

Project Manual

CDBG 20 NR Water Main Replacement & Extensions

CDBG Contract No. 20DB-OO-04-55-02-N06

Town of Callahan, Florida

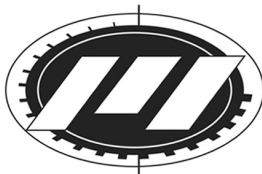
Project Number 0302-31-1

October 2021



BID SET

Prepared by:



MITTAUER
& ASSOCIATES, INC.
CONSULTING ENGINEERS &
PROJECT FUNDING SPECIALISTS
FLORIDA RY NO. 6569

PROJECT MANUAL
FOR
CDBG 20 NR WATER MAIN REPLACEMENT & EXTENSIONS
CDBG CONTRACT NO. 20DB-OO-04-55-02-N06
TOWN OF CALLAHAN, FLORIDA

MITTAUER
& ASSOCIATES, INC.
CONSULTING ENGINEERS &
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Orange Park, Florida
Project No. 0302-31-1
October 2021

CDBG 20 NR WATER MAIN REPLACEMENT & EXTENSIONS
CDBG CONTRACT NO. 20DB-OO-04-55-02-N06
TOWN OF CALLAHAN, FLORIDA

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SECTION 00111
ADVERTISEMENT FOR BIDS
CDBG 20 NR WATER MAIN REPLACEMENT & EXTENSIONS
CDBG CONTRACT NO. 20DB-OO-04-55-02-N06
TOWN OF CALLAHAN, FLORIDA

Sealed Bids for the construction of the CDBG 20 NR Water Main Replacement & Extensions project will be received by the Town of Callahan, Florida at the office of the Town Manager/Public Works Director, 542300 US Hwy 1 (P.O. Box 5016), Callahan, Florida 32011, until 3:00 p.m. local time on December 2, 2021. At that time, the Bids received will be publicly opened and read aloud.

The Project includes the following Work: Furnishing all labor, equipment, and materials necessary to construct approximately 3,700 LF of 6" water main plus associated valves, fittings, fire hydrants, and main connections, as well as a 1,900 SF pavilion and storage building and associated sitework.

Bids are requested for the following Contract: CDBG 20 NR Water Main Replacement & Extensions, CDBG Contract No. 20DB-OO-04-55-02-N06.

The Issuing Office for the Bidding Documents is: Mittauer & Associates, Inc., 580-1 Wells Road, Orange Park, Florida 32073, (904) 278-0030. Prospective Bidders may examine the Bidding Documents at the Issuing Office, Monday through Friday (excluding Holidays), and may obtain copies of the Bidding Documents from the Issuing Office as described below.

Bidding Documents will be provided electronically as portable document format (PDF) files and as printed Bidding Documents, both for a non-refundable charge of \$175 per set payable to "Mittauer & Associates, Inc." Upon Issuing Office's receipt of payment, the digital files will be emailed, and the printed Bidding Documents will be sent via UPS Ground. Partial sets of Bidding Documents will not be available from the Issuing Office. Neither Owner nor Engineer will be responsible for full or partial sets of Bidding Documents, including addenda, if any, obtained from sources other than the Issuing Office.

Bidding Documents also may be examined at the office of the Town Manager/Public Works Director, 542300 US Hwy 1, Callahan, Florida 32011, (904) 879-3801, Monday through Friday (excluding Holidays).

Bid security must be furnished in accordance with the Instructions to Bidders.

To be considered qualified, Bidder must be licensed to engage in the business of contracting in the State of Florida by the Construction Industry Licensing Board.

The Town of Callahan, Florida is an Equal Opportunity Employer and welcomes bids from MBE/WBE and Section 3 Contractors.

Instructions to Bidders.

For all further requirements regarding bid submittal, qualifications, procedures, and contract award, refer to the Instructions to Bidders that are included in the Bidding Documents.

END OF SECTION

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SECTION 00200

INSTRUCTIONS TO BIDDERS FOR CONSTRUCTION CONTRACT

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ARTICLE 1—DEFINED TERMS

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

ARTICLE 2—BIDDING DOCUMENTS

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

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Paragraph 2.06.A above. However, Bidder assumes all risks associated with differences arising from transmission/receipt of Electronic Documents versions of Bidding Documents and reproductions prepared from those versions and, further, assumes all risks, costs, and responsibility associated with use of the Electronic Documents versions to derive information that is not explicitly contained in printed paper versions of the documents, and for Bidder's reliance upon such derived information.

- C. After the Contract is awarded, the Owner will provide or direct the Engineer to provide for the use of the Contractor documents that were developed by Engineer as part of the Project design process, as Electronic Documents in native file formats.
 1. Electronic Documents that are available in native file format include:
 - a. Drawings
 2. Release of such documents will be solely for the convenience of the Contractor. No such document is a Contract Document.
 3. Unless the Contract Documents explicitly identify that such information will be available to the Successful Bidder (Contractor), nothing herein will create an obligation on the part of the Owner or Engineer to provide or create such information, and the Contractor is not entitled to rely on the availability of such information in the preparation of its Bid or pricing of the Work. In all cases, the Contractor shall take appropriate measures to verify that any electronic/digital information provided in Electronic Documents is appropriate and adequate for the Contractor's specific purposes.
 4. In no case will the Contractor be entitled to additional compensation or time for completion due to any differences between the actual Contract Documents and any related document in native file format.

ARTICLE 3—QUALIFICATIONS OF BIDDERS

- 3.01 To be considered qualified, bidder shall be licensed to engage in the business of contracting in the State of Florida by the Construction Industry Licensing Board. To demonstrate Bidder's qualifications to perform the Work, after submitting its Bid and within five (5) days of Owner's request, Bidder must submit the following information:
- A. Written evidence establishing its qualifications such as financial data, previous experience, and present commitments.
 - B. Evidence that Bidder is authorized to do business in the state where the Project is located.
 - C. Bidder's State of Florida contractor license number.
 - D. Subcontractor and Supplier qualification information.
 - E. List of similar projects completed within the most recent five (5) years. Provide brief description of project, date completed, original contract amount, final contract amount, contact names and phone numbers of Owners and Engineers.
 - F. List of currently active projects with project description, contract amount, percent complete, contact names and phone numbers of Owners and Engineers.
 - G. Other required information regarding qualifications.

- 3.02 A Bidder's failure to submit required qualification information within the times indicated may disqualify Bidder from receiving an award of the Contract.
- 3.03 No requirement in this Article 3 to submit information will prejudice the right of Owner to seek additional pertinent information regarding Bidder's qualifications.
- 3.04 Bidder is advised to carefully review those portions of the Bid Form requiring Bidder's representations and certifications.

ARTICLE 4—PRE-BID CONFERENCE

- 4.01 A pre-bid conference will not be conducted.

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

5.01 *Site and Other Areas*

- A. The Site is identified in the Bidding Documents. By definition, the Site includes rights-of-way, easements, and other lands furnished by Owner for the use of the Contractor. Any additional lands required for temporary construction facilities, construction equipment, or storage of materials and equipment, and any access needed for such additional lands, are to be obtained and paid for by Contractor.

5.02 *Existing Site Conditions*

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

1. The Supplementary Conditions identify the following regarding existing conditions at or adjacent to the Site:
 - a. Those reports of explorations and tests of subsurface conditions at or adjacent to the Site that contain Technical Data.
 - b. Those drawings known to Owner of existing physical conditions at or adjacent to the Site, including those drawings depicting existing surface or subsurface structures at or adjacent to the Site (except Underground Facilities), that contain Technical Data.
 - c. Reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site.
 - d. Technical Data contained in such reports and drawings.
2. Owner will make copies of reports and drawings referenced above available to any Bidder on request. These reports and drawings are not part of the Contract Documents, but the Technical Data contained therein upon whose accuracy Bidder is entitled to rely, as provided in the General Conditions, has been identified and established in the Supplementary Conditions. Bidder is responsible for any interpretation or conclusion Bidder draws from any Technical Data or any other data, interpretations, opinions, or information contained in such reports or shown or indicated in such drawings.
3. If the Supplementary Conditions do not identify Technical Data, the default definition of Technical Data set forth in Article 1 of the General Conditions will apply.

- B. *Underground Facilities:* Underground Facilities are shown or indicated on the Drawings, pursuant to Paragraph 5.05 of the General Conditions, and not in the drawings referred to in Paragraph 5.02.A of these Instructions to Bidders. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data.

5.03 *Other Site-related Documents*

- A. In addition to the documents regarding existing Site conditions referred to in Paragraph 5.02.A, the following other documents relating to conditions at or adjacent to the Site are known to Owner and made available to Bidders for reference:

- 1. N/A

Owner will make copies of these other Site-related documents available to any Bidder on request.

- B. Owner has not verified the contents of these other Site-related documents, and Bidder may not rely on the accuracy of any data or information in such documents. Bidder is responsible for any interpretation or conclusion Bidder draws from the other Site-related documents.
- C. The other Site-related documents are not part of the Contract Documents.
- D. Bidders are encouraged to review the other Site-related documents, but Bidders will not be held accountable for any data or information in such documents. The requirement to review and take responsibility for documentary Site information is limited to information in (1) the Contract Documents and (2) the Technical Data.
- E. No other Site-related documents are available.

5.04 *Site Visit and Testing by Bidders*

- A. Bidder is required to visit the Site and conduct a thorough visual examination of the Site and adjacent areas. During the visit the Bidder must not disturb any ongoing operations at the Site.
- B. A site visit has not been pre-scheduled. Bidders shall use contact information in Paragraph 5.04 D to arrange access.
- C. Bidders visiting the Site are required to arrange their own transportation to the Site.
- D. All access to the Site other than during a regularly scheduled Site visit must be coordinated through the following Owner contact for visiting the Site: Mike Williams, Town Manager/Public Works Director, at (904) 879-3801. Bidder must conduct the required Site visit during normal working hours.
- E. Bidder is not required to conduct any subsurface testing or exhaustive investigations of Site conditions.
- F. On request, and to the extent Owner has control over the Site, and schedule permitting, the Owner will provide Bidder general access to the Site to conduct such additional examinations, investigations, explorations, tests, and studies as Bidder deems necessary for preparing and submitting a successful Bid. Owner will not have any obligation to grant such access if doing so is not practical because of existing operations, security or safety concerns, or restraints on Owner's authority regarding the Site. Bidder is responsible for establishing access needed to reach specific selected test sites.

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- G. Bidder must comply with all applicable Laws and Regulations regarding excavation and location of utilities, obtain all permits, and comply with all terms and conditions established by Owner or by property owners or other entities controlling the Site with respect to schedule, access, existing operations, security, liability insurance, and applicable safety programs.
- H. Bidder must fill all holes and clean up and restore the Site to its former condition upon completion of such explorations, investigations, tests, and studies.

5.05 *Owner's Safety Program – Not Applicable*

5.06 *Other Work at the Site*

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

ARTICLE 6—BIDDER'S REPRESENTATIONS AND CERTIFICATIONS

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

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

ARTICLE 7—INTERPRETATIONS AND ADDENDA

- 7.01 Owner, on its own initiative, may issue Addenda to clarify, correct, supplement, or change non-technical aspects of the Bidding Documents.
- 7.02 Bidder shall submit all questions about the meaning or intent of the Bidding Documents to Engineer in writing. Contact information and submittal procedures for such questions are as follows:
 - A. Timothy P. Norman, P.E., tnorman@mittauer.com
- 7.03 Interpretations or clarifications considered necessary by Engineer in response to such questions will be issued by Addenda delivered to all registered plan holders. Questions received less than seven days prior to the date for opening of Bids may not be answered.
- 7.04 Only responses set forth in an Addendum will be binding. Oral and other interpretations or clarifications will be without legal effect. Responses to questions are not part of the Contract Documents unless set forth in an Addendum that expressly modifies or supplements the Contract Documents.

ARTICLE 8—BID SECURITY

- 8.01 A Bid must be accompanied by Bid security made payable to Owner in an amount of 5% percent of Bidder's maximum Bid price (determined by adding the base bid and all additive alternates) and in the form of a Bid bond issued by a surety meeting the requirements of Paragraph 6.01 of the General Conditions. Such Bid bond will be issued in the form included in the Bidding Documents.
- 8.02 The Bid security of the apparent Successful Bidder will be retained until Owner awards the contract to such Bidder, and such Bidder has executed the Contract, furnished the required Contract security, and met the other conditions of the Notice of Award, whereupon the Bid security will be released. If the Successful Bidder fails to execute and deliver the Contract and furnish the required Contract security within 15 business days after the Notice of Award, Owner may consider Bidder to be in default, annul the Notice of Award, and the Bid security of that Bidder will be forfeited, in whole in the case of a penal sum bid bond, and to the extent of Owner's damages in the case of a damages-form bond. Such forfeiture will be Owner's exclusive remedy if Bidder defaults.
- The Bid security of other Bidders that Owner believes to have a reasonable chance of receiving the award may be retained by Owner until the earlier of 7 days after the Effective Date of the contract or 61 days after the Bid opening, whereupon Bid security furnished by such Bidders will be released.
- 8.03 Bid security of other Bidders that Owner believes do not have a reasonable chance of receiving the award will be released within 7 days after the Bid opening.
- 8.04 Bid security of other Bidders that Owner believes do not have a reasonable chance of receiving the award will be released within 7 days after the Bid opening.

ARTICLE 9—CONTRACT TIMES

- 9.01 The number of days within which, or the dates by which, the Work is to be (a) substantially completed and (b) ready for final payment, and (c) Milestones (if any) are to be achieved, are set forth in the Agreement.
- 9.02 Provisions for liquidated damages, if any, for failure to timely attain a Milestone, Substantial Completion, or completion of the Work in readiness for final payment, are set forth in the Agreement.

ARTICLE 10—SUBSTITUTE AND "OR EQUAL" ITEMS

- 10.01 The Contract for the Work, as awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents without consideration during the bidding and Contract award process of possible substitute or "or-equal" items. In cases in which the Contract allows the Contractor to request that Engineer authorize the use of a substitute or "or-equal" item of material or equipment, application for such acceptance may not be made to and will not be considered by Engineer until after the Effective Date of the Contract.
- 10.02 All prices that Bidder sets forth in its Bid will be based on the presumption that the Contractor will furnish the materials and equipment specified or described in the Bidding Documents, as supplemented by Addenda. Any assumptions regarding the possibility of post-Bid approvals of "or-equal" or substitution requests are made at Bidder's sole risk.

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ARTICLE 11—SUBCONTRACTORS, SUPPLIERS, AND OTHERS

- 11.01 A Bidder must be prepared to retain specific Subcontractors and Suppliers for the performance of the Work if required to do so by the Bidding Documents or in the Specifications. If a prospective Bidder objects to retaining any such Subcontractor or Supplier and the concern is not relieved by an Addendum, then the prospective Bidder should refrain from submitting a Bid.
- 11.02 *The apparent Successful Bidder, and any other Bidder so requested, must submit to Owner a list of the Subcontractors or Suppliers proposed for all major component and construction disciplines of the Work within five days after Bid opening.*
- 11.03 If requested by Owner, such list must be accompanied by an experience statement with pertinent information regarding similar projects and other evidence of qualification for each such Subcontractor or Supplier. If Owner or Engineer, after due investigation, has reasonable objection to any proposed Subcontractor or Supplier, Owner may, before the Notice of Award is given, request apparent Successful Bidder to submit an acceptable substitute, in which case apparent Successful Bidder will submit a substitute, Bidder's Bid price will be increased (or decreased) by the difference in cost occasioned by such substitution, and Owner may consider such price adjustment in evaluating Bids and making the Contract award.
- 11.04 If apparent Successful Bidder declines to make any such substitution, Owner may award the Contract to the next lowest Bidder that proposes to use acceptable Subcontractors and Suppliers. Declining to make requested substitutions will constitute grounds for forfeiture of the Bid security of any Bidder. Any Subcontractor or Supplier, so listed and against which Owner or Engineer makes no written objection prior to the giving of the Notice of Award will be deemed acceptable to Owner and Engineer subject to subsequent revocation of such acceptance as provided in Paragraph 7.07 of the General Conditions.

ARTICLE 12—PREPARATION OF BID

- 12.01 The Bid Form is included with the Bidding Documents.
- A. All blanks on the Bid Form must be completed in non-erasable ink and the Bid Form signed in non-erasable ink. Erasures or alterations must be initialed in ink by the person signing the Bid Form. A Bid price must be indicated for each section, Bid item, alternate, adjustment unit price item, and unit price item listed therein.
- B. If the Bid Form expressly indicates that submitting pricing on a specific alternate item is optional, and Bidder elects to not furnish pricing for such optional alternate item, then Bidder may enter the words "No Bid" or "Not Applicable."
- 12.02 If Bidder has obtained the Bidding Documents as Electronic Documents, then Bidder shall prepare its Bid on a paper copy of the Bid Form printed from the Electronic Documents version of the Bidding Documents. The printed copy of the Bid Form must be clearly legible, printed on 8½-inch by 11-inch paper and as closely identical in appearance to the Electronic Document version of the Bid Form as may be practical. The Owner reserves the right to accept Bid Forms which nominally vary in appearance from the original paper version of the Bid Form, providing that all required information and submittals are included with the Bid.
- 12.03 A Bid by a corporation must be executed in the corporate name by a corporate officer (whose title must appear under the signature). The corporate address and state of incorporation must be shown.

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- 12.04 A Bid by a partnership must be executed in the partnership name and signed by a partner (whose title must appear under the signature). The official address of the partnership must be shown.
- 12.05 A Bid by a limited liability company must be executed in the name of the firm by a member or other authorized person. The state of formation of the firm and the official address of the firm must be shown.
- 12.06 A Bid by an individual must show the Bidder's name and official address.
- 12.07 A Bid by a joint venture must be executed by an authorized representative of each joint venturer in the manner indicated on the Bid Form. The joint venture must have been formally established prior to submittal of a Bid, and the official address of the joint venture must be shown.
- 12.08 All names must be printed in ink below the signatures.
- 12.09 The Bid must contain an acknowledgment of receipt of all Addenda, the numbers of which must be filled in on the Bid Form.
- 12.10 Postal and e-mail addresses and telephone number for communications regarding the Bid must be shown.
- 12.11 The Bid must contain evidence of Bidder's authority to do business in the state where the Project is located in the form of a valid business license number, or Bidder must certify in writing that it will obtain such authority within the time for acceptance of Bids and attach such certification to the Bid.
- 12.12 After bid opening, Owner may request 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.
- 12.13 Bidder must be licensed to engage in the business of contracting in the State of Florida by the Construction Industry Licensing Board. Bidder's state contractor license number must be shown on the Bid Form.

ARTICLE 13—BASIS OF BID

13.01 *Lump Sum – Not Applicable*

13.02 *Unit Price*

- A. Bidders must submit a Bid on a unit price basis for each item of Work listed in the unit price section of the Bid Form.
- B. The "Bid Price" (sometimes referred to as the extended price) for each unit price Bid item will be the product of the "Estimated Quantity", which Owner or its representative has set forth in the Bid Form, for the item and the corresponding "Bid Unit Price" offered by the Bidder. The total of all unit price Bid items will be the sum of these "Bid Prices"; such total will be used by Owner for Bid comparison purposes. The final quantities and Contract Price will be determined in accordance with Paragraph 13.03 of the General Conditions
- C. Discrepancies between the multiplication of units of Work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum.

13.03 *Allowances – Not Applicable*

ARTICLE 14—SUBMITTAL OF BID

- 14.01 A Bid must be received no later than the date and time prescribed and at the place indicated in the Advertisement for Bids and must be enclosed in a plainly marked package with the Project title, and, if applicable, the designated portion of the Project for which the Bid is submitted, the name and address of Bidder, and must be accompanied by the Bid security and other required documents. If a Bid is sent by mail or other delivery system, the sealed envelope containing the Bid must be enclosed in a separate package plainly marked on the outside with the notation "BID ENCLOSED." A mailed Bid must be addressed to the **Town of Callahan, 542300 US Hwy 1 (P.O. Box 5016), Callahan, Florida 32011.**
- 14.02 Bids received after the date and time prescribed for the opening of bids, or not submitted at the correct location or in the designated manner, will not be accepted and will be returned to the Bidder unopened.
- 14.03 Bids may not be submitted electronically.

ARTICLE 15—MODIFICATION AND WITHDRAWAL OF BID

- 15.01 An unopened Bid may be withdrawn by an appropriate document duly executed in the same manner that a Bid must be executed and delivered to the place where Bids are to be submitted prior to the date and time for the opening of Bids. Upon receipt of such notice, the unopened Bid will be returned to the Bidder.
- 15.02 If a Bidder wishes to modify its Bid prior to Bid opening, Bidder must withdraw its initial Bid in the manner specified in Paragraph 15.01 and submit a new Bid prior to the date and time for the opening of Bids.
- 15.03 If within 24 hours after Bids are opened any Bidder files a duly signed written notice with Owner and promptly thereafter demonstrates to the reasonable satisfaction of Owner that there was a material and substantial mistake in the preparation of its Bid, the Bidder may withdraw its Bid, and the Bid security will be returned. Thereafter, if the Work is rebid, the Bidder will be disqualified from further bidding on the Work.

ARTICLE 16—OPENING OF BIDS

- 16.01 Bids will be opened at the time and place indicated in the Advertisement for Bids 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 17—BIDS TO REMAIN SUBJECT TO ACCEPTANCE

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

ARTICLE 18—EVALUATION OF BIDS AND AWARD OF CONTRACT

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

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- 18.02 Owner will reject the Bid of any Bidder that Owner finds, after reasonable inquiry and evaluation, to not be responsible.
- 18.03 If Bidder purports to add terms or conditions to its Bid, takes exception to any provision of the Bidding Documents, or attempts to alter the contents of the Contract Documents for purposes of the Bid, whether in the Bid itself or in a separate communication to Owner or Engineer, then Owner will reject the Bid as nonresponsive.
- 18.04 If Owner awards the contract for the Work, such award will be to the responsible Bidder submitting the lowest responsive Bid.
- 18.05 *Evaluation of Bids*
- A. In evaluating Bids, Owner will consider whether the Bids comply with the prescribed requirements, and such alternates, unit prices, and other data, as may be requested in the Bid Form or prior to the Notice of Award.
 - B. For the determination of the apparent low Bidder when unit price bids are submitted, Bids will be compared on the basis of the total of the products of the estimated quantity of each item and unit price Bid for that item, together with any lump sum items.
- 18.06 In evaluating whether a Bidder is responsible, Owner will consider the qualifications of the Bidder and may consider the qualifications and experience of Subcontractors and Suppliers proposed for those portions of the Work for which the identity of Subcontractors and Suppliers must be submitted as provided in the Bidding Documents.
- 18.07 Owner may conduct such investigations as Owner deems necessary to establish the responsibility, qualifications, and financial ability of Bidders and any proposed Subcontractors or Suppliers.

ARTICLE 19—BONDS AND INSURANCE

- 19.01 Article 6 of the General Conditions, as may be modified by the Supplementary Conditions, sets forth Owner’s requirements as to performance and payment bonds, other required bonds (if any), and insurance. When the Successful Bidder delivers the executed Agreement to Owner, it must be accompanied by required bonds and insurance documentation.
- 19.02 Article 8, Bid Security, of these Instructions, addresses any requirements for providing bid bonds as part of the bidding process.

ARTICLE 20—SIGNING OF AGREEMENT

- 20.01 When Owner issues a Notice of Award to the Successful Bidder, it will be accompanied by the unexecuted counterparts of the Agreement along with the other Contract Documents as identified in the Agreement. Within 15 days thereafter, Successful Bidder must execute and deliver the required number of counterparts of the Agreement and any bonds and insurance documentation required to be delivered by the Contract Documents to Owner. Within 10 days thereafter, Owner will deliver one fully executed counterpart of the Agreement to Successful Bidder, together with printed and electronic copies of the Contract Documents as stated in Paragraph 2.02 of the General Conditions.

ARTICLE 21—SALES AND USE TAXES – NOT APPLICABLE

ARTICLE 22—CONTRACTS TO BE ASSIGNED – NOT APPLICABLE

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ARTICLE 23 – WAGE RATES

23.01 Project is subject to Federal Labor Standards Provisions (Davis-Bacon). See Articles 10 and 11 of Section 00810 “CDBG Supplemental Conditions” and attached Wage Decision.

ARTICLE 24 – CDBG REQUIREMENTS

24.01 Prospective bidders are required to make good faith efforts to utilize Minority Business Enterprises (MBE) and Woman Business Enterprises (WBE) in accordance with 24 CFR 85.36(e)(2)(vi), for the construction of this project. The successful bidder will be required to submit documentation of such efforts prior to the award of the construction contract.

24.02 Bidders are hereby notified that certain additional requirements can be found in Section 00810 "CDBG SUPPLEMENTAL CONDITIONS." In order to verify compliance with the Davis Bacon Wage Rate Decision, the project Grant Administrator will be performing on-site interviews with the contractor's employees and subcontractors. The Contractor will also be required to submit weekly payroll reports for all employees and subcontractors who are on the job site. Payroll reports will be required to indicate job category (e.g., carpenter) and construction type (e.g., heavy) so that compliance can be confirmed.

24.03 Prior to contract award, the General Contractor will be required to execute Section 3 Compliance Information, "Certification Regarding Debarment Suspension, and Other Responsibility Matters - Primary Covered Transactions" and a "Sworn Statement under Section 287.133(3)(a), Florida Statutes, on Public Entity Crimes." All subcontractors will be required to execute a "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion." These forms can be found at the end of Section 00810.

24.04 MBE/WBE Solicitation Requirements: The grant agency requires that the Town maintain a file that contains MBE/WBE participation, and they will be reviewing documentation of the prime contractor's efforts to obtain participation. Specifically, prior to execution of a contract with the prime contractor, the contractor must be able to document contacting MBE/WBE firms and why none were used, such as: quote was higher than non-MBE/WBE firm, MBE/WBE firm did not respond, or responded that they were too busy to work on project. A directory of certified MBE/WBE firms may be found at the State Office of Supplier Diversity website: <https://osd.dms.myflorida.com/directories>.

END OF SECTION

SECTION 00410
BID FORM
CDBG 20 NR WATER MAIN REPLACEMENT & EXTENSIONS
CDBG CONTRACT NO. 20DB-OO-04-55-02-N06
TOWN OF CALLAHAN, FLORIDA

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

ARTICLE 1—BIDDER

SUBMITTED BY: _____ **DATE:** _____
Company Name (printed or typed)

Address

City, State, Zip

BIDDER'S CONTACT: _____
Name

PHONE NO.: _____

FAX NO.: _____

EMAIL ADDRESS: _____

CONTRACTOR'S FLORIDA LICENSE NO.: _____

ARTICLE 2—OWNER

2.01 This Bid is submitted to:

Town of Callahan
542300 US Hwy 1 (P.O. Box 5016)
Callahan, Florida 32011

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

ARTICLE 3—ATTACHMENTS TO THIS BID

3.01 The following documents are submitted with and made a condition of this Bid:

- A. Required Bid security;
- B. If Bidder is a corporation, a partnership, or a joint venture, attach evidence of authority to sign;

ARTICLE 4—BASIS OF BID—LUMP SUM BID AND UNIT PRICES

4.01 *Unit Price Bids*

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

Item No.	Item Description	Est. Qty	Unit	Unit Price	Cost
1	Mobilization and General Conditions	1	LS	\$	\$
2	6" PVC Water Main	4,200	LF	\$	\$
3	6" Gate Valves and Boxes	5	Each	\$	\$
4	Ductile Iron Fittings - Cement Lined	600	lbs	\$	\$
5	Fire Hydrant Assembly	7	Each	\$	\$
6	Remove Existing Fire Hydrants	1	Each	\$	\$
7	Connections to Existing Mains				
a.	8" x 6" Tapping Sleeve and Valve	1	Each	\$	\$
b.	6" x 6" Tapping Sleeve and Valve	7	Each	\$	\$
8	Branch Connection				
a.	2" Type A	1	Each	\$	\$
b.	2" Type B	2	Each	\$	\$
9	Cut, Cap, and Abandon Existing Mains				
a.	6"	2	Each	\$	\$
b.	2"	10	Each	\$	\$
10	Reconnect Existing Water Services				
a.	Short	10	Each	\$	\$1
b.	Long	16	Each	\$	\$
11	Removal and Replacement of Unsuitable Soils	500	LF	\$	\$
12	Concrete Encasement and Specials	20	CY	\$	\$

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Item No.	Item Description	Est. Qty	Unit	Unit Price	Cost
13	Asphaltic Roadway/Sidewalk/Driveway Restoration	330	LF	\$	\$
14	Asphaltic Overlay	225	SY	\$	\$
15	Concrete Driveway/Sidewalk Restoration	25	LF	\$	\$
16	Stabilized Roadway/Driveway Restoration	160	LF	\$	\$
17	Grassing				
a.	Seed and Mulch	1,700	LF	\$	\$
b.	Sodding	2,000	LF	\$	\$
18	Flushing, Pressure Testing, and Disinfection	1	LS	\$	\$
19	Rehabilitation of Lift Station No. 1	1	LS	\$	\$
20	Demobilization and Project Closeout	1	LS	\$	\$
21	Depot Park Pavilion and Storage Building	1	LS	\$	\$
22	Depot Park Sitework	1	LS	\$	\$
TOTAL BASE BID					\$
ADDITIVE ALTERNATE					
1	Depot Park Conventional Framing	1	LS	\$	\$
2	Depot Park Additional Electrical and Lighting	1	LS	\$	\$
3	Depot Park Building Insulation	1	LS	\$	\$
TOTAL ADDITIVE ALTERNATE					\$
TOTAL BID (BASE BID + ADDITIVE ALTERNATE)					\$

B. Bidder acknowledges that:

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

ARTICLE 5—TIME OF COMPLETION

5.01 Bidder agrees that the Work will be substantially complete and will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.

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

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ARTICLE 6—BIDDER’S ACKNOWLEDGEMENTS: ACCEPTANCE PERIOD, INSTRUCTIONS, AND RECEIPT OF ADDENDA

6.01 *Bid Acceptance Period*

- A. This Bid will remain subject to acceptance for 60 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

6.02 *Instructions to Bidders*

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

6.03 *Receipt of Addenda*

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

Addendum Number	Addendum Date

ARTICLE 7—BIDDER’S REPRESENTATIONS AND CERTIFICATIONS

7.01 *Bidder’s Representations*

- A. In submitting this Bid, Bidder represents the following:
 - 1. Bidder has examined and carefully studied the Bidding Documents, including Addenda.
 - 2. Bidder has visited the Site, conducted a thorough visual examination of the Site and adjacent areas, and become familiar with the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
 - 3. Bidder is familiar with all Laws and Regulations that may affect cost, progress, and performance of the Work.
 - 4. Bidder has carefully studied the reports of explorations and tests of subsurface conditions at or adjacent to the Site and the drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, with respect to the Technical Data in such reports and drawings.
 - 5. Bidder has carefully studied the reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, with respect to Technical Data in such reports and drawings.
 - 6. Bidder has considered the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and the Technical Data identified in the Supplementary Conditions or by definition, with respect to the effect of such information, observations, and Technical Data on (a) the cost, progress, and performance of the Work; (b) the means, methods, techniques, sequences, and

procedures of construction to be employed by Bidder, if selected as Contractor; and (c) Bidder's (Contractor's) safety precautions and programs.

7. Based on the information and observations referred to in the preceding paragraph, Bidder agrees that no further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract.
8. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.
9. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and of discrepancies between Site conditions and the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.
10. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.
11. The submission of this Bid constitutes an incontrovertible representation by Bidder that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.
12. Bidder is licensed to engage in the business of contracting in the State of Florida by the Construction Industry Licensing Board.

7.02 *Bidder's Certifications*

A. The Bidder certifies the following:

1. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation.
2. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid.
3. Bidder has not solicited or induced any individual or entity to refrain from bidding.
4. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 7.02.A:
 - a. Corrupt practice means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process.
 - b. Fraudulent practice means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition.
 - c. Collusive practice means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels.
 - d. Coercive practice means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

BIDDER hereby submits this Bid as set forth above:

Bidder:

(typed or printed name of organization)

By: _____
(individual's signature)

Name: _____
(typed or printed)

Title: _____
(typed or printed)

Date: _____
(typed or printed)

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

Attest: _____
(individual's signature)

Name: _____
(typed or printed)

Title: _____
(typed or printed)

Date: _____
(typed or printed)

Address for giving notices:

Bidder's Business License No. _____

Affix corporate seal, if applicable.

END OF SECTION

SECTION 00430
BID BOND (PENAL SUM FORM)

Bidder Name: Address <i>(principal place of business)</i> :	Surety Name: Address <i>(principal place of business)</i> :
Owner Name: Town of Callahan, Florida Address <i>(principal place of business)</i> : 542300 US Hwy 1 (P.O. Box 5016) Callahan, Florida 32011	Bid Project <i>(name and location)</i> : CDBG 20 NR Water Main Replacement & Extensions CDBG Contract No. 20DB-OO-04-55-02-N06 Callahan, Florida Bid Due Date:
Bond: 5% of Maximum Bid (Base Bid plus Alternates) Bond No.: Penal Sum: Date of Bond:	
Surety and Bidder, intending to be legally bound hereby, subject to the terms set forth in this Bid Bond, do each cause this Bid Bond to be duly executed by an authorized officer, agent, or representative.	
Bidder _____ <i>(Full formal name of Bidder)</i>	Surety _____ <i>(Full formal name of Surety) (corporate seal)</i>
By: _____ <i>(Signature)</i>	By: _____ <i>(Signature) (Attach Power of Attorney)</i>
Name: _____ <i>(Printed or typed)</i>	Name: _____ <i>(Printed or typed)</i>
Title: _____	Title: _____
Attest: _____ <i>(Signature)</i>	Attest: _____ <i>(Signature)</i>
Name: _____ <i>(Printed or typed)</i>	Name: _____ <i>(Printed or typed)</i>
Title: _____	Title: _____
<i>Notes: (1) Note: Addresses are to be used for giving any required notice. (2) Provide execution by any additional parties, such as joint venturers, if necessary.</i>	

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

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EJCDC® C-430, Bid Bond (Penal Sum Form).**

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SECTION 00520

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

This Agreement is by and between the Town of Callahan, Florida (“Owner”) and _____ (“Contractor”).

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

Owner and Contractor hereby agree as follows:

ARTICLE 1—WORK

1.01 Contractor shall complete all Work as specified or indicated in the Contract Documents. The Work is generally described as follows: Furnishing all labor, equipment, and materials necessary to construct approximately 3,700 LF of 6" water main plus associated valves, fittings, fire hydrants, and main connections, as well as a 1,900 SF pavilion and storage building and associated sitework.

ARTICLE 2—THE PROJECT

2.01 The Project, of which the Work under the Contract Documents is a part, is generally described as follows: CDBG 20 NR Water Main Replacement & Extensions, CDBG Contract No. 20DB-OO-04-55-02-N06.

ARTICLE 3—ENGINEER

3.01 The Owner has retained Mittauer & Associates, Inc. (“Engineer”) to act as Owner’s representative, assume all duties and responsibilities of Engineer, and have the rights and authority assigned to Engineer in the Contract.

3.02 The Project has been designed by Mittauer & Associates, Inc., 580-1 Wells Road, Orange Park, Florida 32073.

ARTICLE 4—CONTRACT TIMES

4.01 *Time is of the Essence*

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

4.02 *Contract Times: Days*

A. The Work will be substantially complete within 180 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 210 days after the date when the Contract Times commence to run.

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4.03 *Liquidated Damages*

- A. Contractor and Owner recognize that time is of the essence as stated in Paragraph 4.01 above and that Owner will suffer financial and other losses if the Work is not completed and Milestones not achieved within the Contract Times, as duly modified. The parties also recognize the delays, expense, and difficulties involved in proving, in a legal or arbitration proceeding, the actual loss suffered by Owner if the Work is not completed on time. Accordingly, instead of requiring any such proof, Owner and Contractor agree that as liquidated damages for delay (but not as a penalty):
1. *Substantial Completion:* Contractor shall pay Owner \$400 for each day that expires after the time (as duly adjusted pursuant to the Contract) specified above for Substantial Completion, until the Work is substantially complete.
 2. *Completion of Remaining Work:* After Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Times (as duly adjusted pursuant to the Contract) for completion and readiness for final payment, Contractor shall pay Owner \$250 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 additive and will be imposed concurrently.
- B. If Owner recovers liquidated damages for a delay in completion by Contractor, then such liquidated damages are Owner's sole and exclusive remedy for such delay, and Owner is precluded from recovering any other damages, whether actual, direct, excess, or consequential, for such delay, except for special damages (if any) specified in this Agreement.

4.04 *Special Damages - Not Applicable*

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, 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 the basis of Contractor's Applications for Payment on or about the 25th 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, including funding agency (if any) approval. 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

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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 the value of the Work completed (with the balance being retainage).
 - 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 95 percent of the Work completed, less such amounts set off by Owner pursuant to Paragraph 15.01.E of the General Conditions, and less 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, Owner shall pay the remainder of the Contract Price in accordance with Paragraph 15.06 of the General Conditions.

6.04 *Consent of Surety*

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

6.05 *Interest*

- A. All amounts not paid when due will bear interest at the rate of 1/12th of the federal prime interest rate (on the date of the application) per month.

ARTICLE 7—CONTRACT DOCUMENTS

7.01 *Contents*

- A. The Contract Documents consist of all of the following:
 1. This Agreement (Section 00520).
 2. Bonds:
 - a. Performance bond (together with power of attorney) (Section 00610).
 - b. Payment bond (together with power of attorney) (Section 00615).
 3. General Conditions (Section 00700).
 4. Supplementary Conditions (Section 00800 and Section 00810).
 5. Specifications as listed in the table of contents of the project manual.
 6. Drawings (not attached but incorporated by reference) consisting of 24 sheets with each sheet bearing the following general title: CDBG 20 NR Water Main Replacement & Extensions.

