIONS.

No measurement for payment shall be made for additional material necessary to correct unauthorized over-width or over-depth excavation.

- 4.1.12 NATIVE BACKFILL MATERIAL. The use of excavated native material for backfilling gas lines will not be measured for payment, but shall be included in the unit price of other items.

- 4.1.13 SHEETING AND BRACING LEFT IN PLACE. No separate payment will be made for sheeting and bracing left in place.

- 4.1.14 REMOVAL AND REPLACEMENT OF HIGHWAY, STREET, DRIVEWAY, AND SIDEWALK PAVEMENT AND CURBS. When no bore is shown on the PLANS, the CONTRACTOR shall install pipe under improved surfaces by the open trench method. Concrete street pavement shall be removed joint to joint. Asphalt and brick streets pavement shall be broken back by the open trench method. Sidewalks and driveways will be broken back to the nearest joint or to a neat saw-cut straight edge.

The CONTRACTOR will be paid for this WORK on the basis of the contract unit price for furnishing and laying pipe plus the extra price bid under this item for removing and replacing the various types of improved surfaces.

Removal and replacement of street, highway, driveway, and sidewalk pavement will be measured by the square yard, and the area for measurement shall be as shown on the PLANS or specified in the SPECIFICATIONS.

Removal and replacement of surfacing of gravel or limestone streets and driveways cut by trenches for installation of pipe will be measured by the cubic yard of gravel or limestone placed, bladed and accepted. Gravel or limestone will be placed only at the direction of the ENGINEER, and actual invoice records on quantities of material placed will be used for measurement.

Removal and replacement of concrete curbs will be measured by the linear foot, and the length of measurement shall be as indicated on the PLANS or in the SPECIFICATIONS.

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- 4.1.15 CONCRETE SURFACES TO BE SAWED. Where called for on the PLANS or where designated by the ENGINEER, existing concrete or paved surfaces shall be neatly saw cut in a straight line to allow for creation of a neat repair patch. Saw cutting of existing pavement may be used wherever WORK is performed on sections of pavement that does not necessitate full removal of an entire concrete panel and at all asphaltic concrete street excavations. Concrete surfaces to be sawed will be paid for by the lineal foot. Concrete surfaces (streets, driveways, sidewalks, etc.) to be sawed will be measured by the actual linear foot sawed. (Note: When sawing both sides of a trench, both sides will be measured.)
- 4.1.16 CLEARING AND GRUBBING. No separate payment will be made for clearing and grubbing work.
- 4.1.17 REMOVAL AND REPLACEMENT OF CULVERT PIPES. No separate payment for removal and replacement of culvert pipes disturbed by gas line excavations will be paid.
- 4.1.18 HOT TAP CONNECTIONS OF MAINS. All gas main hot tap connections will be measured by the actual count of each connection according to size, installed and accepted. The price shall be for a complete hot tap connection as specified.
- 4.1.19 SPECIAL LUMP SUM – METER/REGULATOR STATION, REGULATOR STATION OR REGULATOR STATION SCADA AND TELEMETRY REMOTE SYSTEM. The meter/regulator station, regulator station or regulator station SCADA and telemetry remote system for which a separate lump sum price is requested will be paid for per each. The price shall be for a complete installation as specified and detailed on the PLANS. All special lump sum meter/regulator stations, regulator stations, or regulator station SCADA and telemetry remote systems will be measured per each, installed, tested and accepted.
- 4.1.20 SPECIAL LUMP SUM – RAILROAD CROSSINGS, ROADWAY CROSSINGS, CANAL CROSSINGS AND LEVEE CROSSINGS, ETC. Crossings for which separate lump sum prices are requested will be paid for per each. The price shall be for a complete installation of the gas main portion as specified and detailed on the PLANS. The lump sum crossings will be measured by an actual count of each crossing installed and accepted.
- 4.1.21 SPECIAL LUMP SUM – GAS SEPARATOR WITH CONCRETE VAULT. Gas separator with concrete vault for which separate lump sum prices are requested will be paid for per each. The price shall be for a complete installation as specified and detailed on the PLANS. All special lump sum gas separators with concrete vaults will be measured by the actual count of each separator with vault installed and accepted.