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7. Addenda (numbers ____ to ____, inclusive).
8. Exhibits to this Agreement (enumerated as follows):
 - a. Contractor's Bid (Section 00410)
9. The following which may be delivered or issued on or after the Effective Date of the Contract and are not attached hereto:
 - a. Notice to Proceed.
 - b. Work Change Directives.
 - c. Change Orders.
 - d. Field Orders.
 - e. Warranty Bond, if any.
- B. The Contract Documents listed in Paragraph 7.01.A are attached to this Agreement (except as expressly noted otherwise above).
- C. There are no Contract Documents other than those listed above in this Article 7.
- D. The Contract Documents may only be amended, modified, or supplemented as provided in the Contract.

ARTICLE 8—REPRESENTATIONS, CERTIFICATIONS, AND STIPULATIONS

8.01 Contractor's Representations

- A. In order to induce Owner to enter into this Contract, Contractor makes the following representations:
 1. Contractor has examined and carefully studied the Contract Documents, including Addenda.
 2. Contractor has visited the Site, conducted a thorough visual examination of the Site and adjacent areas, and become familiar with the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
 3. Contractor is familiar with all Laws and Regulations that may affect cost, progress, and performance of the Work.
 4. Contractor has carefully studied the reports of explorations and tests of subsurface conditions at or adjacent to the Site and the drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, with respect to the Technical Data in such reports and drawings.
 5. Contractor has carefully studied the reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, with respect to Technical Data in such reports and drawings.
 6. Contractor has considered the information known to Contractor itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Contract Documents; and the Technical

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Data identified in the Supplementary Conditions or by definition, with respect to the effect of such information, observations, and Technical Data on (a) the cost, progress, and performance of the Work; (b) the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor; and (c) Contractor's safety precautions and programs.

7. 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.
8. 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.
9. Contractor has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract Documents, and of discrepancies between Site conditions and the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.
10. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.
11. 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.
12. Contractor is authorized to do business in the state where the Project is located.
13. Bidder is licensed to engage in the business of contracting in the State of Florida by the Construction Industry Licensing Board.

8.02 *Contractor's Certifications*

- A. Contractor certifies that it has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for or in executing the Contract. For the purposes of this Paragraph 8.02:
 1. "corrupt practice" means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process or in the Contract execution;
 2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process or the execution of the Contract to the detriment of Owner, (b) to establish Bid or Contract prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;
 3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish Bid prices at artificial, non-competitive levels; and
 4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

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8.03 *Standard General Conditions*

- A. Owner stipulates that if the General Conditions that are made a part of this Contract are EJCDC® C-700, Standard General Conditions for the Construction Contract (2018), published by the Engineers Joint Contract Documents Committee, and if Owner is the party that has furnished said General Conditions, then Owner has plainly shown all modifications to the standard wording of such published document to the Contractor, through a process such as highlighting or “track changes” (redline/strikeout), or in the Supplementary Conditions.

[Remainder of page intentionally blank]

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:

Town of Callahan, Florida

(typed or printed name of organization)

By:

(individual's signature)

Date:

(date signed)

Name: Matthew Davis

(typed or printed)

Title: Mayor

(typed or printed)

Attest:

(individual's signature)

Title:

(typed or printed)

Address for giving notices:

Town of Callahan

542300 US Hwy 1 (P.O. Box 5016)

Callahan, Florida 32011

Designated Representative:

Name: Mike Williams

(typed or printed)

Title: Town Manager/Public Works Director

(typed or printed)

Address:

Town of Callahan

542300 US Hwy 1 (P.O. Box 5016)

Callahan, Florida 32011

Phone: (904) 879-3801

Email: pwd@townofcallahan-fl.gov

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

Contractor:

(typed or printed name of organization)

By:

(individual's signature)

Date:

(date signed)

Name:

(typed or printed)

Title:

(typed or printed)

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

Attest:

(individual's signature)

Title:

(typed or printed)

Address for giving notices:

Designated Representative:

Name:

(typed or printed)

Title:

(typed or printed)

Address:

Phone:

Email:

License No.:

(where applicable)

State:

END OF SECTION

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SECTION 00610
PERFORMANCE BOND

<p>Contractor</p> <p>Name: _____</p> <p>Address (<i>principal place of business</i>): _____</p>	<p>Surety</p> <p>Name: _____</p> <p>Address (<i>principal place of business</i>): _____</p>
<p>Owner</p> <p>Name: <u>Town of Callahan, Florida</u></p> <p>Mailing address (<i>principal place of business</i>): 542300 US Hwy 1 (P.O. Box 5016) Callahan, Florida 32011</p>	<p>Contract</p> <p>Description (<i>name and location</i>): CDBG 20 NR Water Main Replacement & Extensions CDBG Contract No. 20DB-OO-04-55-02-N06 Callahan, Florida</p> <p>Contract Price: _____</p> <p>Effective Date of Contract: _____</p>
<p>Bond</p> <p>Bond No.: _____</p> <p>Bond Amount: _____</p> <p>Date of Bond: _____</p> <p><i>(Date of Bond cannot be earlier than Effective Date of Contract)</i></p> <p>Modifications to this Bond form: <input type="checkbox"/> None <input checked="" type="checkbox"/> See Paragraph 16</p>	
<p>Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth in this Performance Bond, do each cause this Performance Bond to be duly executed by an authorized officer, agent, or representative.</p>	
Contractor as Principal	Surety
_____ <i>(Full formal name of Contractor)</i>	_____ <i>(Full formal name of Surety) (corporate seal)</i>
By: _____ <i>(Signature)</i>	By: _____ <i>(Signature)(Attach Power of Attorney)</i>
Name: _____ <i>(Printed or typed)</i>	Name: _____ <i>(Printed or typed)</i>
Title: _____	Title: _____
Attest: _____ <i>(Signature)</i>	Attest: _____ <i>(Signature)</i>
Name: _____ <i>(Printed or typed)</i>	Name: _____ <i>(Printed or typed)</i>
Title: _____	Title: _____
<p><i>Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party is considered plural where applicable.</i></p>	

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1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner for the performance of the Construction Contract, which is incorporated herein by reference.
2. If the Contractor performs the Construction Contract, the Surety and the Contractor shall have no obligation under this Bond, except when applicable to participate in a conference as provided in Paragraph 3.
3. If there is no Owner Default under the Construction Contract, the Surety's obligation under this Bond will arise after:
 - 3.1. The Owner first provides notice to the Contractor and the Surety that the Owner is considering declaring a Contractor Default. Such notice may indicate whether the Owner is requesting a conference among the Owner, Contractor, and Surety to discuss the Contractor's performance. If the Owner does not request a conference, the Surety may, within five (5) business days after receipt of the Owner's notice, request such a conference. If the Surety timely requests a conference, the Owner shall attend. Unless the Owner agrees otherwise, any conference requested under this Paragraph 3.1 will be held within ten (10) business days of the Surety's receipt of the Owner's notice. If the Owner, the Contractor, and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an agreement does not waive the Owner's right, if any, subsequently to declare a Contractor Default;
 - 3.2. The Owner declares a Contractor Default, terminates the Construction Contract and notifies the Surety; and
 - 3.3. The Owner has agreed to pay the Balance of the Contract Price in accordance with the terms of the Construction Contract to the Surety or to a contractor selected to perform the Construction Contract.
4. Failure on the part of the Owner to comply with the notice requirement in Paragraph 3.1 does not constitute a failure to comply with a condition precedent to the Surety's obligations, or release the Surety from its obligations, except to the extent the Surety demonstrates actual prejudice.
5. When the Owner has satisfied the conditions of Paragraph 3, the Surety shall promptly and at the Surety's expense take one of the following actions:
 - 5.1. Arrange for the Contractor, with the consent of the Owner, to perform and complete the Construction Contract;
 - 5.2. Undertake to perform and complete the Construction Contract itself, through its agents or independent contractors;
 - 5.3. Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Construction Contract, arrange for a contract to be prepared for execution by the Owner and a contractor selected with the Owners concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract, and pay to the Owner the amount of damages as described in Paragraph 7 in excess of the Balance of the Contract Price incurred by the Owner as a result of the Contractor Default; or

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- 5.4. Waive its right to perform and complete, arrange for completion, or obtain a new contractor, and with reasonable promptness under the circumstances:
 - 5.4.1 After investigation, determine the amount for which it may be liable to the Owner and, as soon as practicable after the amount is determined, make payment to the Owner; or
 - 5.4.2 Deny liability in whole or in part and notify the Owner, citing the reasons for denial.
6. If the Surety does not proceed as provided in Paragraph 5 with reasonable promptness, the Surety shall be deemed to be in default on this Bond seven days after receipt of an additional written notice from the Owner to the Surety demanding that the Surety perform its obligations under this Bond, and the Owner shall be entitled to enforce any remedy available to the Owner. If the Surety proceeds as provided in Paragraph 5.4, and the Owner refuses the payment, or the Surety has denied liability, in whole or in part, without further notice, the Owner shall be entitled to enforce any remedy available to the Owner.
7. If the Surety elects to act under Paragraph 5.1, 5.2, or 5.3, then the responsibilities of the Surety to the Owner will not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety will not be greater than those of the Owner under the Construction Contract. Subject to the commitment by the Owner to pay the Balance of the Contract Price, the Surety is obligated, without duplication for:
 - 7.1. the responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;
 - 7.2. additional legal, design professional, and delay costs resulting from the Contractor's Default, and resulting from the actions or failure to act of the Surety under Paragraph 5; and
 - 7.3. liquidated damages, or if no liquidated damages are specified in the Construction Contract, actual damages caused by delayed performance or non-performance of the Contractor.
8. If the Surety elects to act under Paragraph 5.1, 5.3, or 5.4, the Surety's liability is limited to the amount of this Bond.
9. The Surety shall not be liable to the Owner or others for obligations of the Contractor that are unrelated to the Construction Contract, and the Balance of the Contract Price will not be reduced or set off on account of any such unrelated obligations. No right of action will accrue on this Bond to any person or entity other than the Owner or its heirs, executors, administrators, successors, and assigns.
10. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.
11. Any proceeding, legal or equitable, under this Bond must be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and must be instituted within two years after a declaration of Contractor Default or within two years after the Contractor ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this paragraph are void or prohibited by law, the minimum periods of limitations available to sureties as a defense in the jurisdiction of the suit will be applicable.
12. Notice to the Surety, the Owner, or the Contractor must be mailed or delivered to the address shown on the page on which their signature appears.
13. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement will be deemed deleted therefrom and provisions conforming to such

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statutory or other legal requirement will be deemed incorporated herein. When so furnished, the intent is that this Bond will be construed as a statutory bond and not as a common law bond.

14. Definitions

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

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

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

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

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

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

16. Modifications to this Bond are as follows:

Bond shall be recorded in the County in which work is performed in accordance with Florida Statutes Section 255.05.

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SECTION 00615
PAYMENT BOND

<p>Contractor</p> <p>Name: _____</p> <p>Address (<i>principal place of business</i>): _____</p>	<p>Surety</p> <p>Name: _____</p> <p>Address (<i>principal place of business</i>): _____</p>
<p>Owner</p> <p>Name: <u>Town of Callahan, Florida</u></p> <p>Mailing address (<i>principal place of business</i>): 542300 US Hwy 1 (P.O. Box 5016) Callahan, Florida 32011</p>	<p>Contract</p> <p>Description (<i>name and location</i>): CDBG 20 NR Water Main Replacement & Extensions CDBG Contract No. 20DB-OO-04-55-02-N06 Callahan, Florida</p> <p>Contract Price: _____</p> <p>Effective Date of Contract: _____</p>
<p>Bond</p> <p>Bond No.: _____</p> <p>Bond Amount: _____</p> <p>Date of Bond: _____</p> <p><i>(Date of Bond cannot be earlier than Effective Date of Contract)</i></p> <p>Modifications to this Bond form: <input type="checkbox"/> None <input checked="" type="checkbox"/> See Paragraph 18</p>	
<p>Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth in this Payment Bond, do each cause this Payment Bond to be duly executed by an authorized officer, agent, or representative.</p>	
Contractor as Principal	Surety
_____ <i>(Full formal name of Contractor)</i>	_____ <i>(Full formal name of Surety) (corporate seal)</i>
By: _____ <i>(Signature)</i>	By: _____ <i>(Signature)(Attach Power of Attorney)</i>
Name: _____ <i>(Printed or typed)</i>	Name: _____ <i>(Printed or typed)</i>
Title: _____	Title: _____
Attest: _____ <i>(Signature)</i>	Attest: _____ <i>(Signature)</i>
Name: _____ <i>(Printed or typed)</i>	Name: _____ <i>(Printed or typed)</i>
Title: _____	Title: _____
<p><i>Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party is considered plural where applicable.</i></p>	

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1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner to pay for labor, materials, and equipment furnished for use in the performance of the Construction Contract, which is incorporated herein by reference, subject to the following terms.
2. If the Contractor promptly makes payment of all sums due to Claimants, and defends, indemnifies, and holds harmless the Owner from claims, demands, liens, or suits by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, then the Surety and the Contractor shall have no obligation under this Bond.
3. If there is no Owner Default under the Construction Contract, the Surety's obligation to the Owner under this Bond will arise after the Owner has promptly notified the Contractor and the Surety (at the address described in Paragraph 13) of claims, demands, liens, or suits against the Owner or the Owner's property by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, and tendered defense of such claims, demands, liens, or suits to the Contractor and the Surety.
4. When the Owner has satisfied the conditions in Paragraph 3, the Surety shall promptly and at the Surety's expense defend, indemnify, and hold harmless the Owner against a duly tendered claim, demand, lien, or suit.
5. The Surety's obligations to a Claimant under this Bond will arise after the following:
 - 5.1. Claimants who do not have a direct contract with the Contractor
 - 5.1.1. have furnished a written notice of non-payment to the Contractor, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were, or equipment was, furnished or supplied or for whom the labor was done or performed, within ninety (90) days after having last performed labor or last furnished materials or equipment included in the Claim; and
 - 5.1.2. have sent a Claim to the Surety (at the address described in Paragraph 13).
 - 5.2. Claimants who are employed by or have a direct contract with the Contractor have sent a Claim to the Surety (at the address described in Paragraph 13).
6. If a notice of non-payment required by Paragraph 5.1.1 is given by the Owner to the Contractor, that is sufficient to satisfy a Claimant's obligation to furnish a written notice of non-payment under Paragraph 5.1.1.
7. When a Claimant has satisfied the conditions of Paragraph 5.1 or 5.2, whichever is applicable, the Surety shall promptly and at the Surety's expense take the following actions:
 - 7.1. Send an answer to the Claimant, with a copy to the Owner, within sixty (60) days after receipt of the Claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed; and
 - 7.2. Pay or arrange for payment of any undisputed amounts.
 - 7.3. The Surety's failure to discharge its obligations under Paragraph 7.1 or 7.2 will not be deemed to constitute a waiver of defenses the Surety or Contractor may have or acquire as to a Claim, except as to undisputed amounts for which the Surety and Claimant have reached agreement. If, however, the Surety fails to discharge its obligations under Paragraph 7.1 or 7.2, the Surety

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shall indemnify the Claimant for the reasonable attorney's fees the Claimant incurs thereafter to recover any sums found to be due and owing to the Claimant.

8. The Surety's total obligation will not exceed the amount of this Bond, plus the amount of reasonable attorney's fees provided under Paragraph 7.3, and the amount of this Bond will be credited for any payments made in good faith by the Surety.
9. Amounts owed by the Owner to the Contractor under the Construction Contract will be used for the performance of the Construction Contract and to satisfy claims, if any, under any construction performance bond. By the Contractor furnishing and the Owner accepting this Bond, they agree that all funds earned by the Contractor in the performance of the Construction Contract are dedicated to satisfying obligations of the Contractor and Surety under this Bond, subject to the Owner's priority to use the funds for the completion of the work.
10. The Surety shall not be liable to the Owner, Claimants, or others for obligations of the Contractor that are unrelated to the Construction Contract. The Owner shall not be liable for the payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligation to make payments to or give notice on behalf of Claimants, or otherwise have any obligations to Claimants under this Bond.
11. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.
12. No suit or action will be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the state in which the project that is the subject of the Construction Contract is located or after the expiration of one year from the date (1) on which the Claimant sent a Claim to the Surety pursuant to Paragraph 5.1.2 or 5.2, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit will be applicable.
13. Notice and Claims to the Surety, the Owner, or the Contractor must be mailed or delivered to the address shown on the page on which their signature appears. Actual receipt of notice or Claims, however accomplished, will be sufficient compliance as of the date received.
14. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement will be deemed deleted here from and provisions conforming to such statutory or other legal requirement will be deemed incorporated herein. When so furnished, the intent is that this Bond will be construed as a statutory bond and not as a common law bond.
15. Upon requests by any person or entity appearing to be a potential beneficiary of this Bond, the Contractor and Owner shall promptly furnish a copy of this Bond or shall permit a copy to be made.
16. Definitions
 - 16.1. *Claim*—A written statement by the Claimant including at a minimum:
 - 16.1.1. The name of the Claimant;
 - 16.1.2. The name of the person for whom the labor was done, or materials or equipment furnished;

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- 16.1.3. A copy of the agreement or purchase order pursuant to which labor, materials, or equipment was furnished for use in the performance of the Construction Contract;
 - 16.1.4. A brief description of the labor, materials, or equipment furnished;
 - 16.1.5. The date on which the Claimant last performed labor or last furnished materials or equipment for use in the performance of the Construction Contract;
 - 16.1.6. The total amount earned by the Claimant for labor, materials, or equipment furnished as of the date of the Claim;
 - 16.1.7. The total amount of previous payments received by the Claimant; and
 - 16.1.8. The total amount due and unpaid to the Claimant for labor, materials, or equipment furnished as of the date of the Claim.
- 16.2. *Claimant*—An individual or entity having a direct contract with the Contractor or with a subcontractor of the Contractor to furnish labor, materials, or equipment for use in the performance of the Construction Contract. The term Claimant also includes any individual or entity that has rightfully asserted a claim under an applicable mechanic’s lien or similar statute against the real property upon which the Project is located. The intent of this Bond is to include without limitation in the terms of “labor, materials, or equipment” that part of the water, gas, power, light, heat, oil, gasoline, telephone service, or rental equipment used in the Construction Contract, architectural and engineering services required for performance of the work of the Contractor and the Contractor’s subcontractors, and all other items for which a mechanic’s lien may be asserted in the jurisdiction where the labor, materials, or equipment were furnished.
- 16.3. *Construction Contract*—The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and all changes made to the agreement and the Contract Documents.
- 16.4. *Owner Default*—Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.
- 16.5. *Contract Documents*—All the documents that comprise the agreement between the Owner and Contractor.
17. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond will be deemed to be Subcontractor and the term Owner will be deemed to be Contractor.
18. Modifications to this Bond are as follows:
- Bond shall be recorded in the County in which work is performed in accordance with Florida Statutes Section 255.05.

Contractor's Application for Payment

Owner: <u>Town of Callahan, Florida</u>	CDBG Contract No.: <u>20DB-00-04-55-02-N06</u>
Engineer: <u>Mittauer & Associates, Inc.</u>	Engineer's Project No.: <u>0302-31-1</u>
Contractor: _____	Contractor's Project No.: _____
Project: <u>CDBG 20 NR Water Main Replacement & Extensions</u>	
Contract: _____	
Application No.: _____	Application Date: _____
Application Period: From _____ to _____	

1. Original Contract Price	\$	-
2. Net change by Change Orders	\$	-
3. Current Contract Price (Line 1 + Line 2)	\$	-
4. Total Work completed and materials stored to date (Sum of Column G Lump Sum Total and Column J Unit Price Total)	\$	-
5. Retainage		
a. _____ X \$ _____ Work Completed	\$	-
b. _____ X \$ _____ Stored Materials	\$	-
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, including retainage (Line 3 - Line 4)	\$	-

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: _____ **Date:** _____

Recommended by Engineer	Approved by Owner
By: _____	By: _____
Title: <u>Timothy P. Norman, P.E., Vice President</u>	Title: <u>Mike Williams, Town Mgr/Pub. Works Dir.</u>
Date: _____	Date: _____
Approved by Funding Agency	
By: _____	By: _____
Title: _____	Title: _____
Date: _____	Date: _____

Modified per Mittauer Associates, Inc.

EJCDC C-620 Contractor's Application for Payment

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Progress Estimate - Unit Price Work - Original Contract

Contractor's Application for Payment

Owner: Town of Callahan, Florida
 Engineer: Mittauer & Associates, Inc.
 Contractor: _____
 Project: CDBG 20 NR Water Main Replacement & Extensions
 Contract: _____

CDBG Contract No.: 2008-00-04-55-02-N06
 Engineer's Project No.: 0302-31-1
 Contractor's Project No.: _____

Application No.: _____ Application Period: From _____ to _____ Application Date: _____

A Bid Item No.	B Description	C Contract Information		E Unit Price (\$)		F Value of Bid Item (C X E) (\$)		G Work Completed		I Materials Currently Stored (not in G) (\$)	J Work Completed and Materials Stored to Date (H + I) (\$)	K % of Value of Item (J / F) (%)	L Balance to Finish (F - J) (\$)
		D Item Quantity	Units	Unit Price (\$)	Value of Bid Item (C X E) (\$)	G Estimated Quantity Incorporated in the Work	H Value of Work Completed to Date (E X G) (\$)						
Original Contract													
						-	-	-	-		-	-	-
						-	-	-	-		-	-	-
						-	-	-	-		-	-	-
						-	-	-	-		-	-	-
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						-	-	-	-		-	-	-
						-	-	-	-		-	-	-
						-	-	-	-		-	-	-
Original Contract Totals						\$	-	\$	-	\$	-	\$	-

Progress Estimate - Unit Price Work - Change Orders

Contractor's Application for Payment

Owner: Town of Callahan, Florida
 Engineer: Mittauer & Associates, Inc.
 Contractor: _____
 Project: CDBG 20 NR Water Main Replacement & Extensions
 Contract: _____

CDBG Contract No.: 20DB-00-04-55-02-N06
 Engineer's Project No.: 0302-31-1
 Contractor's Project No.: _____

Application No.: _____ Application Period: From _____ to _____ Application Date: _____

A Bid Item No.	B Description	C Contract Information				G Work Completed		I Materials Currently Stored (not in G) (\$)	J Work Completed and Materials Stored to Date (H + I) (\$)	K % of Value of Item (J / F) (%)	L Balance to Finish (F - J) (\$)	
		C Item Quantity	D Units	E Unit Price (\$)	F Value of Bid Item (C X E) (\$)	G Estimated Quantity Incorporated in the Work	H Value of Work Completed to Date (E X G) (\$)					
					-		-		-		-	
					-		-		-		-	
					-		-		-		-	
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					-		-		-		-	
					-		-		-		-	
					-		-		-		-	
Change Order Totals					\$	-	\$	-	\$	-	\$	-
Original Contract and Change Orders												
Project Totals					\$	-	\$	-	\$	-	\$	-

Stored Materials Summary

Contractor's Application for Payment

Owner:	Town of Callahan, Florida	CDBG Contract No.:	20DB-00-04-55-02-N06
Engineer:	Mittauer & Associates, Inc.	Engineer's Project No.:	0302-31-1
Contractor:		Contractor's Project No.:	
Project:	CDBG 20 NR Water Main Replacement & Extensions		
Contract:			

Application No.: _____ Application Period: From _____ to _____ Application Date: _____

A	B	C	D	E	F	Materials Stored			Incorporated in Work			M
Item No. (Lump Sum Tab or Bid Item No. (Unit Price Tab)	Supplier Invoice No.	Submittal No. (with Specification Section No.)	Description of Materials or Equipment Stored	Storage Location	Application No. When Materials Placed in Storage	Previous Amount Stored (\$)	Amount Stored this Period (\$)	Amount Stored to Date (G+H) (\$)	Amount Previously Incorporated in the Work (\$)	Amount Incorporated in the Work this Period (\$)	Total Amount Incorporated in the Work (J+K) (\$)	Materials Remaining in Storage (I-L) (\$)
Totals						\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

This document has important legal consequences; consultation with an attorney is encouraged with respect to its use or modification. This document should be adapted to the particular circumstances of the contemplated Project and the controlling Laws and Regulations.

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

Prepared By



Endorsed By



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STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

ARTICLE 1—DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

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

- requirements of the Contract Documents or the acceptability of Work under the Contract Documents; contesting Engineer's decision regarding a Change Proposal; seeking resolution of a contractual issue that Engineer has declined to address; or seeking other relief with respect to the terms of the Contract.
- b. A demand or assertion by Contractor directly to Owner, duly submitted in compliance with the procedural requirements set forth herein, contesting Engineer's decision regarding a Change Proposal, or seeking resolution of a contractual issue that Engineer has declined to address.
 - c. A demand or assertion by Owner or Contractor, duly submitted in compliance with the procedural requirements set forth herein, made pursuant to Paragraph 12.01.A.4, concerning disputes arising after Engineer has issued a recommendation of final payment.
 - d. A demand for money or services by a third party is not a Claim.
11. *Constituent of Concern*—Asbestos, petroleum, radioactive materials, polychlorinated biphenyls (PCBs), lead-based paint (as defined by the HUD/EPA standard), hazardous waste, and any substance, product, waste, or other material of any nature whatsoever that is or becomes listed, regulated, or addressed pursuant to Laws and Regulations regulating, relating to, or imposing liability or standards of conduct concerning, any hazardous, toxic, or dangerous waste, substance, or material.
 12. *Contract*—The entire and integrated written contract between Owner and Contractor concerning the Work.
 13. *Contract Documents*—Those items so designated in the Agreement, and which together comprise the Contract.
 14. *Contract Price*—The money that Owner has agreed to pay Contractor for completion of the Work in accordance with the Contract Documents.
 15. *Contract Times*—The number of days or the dates by which Contractor shall: (a) achieve Milestones, if any; (b) achieve Substantial Completion; and (c) complete the Work.
 16. *Contractor*—The individual or entity with which Owner has contracted for performance of the Work.
 17. *Cost of the Work*—See Paragraph 13.01 for definition.
 18. *Drawings*—The part of the Contract that graphically shows the scope, extent, and character of the Work to be performed by Contractor.
 19. *Effective Date of the Contract*—The date, indicated in the Agreement, on which the Contract becomes effective.
 20. *Electronic Document*—Any Project-related correspondence, attachments to correspondence, data, documents, drawings, information, or graphics, including but not limited to Shop Drawings and other Submittals, that are in an electronic or digital format.
 21. *Electronic Means*—Electronic mail (email), upload/download from a secure Project website, or other communications methods that allow: (a) the transmission or communication of Electronic Documents; (b) the documentation of transmissions, including sending and receipt; (c) printing of the transmitted Electronic Document by the

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

22. *Engineer*—The individual or entity named as such in the Agreement.
23. *Field Order*—A written order issued by Engineer which requires minor changes in the Work but does not change the Contract Price or the Contract Times.
24. *Hazardous Environmental Condition*—The presence at the Site of Constituents of Concern in such quantities or circumstances that may present a danger to persons or property exposed thereto.
 - a. The presence at the Site of materials that are necessary for the execution of the Work, or that are to be incorporated into the Work, and that are controlled and contained pursuant to industry practices, Laws and Regulations, and the requirements of the Contract, is not a Hazardous Environmental Condition.
 - b. The presence of Constituents of Concern that are to be removed or remediated as part of the Work is not a Hazardous Environmental Condition.
 - c. The presence of Constituents of Concern as part of the routine, anticipated, and obvious working conditions at the Site, is not a Hazardous Environmental Condition.
25. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, statutes, rules, regulations, ordinances, codes, and binding decrees, resolutions, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.
26. *Liens*—Charges, security interests, or encumbrances upon Contract-related funds, real property, or personal property.
27. *Milestone*—A principal event in the performance of the Work that the Contract requires Contractor to achieve by an intermediate completion date, or by a time prior to Substantial Completion of all the Work.
28. *Notice of Award*—The written notice by Owner to a Bidder of Owner's acceptance of the Bid.
29. *Notice to Proceed*—A written notice by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work.
30. *Owner*—The individual or entity with which Contractor has contracted regarding the Work, and which has agreed to pay Contractor for the performance of the Work, pursuant to the terms of the Contract.
31. *Progress Schedule*—A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising Contractor's plan to accomplish the Work within the Contract Times.
32. *Project*—The total undertaking to be accomplished for Owner by engineers, contractors, and others, including planning, study, design, construction, testing, commissioning, and start-up, and of which the Work to be performed under the Contract Documents is a part.

33. *Resident Project Representative*—The authorized representative of Engineer assigned to assist Engineer at the Site. As used herein, the term Resident Project Representative (RPR) includes any assistants or field staff of Resident Project Representative.
34. *Samples*—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and that establish the standards by which such portion of the Work will be judged.
35. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements for Engineer’s review of the submittals.
36. *Schedule of Values*—A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor’s Applications for Payment.
37. *Shop Drawings*—All drawings, diagrams, illustrations, schedules, and other data or information that are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work. Shop Drawings, whether approved or not, are not Drawings and are not Contract Documents.
38. *Site*—Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements, and such other lands or areas furnished by Owner which are designated for the use of Contractor.
39. *Specifications*—The part of the Contract that consists of written requirements for materials, equipment, systems, standards, and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable to the Work.
40. *Subcontractor*—An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work.
41. *Submittal*—A written or graphic document, prepared by or for Contractor, which the Contract Documents require Contractor to submit to Engineer, or that is indicated as a Submittal in the Schedule of Submittals accepted by Engineer. Submittals may include Shop Drawings and Samples; schedules; product data; Owner-delegated designs; sustainable design information; information on special procedures; testing plans; results of tests and evaluations, source quality-control testing and inspections, and field or Site quality-control testing and inspections; warranties and certifications; Suppliers’ instructions and reports; records of delivery of spare parts and tools; operations and maintenance data; Project photographic documentation; record documents; and other such documents required by the Contract Documents. Submittals, whether or not approved or accepted by Engineer, are not Contract Documents. Change Proposals, Change Orders, Claims, notices, Applications for Payment, and requests for interpretation or clarification are not Submittals.
42. *Substantial Completion*—The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms “substantially complete” and “substantially completed” as applied to all or part of the Work refer to Substantial Completion of such Work.

43. *Successful Bidder*—The Bidder to which the Owner makes an award of contract.
44. *Supplementary Conditions*—The part of the Contract that amends or supplements these General Conditions.
45. *Supplier*—A manufacturer, fabricator, supplier, distributor, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or a Subcontractor.
46. *Technical Data*
- a. Those items expressly identified as Technical Data in the Supplementary Conditions, with respect to either (1) existing subsurface conditions at or adjacent to the Site, or existing physical conditions at or adjacent to the Site including existing surface or subsurface structures (except Underground Facilities) or (2) Hazardous Environmental Conditions at the Site.
 - b. If no such express identifications of Technical Data have been made with respect to conditions at the Site, then Technical Data is defined, with respect to conditions at the Site under Paragraphs 5.03, 5.04, and 5.06, as the data contained in boring logs, recorded measurements of subsurface water levels, assessments of the condition of subsurface facilities, laboratory test results, and other factual, objective information regarding conditions at the Site that are set forth in any geotechnical, environmental, or other Site or facilities conditions report prepared for the Project and made available to Contractor.
 - c. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data, and instead Underground Facilities are shown or indicated on the Drawings.
47. *Underground Facilities*—All active or not-in-service underground lines, pipelines, conduits, ducts, encasements, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or systems at the Site, including but not limited to those facilities or systems that produce, transmit, distribute, or convey telephone or other communications, cable television, fiber optic transmissions, power, electricity, light, heat, gases, oil, crude oil products, liquid petroleum products, water, steam, waste, wastewater, storm water, other liquids or chemicals, or traffic or other control systems. An abandoned facility or system is not an Underground Facility.
48. *Unit Price Work*—Work to be paid for on the basis of unit prices.
49. *Work*—The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction; furnishing, installing, and incorporating all materials and equipment into such construction; and may include related services such as testing, start-up, and commissioning, all as required by the Contract Documents.
50. *Work Change Directive*—A written directive to Contractor issued on or after the Effective Date of the Contract, signed by Owner and recommended by Engineer, ordering an addition, deletion, or revision in the Work.

1.02 Terminology

- A. The words and terms discussed in Paragraphs 1.02.B, C, D, and E are not defined terms that require initial capital letters, but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.
- B. *Intent of Certain Terms or Adjectives:* The Contract Documents include the terms “as allowed,” “as approved,” “as ordered,” “as directed” or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives “reasonable,” “suitable,” “acceptable,” “proper,” “satisfactory,” or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action, or determination will be solely to evaluate, in general, the Work for compliance with the information in the Contract Documents and with the design concept of the Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility contrary to the provisions of Article 10 or any other provision of the Contract Documents.
- C. *Day:* The word “day” means a calendar day of 24 hours measured from midnight to the next midnight.
- D. *Defective:* The word “defective,” when modifying the word “Work,” refers to Work that is unsatisfactory, faulty, or deficient in that it:
1. does not conform to the Contract Documents;
 2. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or
 3. has been damaged prior to Engineer’s recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 15.03 or Paragraph 15.04).
- E. *Furnish, Install, Perform, Provide*
1. The word “furnish,” when used in connection with services, materials, or equipment, means to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.
 2. The word “install,” when used in connection with services, materials, or equipment, means to put into use or place in final position said services, materials, or equipment complete and ready for intended use.
 3. The words “perform” or “provide,” when used in connection with services, materials, or equipment, means to furnish and install said services, materials, or equipment complete and ready for intended use.
 4. If the Contract Documents establish an obligation of Contractor with respect to specific services, materials, or equipment, but do not expressly use any of the four words “furnish,” “install,” “perform,” or “provide,” then Contractor shall furnish and install said services, materials, or equipment complete and ready for intended use.

- F. *Contract Price or Contract Times*: References to a change in “Contract Price or Contract Times” or “Contract Times or Contract Price” or similar, indicate that such change applies to (1) Contract Price, (2) Contract Times, or (3) both Contract Price and Contract Times, as warranted, even if the term “or both” is not expressed.
- G. Unless stated otherwise in the Contract Documents, words or phrases that have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

ARTICLE 2—PRELIMINARY MATTERS

2.01 *Delivery of Performance and Payment Bonds; Evidence of Insurance*

- A. *Performance and Payment Bonds*: When Contractor delivers the signed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner the performance bond and payment bond (if the Contract requires Contractor to furnish such bonds).
- B. *Evidence of Contractor’s Insurance*: When Contractor delivers the signed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner, with copies to each additional insured (as identified in the Contract), the certificates, endorsements, and other evidence of insurance required to be provided by Contractor in accordance with Article 6, except to the extent the Supplementary Conditions expressly establish other dates for delivery of specific insurance policies.
- C. *Evidence of Owner’s Insurance*: After receipt of the signed counterparts of the Agreement and all required bonds and insurance documentation, Owner shall promptly deliver to Contractor, with copies to each additional insured (as identified in the Contract), the certificates and other evidence of insurance required to be provided by Owner under Article 6.

2.02 *Copies of Documents*

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

2.03 *Before Starting Construction*

- A. *Preliminary Schedules*: Within 10 days after the Effective Date of the Contract (or as otherwise required by the Contract Documents), Contractor shall submit to Engineer for timely review:
 - 1. a preliminary Progress Schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract;
 - 2. a preliminary Schedule of Submittals; and
 - 3. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work

into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

2.04 *Preconstruction Conference; Designation of Authorized Representatives*

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

2.05 *Acceptance of Schedules*

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

2.06 *Electronic Transmittals*

- A. Except as otherwise stated elsewhere in the Contract, the Owner, Engineer, and Contractor may send, and shall accept, Electronic Documents transmitted by Electronic Means.
- B. If the Contract does not establish protocols for Electronic Means, then Owner, Engineer, and Contractor shall jointly develop such protocols.
- C. Subject to any governing protocols for Electronic Means, when transmitting Electronic Documents by Electronic Means, the transmitting party makes no representations as to long-term compatibility, usability, or readability of the Electronic Documents resulting from the recipient's use of software application packages, operating systems, or computer hardware differing from those used in the drafting or transmittal of the Electronic Documents.

ARTICLE 3—CONTRACT DOCUMENTS: INTENT, REQUIREMENTS, REUSE

3.01 *Intent*

- A. The Contract Documents are complementary; what is required by one Contract Document is as binding as if required by all.
- B. It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents.
- C. Unless otherwise stated in the Contract Documents, if there is a discrepancy between the electronic versions of the Contract Documents (including any printed copies derived from such electronic versions) and the printed record version, the printed record version will govern.
- D. The Contract supersedes prior negotiations, representations, and agreements, whether written or oral.
- E. Engineer will issue clarifications and interpretations of the Contract Documents as provided herein.
- F. Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation will be deemed stricken, and all remaining provisions will continue to be valid and binding upon Owner and Contractor, which agree that the Contract Documents will be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.
- G. Nothing in the Contract Documents creates:
 - 1. any contractual relationship between Owner or Engineer and any Subcontractor, Supplier, or other individual or entity performing or furnishing any of the Work, for the benefit of such Subcontractor, Supplier, or other individual or entity; or
 - 2. any obligation on the part of Owner or Engineer to pay or to see to the payment of any money due any such Subcontractor, Supplier, or other individual or entity, except as may otherwise be required by Laws and Regulations.

3.02 *Reference Standards*

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

inconsistent with the provisions of the part of the Contract Documents prepared by or for Engineer.

3.03 *Reporting and Resolving Discrepancies*

A. *Reporting Discrepancies*

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

B. *Resolving Discrepancies*

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

3.04 *Requirements of the Contract Documents*

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

- B. Engineer will, with reasonable promptness, render a written clarification, interpretation, or decision on the issue submitted, or initiate an amendment or supplement to the Contract Documents. Engineer's written clarification, interpretation, or decision will be final and binding on Contractor, unless it appeals by submitting a Change Proposal, and on Owner, unless it appeals by filing a Claim.
- C. If a submitted matter in question concerns terms and conditions of the Contract Documents that do not involve (1) the performance or acceptability of the Work under the Contract Documents, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, then Engineer will promptly notify Owner and Contractor in writing that Engineer is unable to provide a decision or interpretation. If Owner and Contractor are unable to agree on resolution of such a matter in question, either party may pursue resolution as provided in Article 12.

3.05 *Reuse of Documents*

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

ARTICLE 4—COMMENCEMENT AND PROGRESS OF THE WORK

4.01 *Commencement of Contract Times; Notice to Proceed*

- A. The Contract Times will commence to run on the 30th day after the Effective Date of the Contract or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 days after the Effective Date of the Contract. In no event will the Contract Times commence to run later than the 60th day after the day of Bid opening or the 30th day after the Effective Date of the Contract, whichever date is earlier.

4.02 *Starting the Work*

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

4.03 *Reference Points*

- A. Owner shall provide engineering surveys to establish reference points for construction which in Engineer's judgment are necessary to enable Contractor to proceed with the Work. Contractor shall be responsible for laying out the Work, shall protect and preserve the

established reference points and property monuments, and shall make no changes or relocations without the prior written approval of Owner. Contractor shall report to Engineer whenever any reference point or property monument is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel.

4.04 *Progress Schedule*

- A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.05 as it may be adjusted from time to time as provided below.
 - 1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.05) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times.
 - 2. Proposed adjustments in the Progress Schedule that will change the Contract Times must be submitted in accordance with the requirements of Article 11.
- B. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work will be delayed or postponed pending resolution of any disputes or disagreements, or during any appeal process, except as permitted by Paragraph 16.04, or as Owner and Contractor may otherwise agree in writing.

4.05 *Delays in Contractor's Progress*

- A. If Owner, Engineer, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times.
- B. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delay, disruption, or interference caused by or within the control of Contractor. Delay, disruption, and interference attributable to and within the control of a Subcontractor or Supplier shall be deemed to be within the control of Contractor.
- C. If Contractor's performance or progress is delayed, disrupted, or interfered with by unanticipated causes not the fault of and beyond the control of Owner, Contractor, and those for which they are responsible, then Contractor shall be entitled to an equitable adjustment in Contract Times. Such an adjustment will be Contractor's sole and exclusive remedy for the delays, disruption, and interference described in this paragraph. Causes of delay, disruption, or interference that may give rise to an adjustment in Contract Times under this paragraph include but are not limited to the following:
 - 1. Severe and unavoidable natural catastrophes such as fires, floods, epidemics, and earthquakes;
 - 2. Abnormal weather conditions;
 - 3. Acts or failures to act of third-party utility owners or other third-party entities (other than those third-party utility owners or other third-party entities performing other work at or adjacent to the Site as arranged by or under contract with Owner, as contemplated in Article 8); and
 - 4. Acts of war or terrorism.

- D. Contractor's entitlement to an adjustment of Contract Times or Contract Price is limited as follows:
1. Contractor's entitlement to an adjustment of the Contract Times is conditioned on the delay, disruption, or interference adversely affecting an activity on the critical path to completion of the Work, as of the time of the delay, disruption, or interference.
 2. Contractor shall not be entitled to an adjustment in Contract Price for any delay, disruption, or interference if such delay is concurrent with a delay, disruption, or interference caused by or within the control of Contractor. Such a concurrent delay by Contractor shall not preclude an adjustment of Contract Times to which Contractor is otherwise entitled.
 3. Adjustments of Contract Times or Contract Price are subject to the provisions of Article 11.
- E. Each Contractor request or Change Proposal seeking an increase in Contract Times or Contract Price must be supplemented by supporting data that sets forth in detail the following:
1. The circumstances that form the basis for the requested adjustment;
 2. The date upon which each cause of delay, disruption, or interference began to affect the progress of the Work;
 3. The date upon which each cause of delay, disruption, or interference ceased to affect the progress of the Work;
 4. The number of days' increase in Contract Times claimed as a consequence of each such cause of delay, disruption, or interference; and
 5. The impact on Contract Price, in accordance with the provisions of Paragraph 11.07.
- Contractor shall also furnish such additional supporting documentation as Owner or Engineer may require including, where appropriate, a revised progress schedule indicating all the activities affected by the delay, disruption, or interference, and an explanation of the effect of the delay, disruption, or interference on the critical path to completion of the Work.
- F. Delays, disruption, and interference to the performance or progress of the Work resulting from the existence of a differing subsurface or physical condition, an Underground Facility that was not shown or indicated by the Contract Documents, or not shown or indicated with reasonable accuracy, and those resulting from Hazardous Environmental Conditions, are governed by Article 5, together with the provisions of Paragraphs 4.05.D and 4.05.E.
- G. Paragraph 8.03 addresses delays, disruption, and interference to the performance or progress of the Work resulting from the performance of certain other work at or adjacent to the Site.

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

5.01 *Availability of Lands*

- A. Owner shall furnish the Site. Owner shall notify Contractor in writing of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work.

- B. Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and legal description of the lands upon which permanent improvements are to be made and Owner's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.
- C. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

5.02 *Use of Site and Other Areas*

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

1. Contractor shall confine construction equipment, temporary construction facilities, the storage of materials and equipment, and the operations of workers to the Site, adjacent areas that Contractor has arranged to use through construction easements or otherwise, and other adjacent areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and such other adjacent areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for (a) damage to the Site; (b) damage to any such other adjacent areas used for Contractor's operations; (c) damage to any other adjacent land or areas, or to improvements, structures, utilities, or similar facilities located at such adjacent lands or areas; and (d) for injuries and losses sustained by the owners or occupants of any such land or areas; provided that such damage or injuries result from the performance of the Work or from other actions or conduct of the Contractor or those for which Contractor is responsible.
 2. If a damage or injury claim is made by the owner or occupant of any such land or area because of the performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible, Contractor shall (a) take immediate corrective or remedial action as required by Paragraph 7.13, or otherwise; (b) promptly attempt to settle the claim as to all parties through negotiations with such owner or occupant, or otherwise resolve the claim by arbitration or other dispute resolution proceeding, or in a court of competent jurisdiction; and (c) to the fullest extent permitted by Laws and Regulations, indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from and against any such claim, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused directly or indirectly, in whole or in part by, or based upon, Contractor's performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible.
- B. *Removal of Debris During Performance of the Work:* During the progress of the Work the Contractor shall keep the Site and other adjacent areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris will conform to applicable Laws and Regulations.
 - C. *Cleaning:* Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work Contractor shall remove from the Site and adjacent areas all tools, appliances, construction equipment

and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.

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

5.03 *Subsurface and Physical Conditions*

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

1. Those reports of explorations and tests of subsurface conditions at or adjacent to the Site that contain Technical Data;
2. Those drawings of existing physical conditions at or adjacent to the Site, including those drawings depicting existing surface or subsurface structures at or adjacent to the Site (except Underground Facilities), that contain Technical Data; and
3. Technical Data contained in such reports and drawings.

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

- C. *Reliance by Contractor on Technical Data:* Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely upon the accuracy of the Technical Data as defined in Paragraph 1.01.A.46.b.

- D. *Limitations of Other Data and Documents:* Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto;
2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings;
3. the contents of other Site-related documents made available to Contractor, such as record drawings from other projects at or adjacent to the Site, or Owner's archival documents concerning the Site; or
4. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions, or information.

5.04 *Differing Subsurface or Physical Conditions*

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

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

- B. *Engineer's Review:* After receipt of written notice as required by the preceding paragraph, Engineer will promptly review the subsurface or physical condition in question; determine whether it is necessary for Owner to obtain additional exploration or tests with respect to the condition; conclude whether the condition falls within any one or more of the differing site condition categories in Paragraph 5.04.A; obtain any pertinent cost or schedule information from Contractor; prepare recommendations to Owner regarding the Contractor's resumption of Work in connection with the subsurface or physical condition in question and the need for any change in the Drawings or Specifications; and advise Owner in writing of Engineer's findings, conclusions, and recommendations.
- C. *Owner's Statement to Contractor Regarding Site Condition:* After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the subsurface or physical condition in question, addressing the resumption of Work in connection with such condition, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations, in whole or in part.
- D. *Early Resumption of Work:* If at any time Engineer determines that Work in connection with the subsurface or physical condition in question may resume prior to completion of Engineer's review or Owner's issuance of its statement to Contractor, because the condition in question has been adequately documented, and analyzed on a preliminary basis, then the Engineer may at its discretion instruct Contractor to resume such Work.
- E. *Possible Price and Times Adjustments*
1. Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times, to the extent that the existence of a differing subsurface or physical condition, or any related delay, disruption, or interference, causes an increase or decrease in

Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

- a. Such condition must fall within any one or more of the categories described in Paragraph 5.04.A;
 - b. With respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03; and,
 - c. Contractor's entitlement to an adjustment of the Contract Times is subject to the provisions of Paragraphs 4.05.D and 4.05.E.
2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times with respect to a subsurface or physical condition if:
- a. Contractor knew of the existence of such condition at the time Contractor made a commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract, or otherwise;
 - b. The existence of such condition reasonably could have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas expressly required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such commitment; or
 - c. Contractor failed to give the written notice required by Paragraph 5.04.A.
3. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, then any such adjustment will be set forth in a Change Order.
4. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the subsurface or physical condition in question.
- F. *Underground Facilities; Hazardous Environmental Conditions*: Paragraph 5.05 governs rights and responsibilities regarding the presence or location of Underground Facilities. Paragraph 5.06 governs rights and responsibilities regarding Hazardous Environmental Conditions. The provisions of Paragraphs 5.03 and 5.04 are not applicable to the presence or location of Underground Facilities, or to Hazardous Environmental Conditions.

5.05 *Underground Facilities*

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

3. verifying the actual location of those Underground Facilities shown or indicated in the Contract Documents as being within the area affected by the Work, by exposing such Underground Facilities during the course of construction;
 4. coordination of the Work with the owners (including Owner) of such Underground Facilities, during construction; and
 5. the safety and protection of all existing Underground Facilities at the Site, and repairing any damage thereto resulting from the Work.
- B. *Notice by Contractor:* If Contractor believes that an Underground Facility that is uncovered or revealed at the Site was not shown or indicated on the Drawings, or was not shown or indicated on the Drawings with reasonable accuracy, then Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), notify Owner and Engineer in writing regarding such Underground Facility.
- C. *Engineer's Review:* Engineer will:
1. promptly review the Underground Facility and conclude whether such Underground Facility was not shown or indicated on the Drawings, or was not shown or indicated with reasonable accuracy;
 2. identify and communicate with the owner of the Underground Facility; prepare recommendations to Owner (and if necessary issue any preliminary instructions to Contractor) regarding the Contractor's resumption of Work in connection with the Underground Facility in question;
 3. obtain any pertinent cost or schedule information from Contractor; determine the extent, if any, to which a change is required in the Drawings or Specifications to reflect and document the consequences of the existence or location of the Underground Facility; and
 4. advise Owner in writing of Engineer's findings, conclusions, and recommendations.

During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.

- D. *Owner's Statement to Contractor Regarding Underground Facility:* After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the Underground Facility in question addressing the resumption of Work in connection with such Underground Facility, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations in whole or in part.
- E. *Early Resumption of Work:* If at any time Engineer determines that Work in connection with the Underground Facility may resume prior to completion of Engineer's review or Owner's issuance of its statement to Contractor, because the Underground Facility in question and conditions affected by its presence have been adequately documented, and analyzed on a preliminary basis, then the Engineer may at its discretion instruct Contractor to resume such Work.
- F. *Possible Price and Times Adjustments*
1. Contractor shall be entitled to an equitable adjustment in the Contract Price or Contract Times, to the extent that any existing Underground Facility at the Site that was not shown

or indicated on the Drawings, or was not shown or indicated with reasonable accuracy, or any related delay, disruption, or interference, causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

- a. With respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03;
 - b. Contractor's entitlement to an adjustment of the Contract Times is subject to the provisions of Paragraphs 4.05.D and 4.05.E; and
 - c. Contractor gave the notice required in Paragraph 5.05.B.
2. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, then any such adjustment will be set forth in a Change Order.
 3. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the Underground Facility in question.
 4. The information and data shown or indicated on the Drawings with respect to existing Underground Facilities at the Site is based on information and data (a) furnished by the owners of such Underground Facilities, or by others, (b) obtained from available records, or (c) gathered in an investigation conducted in accordance with the current edition of ASCE 38, Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data, by the American Society of Civil Engineers. If such information or data is incorrect or incomplete, Contractor's remedies are limited to those set forth in this Paragraph 5.05.F.

5.06 *Hazardous Environmental Conditions at Site*

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

1. those reports known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site;
2. drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site; and
3. Technical Data contained in such reports and drawings.

B. *Reliance by Contractor on Technical Data Authorized*: Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely on the accuracy of the Technical Data as defined in Paragraph 1.01.A.46.b. Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures

- of construction to be employed by Contractor, and safety precautions and programs incident thereto;
2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or
 3. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions or information.
- C. Contractor shall not be responsible for removing or remediating any Hazardous Environmental Condition encountered, uncovered, or revealed at the Site unless such removal or remediation is expressly identified in the Contract Documents to be within the scope of the Work.
- D. Contractor shall be responsible for controlling, containing, and duly removing all Constituents of Concern brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible, and for any associated costs; and for the costs of removing and remediating any Hazardous Environmental Condition created by the presence of any such Constituents of Concern.
- E. If Contractor encounters, uncovers, or reveals a Hazardous Environmental Condition whose removal or remediation is not expressly identified in the Contract Documents as being within the scope of the Work, or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, then Contractor shall immediately: (1) secure or otherwise isolate such condition; (2) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 7.15); and (3) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any. Promptly after consulting with Engineer, Owner shall take such actions as are necessary to permit Owner to timely obtain required permits and provide Contractor the written notice required by Paragraph 5.06.F. If Contractor or anyone for whom Contractor is responsible created the Hazardous Environmental Condition in question, then Owner may remove and remediate the Hazardous Environmental Condition, and impose a set-off against payments to account for the associated costs.
- F. Contractor shall not resume Work in connection with such Hazardous Environmental Condition or in any affected area until after Owner has obtained any required permits related thereto, and delivered written notice to Contractor either (1) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work, or (2) specifying any special conditions under which such Work may be resumed safely.
- G. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, as a result of such Work stoppage, such special conditions under which Work is agreed to be resumed by Contractor, or any costs or expenses incurred in response to the Hazardous Environmental Condition, then within 30 days of Owner's written notice regarding the resumption of Work, Contractor may submit a Change Proposal, or Owner may impose a set-off. Entitlement to any such adjustment is subject to the provisions of Paragraphs 4.05.D, 4.05.E, 11.07, and 11.08.
- H. If, after receipt of such written notice, Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special

conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work, following the contractual change procedures in Article 11. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 8.

- I. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court, arbitration, or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition (1) was not shown or indicated in the Drawings, Specifications, or other Contract Documents, identified as Technical Data entitled to limited reliance pursuant to Paragraph 5.06.B, or identified in the Contract Documents to be included within the scope of the Work, and (2) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.I obligates Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- J. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the failure to control, contain, or remove a Constituent of Concern brought to the Site by Contractor or by anyone for whom Contractor is responsible, or to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.J obligates Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- K. The provisions of Paragraphs 5.03, 5.04, and 5.05 do not apply to the presence of Constituents of Concern or to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 6—BONDS AND INSURANCE

6.01 *Performance, Payment, and Other Bonds*

- A. Contractor shall furnish a performance bond and a payment bond, each in an amount at least equal to the Contract Price, as security for the faithful performance and payment of Contractor's obligations under the Contract. These bonds must remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 15.08, whichever is later, except as provided otherwise by Laws or Regulations, the terms of a prescribed bond form, the Supplementary Conditions, or other provisions of the Contract.
- B. Contractor shall also furnish such other bonds (if any) as are required by the Supplementary Conditions or other provisions of the Contract.
- C. All bonds must be in the form included in the Bidding Documents or otherwise specified by Owner prior to execution of the Contract, except as provided otherwise by Laws or

Regulations, and must be issued and signed by a surety named in “Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies” as published in Department Circular 570 (as amended and supplemented) by the Bureau of the Fiscal Service, U.S. Department of the Treasury. A bond signed by an agent or attorney-in-fact must be accompanied by a certified copy of that individual’s authority to bind the surety. The evidence of authority must show that it is effective on the date the agent or attorney-in-fact signed the accompanying bond.

- D. Contractor shall obtain the required bonds from surety companies that are duly licensed or authorized, in the state or jurisdiction in which the Project is located, to issue bonds in the required amounts.
- E. If the surety on a bond furnished by Contractor is declared bankrupt or becomes insolvent, or the surety ceases to meet the requirements above, then Contractor shall promptly notify Owner and Engineer in writing and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which must comply with the bond and surety requirements above.
- F. If Contractor has failed to obtain a required bond, Owner may exclude the Contractor from the Site and exercise Owner’s termination rights under Article 16.
- G. Upon request to Owner from any Subcontractor, Supplier, or other person or entity claiming to have furnished labor, services, materials, or equipment used in the performance of the Work, Owner shall provide a copy of the payment bond to such person or entity.
- H. Upon request to Contractor from any Subcontractor, Supplier, or other person or entity claiming to have furnished labor, services, materials, or equipment used in the performance of the Work, Contractor shall provide a copy of the payment bond to such person or entity.

6.02 *Insurance—General Provisions*

- A. Owner and Contractor shall obtain and maintain insurance as required in this article and in the Supplementary Conditions.
- B. All insurance required by the Contract to be purchased and maintained by Owner or Contractor shall be obtained from insurance companies that are duly licensed or authorized in the state or jurisdiction in which the Project is located to issue insurance policies for the required limits and coverages. Unless a different standard is indicated in the Supplementary Conditions, all companies that provide insurance policies required under this Contract shall have an A.M. Best rating of A-VII or better.
- C. Alternative forms of insurance coverage, including but not limited to self-insurance and “Occupational Accident and Excess Employer’s Indemnity Policies,” are not sufficient to meet the insurance requirements of this Contract, unless expressly allowed in the Supplementary Conditions.
- D. Contractor shall deliver to Owner, with copies to each additional insured identified in the Contract, certificates of insurance and endorsements establishing that Contractor has obtained and is maintaining the policies and coverages required by the Contract. Upon request by Owner or any other insured, Contractor shall also furnish other evidence of such required insurance, including but not limited to copies of policies, documentation of applicable self-insured retentions (if allowed) and deductibles, full disclosure of all relevant exclusions, and evidence of insurance required to be purchased and maintained by

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

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

- L. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor or Contractor's interests. Contractor is responsible for determining whether such coverage and limits are adequate to protect its interests, and for obtaining and maintaining any additional insurance that Contractor deems necessary.
- M. The insurance and insurance limits required herein will not be deemed as a limitation on Contractor's liability, or that of its Subcontractors or Suppliers, under the indemnities granted to Owner and other individuals and entities in the Contract or otherwise.
- N. All the policies of insurance required to be purchased and maintained under this Contract will contain a provision or endorsement that the coverage afforded will not be canceled, or renewal refused, until at least 10 days prior written notice has been given to the purchasing policyholder. Within three days of receipt of any such written notice, the purchasing policyholder shall provide a copy of the notice to each other insured and Engineer.

6.03 Contractor's Insurance

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

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

6.04 *Builder's Risk and Other Property Insurance*

- A. *Builder's Risk*: Unless otherwise provided in the Supplementary Conditions, Contractor shall purchase and maintain builder's risk insurance upon the Work on a completed value basis, in the amount of the Work's full insurable replacement cost (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). The specific requirements applicable to the builder's risk insurance are set forth in the Supplementary Conditions.
- B. *Property Insurance for Facilities of Owner Where Work Will Occur*: Owner is responsible for obtaining and maintaining property insurance covering each existing structure, building, or facility in which any part of the Work will occur, or to which any part of the Work will attach or be adjoined. Such property insurance will be written on a special perils (all-risk) form, on a replacement cost basis, providing coverage consistent with that required for the builder's risk insurance, and will be maintained until the Work is complete, as set forth in Paragraph 15.06.D.
- C. *Property Insurance for Substantially Complete Facilities*: Promptly after Substantial Completion, and before actual occupancy or use of the substantially completed Work, Owner will obtain property insurance for such substantially completed Work, and maintain such property insurance at least until the Work is complete, as set forth in Paragraph 15.06.D. Such property insurance will be written on a special perils (all-risk) form, on a replacement cost basis, and provide coverage consistent with that required for the builder's risk insurance. The builder's risk insurance may terminate upon written confirmation of Owner's procurement of such property insurance.
- D. *Partial Occupancy or Use by Owner*: If Owner will occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work, as provided in Paragraph 15.04, then Owner (directly, if it is the purchaser of the builder's risk policy, or through Contractor) will provide advance notice of such occupancy or use to the builder's risk insurer, and obtain an endorsement consenting to the continuation of coverage prior to commencing such partial occupancy or use.
- E. *Insurance of Other Property; Additional Insurance*: If the express insurance provisions of the Contract do not require or address the insurance of a property item or interest, then the entity or individual owning such property item will be responsible for insuring it. If Contractor elects to obtain other special insurance to be included in or supplement the builder's risk or property insurance policies provided under this Paragraph 6.04, it may do so at Contractor's expense.

6.05 *Property Losses; Subrogation*

- A. The builder's risk insurance policy purchased and maintained in accordance with Paragraph 6.04 (or an installation floater policy if authorized by the Supplementary Conditions), will contain provisions to the effect that in the event of payment of any loss or damage the insurer will have no rights of recovery against any insureds thereunder, or against

Engineer or its consultants, or their officers, directors, members, partners, employees, agents, consultants, or subcontractors.

1. Owner and Contractor waive all rights against each other and the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, or resulting from any of the perils, risks, or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Engineer, its consultants, all individuals or entities identified in the Supplementary Conditions as builder's risk or installation floater insureds, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, under such policies for losses and damages so caused.
 2. None of the above waivers extends to the rights that any party making such waiver may have to the proceeds of insurance held by Owner or Contractor as trustee or fiduciary, or otherwise payable under any policy so issued.
- B. Any property insurance policy maintained by Owner covering any loss, damage, or consequential loss to Owner's existing structures, buildings, or facilities in which any part of the Work will occur, or to which any part of the Work will attach or adjoin; to adjacent structures, buildings, or facilities of Owner; or to part or all of the completed or substantially completed Work, during partial occupancy or use pursuant to Paragraph 15.04, after Substantial Completion pursuant to Paragraph 15.03, or after final payment pursuant to Paragraph 15.06, will contain provisions to the effect that in the event of payment of any loss or damage the insurer will have no rights of recovery against any insureds thereunder, or against Contractor, Subcontractors, or Engineer, or the officers, directors, members, partners, employees, agents, consultants, or subcontractors of each and any of them, and that the insured is allowed to waive the insurer's rights of subrogation in a written contract executed prior to the loss, damage, or consequential loss.
1. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, for all losses and damages caused by, arising out of, or resulting from fire or any of the perils, risks, or causes of loss covered by such policies.
- C. The waivers in this Paragraph 6.05 include the waiver of rights due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other insured peril, risk, or cause of loss.
- D. Contractor shall be responsible for assuring that each Subcontract contains provisions whereby the Subcontractor waives all rights against Owner, Contractor, all individuals or entities identified in the Supplementary Conditions as insureds, the Engineer and its consultants, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, relating to, or resulting from fire or other peril, risk, or cause of loss covered by builder's risk insurance, installation floater, and any other property insurance applicable to the Work.

6.06 *Receipt and Application of Property Insurance Proceeds*

- A. Any insured loss under the builder's risk and other policies of property insurance required by Paragraph 6.04 will be adjusted and settled with the named insured that purchased the policy. Such named insured shall act as fiduciary for the other insureds, and give notice to such other insureds that adjustment and settlement of a claim is in progress. Any other insured may state its position regarding a claim for insured loss in writing within 15 days after notice of such claim.
- B. Proceeds for such insured losses may be made payable by the insurer either jointly to multiple insureds, or to the named insured that purchased the policy in its own right and as fiduciary for other insureds, subject to the requirements of any applicable mortgage clause. A named insured receiving insurance proceeds under the builder's risk and other policies of insurance required by Paragraph 6.04 shall maintain such proceeds in a segregated account, and distribute such proceeds in accordance with such agreement as the parties in interest may reach, or as otherwise required under the dispute resolution provisions of this Contract or applicable Laws and Regulations.
- C. If no other special agreement is reached, Contractor shall repair or replace the damaged Work, using allocated insurance proceeds.

ARTICLE 7—CONTRACTOR'S RESPONSIBILITIES

7.01 *Contractor's Means and Methods of Construction*

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

7.02 *Supervision and Superintendence*

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

7.03 *Labor; Working Hours*

- A. Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall maintain good discipline and order at the Site.

- B. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of Contractor's employees; of Suppliers and Subcontractors, and their employees; and of any other individuals or entities performing or furnishing any of the Work, just as Contractor is responsible for Contractor's own acts and omissions.
- C. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site will be performed during regular working hours, Monday through Friday. Contractor will not perform Work on a Saturday, Sunday, or any legal holiday. Contractor may perform Work outside regular working hours or on Saturdays, Sundays, or legal holidays only with Owner's written consent, which will not be unreasonably withheld.

7.04 *Services, Materials, and Equipment*

- A. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start up, and completion of the Work, whether or not such items are specifically called for in the Contract Documents.
- B. All materials and equipment incorporated into the Work must be new and of good quality, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications will expressly run to the benefit of Owner. If required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.
- C. All materials and equipment must be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

7.05 *"Or Equals"*

- A. *Contractor's Request; Governing Criteria:* Whenever an item of equipment or material is specified or described in the Contract Documents by using the names of one or more proprietary items or specific Suppliers, the Contract Price has been based upon Contractor furnishing such item as specified. The specification or description of such an item is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or equal" item is permitted, Contractor may request that Engineer authorize the use of other items of equipment or material, or items from other proposed Suppliers, under the circumstances described below.
 - 1. If Engineer in its sole discretion determines that an item of equipment or material proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, Engineer will deem it an "or equal" item. For the purposes of this paragraph, a proposed item of equipment or material will be considered functionally equal to an item so named if:
 - a. in the exercise of reasonable judgment Engineer determines that the proposed item:
 - 1) is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;

- 2) will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole;
 - 3) has a proven record of performance and availability of responsive service; and
 - 4) is not objectionable to Owner.
- b. Contractor certifies that, if the proposed item is approved and incorporated into the Work:
- 1) there will be no increase in cost to the Owner or increase in Contract Times; and
 - 2) the item will conform substantially to the detailed requirements of the item named in the Contract Documents.
- B. *Contractor's Expense:* Contractor shall provide all data in support of any proposed "or equal" item at Contractor's expense.
- C. *Engineer's Evaluation and Determination:* Engineer will be allowed a reasonable time to evaluate each "or-equal" request. Engineer may require Contractor to furnish additional data about the proposed "or-equal" item. Engineer will be the sole judge of acceptability. No "or-equal" item will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an "or-equal," which will be evidenced by an approved Shop Drawing or other written communication. Engineer will advise Contractor in writing of any negative determination.
- D. *Effect of Engineer's Determination:* Neither approval nor denial of an "or-equal" request will result in any change in Contract Price. The Engineer's denial of an "or-equal" request will be final and binding, and may not be reversed through an appeal under any provision of the Contract.
- E. *Treatment as a Substitution Request:* If Engineer determines that an item of equipment or material proposed by Contractor does not qualify as an "or-equal" item, Contractor may request that Engineer consider the item a proposed substitute pursuant to Paragraph 7.06.

7.06 *Substitutes*

- A. *Contractor's Request; Governing Criteria:* Unless the specification or description of an item of equipment or material required to be furnished under the Contract Documents contains or is followed by words reading that no substitution is permitted, Contractor may request that Engineer authorize the use of other items of equipment or material under the circumstances described below. To the extent possible such requests must be made before commencement of related construction at the Site.
1. Contractor shall submit sufficient information as provided below to allow Engineer to determine if the item of material or equipment proposed is functionally equivalent to that named and an acceptable substitute therefor. Engineer will not accept requests for review of proposed substitute items of equipment or material from anyone other than Contractor.
 2. The requirements for review by Engineer will be as set forth in Paragraph 7.06.B, as supplemented by the Specifications, and as Engineer may decide is appropriate under the circumstances.

3. Contractor shall make written application to Engineer for review of a proposed substitute item of equipment or material that Contractor seeks to furnish or use. The application:
 - a. will certify that the proposed substitute item will:
 - 1) perform adequately the functions and achieve the results called for by the general design;
 - 2) be similar in substance to the item specified; and
 - 3) be suited to the same use as the item specified.
 - b. will state:
 - 1) the extent, if any, to which the use of the proposed substitute item will necessitate a change in Contract Times;
 - 2) whether use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item; and
 - 3) whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty.
 - c. will identify:
 - 1) all variations of the proposed substitute item from the item specified; and
 - 2) available engineering, sales, maintenance, repair, and replacement services.
 - d. will contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including but not limited to changes in Contract Price, shared savings, costs of redesign, and claims of other contractors affected by any resulting change.
- B. *Engineer's Evaluation and Determination*: Engineer will be allowed a reasonable time to evaluate each substitute request, and to obtain comments and direction from Owner. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No substitute will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an acceptable substitute. Engineer's determination will be evidenced by a Field Order or a proposed Change Order accounting for the substitution itself and all related impacts, including changes in Contract Price or Contract Times. Engineer will advise Contractor in writing of any negative determination.
- C. *Special Guarantee*: Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.
- D. *Reimbursement of Engineer's Cost*: Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor. Whether or not Engineer approves a substitute so proposed or submitted by Contractor, Contractor shall reimburse Owner for the reasonable charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the reasonable charges of Engineer for making changes in the Contract Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.

- E. *Contractor's Expense*: Contractor shall provide all data in support of any proposed substitute at Contractor's expense.
- F. *Effect of Engineer's Determination*: If Engineer approves the substitution request, Contractor shall execute the proposed Change Order and proceed with the substitution. The Engineer's denial of a substitution request will be final and binding, and may not be reversed through an appeal under any provision of the Contract. Contractor may challenge the scope of reimbursement costs imposed under Paragraph 7.06.D, by timely submittal of a Change Proposal.

7.07 *Concerning Subcontractors and Suppliers*

- A. Contractor may retain Subcontractors and Suppliers for the performance of parts of the Work. Such Subcontractors and Suppliers must be acceptable to Owner. The Contractor's retention of a Subcontractor or Supplier for the performance of parts of the Work will not relieve Contractor's obligation to Owner to perform and complete the Work in accordance with the Contract Documents.
- B. Contractor shall retain specific Subcontractors and Suppliers for the performance of designated parts of the Work if required by the Contract to do so.
- C. Subsequent to the submittal of Contractor's Bid or final negotiation of the terms of the Contract, Owner may not require Contractor to retain any Subcontractor or Supplier to furnish or perform any of the Work against which Contractor has reasonable objection.
- D. Prior to entry into any binding subcontract or purchase order, Contractor shall submit to Owner the identity of the proposed Subcontractor or Supplier (unless Owner has already deemed such proposed Subcontractor or Supplier acceptable during the bidding process or otherwise). Such proposed Subcontractor or Supplier shall be deemed acceptable to Owner unless Owner raises a substantive, reasonable objection within 5 days.
- E. Owner may require the replacement of any Subcontractor or Supplier. Owner also may require Contractor to retain specific replacements; provided, however, that Owner may not require a replacement to which Contractor has a reasonable objection. If Contractor has submitted the identity of certain Subcontractors or Suppliers for acceptance by Owner, and Owner has accepted it (either in writing or by failing to make written objection thereto), then Owner may subsequently revoke the acceptance of any such Subcontractor or Supplier so identified solely on the basis of substantive, reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor or Supplier.
- F. If Owner requires the replacement of any Subcontractor or Supplier retained by Contractor to perform any part of the Work, then Contractor shall be entitled to an adjustment in Contract Price or Contract Times, with respect to the replacement; and Contractor shall initiate a Change Proposal for such adjustment within 30 days of Owner's requirement of replacement.
- G. No acceptance by Owner of any such Subcontractor or Supplier, whether initially or as a replacement, will constitute a waiver of the right of Owner to the completion of the Work in accordance with the Contract Documents.

- H. On a monthly basis, Contractor shall submit to Engineer a complete list of all Subcontractors and Suppliers having a direct contract with Contractor, and of all other Subcontractors and Suppliers known to Contractor at the time of submittal.
- I. Contractor shall be solely responsible for scheduling and coordinating the work of Subcontractors and Suppliers.
- J. The divisions and sections of the Specifications and the identifications of any Drawings do not control Contractor in dividing the Work among Subcontractors or Suppliers, or in delineating the Work to be performed by any specific trade.
- K. All Work performed for Contractor by a Subcontractor or Supplier must be pursuant to an appropriate contractual agreement that specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract for the benefit of Owner and Engineer.
- L. Owner may furnish to any Subcontractor or Supplier, to the extent practicable, information about amounts paid to Contractor for Work performed for Contractor by the Subcontractor or Supplier.
- M. Contractor shall restrict all Subcontractors and Suppliers from communicating with Engineer or Owner, except through Contractor or in case of an emergency, or as otherwise expressly allowed in this Contract.

7.08 *Patent Fees and Royalties*

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

7.09 *Permits*

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

7.10 *Taxes*

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

7.11 *Laws and Regulations*

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

7.12 *Record Documents*

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

7.13 *Safety and Protection*

- A. Contractor shall be solely responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work. Such responsibility does not relieve Subcontractors of their responsibility for the safety of persons or property in the performance of their work, nor for compliance with applicable safety Laws and Regulations.
- B. Contractor shall designate a qualified and experienced safety representative whose duties and responsibilities are the prevention of Work-related accidents and the maintenance and supervision of safety precautions and programs.
- C. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury, or loss to:
 - 1. all persons on the Site or who may be affected by the Work;
 - 2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and
 - 3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, other work in progress, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.
- D. All damage, injury, or loss to any property referred to in Paragraph 7.13.C.2 or 7.13.C.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor at its expense (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).
- E. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection.
- F. Contractor shall notify Owner; the owners of adjacent property; the owners of Underground Facilities and other utilities (if the identity of such owners is known to Contractor); and other contractors and utility owners performing work at or adjacent to the Site, in writing, when Contractor knows that prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property or work in progress.
- G. Contractor shall comply with the applicable requirements of Owner's safety programs, if any. Any Owner's safety programs that are applicable to the Work are identified or included in the Supplementary Conditions or Specifications.
- H. Contractor shall inform Owner and Engineer of the specific requirements of Contractor's safety program with which Owner's and Engineer's employees and representatives must comply while at the Site.

- I. Contractor's duties and responsibilities for safety and protection will continue until all the Work is completed, Engineer has issued a written notice to Owner and Contractor in accordance with Paragraph 15.06.C that the Work is acceptable, and Contractor has left the Site (except as otherwise expressly provided in connection with Substantial Completion).
- J. Contractor's duties and responsibilities for safety and protection will resume whenever Contractor or any Subcontractor or Supplier returns to the Site to fulfill warranty or correction obligations, or to conduct other tasks arising from the Contract Documents.

7.14 *Hazard Communication Programs*

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

7.15 *Emergencies*

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

7.16 *Submittals*

A. *Shop Drawing and Sample Requirements*

- 1. Before submitting a Shop Drawing or Sample, Contractor shall:
 - a. review and coordinate the Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;
 - b. determine and verify:
 - 1) all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect to the Submittal;
 - 2) the suitability of all materials and equipment offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and
 - 3) all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto;
 - c. confirm that the Submittal is complete with respect to all related data included in the Submittal.
- 2. Each Shop Drawing or Sample must bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review of that Submittal, and that Contractor approves the Submittal.

3. With each Shop Drawing or Sample, Contractor shall give Engineer specific written notice of any variations that the Submittal may have from the requirements of the Contract Documents. This notice must be set forth in a written communication separate from the Submittal; and, in addition, in the case of a Shop Drawing by a specific notation made on the Shop Drawing itself.
- B. *Submittal Procedures for Shop Drawings and Samples:* Contractor shall label and submit Shop Drawings and Samples to Engineer for review and approval in accordance with the accepted Schedule of Submittals.
1. *Shop Drawings*
 - a. Contractor shall submit the number of copies required in the Specifications.
 - b. Data shown on the Shop Drawings must be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to provide, and to enable Engineer to review the information for the limited purposes required by Paragraph 7.16.C.
 2. *Samples*
 - a. Contractor shall submit the number of Samples required in the Specifications.
 - b. Contractor shall clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the Submittal for the limited purposes required by Paragraph 7.16.C.
 3. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.
- C. *Engineer's Review of Shop Drawings and Samples*
1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the accepted Schedule of Submittals. Engineer's review and approval will be only to determine if the items covered by the Submittals will, after installation or incorporation in the Work, comply with the requirements of the Contract Documents, and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.
 2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction, or to safety precautions or programs incident thereto.
 3. Engineer's review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.
 4. Engineer's review and approval of a Shop Drawing or Sample will not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 7.16.A.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer will

document any such approved variation from the requirements of the Contract Documents in a Field Order or other appropriate Contract modification.

5. Engineer's review and approval of a Shop Drawing or Sample will not relieve Contractor from responsibility for complying with the requirements of Paragraphs 7.16.A and B.
6. Engineer's review and approval of a Shop Drawing or Sample, or of a variation from the requirements of the Contract Documents, will not, under any circumstances, change the Contract Times or Contract Price, unless such changes are included in a Change Order.
7. Neither Engineer's receipt, review, acceptance, or approval of a Shop Drawing or Sample will result in such item becoming a Contract Document.
8. Contractor shall perform the Work in compliance with the requirements and commitments set forth in approved Shop Drawings and Samples, subject to the provisions of Paragraph 7.16.C.4.