5.1 PAYMENT.

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- 5.1.1 GENERAL. Except for minor modifications, the following SPECIFICATIONS are as developed by the Specifications Committee of the American Public Works Association; Louisiana Chapter and the Associated General Contractors, Louisiana Highway and Heavy Construction Branch. Periodic estimates on all gas piping and appurtenances shall be paid at 75% of the contract unit price until tested.
- 5.1.2 GAS PIPE. Gas pipe, placed and accepted, will be paid for at the contract unit price per linear foot for gas pipe of the various sizes, types and classifications, which price and payment shall constitute full compensation for furnishing, hauling, installing complete, testing the pipe; for excavation, preparation of bed and backfilling, compaction and removing surplus earth; removing and replacing culvert pipe; and for removing surplus earth; removing and replacing culver pipe; and for the furnishing of all equipment, tools, labor and incidentals necessary to complete the item in accordance with PLANS and SPECIFICATIONS.
- 5.1.3 STEEL PIPE FITTINGS. Steel pipe fittings, placed and accepted, measured as provided above, will be paid for at the contract unit price per ton for steel pipe fittings, which price and payment shall constitute full compensation for furnishing, hauling, installing complete, testing; for excavation, preparation of bed and backfilling; concrete thrust blocks or anchors; and for the furnishing of all equipment, tools, labor and incidentals necessary to complete the item in accordance with PLANS and SPECIFICATIONS.
- 5.1.4 VALVES AND VALVE BOXES. The number of valves or valves with valve boxes together, as a unit, installed and accepted, will be paid for at the contract unit price per each, which price and payment shall constitute full compensation for furnishing, hauling, installing complete and testing; for excavation and backfilling; and for the furnishing of all equipment, tools, labor and incidentals necessary to complete the item in accordance with the PLANS and SPECIFICATIONS.
- 5.1.5 GAS SERVICE ASSEMBLIES. Gas service assemblies, in place and accepted, will be paid for at the contract unit price per each, which price and payment shall constitute full compensation for furnishing, hauling, and installing all material complete; for all excavation and backfilling; for all equipment, tools, taps, labor and incidentals necessary to complete the item in accordance with the PLANS and SPECIFICATIONS.
- 5.1.6 GAS SERVICE PIPE. Service pipe, placed and accepted, will be paid for at the contract unit price per linear foot, which price and payment shall constitute full compensation for furnishing, hauling, installing complete, including furnishing connectors, and couplings, testing the pipe; and for the furnishing of all equipment, tools, labor and incidentals necessary to complete the item in accordance with the PLANS and SPECIFICATIONS.

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- 5.1.7 CASING PIPE – JACKING AND BORING METHOD. The actual total linear feet of casing, installed and accepted, will be paid for at the contract unit prices for casing pipe of various diameters, which price and payment shall constitute full compensation for furnishing, hauling and installing complete, for all excavation, boring, tunneling, jacking, and backfilling; and for furnishing all equipment, tools, labor and incidentals and the performance of all WORK necessary to complete the item in accordance with the PLANS and SPECIFICATIONS.
- 5.1.8 CASING PIPE – LAID IN OPEN CUT. The actual total linear feet of casing, installed and accepted, will be paid for at the contract unit price for casing pipe of various diameters, which price and payment shall constitute full compensation for furnishing, hauling and installing complete; for all excavation and backfilling; and for furnishing all equipment, tools, labor and incidentals and the performance of all WORK necessary to complete the item in accordance with PLANS and SPECIFICATIONS.
- 5.1.9 INSTALLING PIPE – JACKING AND BORING METHOD. The cost of installing by the jacking and boring method will be paid for at the contract unit price for installing pipe of various diameters, which price and payment shall constitute full compensation installing complete, for all excavation, boring, jacking, and backfilling and for furnishing all equipment, tools, labor and incidentals and the performance of all WORK necessary to complete the item in accordance with PLANS and SPECIFICATIONS.
- 5.1.10 SPECIAL PIPE FOUNDATIONS. Special pipe foundations, in place and accepted, will be paid for at the contract unit price per cubic yard (vehicular measurement) of gravel foundation and bedding, which price and payment shall constitute full compensation for furnishing, hauling, and installing all gravel, and for furnishing all equipment, tools, labor and incidentals necessary to complete the item in accordance with the PLANS and SPECIFICATIONS.
- 5.1.11 "RED DIRT" BACKFILL. "RED DIRT" Backfill material, in place and accepted, will be paid for at the contract unit price per cubic yard (vehicular measurement in accordance with Section DR-103 "Embankment" of these SPECIFICATIONS.
- 5.1.12 SHEETING AND BRACING LEFT IN PLACE. No separate payment will be made for sheeting and bracing left in place.
- 5.1.13 REMOVAL AND REPLACEMENT OF HIGHWAY, STREET, DRIVEWAY, AND SIDEWALK PAVEMENT AND CURBS. Removal and replacement of highway, street, driveway and sidewalk pavement in place and accepted will be paid for at the contract unit price per square yard for the various types of improved wearing surfaces. Removal and replacement of surfacing of gravel or shell roads in place, bladed and accepted will be paid for at the contract unit price per cubic