D. Resubmittal Procedures for Shop Drawings and Samples

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

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

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

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

7.17 Contractor's General Warranty and Guarantee

- A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer is entitled to rely on Contractor's warranty and guarantee.
- B. Owner's rights under this warranty and guarantee are in addition to, and are not limited by, Owner's rights under the correction period provisions of Paragraph 15.08. The time in which Owner may enforce its warranty and guarantee rights under this Paragraph 7.17 is limited only by applicable Laws and Regulations restricting actions to enforce such rights; provided, however, that after the end of the correction period under Paragraph 15.08:
1. Owner shall give Contractor written notice of any defective Work within 60 days of the discovery that such Work is defective; and
 2. Such notice will be deemed the start of an event giving rise to a Claim under Paragraph 12.01.B, such that any related Claim must be brought within 30 days of the notice.
- C. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:
1. abuse, or improper modification, maintenance, or operation, by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or
 2. normal wear and tear under normal usage.
- D. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents is absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents, a release of Contractor's obligation to perform the Work in accordance with the Contract Documents, or a release of Owner's warranty and guarantee rights under this Paragraph 7.17:
1. Observations by Engineer;
 2. Recommendation by Engineer or payment by Owner of any progress or final payment;
 3. The issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;
 4. Use or occupancy of the Work or any part thereof by Owner;
 5. Any review and approval of a Shop Drawing or Sample submittal;
 6. The issuance of a notice of acceptability by Engineer;
 7. The end of the correction period established in Paragraph 15.08;
 8. Any inspection, test, or approval by others; or

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

7.18 *Indemnification*

- A. To the fullest extent permitted by Laws and Regulations, and in addition to any other obligations of Contractor under the Contract or otherwise, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from losses, damages, costs, and judgments (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) arising from third-party claims or actions relating to or resulting from the performance or furnishing of the Work, provided that any such claim, action, loss, cost, judgment or damage is attributable to bodily injury, sickness, disease, or death, or to damage to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom, but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable.
- B. In any and all claims against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 7.18.A will not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.

7.19 *Delegation of Professional Design Services*

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

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

ARTICLE 8—OTHER WORK AT THE SITE

8.01 *Other Work*

- A. In addition to and apart from the Work under the Contract Documents, the Owner may perform other work at or adjacent to the Site. Such other work may be performed by Owner's employees, or through contracts between the Owner and third parties. Owner may also arrange to have third-party utility owners perform work on their utilities and facilities at or adjacent to the Site.
- B. If Owner performs other work at or adjacent to the Site with Owner's employees, or through contracts for such other work, then Owner shall give Contractor written notice thereof prior to starting any such other work. If Owner has advance information regarding the start of any third-party utility work that Owner has arranged to take place at or adjacent to the Site, Owner shall provide such information to Contractor.
- C. Contractor shall afford proper and safe access to the Site to each contractor that performs such other work, each utility owner performing other work, and Owner, if Owner is performing other work with Owner's employees, and provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work.
- D. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering such work; provided, however, that Contractor may cut or alter others' work with the written consent of Engineer and the others whose work will be affected.

- E. If the proper execution or results of any part of Contractor's Work depends upon work performed by others, Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.
- F. The provisions of this article are not applicable to work that is performed by third-party utilities or other third-party entities without a contract with Owner, or that is performed without having been arranged by Owner. If such work occurs, then any related delay, disruption, or interference incurred by Contractor is governed by the provisions of Paragraph 4.05.C.3.

8.02 *Coordination*

- A. If Owner intends to contract with others for the performance of other work at or adjacent to the Site, to perform other work at or adjacent to the Site with Owner's employees, or to arrange to have utility owners perform work at or adjacent to the Site, the following will be set forth in the Supplementary Conditions or provided to Contractor prior to the start of any such other work:
 - 1. The identity of the individual or entity that will have authority and responsibility for coordination of the activities among the various contractors;
 - 2. An itemization of the specific matters to be covered by such authority and responsibility; and
 - 3. The extent of such authority and responsibilities.
- B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

8.03 *Legal Relationships*

- A. If, in the course of performing other work for Owner at or adjacent to the Site, the Owner's employees, any other contractor working for Owner, or any utility owner that Owner has arranged to perform work, causes damage to the Work or to the property of Contractor or its Subcontractors, or delays, disrupts, interferes with, or increases the scope or cost of the performance of the Work, through actions or inaction, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times. Contractor must submit any Change Proposal seeking an equitable adjustment in the Contract Price or the Contract Times under this paragraph within 30 days of the damaging, delaying, disrupting, or interfering event. The entitlement to, and extent of, any such equitable adjustment will take into account information (if any) regarding such other work that was provided to Contractor in the Contract Documents prior to the submittal of the Bid or the final negotiation of the terms of the Contract, and any remedies available to Contractor under Laws or Regulations concerning utility action or inaction. When applicable, any such equitable adjustment in Contract Price will be conditioned on Contractor assigning to Owner all Contractor's rights against such other contractor or utility owner with respect to the damage, delay, disruption, or interference that is the subject of the adjustment. Contractor's entitlement to an adjustment of the Contract Times or Contract Price is subject to the provisions of Paragraphs 4.05.D and 4.05.E.

- B. Contractor shall take reasonable and customary measures to avoid damaging, delaying, disrupting, or interfering with the work of Owner, any other contractor, or any utility owner performing other work at or adjacent to the Site.
 - 1. If Contractor fails to take such measures and as a result damages, delays, disrupts, or interferes with the work of any such other contractor or utility owner, then Owner may impose a set-off against payments due Contractor, and assign to such other contractor or utility owner the Owner's contractual rights against Contractor with respect to the breach of the obligations set forth in this Paragraph 8.03.B.
 - 2. When Owner is performing other work at or adjacent to the Site with Owner's employees, Contractor shall be liable to Owner for damage to such other work, and for the reasonable direct delay, disruption, and interference costs incurred by Owner as a result of Contractor's failure to take reasonable and customary measures with respect to Owner's other work. In response to such damage, delay, disruption, or interference, Owner may impose a set-off against payments due Contractor.
- C. If Contractor damages, delays, disrupts, or interferes with the work of any other contractor, or any utility owner performing other work at or adjacent to the Site, through Contractor's failure to take reasonable and customary measures to avoid such impacts, or if any claim arising out of Contractor's actions, inactions, or negligence in performance of the Work at or adjacent to the Site is made by any such other contractor or utility owner against Contractor, Owner, or Engineer, then Contractor shall (1) promptly attempt to settle the claim as to all parties through negotiations with such other contractor or utility owner, or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law, and (2) indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against any such claims, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such damage, delay, disruption, or interference.

ARTICLE 9—OWNER'S RESPONSIBILITIES

9.01 *Communications to Contractor*

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

9.02 *Replacement of Engineer*

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

9.03 *Furnish Data*

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

9.04 *Pay When Due*

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

- 9.05 *Lands and Easements; Reports, Tests, and Drawings*
- A. Owner's duties with respect to providing lands and easements are set forth in Paragraph 5.01.
 - B. Owner's duties with respect to providing engineering surveys to establish reference points are set forth in Paragraph 4.03.
 - C. Article 5 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of conditions at the Site, and drawings of physical conditions relating to existing surface or subsurface structures at the Site.
- 9.06 *Insurance*
- A. Owner's responsibilities, if any, with respect to purchasing and maintaining liability and property insurance are set forth in Article 6.
- 9.07 *Change Orders*
- A. Owner's responsibilities with respect to Change Orders are set forth in Article 11.
- 9.08 *Inspections, Tests, and Approvals*
- A. Owner's responsibility with respect to certain inspections, tests, and approvals is set forth in Paragraph 14.02.B.
- 9.09 *Limitations on Owner's Responsibilities*
- A. The Owner shall not supervise, direct, or have control or authority over, nor be responsible for, Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Owner will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.
- 9.10 *Undisclosed Hazardous Environmental Condition*
- A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 5.06.
- 9.11 *Evidence of Financial Arrangements*
- A. Upon request of Contractor, Owner shall furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract (including obligations under proposed changes in the Work).
- 9.12 *Safety Programs*
- A. While at the Site, Owner's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Owner has been informed.
 - B. Owner shall furnish copies of any applicable Owner safety programs to Contractor.

ARTICLE 10—ENGINEER'S STATUS DURING CONSTRUCTION

10.01 *Owner's Representative*

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

10.02 *Visits to Site*

- A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe, as an experienced and qualified design professional, the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.
- B. Engineer's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in Paragraph 10.07. Particularly, but without limitation, during or as a result of Engineer's visits or observations of Contractor's Work, Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

10.03 *Resident Project Representative*

- A. If Owner and Engineer have agreed that Engineer will furnish a Resident Project Representative to represent Engineer at the Site and assist Engineer in observing the progress and quality of the Work, then the authority and responsibilities of any such Resident Project Representative will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in the Supplementary Conditions and in Paragraph 10.07.
- B. If Owner designates an individual or entity who is not Engineer's consultant, agent, or employee to represent Owner at the Site, then the responsibilities and authority of such individual or entity will be as provided in the Supplementary Conditions.

10.04 *Engineer's Authority*

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

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

10.05 *Determinations for Unit Price Work*

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

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

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

10.07 *Limitations on Engineer's Authority and Responsibilities*

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

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

C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.

D. Engineer's review of the final Application for Payment and accompanying documentation, and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Contractor under Paragraph 15.06.A, will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals, that the results certified indicate compliance with the Contract Documents.

E. The limitations upon authority and responsibility set forth in this Paragraph 10.07 also apply to the Resident Project Representative, if any.

10.08 *Compliance with Safety Program*

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

ARTICLE 11—CHANGES TO THE CONTRACT

11.01 *Amending and Supplementing the Contract*

- A. The Contract may be amended or supplemented by a Change Order, a Work Change Directive, or a Field Order.
- B. If an amendment or supplement to the Contract includes a change in the Contract Price or the Contract Times, such amendment or supplement must be set forth in a Change Order.
- C. All changes to the Contract that involve (1) the performance or acceptability of the Work, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, must be supported by Engineer's recommendation. Owner and Contractor may amend other terms and conditions of the Contract without the recommendation of the Engineer.

11.02 *Change Orders*

- A. Owner and Contractor shall execute appropriate Change Orders covering:
 - 1. Changes in Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive;
 - 2. Changes in Contract Price resulting from an Owner set-off, unless Contractor has duly contested such set-off;
 - 3. Changes in the Work which are: (a) ordered by Owner pursuant to Paragraph 11.05, (b) required because of Owner's acceptance of defective Work under Paragraph 14.04 or Owner's correction of defective Work under Paragraph 14.07, or (c) agreed to by the parties, subject to the need for Engineer's recommendation if the change in the Work involves the design (as set forth in the Drawings, Specifications, or otherwise) or other engineering or technical matters; and
 - 4. Changes that embody the substance of any final and binding results under: Paragraph 11.03.B, resolving the impact of a Work Change Directive; Paragraph 11.09, concerning Change Proposals; Article 12, Claims; Paragraph 13.02.D, final adjustments resulting from allowances; Paragraph 13.03.D, final adjustments relating to determination of quantities for Unit Price Work; and similar provisions.
- B. If Owner or Contractor refuses to execute a Change Order that is required to be executed under the terms of Paragraph 11.02.A, it will be deemed to be of full force and effect, as if fully executed.

11.03 *Work Change Directives*

- A. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the modification ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order, following negotiations by the parties as to the Work Change Directive's effect, if any, on the Contract Price and Contract Times; or, if negotiations are unsuccessful, by a determination under the terms of the Contract Documents governing adjustments, expressly including Paragraph 11.07 regarding change of Contract Price.

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

11.04 *Field Orders*

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

11.05 *Owner-Authorized Changes in the Work*

- A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work. Changes involving the design (as set forth in the Drawings, Specifications, or otherwise) or other engineering or technical matters will be supported by Engineer's recommendation.
- B. Such changes in the Work may be accomplished by a Change Order, if Owner and Contractor have agreed as to the effect, if any, of the changes on Contract Times or Contract Price; or by a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved; or, in the case of a deletion in the Work, promptly cease construction activities with respect to such deleted Work. Added or revised Work must be performed under the applicable conditions of the Contract Documents.
- C. Nothing in this Paragraph 11.05 obligates Contractor to undertake work that Contractor reasonably concludes cannot be performed in a manner consistent with Contractor's safety obligations under the Contract Documents or Laws and Regulations.

11.06 *Unauthorized Changes in the Work*

- A. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents, as amended, modified, or supplemented, except in the case of an emergency as provided in Paragraph 7.15 or in the case of uncovering Work as provided in Paragraph 14.05.C.2.

11.07 *Change of Contract Price*

- A. The Contract Price may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Price must comply with the provisions of Paragraph 11.09. Any Claim for an adjustment of Contract Price must comply with the provisions of Article 12.
- B. An adjustment in the Contract Price will be determined as follows:

1. Where the Work involved is covered by unit prices contained in the Contract Documents, then by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 13.03);
 2. Where the Work involved is not covered by unit prices contained in the Contract Documents, then by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 11.07.C.2); or
 3. Where the Work involved is not covered by unit prices contained in the Contract Documents and the parties do not reach mutual agreement to a lump sum, then on the basis of the Cost of the Work (determined as provided in Paragraph 13.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 11.07.C).
- C. *Contractor's Fee:* When applicable, the Contractor's fee for overhead and profit will be determined as follows:
1. A mutually acceptable fixed fee; or
 2. If a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:
 - a. For costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2, the Contractor's fee will be 15 percent;
 - b. For costs incurred under Paragraph 13.01.B.3, the Contractor's fee will be 5 percent;
 - c. Where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraphs 11.07.C.2.a and 11.07.C.2.b is that the Contractor's fee will be based on: (1) a fee of 15 percent of the costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2 by the Subcontractor that actually performs the Work, at whatever tier, and (2) with respect to Contractor itself and to any Subcontractors of a tier higher than that of the Subcontractor that actually performs the Work, a fee of 5 percent of the amount (fee plus underlying costs incurred) attributable to the next lower tier Subcontractor; provided, however, that for any such subcontracted Work the maximum total fee to be paid by Owner will be no greater than 27 percent of the costs incurred by the Subcontractor that actually performs the Work;
 - d. No fee will be payable on the basis of costs itemized under Paragraphs 13.01.B.4, 13.01.B.5, and 13.01.C;
 - e. The amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in Cost of the Work will be the amount of the actual net decrease in Cost of the Work and a deduction of an additional amount equal to 5 percent of such actual net decrease in Cost of the Work; and
 - f. When both additions and credits are involved in any one change or Change Proposal, the adjustment in Contractor's fee will be computed by determining the sum of the costs in each of the cost categories in Paragraph 13.01.B (specifically, payroll costs, Paragraph 13.01.B.1; incorporated materials and equipment costs, Paragraph 13.01.B.2; Subcontract costs, Paragraph 13.01.B.3; special consultants costs, Paragraph 13.01.B.4; and other costs, Paragraph 13.01.B.5) and applying to each such cost category sum the appropriate fee from Paragraphs 11.07.C.2.a through 11.07.C.2.e, inclusive.

11.08 *Change of Contract Times*

- A. The Contract Times may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Times must comply with the provisions of Paragraph 11.09. Any Claim for an adjustment in the Contract Times must comply with the provisions of Article 12.
- B. Delay, disruption, and interference in the Work, and any related changes in Contract Times, are addressed in and governed by Paragraph 4.05.

11.09 *Change Proposals*

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

B. *Change Proposal Procedures*

1. *Submittal:* Contractor shall submit each Change Proposal to Engineer within 30 days after the start of the event giving rise thereto, or after such initial decision.
2. *Supporting Data:* The Contractor shall submit supporting data, including the proposed change in Contract Price or Contract Time (if any), to the Engineer and Owner within 15 days after the submittal of the Change Proposal.
 - a. Change Proposals based on or related to delay, interruption, or interference must comply with the provisions of Paragraphs 4.05.D and 4.05.E.
 - b. Change proposals related to a change of Contract Price must include full and detailed accounts of materials incorporated into the Work and labor and equipment used for the subject Work.

The supporting data must be accompanied by a written statement that the supporting data are accurate and complete, and that any requested time or price adjustment is the entire adjustment to which Contractor believes it is entitled as a result of said event.

3. *Engineer's Initial Review:* Engineer will advise Owner regarding the Change Proposal, and consider any comments or response from Owner regarding the Change Proposal. If in its discretion Engineer concludes that additional supporting data is needed before conducting a full review and making a decision regarding the Change Proposal, then Engineer may request that Contractor submit such additional supporting data by a date specified by Engineer, prior to Engineer beginning its full review of the Change Proposal.
4. *Engineer's Full Review and Action on the Change Proposal:* Upon receipt of Contractor's supporting data (including any additional data requested by Engineer), Engineer will conduct a full review of each Change Proposal and, within 30 days after such receipt of the Contractor's supporting data, either approve the Change Proposal in whole, deny it in whole, or approve it in part and deny it in part. Such actions must be in writing, with a copy provided to Owner and Contractor. If Engineer does not take action on the Change

Proposal within 30 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of Engineer's inaction the Change Proposal is deemed denied, thereby commencing the time for appeal of the denial under Article 12.

5. *Binding Decision*: Engineer's decision is final and binding upon Owner and Contractor, unless Owner or Contractor appeals the decision by filing a Claim under Article 12.
- C. *Resolution of Certain Change Proposals*: If the Change Proposal does not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters, then Engineer will notify the parties in writing that the Engineer is unable to resolve the Change Proposal. For purposes of further resolution of such a Change Proposal, such notice will be deemed a denial, and Contractor may choose to seek resolution under the terms of Article 12.
- D. *Post-Completion*: Contractor shall not submit any Change Proposals after Engineer issues a written recommendation of final payment pursuant to Paragraph 15.06.B.

11.10 *Notification to Surety*

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

ARTICLE 12—CLAIMS

12.01 *Claims*

- A. *Claims Process*: The following disputes between Owner and Contractor are subject to the Claims process set forth in this article:
 1. Appeals by Owner or Contractor of Engineer's decisions regarding Change Proposals;
 2. Owner demands for adjustments in the Contract Price or Contract Times, or other relief under the Contract Documents;
 3. Disputes that Engineer has been unable to address because they do not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters; and
 4. Subject to the waiver provisions of Paragraph 15.07, any dispute arising after Engineer has issued a written recommendation of final payment pursuant to Paragraph 15.06.B.
- B. *Submittal of Claim*: The party submitting a Claim shall deliver it directly to the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto; in the case of appeals regarding Change Proposals within 30 days of the decision under appeal. The party submitting the Claim shall also furnish a copy to the Engineer, for its information only. The responsibility to substantiate a Claim rests with the party making the Claim. In the case of a Claim by Contractor seeking an increase in the Contract Times or Contract Price, Contractor shall certify that the Claim is made in good faith, that the supporting data are accurate and complete, and that to the best of Contractor's knowledge

and belief the amount of time or money requested accurately reflects the full amount to which Contractor is entitled.

- C. *Review and Resolution*: The party receiving a Claim shall review it thoroughly, giving full consideration to its merits. The two parties shall seek to resolve the Claim through the exchange of information and direct negotiations. The parties may extend the time for resolving the Claim by mutual agreement. All actions taken on a Claim will be stated in writing and submitted to the other party, with a copy to Engineer.
- D. *Mediation*
 - 1. At any time after initiation of a Claim, Owner and Contractor may mutually agree to mediation of the underlying dispute. The agreement to mediate will stay the Claim submittal and response process.
 - 2. If Owner and Contractor agree to mediation, then after 60 days from such agreement, either Owner or Contractor may unilaterally terminate the mediation process, and the Claim submittal and decision process will resume as of the date of the termination. If the mediation proceeds but is unsuccessful in resolving the dispute, the Claim submittal and decision process will resume as of the date of the conclusion of the mediation, as determined by the mediator.
 - 3. Owner and Contractor shall each pay one-half of the mediator's fees and costs.
- E. *Partial Approval*: If the party receiving a Claim approves the Claim in part and denies it in part, such action will be final and binding unless within 30 days of such action the other party invokes the procedure set forth in Article 17 for final resolution of disputes.
- F. *Denial of Claim*: If efforts to resolve a Claim are not successful, the party receiving the Claim may deny it by giving written notice of denial to the other party. If the receiving party does not take action on the Claim within 90 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of the inaction, the Claim is deemed denied, thereby commencing the time for appeal of the denial. A denial of the Claim will be final and binding unless within 30 days of the denial the other party invokes the procedure set forth in Article 17 for the final resolution of disputes.
- G. *Final and Binding Results*: If the parties reach a mutual agreement regarding a Claim, whether through approval of the Claim, direct negotiations, mediation, or otherwise; or if a Claim is approved in part and denied in part, or denied in full, and such actions become final and binding; then the results of the agreement or action on the Claim will be incorporated in a Change Order or other written document to the extent they affect the Contract, including the Work, the Contract Times, or the Contract Price.

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

13.01 *Cost of the Work*

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

2. When needed to determine the value of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price. When the value of any such adjustment is determined on the basis of Cost of the Work, Contractor is entitled only to those additional or incremental costs required because of the change in the Work or because of the event giving rise to the adjustment.
- B. *Costs Included:* Except as otherwise may be agreed to in writing by Owner, costs included in the Cost of the Work will be in amounts no higher than those commonly incurred in the locality of the Project, will not include any of the costs itemized in Paragraph 13.01.C, and will include only the following items:
1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor in advance of the subject Work. Such employees include, without limitation, superintendents, foremen, safety managers, safety representatives, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work will be apportioned on the basis of their time spent on the Work. Payroll costs include, but are not limited to, salaries and wages plus the cost of fringe benefits, which include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, sick leave, and vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, will be included in the above to the extent authorized by Owner.
 2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts will accrue to Owner. All trade discounts, rebates, and refunds and returns from sale of surplus materials and equipment will accrue to Owner, and Contractor shall make provisions so that they may be obtained.
 3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, which will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee will be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 13.01.
 4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed or retained for services specifically related to the Work.
 5. Other costs consisting of the following:
 - a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.
 - b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, which are

consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.

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

c. *Construction Equipment Rental*

- 1) Rentals of all construction equipment and machinery, and the parts thereof, in accordance with rental agreements approved by Owner as to price (including any surcharge or special rates applicable to overtime use of the construction equipment or machinery), and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs will be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts must cease when the use thereof is no longer necessary for the Work.
- 2) Costs for equipment and machinery owned by Contractor or a Contractor-related entity will be paid at a rate shown for such equipment in the equipment rental rate book specified in the Supplementary Conditions. An hourly rate will be computed by dividing the monthly rates by 176. These computed rates will include all operating costs.
- 3) With respect to Work that is the result of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price ("changed Work"), included costs will be based on the time the equipment or machinery is in use on the changed Work and the costs of transportation, loading, unloading, assembly, dismantling, and removal when directly attributable to the changed Work. The cost of any such equipment or machinery, or parts thereof, must cease to accrue when the use thereof is no longer necessary for the changed Work.

- d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, as imposed by Laws and Regulations.
- e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.
- f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of builder's risk or other property insurance established in accordance with Paragraph 6.04), provided such losses and damages have resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses will be included in the Cost of the Work for the purpose of determining Contractor's fee.

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

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

- 1. Payroll costs and other compensation of Contractor's officers, executives, principals, general managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 13.01.B.1 or specifically covered by Paragraph 13.01.B.4. The payroll costs and other compensation excluded here are to be considered administrative costs covered by the Contractor's fee.
- 2. The cost of purchasing, renting, or furnishing small tools and hand tools.
- 3. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.
- 4. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.
- 5. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.
- 6. Expenses incurred in preparing and advancing Claims.
- 7. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraph 13.01.B.

D. *Contractor's Fee*

- 1. When the Work as a whole is performed on the basis of cost-plus-a-fee, then:
 - a. Contractor's fee for the Work set forth in the Contract Documents as of the Effective Date of the Contract will be determined as set forth in the Agreement.
 - b. for any Work covered by a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price on the basis of Cost of the Work, Contractor's fee will be determined as follows:
 - 1) When the fee for the Work as a whole is a percentage of the Cost of the Work, the fee will automatically adjust as the Cost of the Work changes.
 - 2) When the fee for the Work as a whole is a fixed fee, the fee for any additions or deletions will be determined in accordance with Paragraph 11.07.C.2.
- 2. When the Work as a whole is performed on the basis of a stipulated sum, or any other basis other than cost-plus-a-fee, then Contractor's fee for any Work covered by a Change

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

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

13.02 Allowances

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

13.03 Unit Price Work

- A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.
- B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Payments to Contractor for Unit Price Work will be based on actual quantities.
- C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.
- D. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Engineer will review with Contractor the Engineer's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision

thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, and the final adjustment of Contract Price will be set forth in a Change Order, subject to the provisions of the following paragraph.

E. *Adjustments in Unit Price*

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

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

14.01 *Access to Work*

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

14.02 *Tests, Inspections, and Approvals*

- A. Contractor shall give Engineer timely notice of readiness of the Work (or specific parts thereof) for all required inspections and tests, and shall cooperate with inspection and testing personnel to facilitate required inspections and tests.
- B. Owner shall retain and pay for the services of an independent inspector, testing laboratory, or other qualified individual or entity to perform all inspections and tests expressly required by the Contract Documents to be furnished and paid for by Owner, except that costs incurred in connection with tests or inspections of covered Work will be governed by the provisions of Paragraph 14.05.
- C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.

- D. Contractor shall be responsible for arranging, obtaining, and paying for all inspections and tests required:
1. by the Contract Documents, unless the Contract Documents expressly allocate responsibility for a specific inspection or test to Owner;
 2. to attain Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work;
 3. by manufacturers of equipment furnished under the Contract Documents;
 4. for testing, adjusting, and balancing of mechanical, electrical, and other equipment to be incorporated into the Work; and
 5. for acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work.

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

- E. If the Contract Documents require the Work (or part thereof) to be approved by Owner, Engineer, or another designated individual or entity, then Contractor shall assume full responsibility for arranging and obtaining such approvals.
- F. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, Contractor shall, if requested by Engineer, uncover such Work for observation. Such uncovering will be at Contractor's expense unless Contractor had given Engineer timely notice of Contractor's intention to cover the same and Engineer had not acted with reasonable promptness in response to such notice.

14.03 *Defective Work*

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

losses, and damages resulting from defective Work, then Owner may impose a reasonable set-off against payments due under Article 15.

14.04 *Acceptance of Defective Work*

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

14.05 *Uncovering Work*

- A. Engineer has the authority to require additional inspection or testing of the Work, whether or not the Work is fabricated, installed, or completed.
- B. If any Work is covered contrary to the written request of Engineer, then Contractor shall, if requested by Engineer, uncover such Work for Engineer's observation, and then replace the covering, all at Contractor's expense.
- C. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, then Contractor, at Engineer's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Engineer may require, that portion of the Work in question, and provide all necessary labor, material, and equipment.
 - 1. If it is found that the uncovered Work is defective, Contractor shall be responsible for all claims, costs, losses, and damages arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and pending Contractor's full discharge of this responsibility the Owner shall be entitled to impose a reasonable set-off against payments due under Article 15.
 - 2. If the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, then Contractor may submit a Change Proposal within 30 days of the determination that the Work is not defective.

14.06 *Owner May Stop the Work*

- A. If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, then Owner may order Contractor to stop the Work,

or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner to stop the Work will not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

14.07 Owner May Correct Defective Work

- A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work, or to remove and replace defective Work as required by Engineer, then Owner may, after 7 days' written notice to Contractor, correct or remedy any such deficiency.
- B. In exercising the rights and remedies under this Paragraph 14.07, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this paragraph.
- C. All claims, costs, losses, and damages incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 14.07 will be charged against Contractor as set-offs against payments due under Article 15. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.
- D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 14.07.

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

15.01 Progress Payments

- A. *Basis for Progress Payments:* The Schedule of Values established as provided in Article 2 will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments for Unit Price Work will be based on the number of units completed during the pay period, as determined under the provisions of Paragraph 13.03. Progress payments for cost-based Work will be based on Cost of the Work completed by Contractor during the pay period.
- B. *Applications for Payments*
 - 1. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents.
 - 2. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment must also be accompanied by: (a) a bill of sale, invoice, copies of subcontract or purchase order payments, or other documentation

establishing full payment by Contractor for the materials and equipment; (b) at Owner's request, documentation warranting that Owner has received the materials and equipment free and clear of all Liens; and (c) evidence that the materials and equipment are covered by appropriate property insurance, a warehouse bond, or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.

3. Beginning with the second Application for Payment, each Application must include an affidavit of Contractor stating that all previous progress payments received by Contractor have been applied to discharge Contractor's legitimate obligations associated with prior Applications for Payment.
4. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

C. *Review of Applications*

1. Engineer will, within 10 days after receipt of each Application for Payment, including each resubmittal, either indicate in writing a recommendation of payment and present the Application to Owner, or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.
2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations of the executed Work as an experienced and qualified design professional, and on Engineer's review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:
 - a. the Work has progressed to the point indicated;
 - b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, the results of any subsequent tests called for in the Contract Documents, a final determination of quantities and classifications for Unit Price Work under Paragraph 13.03, and any other qualifications stated in the recommendation); and
 - c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.
3. By recommending any such payment Engineer will not thereby be deemed to have represented that:
 - a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract; or
 - b. there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.

4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:
 - a. to supervise, direct, or control the Work;
 - b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto;
 - c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work;
 - d. to make any examination to ascertain how or for what purposes Contractor has used the money paid by Owner; or
 - e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.
5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 15.01.C.2.
6. Engineer will recommend reductions in payment (set-offs) necessary in Engineer's opinion to protect Owner from loss because:
 - a. the Work is defective, requiring correction or replacement;
 - b. the Contract Price has been reduced by Change Orders;
 - c. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;
 - d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible; or
 - e. Engineer has actual knowledge of the occurrence of any of the events that would constitute a default by Contractor and therefore justify termination for cause under the Contract Documents.

D. *Payment Becomes Due*

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

E. *Reductions in Payment by Owner*

1. In addition to any reductions in payment (set-offs) recommended by Engineer, Owner is entitled to impose a set-off against payment based on any of the following:
 - a. Claims have been made against Owner based on Contractor's conduct in the performance or furnishing of the Work, or Owner has incurred costs, losses, or damages resulting from Contractor's conduct in the performance or furnishing of the Work, including but not limited to claims, costs, losses, or damages from workplace injuries, adjacent property damage, non-compliance with Laws and Regulations, and patent infringement;

- b. Contractor has failed to take reasonable and customary measures to avoid damage, delay, disruption, and interference with other work at or adjacent to the Site;
 - c. Contractor has failed to provide and maintain required bonds or insurance;
 - d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible;
 - e. Owner has incurred extra charges or engineering costs related to submittal reviews, evaluations of proposed substitutes, tests and inspections, or return visits to manufacturing or assembly facilities;
 - f. The Work is defective, requiring correction or replacement;
 - g. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;
 - h. The Contract Price has been reduced by Change Orders;
 - i. An event has occurred that would constitute a default by Contractor and therefore justify a termination for cause;
 - j. Liquidated or other damages have accrued as a result of Contractor's failure to achieve Milestones, Substantial Completion, or final completion of the Work;
 - k. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens; or
 - l. Other items entitle Owner to a set-off against the amount recommended.
2. If Owner imposes any set-off against payment, whether based on its own knowledge or on the written recommendations of Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and the specific amount of the reduction, and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, if Contractor remedies the reasons for such action. The reduction imposed will be binding on Contractor unless it duly submits a Change Proposal contesting the reduction.
 3. Upon a subsequent determination that Owner's refusal of payment was not justified, the amount wrongfully withheld will be treated as an amount due as determined by Paragraph 15.01.D.1 and subject to interest as provided in the Agreement.

15.02 Contractor's Warranty of Title

- A. Contractor warrants and guarantees that title to all Work, materials, and equipment furnished under the Contract will pass to Owner free and clear of (1) all Liens and other title defects, and (2) all patent, licensing, copyright, or royalty obligations, no later than 7 days after the time of payment by Owner.

15.03 Substantial Completion

- A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete and request that Engineer issue a certificate of Substantial Completion. Contractor shall at the same time

submit to Owner and Engineer an initial draft of punch list items to be completed or corrected before final payment.

- B. Promptly after Contractor's notification, Owner, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.
- C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a preliminary certificate of Substantial Completion which will fix the date of Substantial Completion. Engineer shall attach to the certificate a punch list of items to be completed or corrected before final payment. Owner shall have 7 days after receipt of the preliminary certificate during which to make written objection to Engineer as to any provisions of the certificate or attached punch list. If, after considering the objections to the provisions of the preliminary certificate, Engineer concludes that the Work is not substantially complete, Engineer will, within 14 days after submission of the preliminary certificate to Owner, notify Contractor in writing that the Work is not substantially complete, stating the reasons therefor. If Owner does not object to the provisions of the certificate, or if despite consideration of Owner's objections Engineer concludes that the Work is substantially complete, then Engineer will, within said 14 days, execute and deliver to Owner and Contractor a final certificate of Substantial Completion (with a revised punch list of items to be completed or corrected) reflecting such changes from the preliminary certificate as Engineer believes justified after consideration of any objections from Owner.
- D. At the time of receipt of the preliminary certificate of Substantial Completion, Owner and Contractor will confer regarding Owner's use or occupancy of the Work following Substantial Completion, review the builder's risk insurance policy with respect to the end of the builder's risk coverage, and confirm the transition to coverage of the Work under a permanent property insurance policy held by Owner. Unless Owner and Contractor agree otherwise in writing, Owner shall bear responsibility for security, operation, protection of the Work, property insurance, maintenance, heat, and utilities upon Owner's use or occupancy of the Work.
- E. After Substantial Completion the Contractor shall promptly begin work on the punch list of items to be completed or corrected prior to final payment. In appropriate cases Contractor may submit monthly Applications for Payment for completed punch list items, following the progress payment procedures set forth above.
- F. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to remove its property and complete or correct items on the punch list.

15.04 *Partial Use or Occupancy*

- A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without

significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions:

1. At any time, Owner may request in writing that Contractor permit Owner to use or occupy any such part of the Work that Owner believes to be substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor, Owner, and Engineer will follow the procedures of Paragraph 15.03.A through 15.03.E for that part of the Work.
2. At any time, Contractor may notify Owner and Engineer in writing that Contractor considers any such part of the Work substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.
3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 15.03 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.
4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 6.04 regarding builder's risk or other property insurance.

15.05 *Final Inspection*

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

15.06 *Final Payment*

A. *Application for Payment*

1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance, certificates of inspection, annotated record documents (as provided in Paragraph 7.12), and other documents, Contractor may make application for final payment.
2. The final Application for Payment must be accompanied (except as previously delivered) by:
 - a. all documentation called for in the Contract Documents;
 - b. consent of the surety, if any, to final payment;
 - c. satisfactory evidence that all title issues have been resolved such that title to all Work, materials, and equipment has passed to Owner free and clear of any Liens or other title defects, or will so pass upon final payment.

- d. a list of all duly pending Change Proposals and Claims; and
 - e. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of the Work, and of Liens filed in connection with the Work.
3. In lieu of the releases or waivers of Liens specified in Paragraph 15.06.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (a) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (b) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner might in any way be responsible, or which might in any way result in liens or other burdens on Owner's property, have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien, or Owner at its option may issue joint checks payable to Contractor and specified Subcontractors and Suppliers.
- B. *Engineer's Review of Final Application and Recommendation of Payment:* If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract have been fulfilled, Engineer will, within 10 days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of final payment and present the final Application for Payment to Owner for payment. Such recommendation will account for any set-offs against payment that are necessary in Engineer's opinion to protect Owner from loss for the reasons stated above with respect to progress payments. Otherwise, Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.
- C. *Notice of Acceptability:* In support of its recommendation of payment of the final Application for Payment, Engineer will also give written notice to Owner and Contractor that the Work is acceptable, subject to stated limitations in the notice and to the provisions of Paragraph 15.07.
- D. *Completion of Work:* The Work is complete (subject to surviving obligations) when it is ready for final payment as established by the Engineer's written recommendation of final payment and issuance of notice of the acceptability of the Work.
- E. *Final Payment Becomes Due:* Upon receipt from Engineer of the final Application for Payment and accompanying documentation, Owner shall set off against the amount recommended by Engineer for final payment any further sum to which Owner is entitled, including but not limited to set-offs for liquidated damages and set-offs allowed under the provisions of this Contract with respect to progress payments. Owner shall pay the resulting balance due to Contractor within 30 days of Owner's receipt of the final Application for Payment from Engineer.

15.07 *Waiver of Claims*

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

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

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

15.08 *Correction Period*

- A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the Supplementary Conditions or the terms of any applicable special guarantee required by the Contract Documents), Owner gives Contractor written notice that any Work has been found to be defective, or that Contractor's repair of any damages to the Site or adjacent areas has been found to be defective, then after receipt of such notice of defect Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:
 - 1. correct the defective repairs to the Site or such adjacent areas;
 - 2. correct such defective Work;
 - 3. remove the defective Work from the Project and replace it with Work that is not defective, if the defective Work has been rejected by Owner, and
 - 4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others, or to other land or areas resulting from the corrective measures.
- B. Owner shall give any such notice of defect within 60 days of the discovery that such Work or repairs is defective. If such notice is given within such 60 days but after the end of the correction period, the notice will be deemed a notice of defective Work under Paragraph 7.17.B.
- C. If, after receipt of a notice of defect within 60 days and within the correction period, Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. Contractor shall pay all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others). Contractor's failure to pay such costs, losses, and damages within 10 days of invoice from Owner will be deemed the start of an event giving rise to a Claim under Paragraph 12.01.B, such that any related Claim must be brought within 30 days of the failure to pay.
- D. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications.
- E. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this paragraph, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.

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

ARTICLE 16—SUSPENSION OF WORK AND TERMINATION

16.01 *Owner May Suspend Work*

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

16.02 *Owner May Terminate for Cause*

- A. The occurrence of any one or more of the following events will constitute a default by Contractor and justify termination for cause:
 - 1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment, or failure to adhere to the Progress Schedule);
 - 2. Failure of Contractor to perform or otherwise to comply with a material term of the Contract Documents;
 - 3. Contractor's disregard of Laws or Regulations of any public body having jurisdiction; or
 - 4. Contractor's repeated disregard of the authority of Owner or Engineer.
- B. If one or more of the events identified in Paragraph 16.02.A occurs, then after giving Contractor (and any surety) 10 days' written notice that Owner is considering a declaration that Contractor is in default and termination of the Contract, Owner may proceed to:
 - 1. declare Contractor to be in default, and give Contractor (and any surety) written notice that the Contract is terminated; and
 - 2. enforce the rights available to Owner under any applicable performance bond.
- C. Subject to the terms and operation of any applicable performance bond, if Owner has terminated the Contract for cause, Owner may exclude Contractor from the Site, take possession of the Work, incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere, and complete the Work as Owner may deem expedient.
- D. Owner may not proceed with termination of the Contract under Paragraph 16.02.B if Contractor within 7 days of receipt of notice of intent to terminate begins to correct its failure to perform and proceeds diligently to cure such failure.
- E. If Owner proceeds as provided in Paragraph 16.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds the cost to complete the Work, including all related claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects,

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

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

16.03 *Owner May Terminate for Convenience*

- A. Upon 7 days' written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):
 - 1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;
 - 2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses; and
 - 3. other reasonable expenses directly attributable to termination, including costs incurred to prepare a termination for convenience cost proposal.
- B. Contractor shall not be paid for any loss of anticipated profits or revenue, post-termination overhead costs, or other economic loss arising out of or resulting from such termination.

16.04 *Contractor May Stop Work or Terminate*

- A. If, through no act or fault of Contractor, (1) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (2) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (3) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon 7 days' written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the contract and recover from Owner payment on the same terms as provided in Paragraph 16.03.
- B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, 7 days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The

provisions of this paragraph are not intended to preclude Contractor from submitting a Change Proposal for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this paragraph.

ARTICLE 17—FINAL RESOLUTION OF DISPUTES

17.01 *Methods and Procedures*

- A. *Disputes Subject to Final Resolution:* The following disputed matters are subject to final resolution under the provisions of this article:
1. A timely appeal of an approval in part and denial in part of a Claim, or of a denial in full, pursuant to Article 12; and
 2. Disputes between Owner and Contractor concerning the Work, or obligations under the Contract Documents, that arise after final payment has been made.
- B. *Final Resolution of Disputes:* For any dispute subject to resolution under this article, Owner or Contractor may:
1. elect in writing to invoke the dispute resolution process provided for in the Supplementary Conditions;
 2. agree with the other party to submit the dispute to another dispute resolution process; or
 3. if no dispute resolution process is provided for in the Supplementary Conditions or mutually agreed to, give written notice to the other party of the intent to submit the dispute to a court of competent jurisdiction.

ARTICLE 18—MISCELLANEOUS

18.01 *Giving Notice*

- A. Whenever any provision of the Contract requires the giving of written notice to Owner, Engineer, or Contractor, it will be deemed to have been validly given only if delivered:
1. in person, by a commercial courier service or otherwise, to the recipient's place of business;
 2. by registered or certified mail, postage prepaid, to the recipient's place of business; or
 3. by e-mail to the recipient, with the words "Formal Notice" or similar in the e-mail's subject line.

18.02 *Computation of Times*

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

18.03 *Cumulative Remedies*

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

18.04 *Limitation of Damages*

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

18.05 *No Waiver*

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

18.06 *Survival of Obligations*

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

18.07 *Controlling Law*

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

18.08 *Assignment of Contract*

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

18.09 *Successors and Assigns*

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

18.10 *Headings*

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

SECTION 00800

SUPPLEMENTARY CONDITIONS OF THE CONSTRUCTION CONTRACT

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

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

The address system used in these Supplementary Conditions is the same as the address system used in the General Conditions, with the prefix "SC" added—for example, "Paragraph SC-4.05."

ARTICLE 1—DEFINITIONS AND TERMINOLOGY

SC-1.01 The following have been modified:

Add the following sentence to **"4. Bid"** **"The words 'Bid' and 'Proposal' are interchangeable throughout this Contract."**

Add the following sentence to **"28. Notice of Award"** **"When requested by OWNER, the Notice of Award may be issued by the ENGINEER."**

Add the following sentence to **"29. Notice to Proceed"** **"When requested by OWNER, the Notice to Proceed may be issued by ENGINEER."**

Add the following new defined terms:

"51. Product - As used in the Project Manual, includes materials, fabrications, systems and equipment."

"52. Construct - As used in the Project Manual, means to furnish and install, complete and ready for intended use."

ARTICLE 2—PRELIMINARY MATTERS

2.01 *Delivery of Bonds and Evidence of Insurance*

SC-2.01 Delete Paragraphs 2.01.B. and C. in their entirety and insert the following in their place:

- B. *Evidence of Contractor's Insurance:* When Contractor delivers the signed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner copies of the policies (including all endorsements, and identification of applicable self-insured retentions and deductibles) of insurance required to be provided by Contractor in this Contract. Contractor may block out (redact) any confidential premium or pricing information contained in any policy or endorsement furnished under this provision.

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2.02 *Copies of Documents*

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

- A. Owner shall furnish to Contractor four (4) printed copies of conformed Contract Documents incorporating and integrating all Addenda and any amendments negotiated prior to the Effective Date of the Contract (including one fully signed counterpart of the Agreement), and one copy in electronic portable document format (PDF). Additional printed copies of the conformed Contract Documents will be furnished upon request at the cost of reproduction.

Delete the last sentence of 2.02 B., "Owner may delegate the responsibilities under this provision to Engineer." and substitute in its place the following:

"Engineer is not custodian of Public Records related to this project."

SC-2.03 Add the following immediately after 2.03 A.3.:

- "4. Contractor shall perform no portion of the Work at any time without Contract Documents or, where specified, approved Shop Drawings for such portion of the Work."**

SC-2.06 Delete Paragraphs 2.06.B and 2.06.C in their entirety and insert the following in their place:

- B. *Electronic Documents Protocol:* The parties shall conform to the following provisions in Paragraphs 2.06.B and 2.06.C, together referred to as the Electronic Documents Protocol ("EDP" or "Protocol") for exchange of electronic transmittals.

1. *Basic Requirements*

- a. To the fullest extent practical, the parties agree to and will transmit and accept Electronic Documents in an electronic or digital format using the procedures described in this Protocol. Use of the Electronic Documents and any information contained therein is subject to the requirements of this Protocol and other provisions of the Contract.
- b. The contents of the information in any Electronic Document will be the responsibility of the transmitting party.
- c. Electronic Documents as exchanged by this Protocol may be used in the same manner as the printed versions of the same documents that are exchanged using non-electronic format and methods, subject to the same governing requirements, limitations, and restrictions, set forth in the Contract Documents.
- d. Except as otherwise explicitly stated herein, the terms of this Protocol will be incorporated into any other agreement or subcontract between a party and any third party for any portion of the Work on the Project, or any Project-related services, where that third party is, either directly or indirectly, required to exchange Electronic Documents with a party or with Engineer. Nothing herein will modify the requirements of the Contract regarding communications between and among the parties and their subcontractors and consultants.
- e. When transmitting Electronic Documents, the transmitting party makes no representations as to long term compatibility, usability, or readability of the items resulting from the receiving party's use of software application packages, operating systems, or computer hardware differing from those established in this Protocol.

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- f. Nothing herein negates any obligation 1) in the Contract to create, provide, or maintain an original printed record version of Drawings and Specifications, signed and sealed according to applicable Laws and Regulations; 2) to comply with any applicable Law or Regulation governing the signing and sealing of design documents or the signing and electronic transmission of any other documents; or 3) to comply with the notice requirements of Paragraph 18.01 of the General Conditions.

2. *System Infrastructure for Electronic Document Exchange*

- a. Each party will provide hardware, operating system(s) software, internet, e-mail, and large file transfer functions (“System Infrastructure”) at its own cost and sufficient for complying with the EDP requirements. With the exception of minimum standards set forth in this EDP, and any explicit system requirements specified by attachment to this EDP, it is the obligation of each party to determine, for itself, its own System Infrastructure.
 - 1) The maximum size of an email attachment for exchange of Electronic Documents under this EDP is 20 MB. Attachments larger than that may be exchanged using large file transfer functions or physical media.
 - 2) Each Party assumes full and complete responsibility for any and all of its own costs, delays, deficiencies, and errors associated with converting, translating, updating, verifying, licensing, or otherwise enabling its System Infrastructure, including operating systems and software, for use with respect to this EDP.
- b. Each party is responsible for its own system operations, security, back-up, archiving, audits, printing resources, and other Information Technology (“IT”) for maintaining operations of its System Infrastructure during the Project, including coordination with the party’s individual(s) or entity responsible for managing its System Infrastructure and capable of addressing routine communications and other IT issues affecting the exchange of Electronic Documents.
- c. Each party will operate and maintain industry-standard, industry-accepted, ISO-standard, commercial-grade security software and systems that are intended to protect the other party from: software viruses and other malicious software like worms, trojans, adware; data breaches; loss of confidentiality; and other threats in the transmission to or storage of information from the other parties, including transmission of Electronic Documents by physical media such as CD/DVD/flash drive/hard drive. To the extent that a party maintains and operates such security software and systems, it shall not be liable to the other party for any breach of system security.
- d. In the case of disputes, conflicts, or modifications to the EDP required to address issues affecting System Infrastructure, the parties shall cooperatively resolve the issues; but, failing resolution, the Owner is authorized to make and require reasonable and necessary changes to the EDP to effectuate its original intent. If the changes cause additional cost or time to Contractor, not reasonably anticipated under the original EDP, Contractor may seek an adjustment in price or time under the appropriate process in the Contract.

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- e. Each party is responsible for its own back-up and archive of documents sent and received during the term of the contract under this EDP, unless this EDP establishes a Project document archive, either as part of a mandatory Project website or other communications protocol, upon which the parties may rely for document archiving during the specified term of operation of such Project document archive. Further, each party remains solely responsible for its own post-Project back-up and archive of Project documents after the term of the Contract, or after termination of the Project document archive, if one is established, for as long as required by the Contract and as each party deems necessary for its own purposes.
- f. If a receiving party receives an obviously corrupted, damaged, or unreadable Electronic Document, the receiving party will advise the sending party of the incomplete transmission.
- g. The parties will bring any non-conforming Electronic Documents into compliance with the EDP. The parties will attempt to complete a successful transmission of the Electronic Document or use an alternative delivery method to complete the communication.
- h. The Owner will operate a Project information management system (also referred to in this EDP as "Project Website") for use of Owner, Engineer and Contractor during the Project for exchange and storage of Project-related communications and information. Except as otherwise provided in this EDP or the General Conditions, use of the Project Website by the parties as described in this Paragraph will be mandatory for exchange of Project documents, communications, submittals, and other Project-related information. The following conditions and standards will govern use of the Project Website:
 - 1) Describe the period of time during which the Project Website will be operated and be available for reliance by the parties;
 - 2) Provide any minimum system infrastructure, software licensing and security standards for access to and use of the Project Website;
 - 3) Describe the types and extent of services to be provided at the Project Website (such as large file transfer, email, communication and document archives, etc.); and
 - 4) Include any other Project Website attributes that may be pertinent to Contractor's use of the facility and pricing of such use.

C. *Software Requirements for Electronic Document Exchange; Limitations*

- 1. Each party will acquire the software and software licenses necessary to create and transmit Electronic Documents and to read and to use any Electronic Documents received from the other party (and if relevant from third parties), using the software formats required in this section of the EDP.
 - a. Prior to using any updated version of the software required in this section for sending Electronic Documents to the other party, the originating party will first notify and receive concurrence from the other party for use of the updated version or adjust its transmission to comply with this EDP.

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2. The parties agree not to intentionally edit, reverse engineer, decrypt, remove security or encryption features, or convert to another format for modification purposes any Electronic Document or information contained therein that was transmitted in a software data format, including Portable Document Format (PDF), intended by sender not to be modified, unless the receiving party obtains the permission of the sending party or is citing or quoting excerpts of the Electronic Document for Project purposes.
3. Software and data formats for exchange of Electronic Documents will conform to the requirements set forth in Exhibit A to this EDP, including software versions, if listed.

ARTICLE 4—COMMENCEMENT AND PROGRESS OF THE WORK

SC-4.01 A. Delete in its entirety and substitute in its place:

“4.01 Commencement of Contract Times: Notice to Proceed

A. The date of commencement of the Work is the date established in the Notice to Proceed. If there is no Notice to Proceed, it shall be the date of the OWNER-CONTRACTOR Agreement or such other date as may be established therein.”

SC-4.02 Add the following Paragraph 4.02 B. as follows:

“B. Contractor shall perform no portion of the Work at any time without Contract Documents or, where specified, approved Shop Drawings for such portion of the Work.”

SC-4.02 Add following paragraph:

“C. If Contractor does not start actual construction in the field in accordance with his submitted schedule, he may be liable for the cost of Engineer’s Resident Project Representative (RPR) until actual construction commences.”

SC-4.05 Amend Paragraph 4.05.C by adding the following subparagraphs:

5. *Weather-Related Delays*

- a. If “abnormal weather conditions” as set forth in Paragraph 4.05.C.2 of the General Conditions are the basis for a request for an equitable adjustment in the Contract Times, such request must be documented by data substantiating each of the following: 1) that weather conditions were abnormal for the period of time in which the delay occurred, 2) that such weather conditions could not have been reasonably anticipated, and 3) that such weather conditions had an adverse effect on the Work as scheduled.
- b. The existence of abnormal weather conditions will be determined on a month-by-month basis in accordance with the following:
 - 1) Every workday on which one or more of the following conditions exist will be considered a “bad weather day”:
 - i) Total precipitation (as rain equivalent) occurring between 7:00 p.m. on the preceding day (regardless of whether such preceding day is a workday) through 7:00 p.m. on the workday in question equals or exceeds 1" of precipitation (as rain equivalent, based on the snow/rain

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conversion indicated in the table entitled Foreseeable Bad Weather Days; such table is hereby incorporated in this SC-4.05.C by reference.

- ii) Ambient outdoor air temperature at 11:00 a.m. is equal to or less than the following low temperature threshold: 32 degrees Fahrenheit; or, at 3:00 p.m. the ambient outdoor temperature is equal to or greater than the following high temperature threshold: 101 degrees Fahrenheit.
- 2) Determination of actual bad weather days during performance of the Work will be based on the weather records measured and recorded by NOAA Jacksonville 11.3 WNW FL weather monitoring station, ID GHCND:US1FLDV0071, Lat/Long 30.410782, -81.824799.
- 3) The existence of abnormal weather conditions will not relieve Contractor of the obligation to demonstrate and document that delays caused by abnormal weather are specific to the planned work activities or that such activities thus delayed were on Contractor's then-current Progress Schedule's critical path for the Project.

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

SC-5.03 Add the following new paragraph immediately after 5.03 D.:

“E. No reports of explorations or tests of subsurface conditions at or adjacent to the Site, or drawings of physical conditions relating to existing surface or subsurface structures at the Site, are known to Owner.

SC-5.06 Add the following new paragraph immediately following Paragraphs 5.06 A.3.:

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

ARTICLE 6—BONDS AND INSURANCE

6.01 *Performance, Payment, and Other Bonds*

SC-6.01 Add the following paragraphs immediately after Paragraph 6.01.A:

1. *Required Performance Bond Form:* The performance bond that Contractor furnishes will be in the form of EJCDC® C-610, Performance Bond (2010, 2013, or 2018 edition).
2. *Required Payment Bond Form:* The payment bond that Contractor furnishes will be in the form of EJCDC® C-615, Payment Bond (2010, 2013, or 2018 edition).

6.02 *Insurance—General Provisions*

SC-6.02 Add the following paragraph immediately after Paragraph 6.02.B:

1. Contractor may obtain worker's compensation insurance from an insurance company that has not been rated by A.M. Best, provided that such company (a) is domiciled in the state in which the Project is located, (b) is certified or authorized as a worker's compensation insurance provider by the appropriate state agency, and (c) has been

accepted to provide worker’s compensation insurance for similar projects by the state within the last 12 months.

SC-6.02 Delete Paragraph 6.02 E. in its entirety.

SC-6.02 Paragraph 6.02 F. Delete the words “or Contractor” in the paragraph.

6.03 *Contractor’s Insurance*

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

- D. *Other Additional Insureds:* As a supplement to the provisions of Paragraph 6.03.C of the General Conditions, the commercial general liability, automobile liability, umbrella or excess, pollution liability, and unmanned aerial vehicle liability policies must include as additional insureds (in addition to Owner and Engineer) the following: None.
- E. *Workers’ Compensation and Employer’s Liability:* Contractor shall purchase and maintain workers’ compensation and employer’s liability insurance, including, as applicable, United States Longshoreman and Harbor Workers’ Compensation Act, Jones Act, stop-gap employer’s liability coverage for monopolistic states, and foreign voluntary workers’ compensation (from available sources, notwithstanding the jurisdictional requirement of Paragraph 6.02.B of the General Conditions).

Workers’ Compensation and Related Policies	Policy limits of not less than:
Workers’ Compensation	
State	Statutory
Applicable Federal (e.g., Longshoreman’s)	Statutory
Foreign voluntary workers’ compensation (employer’s responsibility coverage), if applicable	Statutory
Jones Act (if applicable)	
Bodily injury by accident—each accident	\$ N/A
Bodily injury by disease—aggregate	\$ N/A
Employer’s Liability	
Each accident	\$100,000
Each employee	\$100,000
Policy limit	\$500,000
Stop-gap Liability Coverage	
For work performed in monopolistic states, stop-gap liability coverage must be endorsed to either the worker’s compensation or commercial general liability policy with a minimum limit of:	\$

- F. *Commercial General Liability—Claims Covered:* Contractor shall purchase and maintain commercial general liability insurance, covering all operations by or on behalf of Contractor, on an occurrence basis, against claims for:
 1. damages because of bodily injury, sickness or disease, or death of any person other than Contractor’s employees,
 2. damages insured by reasonably available personal injury liability coverage, and

3. damages because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom.
- G. *Commercial General Liability—Form and Content:* Contractor’s commercial liability policy must be written on a 1996 (or later) Insurance Services Organization, Inc. (ISO) commercial general liability form (occurrence form) and include the following coverages and endorsements:
1. Products and completed operations coverage.
 - a. Such insurance must be maintained for three years after final payment.
 - b. Contractor shall furnish Owner and each other additional insured (as identified in the Supplementary Conditions or elsewhere in the Contract) evidence of continuation of such insurance at final payment and three years thereafter.
 2. Blanket contractual liability coverage, including but not limited to coverage of Contractor’s contractual indemnity obligations in Paragraph 7.18.
 3. Severability of interests and no insured-versus-insured or cross-liability exclusions.
 4. Underground, explosion, and collapse coverage.
 5. Personal injury coverage.
 6. Additional insured endorsements that include both ongoing operations and products and completed operations coverage through ISO Endorsements CG 20 10 10 01 and CG 20 37 10 01 (together). If Contractor demonstrates to Owner that the specified ISO endorsements are not commercially available, then Contractor may satisfy this requirement by providing equivalent endorsements.
 7. For design professional additional insureds, ISO Endorsement CG 20 32 07 04 “Additional Insured—Engineers, Architects or Surveyors Not Engaged by the Named Insured” or its equivalent.
- H. *Commercial General Liability—Excluded Content:* The commercial general liability insurance policy, including its coverages, endorsements, and incorporated provisions, must not include any of the following:
1. Any modification of the standard definition of “insured contract” (except to delete the railroad protective liability exclusion if Contractor is required to indemnify a railroad or others with respect to Work within 50 feet of railroad property).
 2. Any exclusion for water intrusion or water damage.
 3. Any provisions resulting in the erosion of insurance limits by defense costs other than those already incorporated in ISO form CG 00 01.
 4. Any exclusion of coverage relating to earth subsidence or movement.
 5. Any exclusion for the insured’s vicarious liability, strict liability, or statutory liability (other than worker’s compensation).
 6. Any limitation or exclusion based on the nature of Contractor’s work.
 7. Any professional liability exclusion broader in effect than the most recent edition of ISO form CG 22 79.

I. *Commercial General Liability—Minimum Policy Limits*

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

- J. *Automobile Liability*: Contractor shall purchase and maintain automobile liability insurance for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance, or use of any motor vehicle. The automobile liability policy must be written on an occurrence basis.

Automobile Liability	Policy limits of not less than:
Bodily Injury	
Each Person	\$1,000,000
Each Accident	\$1,000,000
Property Damage	
Each Accident	\$100,000
[or]	
Combined Single Limit	
Combined Single Limit (Bodily Injury and Property Damage)	\$1,000,000

- K. *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. The coverage afforded must be at least as broad as that of each and every one of the underlying policies.

Excess or Umbrella Liability	Policy limits of not less than:
Each Occurrence	\$2,000,000
General Aggregate	\$2,000,000

- L. *Using Umbrella or Excess Liability Insurance to Meet CGL and Other Policy Limit Requirements*: Contractor may meet the policy limits specified for employer’s liability, commercial general liability, and automobile liability through the primary policies alone, or through combinations of the primary insurance policy’s policy limits and partial attribution of the policy limits of an umbrella or excess liability policy that is at least as broad in coverage as that of the underlying policy, as specified herein. If such umbrella or excess liability policy was required under this Contract, at a specified minimum policy limit, such umbrella or excess policy must retain a minimum limit of \$1,000,000 after accounting for partial attribution of its limits to underlying policies, as allowed above.

ARTICLE 7—CONTRACTOR’S RESPONSIBILITIES

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

- D. 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 workday. 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 9—OWNER’S RESPONSIBILITIES

SC-9.13 Add the following new paragraph immediately after Paragraph 9.12 of the General Conditions:

9.13 *Owner’s Site Representative*

- A. Owner will furnish an “Owner’s Site Representative” to represent Owner at the Site and assist Owner in observing the progress and quality of the Work. The Owner’s Site Representative is not Engineer’s consultant, agent, or employee. Owner’s Site Representative will be identified at a later date.

ARTICLE 10—ENGINEER’S STATUS DURING CONSTRUCTION

10.03 *Resident Project Representative*

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

- C. The Resident Project Representative (RPR) will be Engineer’s representative at the Site. RPR’s dealings in matters pertaining to the Work in general will be with Engineer and Contractor. RPR’s dealings with Subcontractors will only be through or with the full knowledge or approval of Contractor. The RPR will:
 - 1. *Conferences and Meetings:* Attend meetings with Contractor, such as preconstruction conferences, progress meetings, job conferences, and other Project-related meetings (but not including Contractor’s safety meetings), and as appropriate prepare and circulate copies of minutes thereof.
 - 2. *Safety Compliance:* Comply with Site safety programs, as they apply to RPR, and if required to do so by such safety programs, receive safety training specifically related to RPR’s own personal safety while at the Site.
 - 3. *Liaison*
 - a. Serve as Engineer’s liaison with Contractor. Working principally through Contractor’s authorized representative or designee, assist in providing information regarding the provisions and intent of the Contract Documents.
 - b. Assist Engineer in serving as Owner’s liaison with Contractor when Contractor’s operations affect Owner’s on-Site operations.

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- c. Assist in obtaining from Owner additional details or information, when required for Contractor's proper execution of the Work.
4. *Review of Work; Defective Work*
- a. Conduct on-Site observations of the Work to assist Engineer in determining, to the extent set forth in Paragraph 10.02, if the Work is in general proceeding in accordance with the Contract Documents.
 - b. Observe whether any Work in place appears to be defective.
 - c. Observe whether any Work in place should be uncovered for observation, or requires special testing, inspection, or approval.
5. *Inspections and Tests*
- a. Observe Contractor-arranged inspections required by Laws and Regulations, including but not limited to those performed by public or other agencies having jurisdiction over the Work.
 - b. Accompany visiting inspectors representing public or other agencies having jurisdiction over the Work.
6. *Payment Requests: Review Applications for Payment with Contractor.*
7. *Completion*
- a. Participate in Engineer's visits regarding Substantial Completion.
 - b. Assist in the preparation of a punch list of items to be completed or corrected.
 - c. Participate in Engineer's visit to the Site in the company of Owner and Contractor regarding completion of the Work, and prepare a final punch list of items to be completed or corrected by Contractor.
 - d. Observe whether items on the final punch list have been completed or corrected.
- D. The RPR will not:
- 1. Authorize any deviation from the Contract Documents or substitution of materials or equipment (including "or-equal" items).
 - 2. Exceed limitations of Engineer's authority as set forth in the Contract Documents.
 - 3. Undertake any of the responsibilities of Contractor, Subcontractors, or Suppliers.
 - 4. Advise on, issue directions relative to, or assume control over any aspect of the means, methods, techniques, sequences or procedures of construction.
 - 5. Advise on, issue directions regarding, or assume control over security or safety practices, precautions, and programs in connection with the activities or operations of Owner or Contractor.
 - 6. Participate in specialized field or laboratory tests or inspections conducted off-site by others except as specifically authorized by Engineer.
 - 7. Authorize Owner to occupy the Project in whole or in part.

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

15.01 Progress Payments

SC-15.01 In the first line of Paragraph 15.01.D.1., change “**Ten days....**” to read “**Twenty-five days...**”

15.03 Substantial Completion

SC-15.03 Add the following new subparagraph to Paragraph 15.03.B:

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

ARTICLE 17—FINAL RESOLUTIONS OF DISPUTES

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

17.02 Arbitration

- A. All matters subject to final resolution under this Article will be settled by arbitration administered by the American Arbitration Association in accordance with its Construction Industry Arbitration Rules (subject to the conditions and limitations of this Paragraph SC-17.02). Any controversy or claim in the amount of \$100,000 or less will be settled in accordance with the American Arbitration Association’s supplemental rules for Fixed Time and Cost Construction Arbitration. This agreement to arbitrate 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 arbitration administrator, and a copy will be sent to Engineer for information. The demand for arbitration will be made within the specific time required in Article 17, or if no specified time is applicable within a reasonable time after the matter in question has arisen, and in no event will 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.
- C. The arbitrator(s) must be licensed engineers, contractors, attorneys, or construction managers. Hearings will take place pursuant to the standard procedures of the Construction Arbitration Rules that contemplate in-person hearings. The arbitrators will have no authority to award punitive or other damages not measured by the prevailing party's actual damages, except as may be required by statute or the Contract. Any award in an arbitration initiated under this clause will be limited to monetary damages and include no injunction or direction to any party other than the direction to pay a monetary amount.
- D. The Arbitrators will have the authority to allocate the costs of the arbitration process among the parties, but will only have the authority to allocate attorneys' fees if a specific Law or Regulation or this Contract permits them to do so.

Modified per Mittauer & Associates, Inc.

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- E. The award of the arbitrators must be accompanied by a reasoned written opinion and a concise breakdown of the award. The written opinion will cite the Contract provisions deemed applicable and relied on in making the award.
- F. The parties agree that failure or refusal of a party to pay its required share of the deposits for arbitrator compensation or administrative charges will constitute a waiver by that party to present evidence or cross-examine witness. In such event, the other party shall be required to present evidence and legal argument as the arbitrator(s) may require for the making of an award. Such waiver will not allow for a default judgment against the non-paying party in the absence of evidence presented as provided for above.
- G. No arbitration arising out of or relating to the Contract will 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 will allow complete relief to be afforded among those who are already parties to the arbitration;
 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;
 3. such other individual or entity is subject to arbitration under a contract with either Owner or Contractor, or consents to being joined in the arbitration; and
 4. the consolidation or joinder is in compliance with the arbitration administrator's procedural rules.
- H. 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.
- I. Except as may be required by Laws or Regulations, neither party nor an arbitrator may disclose the existence, content, or results of any arbitration hereunder without the prior written consent of both parties, with the exception of any disclosure required by Laws and Regulations or the Contract. To the extent any disclosure is allowed pursuant to the exception, the disclosure must be strictly and narrowly limited to maintain confidentiality to the extent possible.

17.03 *Attorneys' Fees*

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

17.03 *Attorneys' Fees*

- A. 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.

END OF SECTION

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Software Requirements for Electronic Document Exchange

Item	Electronic Documents	Transmittal Means	Data Format	Note (1)
a.1	General communications, transmittal covers, meeting notices and responses to general information requests for which there is no specific prescribed form.	Email	Email	
a.2	Meeting agendas, meeting minutes, RFI's and responses to RFI's, and Contract forms.	Email w/ Attachment	PDF	(2)
a.3	Contactors Submittals (Shop Drawings, "or equal" requests, substitution requests, documentation accompanying Sample submittals and other submittals) to Owner and Engineer, and Owner's and Engineer's responses to Contractor's Submittals, Shop Drawings, correspondence, and Applications for Payment.	Email w/ Attachment	PDF	
a.4	Correspondence; milestone and final version Submittals of reports, layouts, Drawings, maps, calculations and spreadsheets, Specifications, Drawings and other Submittals from Contractor to Owner or Engineer and for responses from Engineer and Owner to Contractor regarding Submittals.	Email w/ Attachment or LFE	PDF	
a.5	Layouts and drawings to be submitted to Owner for future use and modification.	Email w/ Attachment or LFE	DWG	
a.6	Correspondence, reports and Specifications to be submitted to Owner for future word processing use and modification.	Email w/ Attachment or LFE	DOC	
a.7	Spreadsheets and data to be submitted to Owner for future data processing use and modification.	Email w/ Attachment or LFE	EXC	
Notes				
(1)	All exchanges and uses of transmitted data are subject to the appropriate provisions of Contract Documents.			
(2)	Transmittal of written notices is governed by Paragraph 18.01 of the General Conditions.			
Key				
Email	Standard Email formats (.htm, .rtf, or .txt). Do not use stationery formatting or other features that impair legibility of content on screen or in printed copies			
LFE	Agreed upon Large File Exchange method (FTP, CD, DVD, hard drive, file sharing service)			
PDF	Portable Document Format readable by Adobe® Acrobat Reader DC or newer			
DWG	Autodesk® AutoCAD .dwg format Version 2007 or newer			
DOC	Microsoft® Word .docx format Version Office 365			
EXC	Microsoft® Excel .xls or .xml format Version Office 365			

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SECTION 00810



Department of Economic Opportunity -
Community Development Block Grant Program
CDBG Supplemental Conditions for Construction Contracts

Form SC-66
April, 2015

The supplemental conditions contained in this section are intended to cooperate with, to supplement, and to modify the general conditions and other specifications. In case of disagreement with any other section of this contract, the Supplemental Conditions shall govern.

1. Termination (Cause and Convenience)
2. Access to Records
3. Retention of Records
4. Remedies
5. Environmental Compliance (Clean Air Act and Clean Water Act)
6. Energy Efficiency
7. Special Equal Opportunity Provisions
8. Conflict of Interest
9. Utilization of Minority and Women's Businesses
10. Federal Labor Standards Provisions (Davis-Bacon, Copeland, and Contract Work Hours Act)
11. Guidance to Contractor for Compliance with Labor Standards Provisions
12. E-Verify

1. Termination (Cause and Convenience)

- A. This contract may be terminated in whole or in part in writing by either party in the event of substantial failure by the other party to fulfill its obligations under this contract through no fault of the terminating party, provided that no termination may be effected unless the other party is given:
- (1) not less than ten (10) calendar days written notice (delivered by certified mail, return receipt requested) of intent to terminate; and
 - (2) an opportunity for consultation with the terminating party prior to termination.
- B. This contract may be terminated in whole or in part in writing by the local government for its convenience, provided that the other party is afforded the same notice and consultation opportunity specified in 1(a) above.
- C. If termination for default is effected by the local government, an equitable adjustment in the price for this contract shall be made, but
- (1) no amount shall be allowed for anticipated profit on unperformed services or other work, and
 - (2) any payment due to the contractor at the time of termination may be adjusted to cover any additional costs to the local government because of the contractor's default.

If termination for convenience is effected by the local government, the equitable adjustment shall include a reasonable profit for services or other work performed for which profit has not already been included in an invoice.

For any termination, the equitable adjustment shall provide for payment to the contractor for services rendered and expenses incurred prior to receipt of the notice of intent to terminate, in addition to termination settlement costs reasonably incurred by the contractor relating to commitments (e.g., suppliers, subcontractors) which had become firm prior to receipt of the notice of intent to terminate.

- D. Upon receipt of a termination action under paragraphs (a) or (b) above, the contractor shall (1) promptly discontinue all affected work (unless the notice directs otherwise) and (2) deliver or otherwise make available to the local government all data, drawings, reports specifications, summaries and other such information, as may have been accumulated by the contractor in performing this contract, whether completed or in process.
- E. Upon termination, the local government may take over the work and may award another party a contract to complete the work described in this contract.
- F. If, after termination for failure of the contractor to fulfill contractual obligations, it is determined that the contractor had not failed to fulfill contractual obligations, the termination shall be deemed to have been for the convenience of the local government. In such event, adjustment of the contract price shall be made as provided in paragraph (c) above.

2. Access to Records

The local government, the Florida Department of Economic Opportunity, the U.S. Department of Housing and Urban Development, the Comptroller General of the United States, the Chief Financial Officer of the State of Florida, the Auditor General of the State of Florida, the Florida Office of Program Policy Analysis and Government Accountability, and any of their duly authorized representatives, shall have access to any books, documents, papers, and records of the contractor which are directly pertinent to this contract for the purpose of making audit, examination, excerpts, and transcriptions.

3. Retention of Records

The contractor shall retain all records relating to this contract for six years after the local government makes final payment and all other pending matters are closed.

4. Remedies

Unless otherwise provided in this contract, all claims, counter-claims, disputes and other matters in question between the local government and the contractor, arising out of or relating to this contract, or the breach of it, will be decided by arbitration, if the parties mutually agree, or in a Florida court of competent jurisdiction.

5. Environmental Compliance

If this contract exceeds \$100,000, the contractor shall comply with all applicable standards, orders, or requirements issued under section 306 of the Clean Air Act (42 USC 1857(h)), section 508 of the Clean Water Act (33 USC 1368), Executive Order 11738, and U.S. Environmental Protection Agency regulations (40 CFR Part 15). The contractor shall include this clause in any subcontracts over \$100,000.

6. Energy Efficiency

The contractor shall comply with any mandatory standards and policies relating to energy efficiency which are contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act (Public Law 94-163).

7. Special Equal Opportunity Provisions

A. Activities and Contracts Not Subject to Executive Order 11246, as Amended

(Applicable to Federally assisted construction contracts and related subcontracts \$10,000 and under.)

During the performance of this contract, the contractor agrees as follows:

- (1) The contractor shall not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. The contractor shall take affirmative action to ensure that applicants for employment are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to, the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship.
- (2) The contractor shall post in conspicuous places, available to employees and applicants for employment, notices to be provided by Contracting Officer seeking forth the provisions of this nondiscrimination clause. The contractor shall state that all qualified applicants be considered without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.
- (3) Contractors shall incorporate foregoing requirements in all subcontracts.

B. Executive Order 11246, as Amended (through 2014), Section 202 Equal Opportunity Clause (Applicable to contracts/subcontracts above \$10,000)

During the performance of this contract, the contractor agrees as follows:

- (1) The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the contracting officer setting forth the provisions of this nondiscrimination clause.
- (2) The contractor will, in all solicitations or advancements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.
- (3) The contractor will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the contractor's legal duty to furnish information."

- (4) The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice, to be provided by the agency contracting officer, advising the labor union or workers' representative of the contractor's commitments under Section 202 of Executive Order No. 11246 of September 24, 1965, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
- (5) The contractor will comply with all provisions of Executive Order No. 11246 of Sept. 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.
- (6) The contractor will furnish all information and reports required by Executive Order No. 11246 of September 24, 1965, and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the contracting agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.
- (7) In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of such rules, regulations, or orders, this contract may be cancelled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts in accordance with procedures authorized in Executive Order No. 11246 of Sept. 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order No. 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.
- (8) The contractor will include the provisions of paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to Section 204 of Executive Order No. 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as may be directed by the Secretary of Labor as a means of enforcing such provisions including sanctions for noncompliance: Provided, however, that in the event the contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

C. Notice of Requirement for Affirmative Action to Ensure Equal Employment Opportunity (Executive Order 11246). (Applicable to contracts/subcontracts exceeding \$10,000.)

- (1) The Offerer's or Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Opportunity Construction Contract Specifications" set forth herein.
- (2) The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate workforce in each trade on all construction work in the covered area, are as follows:

Female participation: 6.9% (statewide)

Minority participation (See Appendix at CDBG-25 for goals for each county)

These goals are applicable to all Contractor's construction work (whether or not it is federally-assisted) performed in the covered area. If the Contractor performs construction work in a geographic area located outside of the covered area, it shall apply the goals established for such geographic area where the work is actually performed. With regard to this second area, the Contractor also is subject to the goals for both its federally involved and non-federally involved construction.

The Contractor's compliance with Executive Order and the regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3 (a), and its efforts to meet the goals established or the geographic area where the contract resulting from his solicitation is to be performed. The hours of minority and female employment or training must be substantially uniform throughout the length of the contract and in each trade the Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, the Executive Order, and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

- (3) The Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within 10 working days of award of any construction subcontract in excess of \$10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address, and telephone number of the subcontractor; employer identification number; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the contract is to be performed.
- (4) As used in this Notice, and in the contract resulting from the solicitation, the "covered area" is the county in which the contract work is being undertaken.

D. 41 CFR 60-4.3. Equal Opportunity Clauses

- (1) The equal opportunity clause published at 41 CFR 60-1.4(a) of this chapter is required to be included in, and is part of, all nonexempt Federal contracts and subcontracts, including construction contracts and subcontracts. The equal opportunity clause published at 41 CFR 60-1.4(b) is required to be included in, and is a part of, all nonexempt federally assisted construction contracts and subcontracts. In addition to the clauses described above, all Federal contracting officers, all applicants and all nonconstruction contractors, as applicable, shall include the specifications set forth in this section in all Federal and federally assisted construction contracts in excess of \$10,000 to be performed in geographical areas designated by the Director pursuant to § 60-4.6 of this part and in construction subcontracts in excess of \$10,000 necessary in whole or in part to the performance of nonconstruction Federal contracts and subcontracts covered under the Executive order.

Standard Federal Equal Employment Opportunity Construction Contract Specifications (Executive Order 11246).