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yard of gravel or limestone. Removal and replacement of concrete curbs, in place and accepted, will be paid for at the contract unit price per linear foot. These prices and payment shall constitute full compensation for furnishing, hauling and installing all materials; for excavation and backfill compaction; sub-grade preparation; finishing and curing; and for furnishing all equipment, tools, labor and incidentals necessary to complete the item in accordance with PLANS and SPECIFICATIONS.

5.1.14 CONCRETE SURFACES TO BE SAWED. Concrete surfaces (streets, driveways, sidewalks, etc.) sawed, approved and accepted, will be paid for at the contract unit price per linear foot for this item, which price and payment shall constitute full compensation for furnishing all equipment, tools, labor and incidentals necessary to complete the item in accordance with PLANS and SPECIFICATIONS.

5.1.15 CLEARING AND GRUBBING. No separate payment will be made for clearing and grubbing.

5.1.16 REMOVAL AND REPLACEMENT OF CULVERT PIPES. Cost for the removal and replacement of culvert pipe will be included in the price bid for pipe. No additional payment will be made for new pipe necessary to replace culvert pipe broken or damaged while being removed and replaced unless authorized in writing by the ENGINEER.

5.1.17 HOT TAP CONNECTIONS OF MAINS. Hot tap connection of new mains to existing mains in place and accepted, will be paid for at the contract unit price per each according to size which price and payment shall constitute full compensation for locating the existing mains.

Preparation of bedding and backfilling, furnishing, hauling, and installing all material, including stopple fittings and three way tees, for removing and abandoning existing facilities, and for furnishing all equipment, tools, taps, labor and incidentals necessary to complete the item in accordance with the PLANS and SPECIFICATIONS.

5.1.18 SPECIAL LUMP SUM – METER/REGULATOR STATION, REGULATOR STATION OR REGULATOR STATION SCADA AND TELEMETRY REMOTE SYSTEM. Special lump sum meter/regulator stations, regulator stations or regulator station SCADA and telemetry remote systems will be paid for at the contract lump sum price which price and payment shall constitute full compensation for furnishing all equipment, tools, labor, and incidentals necessary to complete the item in accordance with the PLANS and SPECIFICATIONS.

5.1.19 SPECIAL LUMP SUM – RAILROAD CROSSINGS, ROADWAY CROSSINGS, CANAL CROSSINGS, AND LEVEE CROSSINGS, ETC. Special lump sum

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crossings in place and accepted will be paid for at the contract lump sum price which price and payment shall constitute full compensation for furnishing, hauling, and installing all material, and for furnishing all equipment, tools, labor and incidentals necessary to complete the item in accordance with PLANS and SPECIFICATIONS.

5.1.20 SPECIAL LUMP SUM – GAS SEPARATOR WITH CONCRETE VAULT. Special lump sum gas separator with concrete vault in place and accepted will be paid for at the contract lump sum price which price and payment shall constitute full compensation for furnishing, hauling and installing all material, and for furnishing all equipment, tools, labor and incidentals necessary to complete the item in accordance with PLANS and SPECIFICATIONS.

5.1.21 ITEMS TO BE FURNISHED TO OWNER. Items to be furnished to the OWNER shall be paid for at the lump sum contract price. The CONTRACTOR shall furnish a receipt signed by an authorized representative of the OWNER as evidence of delivery in good condition. The contract price and payment shall constitute full compensation for furnish, hauling, installing all material, and for furnishing all equipment, tools, labor and incidentals necessary to complete the item in accordance with PLANS and SPECIFICATIONS.