1. As used in these specifications:
 - A. "Covered area" means the geographical area described in the solicitation from which this contract resulted;
 - B. "Director" means Director, Office of Federal Contract Compliance Programs, United States Department of Labor, or any person to whom the Director delegates authority;

- C. "Employer identification number" means the Federal Social Security number used on the Employer's quarterly Federal Tax Return, U. S. Treasury Department Form 941.
- D. "Minority" includes:
 - (i) Black (all persons having origins in any of the Black African racial groups not of Hispanic origin);
 - (ii) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish Culture or origin, regardless of race);
 - (iii) Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Island); and
 - (iv) American Indian or Alaskan Native (all persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification).
- 2. Whenever the contractor, or any subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of \$10,000 the provisions of these specifications and the notice which contains the applicable goals for minority and female participation and which is set forth in the solicitations from which this contract resulted.
- 3. If the contractor is participating (pursuant to 41 CFR 60-4.5) in a Hometown Plan approved by the U. S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the Plan area (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors must be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each contractor or subcontractor participating in an approved Plan is individually required to comply with its obligations under the EEO clause, and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall good faith performance by other contractors or subcontractors toward a goal in an approved Plan does not excuse any covered contractor's or subcontractor's failure to take good faith efforts to achieve the Plan goals and timetables.
- 4. The contractor shall implement the specific affirmative action standards provided in paragraphs 7.A. through P. of these specifications. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. Covered construction contractors performing construction work in geographical areas where they do not have a federal or federally-assisted construction contract shall apply the minority and female goals established for the geographic area where the contract is being performed. Goals are published periodically in the Federal Register in notice form and such notices may be obtained from any Office of Federal Contract Compliance Programs office or from Federal procurement contracting officers. The Contractor is expected to make substantially uniform progress in meeting its goals in each craft during the period specified.

5. Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the Contractor has a collective bargaining agreement, to refer either minorities or women shall excuse the Contractor's obligations under these specifications, Executive Order 11246, or the regulations promulgated pursuant thereto.
6. In order for the nonworking training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees must be employed by the contractor during the training period, and the contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U. S. Department of Labor.
7. The Contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The Contractor shall document these efforts fully, and shall implement affirmative action steps at least as extensive as the following:
 - (a) Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and in all facilities at which the contractor's employees are assigned to work. The contractor, where possible, will assign two or more women to each construction project. The contractor shall specifically ensure that all foremen, superintendents, and other on-site supervisory personnel are aware of and carry out the contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.
 - (b) Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the contractor or its unions have employment opportunities available, and maintain a record of the organizations' responses.
 - (c) Maintain a current file of the names, addresses, and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source, or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the contractor by the union or, if referred, not employed by the contractor, this shall be documented in the file with the reason therefor, along with whatever additional actions the contractor may have taken.
 - (d) Provide immediate written notification to the Director when the union or unions with which the contractor has a collective bargaining agreement has not referred to the contractor a minority person or woman sent by the contractor, or when the contractor has other information that the union referral process has impeded the contractor's efforts to meet its obligations.
 - (e) Develop on-the-job training opportunities and/or participate in training programs for the areas which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the contractor's employment needs, especially those programs funded or approved by the Department of Labor. The contractor shall provide notice of these programs to the sources compiled under 7.(b) above.

- (f) Disseminate the contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the contractor in meeting its EEO obligations; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.
- (g) Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination, or other employment decisions including specific review of these items with on-site supervisory personnel such as superintendents, general foremen, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.
- (h) Disseminate the contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the contractor's EEO policy with other contractors and subcontractors with whom the contractor does or anticipates doing business.
- (i) Direct its recruitment efforts, both oral and written, to minority, female and community organizations, to schools with minority and female recruitment students and to minority and female recruitment and training organizations serving the contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the contractor shall send written notification to organizations such as the above, describing the openings, screening procedures, and tests to be used in the selection process.
- (j) Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer and vacation employment to minority and female youth both on the site and in other areas of a contractor's work force.
- (k) Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR 60-3.
- (l) Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.
- (m) Ensure that seniority practices, job classifications, work assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the contractor's obligations under these specifications are being carried out.
- (n) Ensure that all facilities and company activities are nonsegregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.

- (o) Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction contractors and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.
 - (p) Conduct a review, at least annually, of all supervisors' adherence to and performance under the contractor's EEO policies and affirmative action obligations.
8. Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations 7.(a) through (p). The efforts of a contractor association, joint contractor-union, contractor-community, or other similar group of which the contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under 7.(a) through (p) of these specifications provided that the contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the contractor's minority and female workforce participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the contractor. The obligation to comply, however, is the contractor's and failure of such a group to fulfill an obligation shall not be a defense for the contractor's noncompliance.
 9. A single goal for minorities and separate single goal for women have been established. The contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, the contractor may be in violation of the Executive Order if a particular group is employed in a substantially disparate manner (for example, even though the contractor has achieved its goals for women generally, the contractor may be in violation of the Executive Order if a specific minority group of women is underutilized).
 10. The contractor shall not use the goals and timetables or affirmative action standards to discriminate against any person because of race, color, religion, sex, or national origin.
 11. The contractor shall not enter into any subcontract with any person or firm debarred from government contracts pursuant to Executive Order 11246.
 12. The contractor shall carry out sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause, including suspension, termination and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations, by the Office of Federal Contract Compliance Programs. Any contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246, as amended.
 13. The contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensively as those standards prescribed in paragraph 7 of these specifications, so as to achieve maximum results from its effort to ensure equal employment opportunity. If the contractor fails to comply with the requirements of the Executive Order, the implementing regulations, or these specifications, the Director shall proceed in accordance with 41 CFR 60-4.8.

14. The contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the Government and to keep records. Records shall at least include for each employee, the name, address, telephone numbers, construction trade, union affiliation, if any, employee identification number when assigned, social security number, race, sex, status (e.g., mechanic, apprentice trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, contractors shall not be required to maintain separate records.
15. Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance and upon the application of requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

E. Certification of Non-Segregated Facilities (Contracts over \$10,000)

The contractor does not maintain or provide for its employees any segregated facilities at any of its establishments, and does not permit its employees to perform their services at any location, under its control, where segregated facilities are maintained. The contractor certifies further that it will not maintain or provide for its employees any segregated facilities at any of its establishments, and that it will not permit its employees to perform their services at any location, under its control, where segregated facilities are maintained. The contractor agrees that a breach of this certification is a violation of the Equal Opportunity Clause in this contract.

As used in this certification, "segregated facilities" mean any waiting rooms, work areas, rest rooms and wash rooms, restaurants, and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities which are segregated by explicit directive or are in fact segregated on the basis of race, creed, color, or national origin, because of habit, local custom, or otherwise.

The contractor further agrees that (except where it has obtained identical certifications from proposed subcontractors for specific time periods) it will obtain identical certifications from proposed subcontractors prior to the award of subcontracts exceeding \$10,000 which are not exempt from the provisions of the Equal Opportunity Clause; that it will retain such certifications in its files; and that it will forward the following notice to such proposed subcontractors (except where the proposed subcontractors have submitted identical certifications for specific time periods).

F. Civil Rights Act of 1964

Under Title VI of the Civil Rights Act of 1964, no person shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.

G. Section 109 of the Housing and Community Development Act of 1974

No person in the United States shall on the grounds of race, color, national original, religion or sex be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity funded in whole or in part with funds made available under this title.

H. "Section 3" Compliance in the Provision of Training, Employment and Business Opportunities

- (1) The work to be performed under this contract is subject to the requirements of Section 3 of the Housing and Urban Development Act of 1968, as amended, 12 USC 1701u (Section 3). The purpose of Section 3 is to ensure that employment and other economic opportunities generated by HUD assistance or HUD- assisted projects covered by section 3, shall, to the greatest extent feasible, be directed to low- and very low-income persons, particularly persons who are recipients of HUD assistance for housing.
- (2) The parties to this contract agree to comply with HUD's regulations in 24 CFR Part 135, which implement Section 3. As evidenced by their execution of this contract, the parties to this contract certify that they are under no contractual or other impediment that would prevent them from complying with the Part 135 regulations.
- (3) The contractor agrees to send to each labor organization or representative of workers with which the contractor has a collective bargaining agreement or other understanding, if any, a notice advising the labor organization or workers' representative of the contractor's commitments under this Section 3 clause, and will post copies of the notice in conspicuous places at the work site where both employees and applicants for training and employment positions can see the notice. The notice shall describe the Section 3 preference, shall set forth minimum number and job titles subject to hire, availability of apprenticeship and training positions, the qualifications for each; and the name and location of the person(s) taking applications for each of the positions; and the anticipated date the work shall begin.
- (4) The contractor agrees to include this Section 3 clause in every subcontract subject to compliance with regulations in 24 CFR Part 135, and agrees to take appropriate action, as provided in an applicable provision of the subcontract or in this Section 3 clause, upon a finding that the subcontractor is in violation of the regulations in 24 CFR Part 135. The contractor will not subcontract with any subcontractor where the contractor has notice or knowledge that the subcontractor has been found in violation of the regulations in 24 CFR Part 135.
- (5) The contractor will certify that any vacant employment positions, including training positions, that are filled (1) after the contractor is selected but before the contract is executed, and (2) with persons other than those to whom the regulations of 24 CFR Part 135 require employment opportunities to be directed, were not filled to circumvent the contractor's obligations under 24 CFR Part 135.
- (6) Noncompliance with HUD's regulations in 24 CFR Part 135 may result in sanctions, termination of this contract for default, and debarment or suspension from future HUD assisted contracts.
- (7) With respect to work performed in connection with Section 3 covered Indian housing assistance, section 7(b) of the Indian Self-Determination and Education Assistance Act (25 USC 450e) also applies to the work to be performed under this contract. Section 7(b) requires that to the greatest extent feasible (i) preference and opportunities for training and employment shall be given to Indians, and (ii) preference in the award of contracts and subcontracts shall be given to Indian organizations and Indian-owned Economic Enterprises. Parties to this contract that are subject to the provisions of section 3 and section 7(b) agree to comply with Section 3 to the maximum extent feasible, but not in derogation of compliance with section 7(b).

I. Section 503 Handicapped (Contracts \$2,500 or more)

- (1) The Contractor will not discriminate against any employee or applicant for employment because of physical or mental handicap in regard to any position for which the employee or applicant for employment is qualified. The Contractor agrees to take affirmative action to employ, advance in employment and otherwise treat qualified handicapped individuals without discrimination based

upon their physical or mental handicap in all employment practices such as the following: employment, upgrading, demotion or transfer, recruitment, advertising, layoff or termination, rates of pay or other forms of compensation, and selection for training, including apprenticeship.

- (2) The Contractor agrees to comply with the rules, regulations and relevant orders of the Secretary of Labor issued pursuant to the Act.
- (3) In the event of the Contractor's noncompliance with the requirements of this clause, actions for noncompliance may be taken in accordance with the rules, regulations, and relevant orders of the Secretary of Labor issued pursuant to the Act.
- (4) The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices in a form to be prescribed by the Director, provided by or through the contracting officer. Such notices shall state the Contractor's obligation under the law to take affirmative action to employ and advance in employment qualified handicapped employees and applicants for employment, and the rights of applicants and employees.
- (5) The contractor will notify each labor union or representative of workers with which it has a collective bargaining agreement or their contract understanding, that the contractor is bound by the terms of Section 503 of the Rehabilitation Act of 1973, and is committed to take affirmative action to employ and advance in employment physically and mentally handicapped individuals.
- (6) The contractor will include the provisions of this clause in every subcontract or purchase order of \$2,500 or more unless exempted by rules, regulations, or orders of the Secretary issued pursuant to Section 503 of the Act, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the Director of the Office of Federal Contract Compliance Programs may direct to enforce such provisions, including action for noncompliance.

J. Age Discrimination in Employment Act of 1967, as Amended

It shall be unlawful for an employer-

- (1) to fail or refuse to hire or to discharge any individual or otherwise discriminate against any individual with respect to his compensation, terms, conditions, or privileges of employment, because of such individual's age;
- (2) to limit, segregate, or classify his employees in any way which would deprive or tend to deprive any individual of employment opportunities or otherwise adversely affect his status as an employee, because of such individual's age; or
- (3) to reduce the wage rate of any employee in order to comply with this chapter.

K. Title II of the Genetic Information Nondiscrimination Act of 2008 (GINA)

- (1) Under Title II of the Genetic Information Nondiscrimination Act, it is illegal to discriminate against employees or applicants because of genetic information. Employers are prohibited from using genetic information in making employment decisions. GINA restricts employers and other entities covered by Title II (employment agencies, labor organizations and joint labor-management training and apprenticeship programs - referred to as "covered entities") from requesting, requiring or purchasing genetic information, and strictly limits the disclosure of genetic information.

The law forbids discrimination on the basis of genetic information when it comes to any aspect of employment, including hiring, firing, pay, job assignments, promotions, layoffs, training, fringe benefits, or any other term or condition of employment.

- (2) "Genetic information" includes information about an individual's genetic tests and the genetic tests of an individual's family members, as well as information about the manifestation of a disease or disorder in an individual's family members (i.e. family medical history). Family medical history is included in the definition of genetic information because it is often used to determine whether someone has an increased risk of getting a disease, disorder, or condition in the future.

8. Conflict of Interest of Officers or Employees of the Local Jurisdiction, Members of the Local Governing Body, or Other Public Officials

No officer or employee of the local jurisdiction or its designees or agents, no member of the governing body, and no other public official of the locality who exercises any function or responsibility with respect to this contract, during his/her tenure or for one year thereafter, shall have any interest, direct or indirect, in any contract or subcontract, or the proceeds thereof, for work to be performed. Further, the contractor shall cause to be incorporated in all subcontracts the language set forth in this paragraph prohibiting conflict of interest.

9. Utilization of Minority and Women Firms (M/WBE)

The contractor shall take all necessary affirmative steps to assure that M/WBE firms are utilized when possible as suppliers and/or subcontractors, as applicable. Prior to contract award, the contractor shall document efforts to utilize M/WBE firms, including identifying what firms were solicited as suppliers and/or subcontractors, as applicable. Information regarding certified M/WBE firms can be obtained from:

- ▶ Florida Department of Management Services, Office of Supplier Diversity,
- ▶ Florida Department of Transportation (construction services, particularly highway),
- ▶ Minority Business Development Center in most major cities, and
- ▶ Local government M/WBE programs in many large counties and cities.

A firm recognized as an M/WBE by any of the above agencies is acceptable for the CDBG program.

10. Federal Labor Standards Provisions

(Davis-Bacon Act, Copeland Act, and Contract Works Hours & Safety Standards Act) The Project to which the construction work covered by this contract pertains is being assisted by the United States of America and the following Federal Labor Standards Provisions are included in this Contract pursuant to the provisions applicable to such Federal assistance.

- A. (1)(a) Minimum Wages. All laborers and mechanics employed or working upon the site of the work (or under the United States Housing Act of 1937 or under the Housing Act of 1949 in the construction or development of the project), will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR Part 3), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics. Contributions made or costs reasonably anticipated for bona fide fringe benefits under Section

1(b)(2) of the Davis- Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of 29 CFR 5.5(a)(1)(iv); also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs, which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period.

Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein; provided, that the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under 29 CFR 5.5(a)(1)(ii) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

- (b) (i) Any class of laborers or mechanics which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. HUD shall approve an additional classification and wage rate and fringe benefits; therefore, only when the following criteria have been met:
 - (1) The work to be performed by the classification requested is not performed by a classification in the wage determination; and
 - (2) The classification is utilized in the area by the construction industry; and
 - (3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.
- (ii) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and HUD or its designee agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by HUD or its designee to the Administrator of the Wage and Hour Division, employment Standards Administration, U. S. Department of Labor, Washington, D. C. 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise HUD or its designee or will notify HUD or its designee within the 30-day period that additional time is necessary. (Approved by the Office of Management and Budget under OMB control number 1215-0140.)
- (iii) In the event that the Contractor, the laborers or mechanics to be employed in the Classification or their representatives, and HUD or its designee do not agree on the proposed classification and wage rate (including the amount designed for fringe benefits, where appropriate), HUD or its designee shall refer the questions, including the views of all interested parties and the recommendation of HUD or its designee, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise HUD or its designee or will notify HUD or its designee within the 30-day period that the additional time is necessary. (Approved by the Office of Management and Budget under OMB Control Number 1215-0140.)

- (iv) The wage rate (including fringe benefits where appropriate) determined pursuant to subparagraphs (b)(ii) or (iii) of this paragraph, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.
 - (c) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.
 - (d) If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program. Provided, that the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program. (Approved by the Office of Management and Budget under OMB Control Number 1215-0140.)
- (2) Withholding. HUD or its designee shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld from the contractor under this contract or any other federal contract with the same prime contractor, or any other Federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees and helpers employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee or helper, employed or working on the site of the work (or under the United States Housing Act of 1937 or under the Housing Act of 1949 in the construction or development of the project), all or part of the wages required by the contract, HUD, or its designee may, after written notice to the contractor, sponsor, applicant, or owners, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased. HUD or its designee may, after written notice to the contractor, disburse such amounts withheld for and on account of the contractor or subcontractor to the respective employees to whom they are due. The Comptroller General shall make such disbursements in the case of direct Davis-Bacon Act contracts.
- (3)(a) Payrolls and Basic Records. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work (or under the United States Housing Act of 1937, or under the Housing Act of 1949, in the construction or development of the project). Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in Section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in Section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

(Approved by the Office of Management and Budget under OMB Control Numbers 1215-0140 and 1215-0017).

- (b) (i) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to HUD or its designee if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit the payrolls to the applicant, sponsor, or owners, as the case may be, for transmission to HUD or its designee. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR Part 5.5(a)(3)(I). This information may be submitted in any form desired. Optional Form WH-347 is available for this purpose and may be purchased from the Superintendent of Documents (Federal Stock Number 029-005-00014-1), U. S. Government Printing Office, Washington, DC 20402. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. (Approved by the Office of Management and Budget under OMB Control Number 1215-0149).
 - (ii) Each payroll submitted shall be accompanied by a "Statement of Compliance", signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:
 - (1) That the payroll for the payroll period contains the information required to be maintained under 29 CFR Part 5.5 (a)(3)(I) and that such information is correct and complete;
 - (2) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in 29 CFR Part 3;
 - (3) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.
 - (iii) The weekly submission of a properly executed certification set forth on the reverse side of Option Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph A(3)(b)(ii) of this section.
 - (iv) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under Section 1001 of Title 18 and Section 231 of Title 31 of the United States Code.
- (c) The contractor or subcontractor shall make the records required under paragraph A(3)(a) of this section available for inspection, copying, or transcription by authorized representatives of HUD or its designee or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, HUD or its designee may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request to make such records available may be grounds for debarment action pursuant to 29 CFR Part 5.12.

(4)(a) Apprentices and Trainees.

- (i) Apprentices. Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U. S. Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a State Apprenticeship Agency recognized by the Bureau, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Bureau of Apprenticeship and Training or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program, shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with the determination. In the event the Bureau of Apprenticeship and Training, or a State Apprenticeship Agency recognized by the Bureau, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.
- (ii) Trainees. Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U. S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program the contract will no longer be permitted

to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

- (iii) Equal Employment Opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR Part 30.
- (5) Compliance with Copeland Act Requirements. The contractor shall comply with the requirements of 29 CFR Part 3 which are incorporated by reference in this contract.
- (6) Subcontracts. The contractor or subcontractor will insert in any subcontracts the clauses contained in 29 CFR 5.5(a)(1) through (10) and such other clauses as HUD or its designee may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contract shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR Part 5.5.
- (7) Contract Termination, Debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.
- (8) Compliance with Davis-Bacon and Related Act Requirements. All rulings and interpretations of the Davis- Bacon and Related Acts contained in 29 CFR Parts 1, 3 and 5 are herein incorporated by referenced in this contract.
- (9) Disputes Concerning Labor Standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the U. S. Department of Labor (USDOL) set forth in 29 CFR Parts 5, 6 and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and HUD or its designee, the USDOL, or the employees or their representatives.
- (10) (a) Certification of Eligibility. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of Section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1) or to be awarded HUD contracts or participate in HUD programs pursuant to 24 CFR Part 24.
 - (b) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of Section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1) or to be awarded HUD contracts or participate in HUD programs pursuant to 24 CFR Part 24.
 - (c) The penalty for making false statements is prescribed in the U. S. Criminal Code, 18 USC 1001. Additionally, U.S. Criminal Code, Section 1010, Title 18, USC, "Federal Housing Administration transactions", provides in part "Whoever, for the purpose of ... influencing in any way the action of such Administration ... makes, utters or publishes any statement, knowing the same to be false ... shall be fined not more than \$5,000 or imprisoned not more than two years, or both."

(11) Complaints, Proceedings, or Testimony by Employees. No laborer or mechanic to whom the wage, salary, or other labor standards provisions of this contract are applicable shall be discharged or in any other manner discriminated against by the contractor or any subcontractor because such employee has filed any complaint or instituted or caused to be instituted any proceeding or has testified or is about to testify in any proceeding under or relating to the labor standards applicable under this contract to his employer.

B. Contract Work Hours and Safety Standards Act. As used in the paragraph, the terms "laborers" and "mechanics" include watchmen and guards.

(1) Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

(2) Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in subparagraph (1) of this paragraph, the contractor and any subcontractor responsible therefore shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in subparagraph (1) of this paragraph, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in subparagraph (1) of this paragraph.

(3) Withholding for unpaid wages and liquidated damages. HUD or its designee shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in subparagraph (2) of this paragraph.

(4) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in subparagraph (1) through (4) of this paragraph and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in subparagraphs (1) through (4) of this paragraph.

C. Health and Safety

(1) No laborer or mechanic shall be required to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to his health and safety as determined under construction safety and health standards promulgated by the Secretary of Labor by regulation.

(2) The contractor shall comply with all regulations issued by the Secretary of Labor pursuant to Title 29 Part 1926 (formerly part 1518) and failure to comply may result in imposition of sanctions pursuant to the Contract Work Hours and Safety Standards Act (Public Law 91-54.83 State 96).

- (3) The contractor shall include the provisions of this Article in every subcontract so that such provisions will be binding on each subcontractor. The contractor shall take such action with respect to any subcontract as the Secretary of Housing and Urban Development or the Secretary of Labor shall direct as a means of enforcing such provisions.

11. Guidance to Contractor for Compliance with Labor Standards Provisions

A. Contracts with Two Wage Decisions

If the contract includes two wage decisions, the contractor, and each subcontractor who works on the site, must submit either two separate payrolls (one for each wage decision) or one payroll which identifies each worker twice and the hours worked under each wage decision. One single payroll, reflecting each worker once, may be submitted provided the Contractor uses the higher rate in the wage decisions for each identical job classification. However, where a job classification is not listed in a wage decision and is needed for that portion of the work, the classification must be added to the wage decision. A worker may not be paid at the rate for a classification using the hourly rate for that same classification in another wage decision. After the additional classification is approved, the contractor may pay the higher of the two rates and submit one payroll, if desired.

B. Complying with Minimum Hourly Amounts

- (1) The minimum hourly amount due to a worker in each classification is the total of the amounts in the "Rates" and "Fringe Benefits" (if any) columns of the applicable wage decision.
- (2) The contractor may satisfy this minimum hourly amount by any combination of cash and bona fide fringe benefits, regardless of the individual amounts reflected in the "Rates" and "Fringe Benefits" columns.
- (3) A contractor payment for a worker which is required by law is not a fringe benefit in meeting the minimum hourly amount due under the applicable wage decision. For example, contractor payments for FICA or unemployment insurance are not a fringe benefit; however, contractor payments for health insurance or retirement are a fringe benefit. Generally, a fringe benefit is bona fide if (a) it is available to most workers and (b) involves payments to a third party.
- (4) The hourly value of the fringe benefit is calculated by dividing the contractor's annual cost (excluding any amount contributed by the worker) for the fringe benefit by 2080. Therefore, for workers with overtime, an additional payment may be required to meet the minimum hourly wages since generally fringe benefits have no value for any time worked over 40 hours weekly. (If a worker is paid more than the minimum rates required by the wage decision, this should not be a problem. As long as the total wages received by a worker for straight time equals the hours worked times the minimum hourly rate in the wage decision, the requirement of the Davis-Bacon and Related Acts has been satisfied.)

C. Overtime

For any project work over 40 hours weekly, a worker generally must be paid 150% of the actual hourly cash rate received, not the minimum required by the wage decision. (The Davis-Bacon and related acts only establish minimum rates and does not address overtime; the Contract Work Hours Act contains the overtime requirement and uses "basic rate of pay" as the base for calculation, not the minimum rates established by the Davis-Bacon and related acts.)

D. Deductions

Workers who have deductions, not required by law, from their pay must authorize these deductions in writing. The authorization must identify the purpose of each deduction and the amount, which may be a specific dollar amount or a percentage. A copy of the authorization must be submitted with the first payroll containing the deduction. If deducted amounts increase, another authorization must be submitted. If deducted amounts decrease, no revision to the original authorization is needed. Court-ordered deductions, such as child support, may be identified by the responsible payroll person in a separate document. This document should identify the worker, the amount deducted and the purpose. A copy of the court order should be submitted.

E. Classifications Not Included in the Wage Decision

If a classification not in the wage decision is required, please advise the owner's representative in writing and identify the job classification(s) required. In some instances, the State agency may allow the use of a similar classification in the wage decision.

Otherwise, the contractor and affected workers must agree on a minimum rate, which cannot be lower than the lowest rate for any trade in the wage decision. Laborers (including any subcategory of the laborer classification) and truck drivers are not considered a trade for this purpose. If the classification involves a power equipment operator, the minimum cannot be lower than the lowest rate for any power equipment operator in the wage decision. The owner will provide forms to document agreement on the minimum rate by the affected workers and contractor.

The USDOL must approve the proposed classification and rate. The contractor may pay the proposed rate until the USDOL makes a determination. Should the USDOL require a higher rate, the contractor must make wage restitution to the affected worker(s) for all hours worked under the proposed rate.

F. Supervisory Personnel

Foremen and other supervisory personnel who spend at least 80% of their time supervising workers are not covered by the Davis-Bacon and Related Acts. Therefore, a wage decision will not include such supervisory classifications and their wages are not subject to any minimums under the Davis-Bacon and Related Act or overtime payments under the Contract Work Hours and Safety Standards Act. However, foremen and other supervisory personnel who spend less than 80% of their time engaged in supervisory activities are considered workers/mechanics for the time spent engaged in manual labor and must be paid at least the minimum in the wage decision for the appropriate classification(s) based on the work performed.

G. Sole Proprietorships/Independent Contractors/Leased Workers

The nature of the relationship between a prime contractor and a worker does not affect the requirement to comply with the labor standards provisions of this contract. The applicability of the labor standards provisions is based on the nature of the work performed.

If the work performed is primarily manual in nature, the worker is subject to the labor standards provisions in this contract. For example, if John Smith is the owner of ABC Plumbing and performs all plumbing work himself, then Mr. Smith is subject to the labor standards provisions, including minimum wages and overtime. His status as "owner" is irrelevant for labor standards purposes.

If a worker meets the IRS standards for being an independent contractor, and is employed as such, this means that the worker must submit a separate payroll as a subcontractor rather than be included on some other payroll. The worker is still subject to the labor standards provisions in this contract, including minimum wages and overtime.

If a contractor or subcontractor leases its workers, they are subject to the labor standards provisions in this contract, including minimum wages and overtime. The leasing firm must submit payrolls and these payrolls must reflect information required to determine compliance with the labor standards provisions of this contract, including a classification for each worker based on the nature of the work performed, number of regular hours worked, and number of overtime hours worked.

H. Apprentices/Helpers

A worker may be classified as an apprentice **only if participating in a federal or state program**. Documentation of participation must be submitted. Generally, the apprentice program specifies that the apprentice will be compensated at a percentage of the journeyman rate. For Davis-Bacon Act purposes, the hourly rate cannot be lower than the percentage of the hourly rate for the classification in the applicable wage decision.

If the worker does not participate in a federal or state apprentice program, then the worker must be classified according to duties performed. This procedure may require classification in the "trade" depending on tools used, or as a laborer if specialized tools of the trade are not used. The contractor may want to consult with the Wage and Hour Division of the U.S. Department of Labor located in most large cities regarding the appropriate classification.

Presently, no worker may be classified as a "helper". As with apprentices not participating in a formal apprentice program, the worker must be classified according to duties performed and tools used.

12. E-Verify

Contractors and subcontractors performing work funded by CDBG subgrants are required to enroll in the U.S. Department of Homeland Security's E-Verify system to verify the employment eligibility of all new employees that they hire during the term of their contracts under Executive Order 11-116, signed by the Governor of Florida on May 27, 2011.

- (a) E-Verify is an Internet-based system that allows businesses to determine the eligibility of their employees to work in the United States. A contractor or subcontractor that has not signed up for E-Verify and executed a memorandum of understanding with the Department of Homeland Security can enroll in the E-Verify system on the Department of Homeland Security's website listed below:

<http://www.uscis.gov/e-verify/e-verify-enrollment-page>

- (b) Contractors and subcontractors shall enroll in the E-Verify system prior to hiring any new employee after the effective date of their contracts to perform work on CDBG-funded projects. The address for obtaining an Employer Memorandum of Understanding is:

http://www.uscis.gov/sites/default/files/USCIS/Verification/E-Verify/E-Verify_Native_Documents/MOU_for_E-Verify_Employer.pdf

- (c) The Department of Homeland Security offers tutorials and other assistance at the web address below:
<http://www.uscis.gov/e-verify/you-start>

Appendix
Minority Participation Goals

These are the goals, by county, for meeting the minority participation portion of Section 7-B(2)(b) of the CDBG Supplemental Conditions. These are contractor workforce goals, not goals for subcontracting to minority and women firms. Solicitation of minority and women firms as subcontractors is a separate federal requirement which the contractor must document compliance with.

<u>Tampa-St. Petersburg Area</u>	<u>Percentage</u>
Hillsborough, Pinellas, Pasco	17.9
Charlotte, Citrus, Collier, DeSoto,	17.1
Hardee, Hernando, & Highlands (all seven counties)	
Lee.	15.3
Manatee.	15.9
Polk	18.0
Sarasota	10.5

<u>Tallahassee Area</u>	
Leon, Wakulla	24.3
Calhoun, Franklin, Gadsden, Jackson,	29.5
Jefferson, Liberty, Madison, & Taylor (all eight counties)	

<u>Pensacola - Panama City Area</u>	
Bay	14.1
Escambia, Santa Rosa	18.3
Gulf, Holmes, Okaloosa,	15.4
Walton, & Washington (all five counties)	

<u>Jacksonville Area</u>	
Alachua	20.6
Baker, Clay, Duval, Nassau, & St. Johns	21.8
Bradford, Columbia, Dixie, Gilchrist	22.2
Hamilton, Lafayette, Levy, Marion, Putnam, Suwannee, & Union (all 11 counties)	

<u>Orlando - Daytona Beach Area</u>	
Volusia	15.7
Brevard	10.7
Orange, Osceola, & Seminole (all three counties)	15.5
Flagler, Lake, & Sumter (all three counties)	14.9

<u>Miami - Fort Lauderdale Area</u>	
Dade	39.5
Broward.	15.5
Palm Beach	22.4
Glades, Hendry, Indian River, Monroe,	30.4
Okeechobee, Martin, & St. Lucie (all seven counties)	

DAVIS-BACON WAGE DECISION

"General Decision Number: FL20210126 09/24/2021

Superseded General Decision Number: FL20200126

State: Florida

Construction Type: Heavy

County: Nassau County in Florida.

HEAVY CONSTRUCTION PROJECTS (Including Sewer and Water Lines)

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.95 for calendar year 2021 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.95 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2021. If this contract is covered by the EO and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must pay workers in that classification at least the wage rate determined through the conformance process set forth in 29 CFR 5.5(a)(1)(ii) (or the EO minimum wage rate, if it is higher than the conformed wage rate). The EO minimum wage rate will be adjusted annually. Please note that this EO applies to the above-mentioned types of contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but it does not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60). Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/01/2021
1	02/12/2021
2	04/16/2021
3	04/30/2021
4	06/18/2021
5	07/09/2021
6	09/24/2021

ELEC0177-002 11/30/2020

	Rates	Fringes
ELECTRICIAN.....	\$ 30.01	13.49

PAID HOLIDAYS: New Year's Day, Memorial Day, 4th of July, Labor Day, Thanksgiving Day, The Day after Thanksgiving and Christmas Day.

ENGI0673-012 05/01/2021

	Rates	Fringes
OPERATOR: Oiler.....	\$ 27.08	12.00

TRUCK DRIVER: Lowboy Truck.....\$ 13.06	2.18
TRUCK DRIVER: Off the Road Truck.....\$ 12.21	1.97

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

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

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

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

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than ""SU"" or ""UAVG"" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate

Branch of Construction Wage Determinations. Write to:

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

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

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

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

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

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

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION"

"General Decision Number: FL20210216 09/24/2021

Superseded General Decision Number: FL20200216

State: Florida

Construction Type: Building

County: Nassau County in Florida.

BUILDING CONSTRUCTION PROJECTS (does not include single family homes or apartments up to and including 4 stories).

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.95 for calendar year 2021 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.95 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2021. If this contract is covered by the EO and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must pay workers in that classification at least the wage rate determined through the conformance process set forth in 29 CFR 5.5(a)(1)(ii) (or the EO minimum wage rate, if it is higher than the conformed wage rate). The EO minimum wage rate will be adjusted annually. Please note that this EO applies to the above-mentioned types of contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but it does not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60). Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/01/2021
1	01/22/2021
2	05/07/2021
3	07/09/2021
4	09/03/2021
5	09/24/2021

ASBE0013-001 09/01/2019

	Rates	Fringes
ASBESTOS WORKER/HEAT & FROST INSULATOR.....	\$ 24.50	11.75

ELEV0049-001 01/01/2021

	Rates	Fringes
ELEVATOR MECHANIC.....	\$ 43.31	35.825

FOOTNOTE:

A. Employer contributions 8% of regular hourly rate to vacation pay credit for employee who has worked in business more than 5 years; Employer contributions 6% of regular

hourly rate to vacation pay credit for employee who has worked in business less than 5 years.

Paid Holidays: New Year's Day; Memorial Day; Independence Day; Labor Day; Thanksgiving Day; The Friday after Thanksgiving Day; and Christmas Day.

ENGI0487-021 07/01/2016

	Rates	Fringes
OPERATOR: Crane		
All Cranes 160 Ton Capacity and Over.....	\$ 33.05	9.20
All Cranes Over 15 Ton Capacity.....	\$ 32.05	9.20
OPERATOR: Forklift.....	\$ 23.25	9.20
OPERATOR: Mechanic.....	\$ 32.05	9.20
OPERATOR: Oiler.....	\$ 23.50	9.20

* IRON0402-001 10/01/2020

	Rates	Fringes
IRONWORKER, ORNAMENTAL.....	\$ 25.00	13.98

PLUM0234-006 09/01/2021

	Rates	Fringes
PLUMBER.....	\$ 31.84	15.95

PLUM0234-010 09/01/2021

	Rates	Fringes
PIPEFITTER (Includes HVAC Pipe Installation).....	\$ 31.84	15.95

SFFL0821-004 07/01/2021

	Rates	Fringes
SPRINKLER FITTER (Fire Sprinklers).....	\$ 30.63	20.55

SHEE0435-002 04/01/2021

	Rates	Fringes
SHEET METAL WORKER (Includes HVAC Duct and Unit Installation).....	\$ 26.41	15.19

A: Holiday Pay: New Year's Day, Memorial Day, July Fourth, Labor Day, Thanksgiving Day, Day after Thanksgiving and Christmas Day

SUFL2014-025 08/16/2016

	Rates	Fringes
CARPENTER, Includes Drywall		

Hanging, and Form Work.....	\$ 18.29	4.90
CEMENT MASON/CONCRETE FINISHER...	\$ 17.38	0.00
ELECTRICIAN, Includes Low Voltage Wiring.....	\$ 22.82	8.11
IRONWORKER, REINFORCING.....	\$ 22.81	11.58
IRONWORKER, STRUCTURAL.....	\$ 17.66	4.49
LABORER: Common or General, Including Cement Mason Tending...	\$ 13.51	0.00
LABORER: Pipelayer.....	\$ 13.73	1.07
OPERATOR: Backhoe/Excavator/Trackhoe.....	\$ 14.44	1.40
OPERATOR: Bulldozer.....	\$ 15.40	1.90
OPERATOR: Grader/Blade.....	\$ 18.97	0.00
OPERATOR: Loader.....	\$ 14.83	1.84
OPERATOR: Roller.....	\$ 14.43	4.78
PAINTER: Brush, Roller and Spray.....	\$ 15.62	2.05
ROOFER.....	\$ 16.99	0.00
TILE SETTER.....	\$ 18.01	0.00
TRUCK DRIVER: Dump Truck.....	\$ 13.22	2.12
TRUCK DRIVER: Lowboy Truck.....	\$ 14.24	0.00

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

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

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses

(29CFR 5.5 (a) (1) (ii)).

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

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than ""SU"" or ""UAVG"" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the ""SU"" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date

for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

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

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

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

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

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

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

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

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

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION"

EMPLOYEE RIGHTS

UNDER THE DAVIS-BACON ACT

FOR LABORERS AND MECHANICS EMPLOYED ON FEDERAL OR FEDERALLY ASSISTED CONSTRUCTION PROJECTS

PREVAILING WAGES

You must be paid not less than the wage rate listed in the Davis-Bacon Wage Decision posted with this Notice for the work you perform.

OVERTIME

You must be paid not less than one and one-half times your basic rate of pay for all hours worked over 40 in a work week. There are few exceptions.

ENFORCEMENT

Contract payments can be withheld to ensure workers receive wages and overtime pay due, and liquidated damages may apply if overtime pay requirements are not met. Davis-Bacon contract clauses allow contract termination and debarment of contractors from future federal contracts for up to three years. A contractor who falsifies certified payroll records or induces wage kickbacks may be subject to civil or criminal prosecution, fines and/or imprisonment.

APPRENTICES

Apprentice rates apply only to apprentices properly registered under approved Federal or State apprenticeship programs.

PROPER PAY

If you do not receive proper pay, or require further information on the applicable wages, contact the Contracting Officer listed below:

or contact the U.S. Department of Labor's Wage and Hour Division.



WAGE AND HOUR DIVISION
UNITED STATES DEPARTMENT OF LABOR

1-866-487-9243
TTY: 1-877-889-5627
www.dol.gov/whd



MBE/WBE VENDORS REPORT

MBE/WBE VENDORS REPORT
 CDBG 20 NR Water Main Replacement & Exrtensions
 CDBG Contract No. 20DB-OO-04-55-02-N06
 Town of Callahan, Florida
 October 2021

NAME	CONTACT	ADDRESS	CITY	STATE	POSTAL CODE	COUNTY	EMAIL	PHONE
DUVAL COUNTY								
3rd JC Enterprises LLC	John Carter III	5501 Westconnett Blvd	Jacksonville	FL	32238-7778	Duval	designefxjc3@gmail.com	904-233-9215
5 Points Consulting, Inc.	Carolyn Taraboletti	3948 3rd Street South	Jacksonville Beach	FL	32250	Duval	carolyn.taraboletti@5pointsconsultinginc.c	312-316-4581
A & R Holdings	Ryan Ross	8309 Highgate Dr	Jacksonville	FL	32216	Duval	anrholdings@outlook.com	561-212-0136
A.WordSmith Communications	Amelia Smith	1314 Morvenwood Road	Jacksonville	FL	32207	Duval	amelia@awordsmithco.com	904-226-7104
Able Body Junk Removal LLC	Tanecia Miller	6534 Longleaf Branch Dr.	Jacksonville	FL	32222	Duval	ablebodyjunkremoval@outlook.com	904-908-7318
Above All Ceilings, Inc	Toni Bosse'	5605 Florida Mining Blvd.	Jacksonville	FL	32257	Duval	aboveallceilings@bellsouth.net	904-880-3449
AC CONCRETE Enterprise,INC	aaron ferguson	5430 dakota dr	Jacksonville	FL	32209	Duval	acconcrete@bellsouth.net	904-768-2394
Action Rentals JAX LLC	Orlando Romero	3261 Phillips Hwy	Jacksonville	FL	32207	Duval	oromero@actrents.com	877-693-8210
Acuity Design Group, Inc.	Cantrece Jones	3109 Spring Glen Road	Jacksonville	FL	32207	Duval	cjones@adgmark.com	904-236-4106
Advanced Document Solutions, Inc	Daphne Montalvo	8384 Baymeadows Road	Jacksonville	FL	32256	Duval	nvo@myadsusa.com	407-412-6929
Advanced Document Solutions, Inc.	Moody Hamdan	1301 Riverplace Blvd	Jacksonville	FL	32207	Duval	mhamdan@myadsusa.com	407-412-6929
Advantage Design Group	Catherine Swingle	6877 Phillips Industrial Blvd.	JACKSONVILLE	FL	32256	Duval	cjs@advantagedesigngroup.com	904-722-8200
AE Engineering Inc.	Emilee Prater	219 N Newnan Street	JACKSONVILLE	FL	32202	Duval	eprater@aeengineeringinc.com	904-622-8499
Affinity Consulting Group NEFL, LLC	Cherrise Wilks	1300 Riverplace Blvd	Jacksonville	FL	32202	Duval	info@acgfl.org	800-209-2817
Agile Tech Consulting, LLC	I Nengah Mustika	6100 Greenland Road, Suite 4	Jacksonville	FL	32258	Duval	nmustika@agiletechconsulting.com	904-625-7096
Alexander DeGance Barnett, P.A.	Michelle Barnett	1500 Riverside Avenue	Jacksonville	FL	32204	Duval	michelle.barnett@adblegal.com	904-345-3278
AlkaVita Alkaline Water LLC	Savita Jones	1301 Riverplace Blvd.	jacksonville	FL	32207	Duval	marketing@alkavita.life	904-800-8590
All Things Diverse	Tammy Hodo	12008 Lazarette Ct	Jacksonville	FL	32258	Duval	tammy@allthingsdiverse.com	619-669-8689
Allstar Irrigation Company	Taylor Hunt	6668 Columbia Park Dr. S.	Jacksonville	FL	32258	Duval	taylor@allstarirrigation.company	904-236-9293
Alpha Envirotech Consulting, Inc.	Amy Fu	8681 ETHANS GLEN TERRACE	JACKSONVILLE	FL	32256	Duval	AENVIROTECH2010@GMAIL.COM	904-382-0083
Alpha Omega Global	Frank Brewer	PO BOX 40841	Jacksonville	FL	32203	Duval	frank@alphaomegaglobal.net	904-472-9283
AmDen Technologies	Rafielle Usher	14286 Beach Blvd.	Jacksonville	FL	32250	Duval	sales@amdentechnologies.com	904-418-2179
American Homegrown Fuel Corporation	John Magwood	13852 Waterchase Way	Jacksonville	FL	32224-0806	Duval	john@fcbio.com	904-525-3835
American Medical Review Officer, Inc.	Jane Freedman	4237 Salisbury Road	Jacksonville	FL	32216	Duval	jfreedman@medicaexpresscorp.com	904-281-9723
American Medicals	B G Bihani	8900 Corporate Square Ct	Jacksonville	FL	32216	Duval	sales@americanmedicals.com	904-636-9451
AMW Dispatching Service LLC	Gartrell McDaniel	2765 Palmdale St	Jacksonville	FL	32208	Duval	mdmcdaniel92@hotmail.com	904-674-7213
Anything With Plants, Inc.	Hillary Jackson	5040 St Augustine Rd	Jacksonville	FL	32207	Duval	hillaryj@anythingwithplants.com	800-972-8918
Archizen.net Architects, LLC	Albert Rodriguez	4446 Hendricks Avenue #384	JACKSONVILLE	FL	32207	Duval	al@archizen.net	904-396-0266
Arkest LLC	Rafael Caldera	533 East Church Street	Jacksonville	FL	32202	Duval	arkest@att.net	904-355-9001
Aseptix Environmental LLC	Scotty Jones	16258 Tisons Bluff Rd	Jacksonville	FL	32218	Duval	sjones@septixenvironmental.com	855-633-2561
Atlantic Concrete and Mechanical Inc.	Joe Brown	P.O. Box 551315	Jacksonville	FL	32255-1315	Duval	jbrown@acmfla.com	904-866-0392
Atlantic First Inspection and Environmental Ser	Mary Heitzenrater	14665 Marsh Island Lane	Jacksonville	FL	32250	Duval	maryh0319@gmail.com	904-697-9758
Atlas Mobile Massage Therapy, LLC	LaToya Ashley	9802 Baymeadows Road	Jacksonville	FL	32256	Duval	atlasmobilemassage@gmail.com	904-683-4373
Baker Construction Services LLC	Tamara Baker	219 N. Newnan Street, 2nd Fl	Jacksonville	FL	32202	Duval	ctaylor@bdbjax.com	904-219-8148
Baker Consulting & Engineering	Kellie Valasek	219 N. Newnan Street	Jacksonville	FL	32202	Duval	kvalasek@bdbjax.com	904-559-2674
Baker Consulting & Engineering LLC	Tamara Baker	219 N. Newnan Street	Jacksonville	FL	32202	Duval	tbaker@bakerdesign.build	904-219-8148
Baldwin's Quality Plumbing	Terence Mckenzie	9556 Historic Kings Rd. S	Jacksonville	FL	32257	Duval	tmckenzie@baldwinsplumbing.com	904-805-0660
Bar Code Equipment Service, LLC	Ann Rose	131 10th Avenue North	Jacksonville Beach	FL	32250	Duval	arose@barcodeservice.com	904-249-3862
Barber Klein Contractors P.L.L.C.	Stacy Dobscha	7254 Golden Wings Road Suite	Jacksonville	FL	32244	Duval	sjohnson@barberklein.com	904-990-1075
BBC Solar LLC	Catherine Orr	12128 Hidden Hills Drive	Jacksonville	FL	32225	Duval	catherine@bbcsolar.com	904-955-3272
BENT CONSTRUCTION LLC	Ben Bradley	4446 Hendricks Ave	JACKSONVILLE	FL	32207	Duval	BENTLEY@BENTCONSTRUCTION.COM	904-323-8928
Berling Design Build	JOANA BERLING	2818 CASA DEL RIO TERRACE	JACKSONVILLE	FL	32257	Duval	JOANABERLING@GMAIL.COM	305-934-7913
BERYLLUS CONSULTING & STAFFING, LLC	Tonjameka Southern	4674 Empire	Jacksonville	FL	32207	Duval	tsouthern@beryllus.net	317-514-0857

NAME	CONTACT	ADDRESS	CITY	STATE	POSTAL CODE	COUNTY	EMAIL	PHONE
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Bihani Corporation	Earl Bautista	8900 Corporate Square Court	Jacksonville	FL	32216	Duval	earl.bautista@americanmedicals.com	904-636-9451
Bluewater Project Services	Carol Taylor	1126 1st Street North	Jacksonville Beach	FL	32250	Duval	michelletaycorp@aol.com	404-374-5808
Booming Learning Center	Kaori Lee	731 Duval Station Road	Jacksonville	FL	32218	Duval	klee@boominglearningcenter.com	904-310-4440
Broad Horizons Speech Therapy LLC	Calonda Henry	1227 Luffness Dr	Jacksonville	FL	32221	Duval	info@broadhorizonsspeech.com	904-993-7248
BroadBased Communications, Inc	Jan Hirabayashi	1301 Riverplace Blvd	Jacksonville	FL	32207	Duval	jan@bbased.com	904-398-7279
Brunet-Garcia Advertising, Inc.	Diane Brunet	1534 Oak St	Jacksonville	FL	32204	Duval	dbrunet@brunetgarcia.com	904-346-1977
Bublak Professional Consulting, LLC	Mark Bublak	7935 Dubois Drive	Jacksonville	FL	32221	Duval	bublakprofessionalconsulting@gmail.com	904-392-0882
Bug Pro Florida	Tammi Waters	P.O. Box 8085	Jacksonville	FL	32239	Duval	tammi@bugproflorida.com	904-745-3100
BV Group & Associates, Inc.	Julian Valbuena	6501 arlington Ex Wy	Jacksonville	FL	32211	Duval	jvalbuena@bvandassociates.com	904-725-6362
C. Vargas and Associates, Ltd. Consulting Engin	Clark Vargas	8808 Arlington Expressway	Jacksonville	FL	32211	Duval	cvargas@cvaltd.com	904-722-2294
C.C. Borden Construction, Inc.	Camille C. Borden	1019 Rosselle Street	Jacksonville	FL	32204	Duval	Camille@CCBorden.com	904-354-3458
Caring Hands Supports & Services	Sheretta Joseph	9921 New Kings Rd Unit 107	Jacksonville	FL	32219	Duval	caringhandsss@yahoo.com	904-449-7977
Carolyn's Cleaning Service	Carolyn Rolack	6322 Ian Chad Drive West	Jacksonville	FL	32244	Duval	therolacks@bellsouth.net	904-302-4771
CC Borden Construction	Camille Borden	1019 Rosselle St	Jacksonville	FL	32204	Duval	ccborden@ccborden.com	904-354-3458
CE Broker, Inc.	Brian Solano	4601 Touchton Rd E,	JACKSONVILLE	FL	32246	Duval	accounting@cebroker.com	904-726-4271
Cesar John Global LLC	Alana John	2479 Shelby Creek Rd W	Jacksonville	FL	32221	Duval	alanajohn@redkinglogistics.com	904-803-2882
Chief Consulting LLC	Alexandria O'Donnell	3652 3rd Street South	Jacksonville Beach	FL	32250	Duval	alex.t.odonnell@gmail.com	404-201-0811
Civil Services, Inc.	Christopher E. Morse	2394 St. Johns Bluff Road, S.	Jacksonville	FL	32246	Duval	cmorse@civilservicesinc.com	904-641-1834
CK Direct	Carolyn Klucha	112 20th ave. n.	Jacksonville Beach	FL	32250	Duval	cklucha@comcast.net	904-287-2217
CLEANERS IN ACTION LLC	Shabraska Ponder	PO BOX 13083	JACKSONVILLE	FL	32206	Duval	CleanersInActionUSA@gmail.com	904-207-1007
Clear Impressions Solar & Security Window Filr	Christie Page	12041-17 Beach Blvd.	Jacksonville	FL	32246	Duval	clearimpressions@me.com	904-730-3400
CMAR CONSULTING, LLC	M. Alexandra Carvalho	7990 BAYMEADOWS RD E UNIJ	JACKSONVILLE	FL	32256	Duval	info@cmarconsulting.com	904-993-4806
Coastal Solutions Group LLC	Rebecca McKinney	7622 Crosstree Lane	Jacksonville	FL	32256	Duval	rebeccamckinney@bellsouth.net	904-535-3524
Complete Cleaning and More LLC	Teddy Tomlin	1100 Kings Rd Unit 2785	Jacksonville	FL	32203	Duval	Tomlinenterprises@gmail.com	432-214-0868
COMPREHENSIVE COUNSELING AND FAMILY ST	KENDRA SHEALEY	3115 SPRING GLEN ROAD	JACKSONVILLE	FL	32207	Duval	mail@ccfsjax.com	904-404-8113
CONCEPT RENAISSANCE SERVICES, LLC	RICARDO GRANELA	PO BOX 8152	JACKSONVILLE	FL	32239	Duval	INFOCONCEPTRENAISSANCE@GMAIL.COM	904-805-5858
Construction & Engineering Services Consultan	Steven Davis	9432 Baymeadows Road	Jacksonville	FL	32256	Duval	sdavis@candesconsults.com	904-652-4186
Core Construction Company of Jacksonville	Jay Chung	8375 Baymeadows Way	Jacksonville	FL	32256	Duval	jaychung@core-constructionco.com	904-399-1033
Corporate Interiors, Inc.	James Marshall	1950 San Marco Blvd.	Jacksonville	FL	32207	Duval	dmarshall@the-cigroup.com	727-539-7544
Cox-Morgan & Associates, LLC	Doneth Morgan	1109 Wild Azalea Drive	Jacksonville	FL	32221	Duval	doneth@coxmorgan.com	954-494-5384
Crest Peak Learning Center, LLC	Joseph Moravia	4228 Hood Rd	Jacksonville	FL	32257	Duval	joseph@crestpeak.com	904-600-0680
CrimeTech, Inc.	Bryan Smith	10950 San Jose Blvd Ste 60-20	Jacksonville	FL	32223-6688	Duval	bsmith@crimetech.net	904-880-9688
D.N.A. Motor Xpress Corporation	David Smith	P.O. BOX 8377	Jacksonville	FL	32239	Duval	dna_mx@yahoo.com	904-673-7164
DAK Resources, Inc	David Moorefield	50 North Laura Street	Jacksonville	FL	32202	Duval	david@dakresources.com	904-516-5444
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DataCenter Airflow Experts, LLC	David Elwood	9520 Beauclerc Cove Rd	Jacksonville	FL	32257	Duval	David.elwood13@gmail.com	904-910-9153
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Dees Pathway to Success	Deirdre Clayton	5036 Jammes Road	Jacksonville	FL	32210	Duval	dmclayton_bellsouth@comcast.net	904-463-6994
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Dion Marketing Company	Julie Dion	2014 Mayport Rd.	Jacksonville	FL	32233	Duval	juliedion@comcast.net	904-249-9784
DM PLANNING AND DESIGN BUILD SERVICES, II	Diana Folino	PO Box 19596	jacksonville	FL	32245	Duval	dmplanninganddesignbuild@gmail.com	904-598-4289
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Do Good Communications LLC	Charmaine Campo	2744 Old River Rd	Jacksonville	FL	32223	Duval	charmaine@dogoodcomms.com	904-790-1178
Dominion Engineering Group, Inc.	William Schaefer	4348 Southpoint Blvd.	Jacksonville	FL	32216	Duval	bschaefer@dom-eng.com	904-854-4500
Dorado Graphix LLC	Bart Jordan	10592 Balmoral Circle E	Jacksonville	FL	32218	Duval	sales@doradographix.com	904-751-4500

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E.Kelly Enterprises Inc.	Annette Kelly	1433-1 Romney St	Jacksonville	FL	32211	Duval	akelly@ekellyinc.com	904-742-6940
E2 Design & Construction, LLC	Elizabeth Evans	6900 Philips Highway	Jacksonville	FL	32216	Duval	eevans@e2dc.net	904-923-5003
EBS SECURITY INC	Printella Bankhead	220 E. Forsyth Street	Jacksonville	FL	32202	Duval	ebssecurity@bellsouth.net	904-354-4242
ECHO 4 Change, INC.	Felicia Walker	221 N Hogan St 304	Jacksonville	FL	32202	Duval	echo4change@gmail.com	954-817-6130
Echotech software solutions llc	Delores Rutherford	8825 Perimeter Park Blvd	Jacksonville	FL	32216	Duval	Accounting@echotechllc.com	321-252-0329
EDC3, LLC	Jocelyn Gaffney	2771-29 Monument Rd #177	Jacksonville	FL	32225	Duval	info@edc3global.com	904-452-4042
Edutech LLC	Mary Maddox	1611 6th St. S	Jacksonville Beach	FL	32250	Duval	maddox.mk@gmail.com	850-209-1086
Elite Parking Services of America, Inc.	Dane Grey	76 South Laura St, Suite 1702	Jacksonville	FL	32202	Duval	danegrey@eliteparkingsoa.com	904-297-4437
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Environmental & Geotechnical Specialists, Inc.	Tom Hayden	3772 Kori Road	Jacksonville	FL	32257	Duval	Tom.Hayden@egs-us.com	850-386-1253
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ERS Corp	John Anderson	760 Talleyrand Ave	Jacksonville	FL	32202	Duval	j.anderson@ersfl.com	904-791-9992
Esoteric Empress LLC	Rodrica Wright	3780 University Club Boulevard	Jacksonville	FL	32277	Duval	Esoteric.Empress@yahoo.com	904-472-5825
Exceptional Case Services, Inc.	Julie Collins	4811 Atlantic Blvd Suite 2	Jacksonville	FL	32207	Duval	julie.collins@ecaseservices.com	904-874-1920
Expert T's of Jacksonville, Inc.	Denise Fisher	711 Cassat Ave.	Jacksonville	FL	32205	Duval	denise@expertsjax.com	904-387-2500
EZAD LLC	Maryam Daneshvar	11791 JAYLIN CT.	JACKSONVILLE	FL	32223	Duval	mshamsei@gmail.com	904-288-9778
Ezell Law Firm, P.A.	Brenda Ezell	3560 Cardinal Point Drive, Sui	Jacksonville	FL	32257	Duval	brenda@ezellfirm.com	904-432-3200
Ezell Power Distribution Services, Inc.	Terrell Ezell	3560 Cardinal Point Dr. Suite	Jacksonville	FL	32257	Duval	tfezell@epds.co	904-535-4345
F & G Construction General Contractors, Inc.	Donna Chambers	2734 Edison Avenue	Jacksonville	FL	32254	Duval	donna@fandgconstruction.com	904-388-5707
Fainting Hearts Health & Safety Consultants LL	APRIL CHAMBERS	2324 Ernest Street	Jacksonville	FL	32204	Duval	faintingheartslivee@gmail.com	904-828-9987
Fasttrack Staffing, Inc	Mary Thomas	3728 Phillips Hwy	Jacksonville	FL	32207	Duval	m.thomas@fasttrackse.com	352-622-2040
FB Security Solutions Inc.	FREDERICK BROWN	7802 TORY PLACE EAST	JACKSONVILLE	FL	32208-3527	Duval	fbssi@aol.com	904-768-8071
FCH ENGINEERING SERVICES INC	Santiago Carrizosa	7801 POINT MEADOWS DR UN	Jacksonville	FL	32256	Duval	santiago@fchengineering.com	904-654-1619
first coast industrial supply	marne harvich	2950 st augustine road	jacksonville	FL	32207	Duval	fircoast@aol.com	904-398-7503
FIVE STAR QUALITY HOMECARE LLC	KATRINA JOHNSON	PO Box 440931	Jacksonville	FL	32222	Duval	fivestarqualityhomecare@yahoo.com	904-923-3505
Florida Industrial Contractors, LLC	Julio Nazario	7219 LONGLEAF BRANCH DR	Jacksonville	FL	32222	Duval	sales@ffindustrialcleaning.com	904-536-9650
Foresight Construction Group, Inc.	Juan Segarra	10407 Centurion Pkwy N.	Jacksonville	FL	32256	Duval	cbarroso@foresightcgi.com	352-335-6352
Four Waters Engineering Inc.	Michael Klink	324 6th Avenue North	Jacksonville Beach	FL	32250	Duval	mklink@4weng.com	904-414-2400
Fourth Party Affiliates, LLC	Jason French	13080 Silver Oak Drive	Jacksonville	FL	32223	Duval	fourthpartyaffiliates@yahoo.com	9043570714
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FUEL Media Holdings	Patrick Mercy	101 Marketside Ave 404-177	Ponte Vedra	FL	32081	Duval	patrick@fueloutdoormedia.com	904-537-0322
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GEMINI ENGINEERING & SCIENCES INC	Ki Pak	2950 Halcyon Lane, Suite 501	Jacksonville	FL	32223	Duval	kpak@geminiengineering.com	904-217-7485
Gibbs Group, Inc	Sheldon Gibbs	7400 Baymeadows Way	Jacksonville	FL	32256	Duval	SGibbs@GibbsGroupEngineers.com	904-626-0055
Global Freight And Commerce LLC	Jesus Garay	1550 Normandy Village Pkwy	Jacksonville	FL	32221	Duval	info@globalfreightandcommerce.com	904-862-6978
Green Energy Builders & Solutions by Arch Con	Camille Touma	13720 Old St Augustine Rd	Jacksonville	FL	32258	Duval	ctouma@gebs1.com	904-429-7001
Group 4 Design, Inc.	Leigh Gunn	1520 Prudential Drive	Jacksonville	FL	32207	Duval	lgunn@g4designinc.com	904-353-5900
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Haggerty Strategic Solutions LLC	Lisa Haggerty	3019 Lopez Rd	Jacksonville	FL	32216-3509	Duval	lisad@haggertyss.com	904-629-2234
HAK Construction LLC	Denise Hakimi	11036 Castlemain Circle East	Jacksonville	FL	32256	Duval	dhakimi@hak-construction.com	904-705-5700
HarmonBK LLC	Antonette Harmon	4651 Salisbury Road	Jacksonville	FL	32256	Duval	info@inapinchcleaning.com	203-668-4235
Harper & Associates Real Estate, LLC	Delmas Harper	1461 Rogero Rd	Jacksonville	FL	32211	Duval	homes@dharperealty.com	904-619-9488
Harris & Associates Financial Consulting	Annette Harris	8224 Sierra Oaks Blvd	Jacksonville	FL	32219	Duval	aharris@harriswealthcoach.com	904-607-9827
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Hurel Transcription Translation Professionals LI	Rosario Hurel	1800 The Greens Way	JACKSONVILLE BEA	FL	32250	Duval	rhurel@hureltranslations.com	909-553-9764
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I-TECH RESOURCES, INC.	TIEN NGUYEN	5627 Atlantic Blvd, unit 2	Jacksonville	FL	32207	Duval	eric@itechpersonnel.com	904-739-9350
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ISF, INC.	ISF Sales	4601 Touchton Rd E	Jacksonville	FL	32246-4485	Duval	sales@isf.com	904-724-2277
J 3's Pressure Washing	travis jones	9125 jennifer lane	Jacksonville	FL	32222	Duval	tjones@j3spropertyenhancements.com	386-237-3074
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Jacksonville Free Press	Sylvia Perry	P.O. Box 43580	Jacksonville	FL	32203	Duval	JFreePress@aol.com	904-634-1993
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Jael Concepts LLC	Darlene Vaughn	8150 Point Meadows Drive	Jacksonville	FL	32256	Duval	jaelconceptsllc@gmail.com	317-656-1314
Jax Visuals, LLC	Vincent Tan	1389 Cassat Avenue	Jacksonville	FL	32205	Duval	Vincent.tan@fastsigns.com	904-683-9569
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Jonyce D. Brown Inc	Jonyce Brown	6900 Phillips Highway	Jacksonville	FL	32216	Duval	j.brown@floorcoveringsinternational.com	904-806-3328
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Kimistry Solutions Consulting, LLC	Kimberly Scott	14047 Ridgewick Drive	Jacksonville	FL	32218	Duval	kim@kimistrysolutionsconsulting.com	904-219-6055
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Lacayo Advertising	Andres Lacayo	131 East bay Street	Jacksonville	FL	32202	Duval	andres@lacayoadvertising.com	904-636-5085
Landry & Sons	Robert Landry	2040 Sandpiper Pt	Neptune Beach	FL	32266	Duval	markaman2040@comcast.net	904-955-4745
Lasa Construction, Inc	Chris Hernandez	6734 Greenland Industrial Blv	Jacksonville	FL	32258	Duval	chris.hernandez@lasa-usa.com	904-260-2381
Lauren Lucas PhD PA	lauren lucas	3100 University Blvd S 122	Jacksonville	FL	32216	Duval	lauren@laurenlucasphd.com	904-725-2008
Law Office of Lintera Harvin, PLLC	Lintera Robinson	311 W Ashley Street	Jacksonville	FL	32202	Duval	Law@LinteraHarvin.com	904-201-9272
LDW Group LLC	Linda Woodard	14098 Summer Breeze Drive E	Jacksonville	FL	32218	Duval	ldwgroup1@yahoo.com	216-496-4598
Leneer Data Assurance Solutions, Inc.	Robert Lester	1225 West Beaver St.	Jacksonville	FL	32204	Duval	robert.lester@leneer.net	301-476-1844
Lewos-Schuh Consulting	Susan Lewos-Schuh	3600 Eastbury Drive	Jacksonville	FL	32224	Duval	susan@lewos-schuh.com	904-631-9901

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Lippmann-International LLC	Brigitte Lippmann	13700 Richmond Park Dr N	Jacksonville	FL	32224	Duval	admin@lippmann-international.com	917-779-9357
Lodgeport Inc	Chris Billings	4320 Deerwood Lake Pkwy	Jacksonville	FL	32216	Duval	chris@lodgeport.com	877-848-0280
LUMBEE RESOURCE MANAGEMENT GROUP,LLC	Johnny Helms	6440 Southpoint Parkway	Jacksonville	FL	32216	Duval	jhelms@Lumbeegroup.com	706-248-1221
M & J Jones Trucking LLC	James Jones	731 Duval Station Road	JACKSONVILLE	FL	32218	Duval	MJJonesTrucking@yahoo.com	859-496-2299
M&A Eight Transport LLC	Artavia Turner	4625 GERBER CT	Jacksonville	FL	32210	Duval	info@manda8transport.com	904-254-7840
MACS Industrial Supplies, Inc.	Susan Woolsey	10418 New Berlin Road #103	Jacksonville	FL	32226	Duval	info@macsindustrial.net	904-757-9788
Madisel Group, LLC	Sandra Johnson	5201 Atlantic Blvd, Unit 157	Jacksonville	FL	32207	Duval	sandra@themadiselgroup.com	904-233-5417
Mann Maid Cleaning Service	Antonio Leon	1650 Margaret st 302-204	Jacksonville	FL	32204	Duval	antonio.leon79@yahoo.com	904-624-9212
Marc Manor LLC	Marc Manor	1301 Riverplace Blvd	Jacksonville	FL	32207	Duval	marc@marcmanor.com	904-222-0698
Marshall Painting and Drywall	Sylvia Ratliff	4103 Dawnridge Rd E	Jacksonville	FL	32277	Duval	syrlatliff@hotmail.com	904-742-8687
Martin's Wholesale Distributors, Inc.	Helen Gay	1972 Van Sickle Rd	Jacksonville	FL	32218	Duval	helenjgay@gmail.com	904-751-2839
MD&RP Partners LLC	Michael DeBerry	7643 Gate Parkway #104-101	Jacksonville	FL	32256	Duval	Info@hybridaerialsolutions.com	904-635-6303
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Meridian Integration, LLC	Dustin Theilacker	4685 Sunbeam Road	Jacksonville	FL	32257	Duval	dtheilacker@meridian-integration.com	904-559-0140
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MILLS CONSTRUCTION OF LOUISIANA LLC	Kate Mills	5107 University Blvd West	Jacksonville	FL	32216	Duval	kmills@millsconstructionllc.com	985-201-9295
MIRANDA CONTRACTING, LLC	JOSHUA Garrison	8442 W. Beaver Street	Jacksonville	FL	32220	Duval	kgarrison@mirandacontracting.com	904-388-1121
Mister Gene Clean Janitorial Services, Inc.	Gene Buchanan	13100 Broxton Bay Drive #51	Jacksonville	FL	32218	Duval	mrgeclean@yahoo.com	904-208-1982
Mitchell & Associates LLC	Juanita Mitchell	3865 Reds Gait Ln	Jacksonville	FL	32223	Duval	J.Mitchell@royaltyaccountingservices.com	904-712-6040
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Morales Consulting Engineers, Inc.	Ed Morales Jr.	3832-010 Baymeadows Rd.	Jacksonville	FL	32217	Duval	emorales@morales-ce.com	904-434-4366
Morally Compassionate Staffing LLC	Willie Coleman	10535 Lem Turner Road	Jacksonville	FL	32218	Duval	morallycompassionate@gmail.com	954-504-8979
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National Tire Solutions, Inc.	JENNIE MIGLIARESE	1550 Spearing ST	Jacksonville	FL	32206	Duval	nationaltirevp@bellsouth.net	904-398-9544
Native Tongue Inc	Justina Wright	1301 Riverplace Blvd Ste #800	Jacksonville	FL	32207	Duval	greenhouseflorida@yahoo.com	904-666-0809
NATURE'S WAY NATURAL PEST CONTROL, INC.	REGINA MCDONOUGH	14376 Aqua Vista Road N.	Jacksonville	FL	32224	Duval	gina@natureswaypest.com	904-813-3094
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Present Heating Air Conditioning and Refrigeration	Paul Dorsey	P.O Box 41321	Jacksonville	FL	32203	Duval	support@presenthacrllc.com	904-303-9547
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Ross Results, LLC	Holly Ross	PO Box 51473	Jacksonville Beach	FL	32250	Duval	rossresultslc@gmail.com	352-642-6861
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She IS Creations LLC	Omari Smith	3721 Longleaf Forest LN	Jacksonville	FL	32210	Duval	sheiscreationsllc@gmail.com	216-225-3398
Shear Finesse Beauty Academy, Inc.	Yvonne Williams	9200 Arlington Exp Way #28	Jacksonville	FL	32225	Duval	shearfinesse@att.net	904-764-6474
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Shipping + Business Services LLC	Randall Smith	12627 San Jose Blvd	Jacksonville	FL	32223	Duval	Smithrn@s-bs.biz	904-240-1737
Shirley Singleton Inc	Shirley Singleton	2301 Gilmore St	Jacksonville	FL	32204	Duval	sysingleton@gmail.com	904-536-7916
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Southern Girl Skincare	Tonjameka Southern	4674 Empire	Jacksonville	FL	32207	Duval	tj@southerngirlskin.com	317-514-0857
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united homemaker & companion service inc	nacha beldor	900 Cesery Blvd ste 117	JAX	FL	32211	Duval	unitedhcservices@gmail.com	904-444-8367
Universal Design Solutions LLC	Mike Jones	11555 Central Pkwy, Ste 1002	Jacksonville	FL	32224	Duval	CustomerService@universaldesignsolution	904-721-2225
UNIVERSAL MANAGEMENT AND CONSULTING	Tazwa Brown	2902 Montilla Dr	Jacksonville	FL	32246	Duval	TazwaBrown2@gmail.com	904-477-9243
Up-Side Management Company	Victor Letourneau	324 E. 3rd Street	Jacksonville	FL	32206	Duval	victor.letourneau@up-sidemanagement.c	904-423-0989
US Flag Supply	Cynthia Oneal	1198 Mayport Rd #9	atlantic beach	FL	32233	Duval	cyndy.oneal@gmail.com	904-743-9353
UTLC Consulting Services, LLC	Ursula Boudreaux	PO Box 54194	Jacksonville	FL	32245	Duval	uboudreaux@utlc.net	602-741-0132
V MITCHELL ENTERPRISE LLC	VONTRELL MITCHELL	7911 DWYER DR	JACKSONVILLE	FL	32244	Duval	vmitchell06@gmail.com	904-651-5919
ValuNav LLC	Christopher Landon	10917 Crosswicks Rd	Jacksonville	FL	32256	Duval	clandon@valunav.com	443-758-4144
VIA Concepts, LLC	Tat Chan	1807 3rd Street N.	Jacksonville Beach	FL	32250	Duval	tat.chan@viaconcepts.com	904-249-9900
Waitz & Moye, Inc.	Arelys Moye	3738 Southside Boulevard	Jacksonville	FL	32216	Duval	arelysmoye@comcast.net	904-642-8311
Walker Trophies & More, LLC	Lynn Walker	11792 San Jose Blvd	Jacksonville	FL	32223	Duval	crownjacksonville@gmail.com	904-260-4871
Warehouse Engineers, LLC	Brandon Ashby	4060 London Road	Jacksonville	FL	32207	Duval	ashby.brandon@gmail.com	404-934-5753
Warrior Supply Depot Inc.	Michael Harshman	7889 Little Fox Lane	Jacksonville	FL	32256	Duval	michael.harshman@warriorsupplydepot.cc	904-422-4326
Watergate Painting & Decorating Inc.	Darlene Tillem	3982 Kaden Drive East	Jacksonville	FL	32277	Duval	wpainting@aol.com	904-725-1949
White Sands Trading Company, Inc.	Kelly Mannel	13350 International Parkway	Jacksonville	FL	32218	Duval	ronmackoul@mackoul.net	904-708-5321
willis the cook caterer	lindsey willis	1445 Falabella Dr	Jacksonville	FL	32218	Duval	lindseywillis@bellsouth.net	904-318-3574
WiredPeople	Preston Yutzey	4601 Touchton Rd	Jacksonville	FL	32246	Duval	wpsales@wiredpeopleinc.com	850-671-1010
Workplace Solutions Inc	Stephanie Royal	3733 University Blvd. West	Jacksonville	FL	32217	Duval	sroyal@workplace.us	904-997-8878
Workplace Solutions, Inc	Jessica Martin	3733 University Blvd West	Jacksonville	FL	32217	Duval	jmartin@workplace.us	904-997-8878
Workplace Solutions, Inc	Jessica Martin	3733 University Blvd West	Jacksonville	FL	32217	Duval	jmartin@workplace.us	904-997-8878
WORKSCAPES, Inc	Kelly Jones	121 W. Forsyth St.	Jacksonville	FL	32202	Duval	orders@workscapes.com	813-463-9283
You and I services LLC	You and Services	11458 SHEEPSHEAD LANE	Jacksonville	FL	32226	Duval	dre92126@yahoo.com	619-733-1102
Yown's Boiler	Cory Yown	3501 West 20th. Street	Jacksonville	FL	32254	Duval	cyown@yowns.com	904-786-1645
Zabatt Inc	Maria Sabatier	4612 Highway Ave	Jacksonville	FL	32254	Duval	sales@zabatt.com	904-421-9848
NASSAU COUNTY								
Aerial Drone Services	Kory Klix	76233, Dove RD	Yulee	FL	32097	Nassau	koryklix@aerialdroneservices1.com	904-274-1079
Alpine Wholesale LLC	Ellen Meakin	P.O. Box 15567	Fernandina Beach	FL	32035	Nassau	AlpineWholesaleLLC@yahoo.com	904-624-4263
Building It Green, LLC	Ashley Powell	463688 State Road 200	Yulee	FL	32097	Nassau	ashley.powell@buildingitgreenconsulting.c	904-310-0798
C Harrison Construction Inc.	Carrie Harrison	PO Box 50	Callahan	FL	32011	Nassau	chci@windstream.net	904-524-1733
CENTERLINE CONTRACTING INC.	CHRIS CROSSWAY	54765 Church Rd	Callahan	FL	32011	Nassau	bwarner@centerlinecontract.net	904-553-4875
Coplon Consulting & Staffing	Kelli Williams	PO Box 15613	Fernandina	FL	32035	Nassau	kcoplon@outlook.com	850-281-4332
Florida Psychological Associates, LLC	Melanie Dempsey	1903 Island Walkway	Fernandina Beach	FL	32034	Nassau	dempsey@floridapsy.com	904-277-0027
Howat Contract Furnishings, LLC	Lori Howat	95273 Amelia National Pkwy	Fernandina Beach	FL	32034	Nassau	Lori.Howat@gmail.com	904-441-9440
Sourcing Interests Group	Dawn Tiura	961687 Gateway Blvd	Amelia Island	FL	32034	Nassau	dtiura@sig.org	530-448-0000
Southeast Specialty Products, Inc.	Remberto Leiseca	PO Box 17197	Fernandina Beach	FL	32035-3134	Nassau	sespecproducts@earthlink.net	800-395-8953
Stark Contracting, LLC	Beth Stark	P.O. Box 16062	Fernandina Beach	FL	32034	Nassau	bstarkcontracting@gmail.com	904-352-9732
CLAY COUNTY								
5th Ward Enterprises	Aisha Ward	625 Oakleaf Plantation pkwy	orange park	FL	32065	Clay	info@fifthwardenterprises.com	904-480-3516
AC Specialty Plus Inc	Jorge Santiago	487 Logan Ave	Orange Park	FL	32065	Clay	jorgesantiagojr@comcast.net	9045710748
All American Building Corporation	Sharon Howard	3183 Juniper Ave	Middleburg	FL	32068	Clay	sharonhoward@trinityfabricators.com	904-219-1653
Barnebee Holdings, LLC	James Barnebee	411 walnut st #17530	green cove springs	FL	32043	Clay	jim@aim-e.biz	833-422-7632
BRP Consulting, Inc	Barika Poole	4185 EAGLE LANDING PARKW	ORANGE PARK	FL	32065	Clay	bpoole@brpconsult.com	407-900-3565
Cheryl King Counseling LLC	Cheryl King	7539 Mishkie Dr	Jacksonville	FL	32244	Clay	ckinglcs@gmail.com	904-532-4045
Chrisvon Services, Inc	Robert Dey	1697 Ashwood Cir	Middleburg	FL	32068	Clay	robert@chrisvonservices.com	904-600-1621
CLASS Management Group LLC	Carla Lomack	573 OAKLEAF PLANTATION PA	ORANGE PARK	FL	32065	Clay	carlalomack@gmail.com	904-438-8145
Clean Touch Janitorial Services	Olivia Richard	2936 Cold Creek Court	Green Cove Springs	FL	32043	Clay	cleantouchjanserv@gmail.com	843-471-9508
CLR Marine LLC	Charles Reed	411 Walnut St	Green Cove Springs	FL	32043	Clay	ChuckR@clrmarine.com	708-227-6163
CMI Consulting	Charles Moreland	1782 Fiddlers Ridge Drive	Fleming Island	FL	32003	Clay	CMORELAN@BELLSOUTH.NET	904-521-8495
Commercials Specialties LLC	Chris Todd	329 Parkridge Ave Unit 6	Orange Park	FL	32065	Clay	christodd@commercialspecialties.net	904-644-7214