5.2 PAYMENT ITEMS. Payment will be made under:

Gas Pipe	(<u>Size</u>)"(<u>Type</u>), per linear foot;
Steel Pipe Fittings	per ton;
Valve w/box	(<u>Size</u>)"(<u>Type</u>), per each;
(CFH) meter setting gas service assemblies	(<u>Size</u>)"(<u>Type</u>), per each;
Gas Service Pipe	(<u>Size</u>)"(<u>Type</u>), per linear foot;
Casing Pipe Jacked and Bored	(<u>Size</u>)", per linear foot;
Casing pipe Laid in Open Cut	(<u>Size</u>)", per linear foot;
Gas pipe Jacked and Bored	(<u>Size</u>)", per linear foot;
Special pipe foundation	per cubic yard (vehicular measurement);
"Red Dirt" Backfill	per cubic yard (vehicular measurement);
Removal and replacement of	

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(<u>Type</u>) surfaces	per square yard
Sawing Concrete Surfaces	per linear foot;
Hot tap connection of mains	(<u>new main size</u>) to (existing main size), per each;
Meter/regulator station, regulator station, or regulator station SCADA and telemetry remote system	per lump sum;
(<u>Description of Crossing</u>) Crossing	per lump sum;
Gas separator with concrete vault	per lump sum;
Items to be furnished to Owner	per lump sum.

**SPECIFICATION CHECK LIST
GAS DISTRIBUTION SYSTEM**

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PROJECT: _____

PROJECT ENGINEER: _____

DATE: _____

PARAGRAPH NUMBER	ITEM REQUIREMENTS	APPLICABLE TO THIS PROJECT	
		<u>YES</u>	<u>NO</u>
1.3	The CONTRACTOR shall layout the WORK at his expense.	_____	_____
2.1	The type of pipe shall be specified on the PLANS.	_____	_____
	CONTRACTORS are required to abide by and Follow the OWNER'S drug testing program, Per D.O.T. Title 49 CFR, Parts 40 and 199, latest revision. This requirement shall also be included in the SPECIAL PROVISIONS.	_____	_____
2.1.3(A)	Steel pipe shall be manufactured in U.S. and be Schedule 40.	_____	_____
2.1.3(B)	Joints for steel pipe other than butt welded shall be specified on the PLANS.	_____	_____
2.1.3(C)	Steel pipe fittings other than as per ASTM A 234 shall be specified on the PLANS.	_____	_____
2.1.4(A)	Polyethylene (P.E.) pipe other than cell classification P. E. 355434 C shall be specified on the PLANS.	_____	_____
2.1.4(B)	Joints for P. E. pipe shall be butt heat fused as per ASTM D2513, specified on the PLANS.	_____	_____
2.1.5	Service line other than P. E. pipe shall be Specified on the PLANS.	_____	_____
2.1.7(A)	Steel valves, which shall conform to other that ANSI Class 150 Standards shall be specified on the PLANS.	_____	_____
2.1.8	Polyethylene (P.E.) valves shall be specified on the PLANS or Proposal Form. The allowable service pressure and class location shall be specified.	_____	_____
2.1.9	The type of service assemblies required shall be shown on the PLANS.	_____	_____

**SPECIFICATION CHECK LIST
GAS DISTRIBUTION SYSTEM**

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PARAGRAPH NUMBER	ITEM REQUIREMENTS	APPLICABLE TO THIS PROJECT	
		<u>YES</u>	<u>NO</u>
2.1.10	Type valve boxes required shall be shown on the PLANS.	_____	_____
2.1.11	Type pipe line crossing marker signs shall be shown on the PLANS.	_____	_____
2.1.12	This paragraph requires detection purposes wire over pipelines.	_____	_____
2..17	This paragraph describes painting SPECIFICATIONS to be used.	_____	_____
3.1.7	This paragraph outlines procedure for obtaining Project permits.	_____	_____
3.1.11	This paragraph requires "Type 1 Standard Pipe Foundation" to be included in the PLANS.	_____	_____
3.1.12	This paragraph outlines procedures and Specifications for welding and field coating steel pipe. The testing pressure of _____psig and maximum design pressure of _____psig are specified for the system designed on the PLANS and/or SPECIAL PROVISIONS.	_____	_____
	Specify in the SPECIAL PROVISIONS the frequency and number of welds to be tested by mechanical or radiographic testing, as appropriate, to insure the quality of said welds. Include that all welds installed above ground shall be radio-graphically tested. Specify who shall pay for such test.	_____	_____
3.1.13	This paragraph requires a factory representative to be present on all P. E. jobs for 3 full days.	_____	_____
3.1.20	This paragraph outlines the test pressure, length of pressure test and allowable leakage required.	_____	_____
3.1.26 & 3.1.27	Special backfill material and/or foundation shall be specified on the PLANS.	_____	_____
3.1.29	This paragraph requires replacement of all street surfaces with Details as shown in the PLANS.	_____	_____
5.1.1	This paragraph requires that periodic estimates On all gas piping and appurtenances be paid at 95% of contract unit price until tested and approved.	_____	_____