NAME	CONTACT	ADDRESS	CITY	STATE	POSTAL CODE	COUNTY	EMAIL	PHONE
DAP Imaging, LLC	John Dwyer	160 Gail Ct	Orange Park	FL	32073	Clay	dapimaging@comcast.net	904-994-8602
DHS Associates, Inc.	Diane Hyman	563 Blanding Blvd	Orange Park	FL	32073	Clay	dhyman@dhsworldwide.com	904-213-0448
Dynamic Corporate Solutions, Inc.	Donna Schilkofski	1845 Town Center Blvd.	Fleming Island	FL	32003	Clay	dschilkofski@dynamiccorp.com	904-637-2511
E. Vaughan Rivers, Inc.	Vaughan Rivers	1882 Bellair Boulevard	Orange Park	FL	32073	Clay	vaughan@riversconstruction.com	904-264-0123
Fidelity Security Operations, LLC	Nathan McClure	1734 Kingsley Ave	Orange Park	FL	32073	Clay	nmcclore@fsofl.com	904-770-5111
Five G Services LLC	Kentwan Everett	2900 Plum Orchard Dr	Orange Park	FL	32073	Clay	keverett1980@gmail.com	954-934-5447
Global Alliance Communications, Inc.	Liby Arzate-Hansen	411 Walnut Street	Green Cove Springs	FL	32042	Clay	liby@gacigroup.com	210-489-0093
HEB Services, Inc.	Holly Bucci	PO Box 8430	Fleming Island	FL	32006	Clay	hollybucci@yahoo.com	904-333-8064
JAY CAM LLC	Dwayne Moore	3019 Whispering Willow Way	Orange Park	FL	32065	Clay	dwayne.moore@jaycamllc.com	904-576-4624
Kallaher, DeLuca, & Naughton	James Kallaher	151 College Dr	Orange Park	FL	32065	Clay	jkallaher@kdnfirm.com	904-541-4121
Kick Bag Logistics, LLC	Matthew T.Kohn	3939 Arbor Mill Cir	Orange Park	FL	32065	Clay	mkohn@kickbaglogistics.com	904-458-6227
L&L Supply, Inc	Liza Raulerson	3059 Country Club Blvd	Orange Park	FL	32073	Clay	llsupplyliza@gmail.com	904-923-4268
LTB Custom Homes, Inc.	Christa Dubois	710 Arthur Moore Drive	Green Cove Springs	FL	32043	Clay	chrissyd72@icloud.com	904-591-9624
MG Consultation, LLC	Maranda Griffin	984 Autumn Pines Drive	Orange Park	FL	32065	Clay	drmarandagriffin@outlook.com	805-664-0203
Michele M. Agee, P.E., P.A.	Michele Agee	1329 Kingsley Ave.	Orange Park	FL	32073	Clay	mmagee@bellsouth.net	904-264-9914
Mister Gene Clean Janitorial Services, Inc.	Gene Buchanan	3299 Roundabout Drive	Middleburg	FL	32068	Clay	mrgenecclean@yahoo.com	904-208-1982
Naturally Purposed	Ashlee Mcnair	225 College Dr.	Orange Park	FL	32065	Clay	root2tipjax@amarietalks.com	850-329-5127
Ocean Movers Inc.	Amber Sahbudak	334 Blanding Blvd	Orange Park	FL	32073	Clay	ocean.movers.fl@gmail.com	904-269-4430
Palicos Services	Nora Smith	2797 Ravines Rd	Middleburg	FL	32068	Clay	tsmith4343@aol.com	904-233-7812
Pena Technologies LLC	Nancy Swerdloff	411 Walnut Street	Green Cove Springs	FL	32043	Clay	penatechnologiesllc@gmail.com	407-474-9892
Powerhouse Realty Inc	LaToshia Hall	1857 Wells RD	Orange Park	FL	32073	Clay	buyorselljax@gmail.com	844-742-2011
Premier American Construction	Jeremy Britt	505	green cove springs	FL	32043	Clay	jbritt@pacbuildersinc.com	904-535-1028
Ricky Plumbing, LLC	Enrique Trabal	1880 Eastwest Pkwy	Fleming Island	FL	32006	Clay	enriquetrabal72@gmail.com	201-663-2147
Rivers and Rivers	Jennifer Rivers	1882 Bellair Blvd	Orange Park	FL	32073	Clay	ginger@riversconstruction.com	904-264-0123
Sankofa Creations LLC	LaDonna Mixon	3750 Silver Bluff Blvd	Orange Park	FL	32065	Clay	sankofacreationsllc@gmail.com	904-994-4147
SE Design Consult LLC	Sheryl Eliam	530 Jimbay Dr.	Orange Park	FL	32073	Clay	sheryl@4designscope.com	904-868-7455
Superior Communication Inc.	Hector DeDiego	749 Bay Cove Ct.	Middleburg	FL	32068	Clay	superiorcom59953@bellsouth.net	904-291-0479
Terraworx Land Group Inc.	Chanda Napier	401 Bay Street	Green Cove Springs	FL	32092	Clay	terraworxlandgroup@gmail.com	904-531-5674
Tmesis, LLC	Howard Wright	2012 Stable Gate Lane	Orange Park	FL	32065	Clay	howard.wright@tmesisglobal.com	833-262-9292
Tocoi Engineering, LLC	Terri Villalva	714 N. Orange Avenue	GREEN COVE SPRIN	FL	32043	Clay	tvillalva@tocoi.com	904-215-1388
Triple A & S, LLC	Anthony Patterson	4427 Vista Point Ln	Orange Park	FL	32065	Clay	apatterson39@gmail.com	904-505-3281
Veteran Builders	Bill Abrahamsen	80 - 6B Industrial Loop North	Orange Park	FL	32073	Clay	bill@vet-builders.com	904-375-0515
VETTECH SOLUTIONS, LLC	Freddie Harvey	4248 Sunset Pass Court	Middleburg	FL	32068	Clay	info@vettechsol.com	19043123160
Vocational Initiative, LLC	Patrick Arnwine	1815 Creekwood Ln	Fleming Island	FL	32003	Clay	parnwine1@gmail.com	904-502-8036
BAKER COUNTY								
Baker Business Center, LLC	Mark Akins	11 South Blvd E	Macclenny	FL	32063	Baker	mark@bakerbusinesscenter.com	904-397-0458
Fifth Street Center	Sally Haynes	PO Box 86	Glen St Mary	FL	32040	Baker	shaynes@fifthstreetcenter.com	904-226-4025
L. V. Hiers, Inc.	Leslie Stone	P. O. Box 1229	Macclenny	FL	32063	Baker	astone@lvhiers.com	904-259-2314



Bidding Information and Contractor Eligibility

Local Government: Town of Callahan, Florida CDBG Contract #: 20DB-OO-04-55-02-N06

Use a separate form for each prime contractor hired under the CDBG subgrant.

A construction contract is expected to be awarded to the contractor listed below. Please advise whether the prime contractor is identified on the List of Parties Excluded from Federal Procurement Programs.

Prime Contractor	Bid Amount	Bid Date	Wage Decision Information	
			Number	Modification
Name:	\$		FL	
DUNS #:			FL	
			FL	
Describe the construction work to be performed:				
List any subcontractors that will be working under the prime contract:				
1)	4)			
2)	5)			
3)	6)			
A. Is there additional work to be bid?			<input type="checkbox"/> Yes* <input type="checkbox"/> No	
B. Is contract award to the apparent low bidder?			<input type="checkbox"/> Yes <input type="checkbox"/> No*	
C. After bid opening, was any bidder allowed to modify his bid, or was the project changed in any way?			<input type="checkbox"/> Yes* <input type="checkbox"/> No	
D. Was any bidder rejected or allowed to withdraw after bid opening?			<input type="checkbox"/> Yes* <input type="checkbox"/> No	
E. If there is only one bid, is it within the estimate or do the files document that the bid is reasonable?			<input type="checkbox"/> Yes <input type="checkbox"/> No* <input type="checkbox"/> N/A	
F. Has the prime contractor documented efforts to obtain minority and women subcontractors as required by 24 CFR 85.36(e)(2)(vi)? (Documentation of efforts must be retained in project files for review and reporting purposes.)			<input type="checkbox"/> Yes <input type="checkbox"/> No*	
G. Did any party (bidder, sub, or supplier) file a protest? (Subgrantees must have written protest procedures.)			<input type="checkbox"/> Yes* <input type="checkbox"/> No	

** For these situations, please provide details on a separate sheet of paper. It is recommended that the subgrant administrator discuss this with CDBG staff before the contract is awarded to ensure compliance with procurement regulations.*

 Name Signature Date
73C-23.0051, FAC

SECTION 00811



**Section 3 Participation Report
(Construction Prime Contractor)**

April, 2015

Local Government: Town of Callahan, Florida CDBG Contract #: 20DB-OO-04-55-02-N06

This form must be completed by the prime contractor for any construction contract over \$100,000. Voluntary reporting for contracts under \$100,000 is encouraged.

Contractor's Name: _____

Contractor's DUNS Number: _____ Contract Amount: \$ _____

1. Does the business qualify as a "Section 3 Business Concern" because	
a) It is at least <u>51% owned</u> by Section 3 residents*, or	<input type="checkbox"/> Yes <input type="checkbox"/> No
b) At least 30% of its <u>permanent full-time employees</u> are	
i) Currently Section 3 residents*, or	<input type="checkbox"/> Yes <input type="checkbox"/> No
ii) Were Section 3 residents* within first three years of employment, or	<input type="checkbox"/> Yes <input type="checkbox"/> No
c) Will at least 25% (dollar value) of construction subcontracts (no material/supplies/equipment vendors unless they are also installing same) be to businesses meeting (a) or (b) above?	<input type="checkbox"/> Yes <input type="checkbox"/> No
If yes , list any Section 3 subcontractors and subcontract amount:	
Subcontractors	Subcontract Amount
	\$
	\$
	\$
2. Will the contractor be hiring any additional staff (office or field) for this project? <input type="checkbox"/> Yes <input type="checkbox"/> No	
• If yes , what types of jobs will be filled, and how many additional hires are estimated in each job type?	

***Section 3 resident means:**

- (1) A public housing resident; or
- (2) An individual who resides in the metropolitan area or nonmetropolitan county in which the section 3 covered assistance is expended, and who is:
 - (i) A *low-income person*, as this term is defined in section 3(b)(2) of the 1937 Act (42 U.S.C. 1437a(b)(2)). Section 3(b)(2) of the 1937 Act defines this term to mean families (including single persons) whose incomes do not exceed 80 per centum of the median income for the area, as determined by the Secretary, with adjustments for smaller and larger families, except that the Secretary may establish income ceilings higher or lower than 80 per centum of the median for the area on the basis of the Secretary's findings that such variations are necessary because of prevailing levels of construction costs or unusually high or low-income families; or
 - (ii) A *very low-income person*, as this term is defined in section 3(b)(2) of the 1937 Act (42 U.S.C. 1437a(b)(2)). Section 3(b)(2) of the 1937 Act (42 U.S.C. 1437a(b)(2)) defines this term to mean families (including single persons) whose incomes do not exceed 50 per centum of the median family income for the area, as determined by the Secretary with adjustments for smaller and larger families, except that the Secretary may establish income ceilings higher or lower than 50 per centum of the median for the area on the basis of the Secretary's findings that such variations are necessary because of unusually high or low family incomes.
- (3) A person seeking the training and employment preference provided by section 3 bears the responsibility of providing evidence (if requested) that the person is eligible for the preference.

Note: This contract is funded with federal funds, and this information is required for construction contracts over \$100,000 for reporting purposes. See Section 3 portion of **CDBG Supplemental Conditions for Construction Projects** for additional information.

73C-23.0051, FAC

SECTION 00811



Section 3 Participation Report (Construction Subcontractor)

April, 2015

Local Government: Town of Callahan, Florida CDBG Contract #: 20DB-OO-04-55-02-N06

This form must be completed by construction subcontractors when the prime contract is at least \$100,000. (Do not include the cost of equipment or material supplies unless you are installing also.) Voluntary reporting is encouraged when the prime contract is under \$100,000.

Subcontractor's Name: _____

Subcontractor's DUNS Number: _____ Subcontract Amount: \$ _____

- 1. Does the business qualify as a "Section 3 Business Concern" because
a) It is at least 51% owned by Section 3 residents*, or
b) At least 30% of its permanent full-time employees are
i) Currently Section 3 residents*, or
ii) Were Section 3 residents* within first three years of employment, or
2. Will the subcontractor be hiring any additional staff (office or field) for this project?
• If yes, what types of jobs (e.g., laborer, equipment operator) will be filled, and how many additional hires are estimated in each job type?

*Section 3 resident means:

- (1) A public housing resident; or
(2) An individual who resides in the metropolitan area or nonmetropolitan county in which the section 3 covered assistance is expended, and who is:
(i) A low-income person, as this term is defined in section 3(b)(2) of the 1937 Act (42 U.S.C. 1437a(b)(2)).
(ii) A very low-income person, as this term is defined in section 3(b)(2) of the 1937 Act (42 U.S.C. 1437a(b)(2)).
(3) A person seeking the training and employment preference provided by section 3 bears the responsibility of providing evidence (if requested) that the person is eligible for the preference.

Note: This contract is funded with federal funds, and this information is required for reporting purposes for projects costing over \$100,000. See Section 3 portion of CDBG Supplemental Conditions for Construction Contracts for additional information.

73C-23.0051, FAC



SECTION 00811

Department of Economic Opportunity – Small Cities Community Development Block Grant Program

Form SC-54

Documentation for Business Claiming Section 3 Status

April, 2015

Name of Business: _____

DUNS Number of Business: _____

Address of Business: _____

Type of Business: Corporation Partnership
 Sole Proprietorship Joint Venture

Attached is the following documentation as evidence of our Section 3 status:

For a business claiming status as a Section 3 resident-owned enterprise

- Copy of resident lease
- Copy of receipt of public assistance
- Copy of evidence of participation in a public assistance program
- Other evidence

For a business claiming Section 3 status by subcontracting 25 percent of the dollar amount awarded to qualified Section 3 businesses

- List of Section 3 subcontractor(s) and subcontract amount(s).

For a business claiming Section 3 status based on at least 30 percent of their workforce currently qualifying as Section 3 residents or having been qualified as Section 3 eligible residents within three years of date of first employment with the business

- List of all current full-time employees, and
- List of employees claiming Section 3 status and for each such employee:
 - PHA/IHA Residential lease less than three years from date of employment, or
 - Other evidence of Section 3 status less than three years from day of employment.

I certify that the above information is correct.

Signature

Type Name and Title

Date

Note: The local government shall maintain this form and supporting documentation in the CDBG project files for review during monitoring.

73C-23.0051, FAC

SECTION 00812

Department of Economic Opportunity – Small Cities Community Development Block Grant Program Form SC-37



**Certification Regarding Debarment, Suspension, and Other
Responsibility Matters (Primary Covered Transactions)**

April, 2015

Recipient: Town of Callahan, Florida CDBG Contract Number: 20DB-OO-04-55-02-N06

Name of Company Selected as a Prime Contractor: _____

DUNS Number: _____

- 1) The prospective primary participant certifies to the best of its knowledge and belief, that it and its principals:
 - (a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
 - (b) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
 - (c) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph 1)(b) of this certification; and
 - (d) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.
- (2) Where the prospective primary participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

Authorized Signature

Date

Name Typed

Title

Street Address

City, State, Zip

(24 CFR 24.510 and 24 CFR, Part 24, Appendix A)

73C-23.0051, FAC

SECTION 00813

Department of Economic Opportunity – Small Cities Community Development Block Grant Program

Form SC-38



**Certification Regarding Debarment, Suspension, Ineligibility
and Voluntary Exclusion (Subcontractor)**

April, 2015

Recipient: Town of Callahan, Florida CDBG Contract Number: 20DB-OO-04-55-02-N06

Name of Subcontractor: _____

DUNS Number: _____

Lower Tier Covered Transactions

- (1) The prospective lower tier participant certifies, by submission of this document, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.
- (2) Where the prospective lower tier participant is unable to certify to the above statement, the prospective participant shall attach an explanation to this form.

Authorized Signature

Date

Name Typed

Title

Street Address

City, State, Zip

(24 CFR 24.510 and 24 CFR, Part 24, Appendix A)

73C-23.0051, FAC

SECTION 00814

**SWORN STATEMENT UNDER SECTION 287.133(3)(a),
FLORIDA STATUTES, ON PUBLIC ENTITY CRIMES**

THIS FORM MUST BE SIGNED AND SWORN TO IN THE PRESENCE OF A NOTARY PUBLIC OR OTHER OFFICIAL AUTHORIZED TO ADMINISTER OATHS.

1. This sworn statement is submitted to Town of Callahan, Florida

by _____
[print individual's name and title]

for _____
[print name of entity submitting sworn statement]

whose business address is

_____ and (if applicable) its Federal Employer Identification Number (FEIN) is _____

(If the entity has no FEIN, include the Social Security Number of the individual signing this sworn statement: _____.)

2. I understand that a "public entity crime" as defined in Paragraph 287.133(1)(g), Florida Statutes, means a violation of any state or federal law by a person with respect to and directly related to the transaction of business with any public entity or with an agency or political subdivision of any other state or with the United States, including but not limited to, any bid or contract for goods or services to be provided to any public entity or an agency or political subdivision or any other state or of the United States and involving antitrust, fraud, theft, bribery, collusion, racketeering, conspiracy, or material misrepresentation.

3. I understand that "convicted" or "conviction" as defined in Paragraph 287.133(1)(b), Florida Statutes, means a finding of guilt or a conviction of a public entity crime, with or without an adjudication of guilt, in any federal or state trial court of record relating to charges brought by indictment or information after July 1, 1989, as a result of a jury verdict, nonjury trial, or entry of a plea of guilty or nolo contendere.

4. I understand that an "affiliate" as defined in Paragraph 287.133(1)(a), Florida Statutes, means:

1. A predecessor or successor of a person convicted of a public entity crime: or
2. An entity under the control of any natural person who is active in the management of the entity and who has been convicted of a public entity crime. The term "affiliate" includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in the management of an affiliate. The ownership by one person of shares constituting a controlling interest in another person, or a pooling of equipment or income among persons when not for fair market value under an arm's length agreement, shall be a prima facie case that one person controls another person. A person who knowingly enters into a joint venture with a person who has been convicted of a public entity crime in Florida during the preceding 36 months shall be considered an affiliate.

5. I understand that a "person" as defined in Paragraph 287.133(1)(e), Florida Statutes, means any natural person or entity organized under the laws of any state or of the United States with the legal power to enter into a binding contract and which bids or applies to bid on contracts for the provision of goods or services let by a public entity, or which otherwise transacts or applies to transact business with a public entity. The term "person" includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in management of an entity.

6. Based on information and belief, the statement which I have marked below is true in relation to the entity submitting this sworn statement. **[indicate which statement applies.]**

___ Neither the entity submitting this sworn statement, nor any of its officers, directors, executives, partners, shareholders, employees, members, or agents who are active in management of the entity, nor any affiliate of the entity have been charged with and convicted of a public entity crime subsequent to July 1, 1989.

___ The entity submitting this sworn statement, or one or more of its officers, directors, executives, partners, shareholders, employees, members, or agents who are active in management of the entity, or an affiliate of the entity has been charged with and convicted of a public entity crime subsequent to July 1, 1989.

___ The entity submitting this sworn statement, or one or more of its officers, directors, executives, partners, shareholders, employees, members, or agents who are active in management of the entity, or an affiliate of the entity has been charged with and convicted of a public entity crime subsequent to July 1, 1989. However, there has been a subsequent proceeding before a Hearing Officer of the State of Florida, Division of Administrative Hearings and the Final Order entered by the Hearing Officer determined that it was not in the public interest to place the entity submitting this sworn statement on the convicted vendor list. **[attach a copy of the final order]**

I UNDERSTAND THAT THE SUBMISSION OF THIS FORM TO THE CONTRACTING OFFICER FOR THE PUBLIC ENTITY IDENTIFIED IN PARAGRAPH 1 (ONE) ABOVE IS FOR THAT PUBLIC ENTITY ONLY AND, THAT THIS FORM IS VALID THROUGH DECEMBER 31 OF THE CALENDAR YEAR IN WHICH IT IS FILED. I ALSO UNDERSTAND THAT I AM REQUIRED TO INFORM THE PUBLIC ENTITY PRIOR TO ENTERING INTO A CONTRACT IN EXCESS OF THE THRESHOLD AMOUNT PROVIDED IN SECTION 287.017, FLORIDA STATUTES FOR CATEGORY TWO OF ANY CHANGE IN THE INFORMATION CONTAINED IN THIS FORM.

[signature]

Sworn to and subscribed before me this _____ day of _____, 20____

Personally known _____

OR Produced identification _____

Notary Public - State of _____

My commission expires _____

(Printed typed or stamped
commissioned name of notary public)

Form PUR 7068 (Rev. 04/10/92)

SECTION 00900

ADDENDA AND MODIFICATIONS

Bidding addenda and/or modifications issued prior to signing of the construction agreement are to be attached hereto.

END OF SECTION

SECTION 01060

REGULATORY REQUIREMENTS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS: The general provisions of the Contract, including General and Supplementary Conditions apply to the work specified in this section.

1.02 SPECIFIED CODES:

- A. The design of the work is based on the requirements of the latest editions of the Florida Building Code, Florida Fire Prevention Code, Florida Accessibility Code, NFPA 70 National Electric Code, NFPA 101 Life Safety Code and National Fire Protection Association requirements, whichever is most stringent.
- B. The site work is based on the latest edition of the Florida Department of Transportation, Standard Specifications for Road and Bridge Construction, hereinafter referred to as the Florida DOT Specifications or DOT Spec.
- C. The Contractor shall ensure the work complies to the aforementioned codes and regulations as they apply to the project whether or not specifically referenced elsewhere.

1.03 REFERENCE STANDARDS:

- A. Except as otherwise required by Paragraph 1.02 all products and workmanship shall conform to best quality materials and practices recognized by agencies, associations, councils, etc., specified in individual sections.
- B. In the absence of specified agencies, associations, councils, etc., the Contractor shall conform to the requirements of the most widely recognized standards for each particular portion of the work.

1.04 PERMITS:

- A. A Florida Department of Environmental Protection Water Distribution System Permit has been obtained and is included at the end of this section. Construction of the project shall be performed so as to allow the Owner to meet the requirements and stipulations of this permit.
- B. Building Permit: The Town of Callahan will require a building permit for the Depot Park Pavilion and Storage Facility.

1.05 FEES: Contractor shall be responsible for all fees associated with the permits for which he applies.

A. The Owner shall be responsible for any associated fees from the power company.

B. The Owner shall pay all fees associated with the building permit, not including electrical service noted previously.

1.06 SUBMITTALS:

A. Copy of Application.

B. Copy of Approved Permit.

END OF SECTION



FLORIDA DEPARTMENT OF Environmental Protection

Northeast District
8800 Baymeadows Way West, Suite 100
Jacksonville, Florida 32256

Ron DeSantis
Governor

Jeanette Nuñez
Lt. Governor

Shawn Hamilton
Interim Secretary

Notification of Acceptance of Use of a General Permit

Mr. Mike Williams
Town Manager
Town of Callahan
Post Office Box 5016
Callahan, Florida 32011
pwd@townofcallahan-fl.gov

General Permit Number: 0080311-025-DSGP
**Project Name: CDBG NR WM Replacement
& Extension**
County: Nassau
Effective Date: September 28, 2021
Expiration Date: September 27, 2026
Water Supplier: Town of Callahan WTP
PWS ID: 2450146

Dear Mr. Williams:

On September 28, 2021, the Florida Department of Environmental Protection received a “*Notice of Intent to Use the General Permit for Construction of Water Main Extensions for PWSs*” [DEP Form No 62-555.900(7)], under the provisions of Rule 62-4.530 and Chapter 62-555, Florida Administrative Code (F.A.C.). The proposed project includes 4200 LF of 6" PVC watermain.

Based upon the submitted Notice and accompanying documentation, this correspondence is being sent to advise that the Department does not object to the use of such general permit at this time. Please be advised that the permittee is required to abide by Rule 62-555.405, F.A.C., all applicable rules in Chapters 62-4, 62-550, 62-555, F.A.C., and the General Conditions for All General Drinking Water Permits (found in 62-4.540, F.A.C.).

The permittee shall comply with all sampling requirements specific to this project. These requirements are attached for review and implementation.

Pursuant to Rule 62-555.345, F.A.C., the permittee shall submit a certification of construction completion [DEP Form No. 62-555.900(9)] to the Department and obtain approval, or clearance, from the Department before placing any water main extension constructed under this general permit into operation for any purpose other than disinfection or testing for leaks.

Within 30 days after the sale or legal transfer of ownership of the permitted project that has not been cleared for service in total by the Department, both the permittee and the proposed permittee shall sign and submit an application for transfer of the permit using Form 62-555.900(8), F.A.C., with the appropriate fee. The permitted construction is not authorized past the 30-day period unless the permit has been transferred.

CDBG NR WM Replacement
0080311-025-DSGP
Page 2 of 3
September 28, 2021

This permit will expire five years from the effective date. If the project has been started and not completed by that time, a new permit must be obtained before the expiration date in order to continue work on the project, per Rule 62-4.030, F.A.C.

Sincerely,

A handwritten signature in black ink, appearing to read "Michelle Neeley", with a large, stylized flourish at the end.

Michelle Neeley
Environmental Manager
Permitting Program

c:
Timothy P. Norman, P.E., tnorman@mittauer.com
DEP: Michelle Neeley, Stephen Spence

A Civil Penalty May Be Incurred
if this project is placed into operation before obtaining a clearance from this office.

Requirements for clearance upon completion of projects are as follows:

1) Clearance Form

Submission of a fully completed Department of Environmental Protection (DEP) Form 62-555.900(9), *Certification of Construction Completion and Request for Clearance to Place Permitted PWS Components into Operation*.

2) Record Drawings, if deviations were made

Submission of the portion of record drawings showing deviations from the DEP construction permit, including preliminary design report or drawings and specifications, if there are any deviations from said permit. (Note that it is necessary to submit a copy of only the portion of record drawings showing deviations and not a complete set of record drawings.)

3) Bacteriological Results

Copies of satisfactory bacteriological analysis (a.k.a. Main Clearance), taken within sixty (60) days of completion of construction, from locations within the distribution system or water main extension to be cleared, in accordance with Rules 62-555.315(6), 62-555.340, and 62-555.330, F.A.C. and American Water Works Association (AWWA) Standard C 651-92, as follows:

- The endpoint of the proposed addition;
- Any water lines branching off a main extension;
- Every 1,200 feet of water main;
- Each location shall be sampled on two consecutive days (at least 6 hours apart) with sample point locations and chlorine residual readings clearly indicated on the report and/or drawings.
- A sketch or description of all bacteriological sampling locations must also be provided.
- Bacteriological sample results will be considered unacceptable if the tests were completed more than 60 days before the Department receives the results.

For further clarification, contact:
FDEP – Northeast District
Potable Water Permitting
8800 Baymeadows Way West, Suite 100
Jacksonville, Florida 32256
(904) 256-1700

SECTION 01150

MEASUREMENT AND PAYMENT

PART 1 - GENERAL

1.01 GENERAL: Measurement and payment will be based upon actual quantities of work completed and accepted in accordance with the Contract Documents. No separate payment will be made for incidental clearing, excavation, trenching, dewatering, backfilling, compaction, finish grading, surveying or other incidental items of work not shown in the Agreement.

1.02 ESTIMATED QUANTITIES: Where quantities are shown they are approximate and are given only as a basis of calculation upon which the award of the contract is to be made. Owner or Engineer do not assume any responsibility for the final quantities, nor shall Contractor claim misunderstanding because of such estimate of quantities. Final payment will be made only for the satisfactorily completed quantity of each item.

1.03 METHOD OF MEASUREMENT:

- A. Measurement of Length: Unless otherwise specified for the particular items involved, all measurements of distance for items to be paid for on the basis of length shall be taken horizontally or vertically.
- B. Measurement of Area: In the measurement of items paid for on the basis of area of finished work, the lengths and/or widths to be used in the calculations shall be the actual dimensions measured along the surface of the completed work within the neat lines shown or designated.

1.04 PAYMENT:

- A. Lump Sum Items: Where payment for items is shown to be paid for on a lump sum basis, no separate payment will be made for any item of work required to complete the lump sum item.
- B. Unit Price Items: Where payment for items is shown to be paid for on a unit price basis, separate payment will be made for the items of work described herein and listed on the Bid Form. Any related work not specifically listed, but required for satisfactory completion of the Work, shall be considered to be included in the scope of the appropriate listed work items.

1.05 EQUIPMENT AND MATERIALS IN STORAGE: Partial payment for materials and equipment in proper storage at the site of the work or other approved storage site will be made for those items for which the Contractor has submitted paid invoices to the Engineer.

1.06 BID ITEMS:

A. Mobilization and General Conditions:

1. Measurement: The quantity for payment shall be on a lump sum basis and shall include all costs associated with mobilizing all labor, equipment, and materials necessary to perform the work and all administrative costs such as bonds, insurance, etc. Bid item shall be limited to 10% of the total bid, half of which shall be for mobilization, bonds, and insurance and the remaining half of which shall be for general conditions spread evenly over the construction period.
2. Payment: Payment shall be full compensation for mobilizing all materials, equipment and labor and securing all bonds necessary to perform the work, and all general conditions..

B. PVC Water Main:

1. Measurement: The quantity for payment shall be the actual number of linear feet of PVC main of the size identified satisfactorily furnished and laid using conventional construction methods (i.e., excavation) as measured along the length of the centerline of the completed pipeline, without deduction for the length of valves and fittings.
2. Payment: Payment of the applicable unit price per linear foot shall be full compensation for furnishing all labor, materials, and equipment, and constructing the main complete including trace wire, detection tape, etc.

C. Gate Valves and Boxes:

1. Measurement: The quantity for payment shall be the actual number of valves of the specified type and size with boxes satisfactorily furnished and installed.
2. Payment: Payment of the applicable unit price for each valve of the specified size and type shall be full compensation for furnishing all labor, materials, equipment, and installing the valve complete with box and cover as shown on the detail.

D. Tapping Sleeves and Valves:

1. Measurement: The quantity for payment shall be the number of tapping sleeves and tapping valves furnished and installed of the identified size.
2. Payment: Payment of the applicable unit price shall be full compensation for locating the existing main to be connected to,

excavating and exposing the existing main, installing tapping sleeve and tapping valve, restraint of existing main as required, connection of new pipe to tapping valve, and associated restoration.

E. Ductile Iron Fittings - Cement-Lined:

1. Measurement: The quantity for payment shall be on the basis of the number of pounds of ductile iron fittings with cement lining (excluding accessories) satisfactorily furnished and installed. For the purposes of determining the pounds of fittings installed, the "compact" (i.e. AWWA C-153) fitting weights shall be utilized.
2. Payment: Payment of the applicable unit price per pound shall be full compensation for furnishing all labor, materials and equipment to satisfactorily install ductile iron fittings. No separate payment shall be made for thrust restrainers or detection tape, required to be installed with ductile iron fittings.

F. Fire Hydrant Assembly:

1. Measurement: The quantity for payment shall be the number of fire hydrant assemblies installed as identified on the drawings.
2. Payment: Payment of the applicable unit price shall be full compensation for installing fire hydrant, gate valve and box, hydrant tee, pipe, tie rods, and associated restoration.

G. Remove Existing Fire Hydrant Assembly:

1. Measurement: The quantity for payment shall be the number of fire hydrant assemblies removed as identified on the Drawings.
2. Payment: Payment of the applicable unit price shall be full compensation for removing existing fire hydrant, capping existing hydrant lead, and associated restoration.

H. Branch Connections:

1. Measurement: The quantity for payment shall be the number of branch connections of the identified size and type furnished and installed.
2. Payment: Payment of the applicable unit price shall be full compensation for locating the existing main to be connected to, excavation and exposing of existing main, capping existing main, installation of branch connections as shown on the Details, and associated restoration.

I. Cut and Cap Existing Mains:

1. Measurement: The quantity for payment shall be the number of existing water mains of the specified size that are cut and capped.
2. Payment: Payment of the applicable unit price shall be full compensation for locating and exposing the existing main (including excavation and dewatering), cutting the existing main, furnishing and installing a cap on the end of the main, providing restraint of the existing main as required, and associated restoration.

J. Reconnect Existing Water Services:

1. Measurement: The quantity for payment shall be the number of existing water services of the specified type (long or short) reconnected to the newly-installed water main. Long services are defined as those crossing a street or roadway.
2. Payment: Payment of the applicable unit price shall be full compensation for installing tapping saddle and corporation stop on newly-installed or existing main, installing service tubing from newly-installed water main to existing meter box (including drilling under roadway), and connection to existing meter box assembly including all required connections/adapters, and associated restoration.

K. Removal and Replacement of Unsuitable Soils:

1. Measurement: The quantity of payment shall be the actual number of linear feet (as measured along the pipe centerline) of unsuitable soils removed and replaced with suitable backfill material, as determined by the Engineer.
2. Payment: Payment of the applicable unit price per linear foot of unsuitable soils shall be full compensation for furnishing all labor, materials, and equipment to remove the unsuitable soils and hauling and disposal of excess material unsuitable for backfill.

L. Concrete Encasement and Specials:

1. Measurement: The quantity for payment shall be the number of cubic yards of concrete satisfactorily furnished and installed for encasing water or sewer mains or for other special conditions as directed by the Engineer. The volume of concrete for encasement shall be limited to 6 inches around the outside diameter of the pipe being encased minus the volume of pipe, per foot of length.

2. Payment: Payment of the applicable unit price shall be full compensation for furnishing all labor, materials, and equipment to place the concrete around the pipe, provide pipe support, forming, vibratory placement, and related items.

M. Asphaltic Roadway/Sidewalk/Driveway Restoration:

1. Measurement: The quantity of payment shall be the actual number of linear feet (as measured along the pipe centerline) of asphaltic roadway/driveway surface open cut and restored in accordance with specifications.
2. Payment: Payment of the applicable unit price per linear foot of asphaltic roadway/driveway restoration shall be full compensation for furnishing all labor, materials, and equipment to saw cut, remove and dispose of existing pavement, install suitable base and subgrade materials, and recompaction in accordance with pavement restoration requirements. Asphaltic overlay shall be paid for separately under its respective pay item. No separate payment shall be made for incidental restoration items (i.e., curb, grassing, driveways, etc.) adjoining asphalt roadway restoration, unless such items are crossed by pipeline, although any such disturbed items must still be restored.

N. Asphaltic Overlay:

1. Measurement: The quantity for payment shall be the actual number of square yards of asphaltic overlay of the identified thickness installed. Limits of asphaltic overlay are indicated on the drawings. If no so indicated, overlay limits shall correspond to asphaltic roadway/driveway restoration limits or as directed by Engineer/Owner.
2. Payment: Payment of the applicable unit price per square yard of asphaltic overlay shall be full compensation for furnishing all labor, materials, and equipment to install asphaltic overlay to the limits indicated on the drawings. Item includes adjustments to any manhole covers, valve boxes traffic control devices, or similar items necessary to make flush with overlain surface.

O. Concrete Driveway/Sidewalk Restoration:

1. Measurement: The quantity for payment shall be the actual number of linear feet (as measured along the pipe centerline) of concrete driveway/sidewalk/curb open cut and restored in accordance with specifications.

2. Payment: Payment of the applicable unit price per linear foot of concrete driveway/sidewalk/curb restoration shall be full compensation for furnishing all labor, materials, and equipment to open cut existing driveway/sidewalk/curb, remove and dispose of existing concrete, recompact open cut area, and install new concrete driveway/sidewalk/curb. Width of concrete driveway replacement shall be 10 foot minimum or to nearest concrete joint existing prior to construction, whichever is greater. No separate payment shall be made for incidental grass restoration adjoining concrete driveways/sidewalks/curbs. Replacement of existing curb is not required if curb is not damaged as a result of Contractor's operations.

P. Stabilized/Gravel Roadway/Driveway Restoration:

1. Measurement: The quantity for payment shall be the actual number of linear feet (as measured along the pipe centerline) of stabilized/gravel roadway surface open cut and restored in accordance with specifications.
2. Payment: Payment of the applicable unit price per linear foot of stabilized/gravel roadway restoration shall be full compensation for furnishing all labor, materials, and equipment to install suitable base and subgrade materials and recompact in accordance with details and specifications. No separate payment shall be made for incidental grass restoration adjoining stabilized gravel roadways.

Q. Grassing:

1. Measurement: The quantity for payment shall be the actual number of linear feet of grass of the specified type satisfactorily replaced as measured along the centerline of the pipe. The entire width of disturbed area shall be grassed.
2. Payment: Payment of the applicable unit price shall be full compensation for furnishing all labor, materials, and equipment necessary to replace grass as shown, directed, or specified including all necessary grading, soil preparation, fertilizer, and irrigation. Where pipe is to be installed in areas whose restoration has a separate pay item (i.e., asphalt roadway restoration, concrete driveway restoration, etc.), no separate payment for grassing in these areas will be made even though any disturbed grassed areas must be restored.

R. Flushing, Pressure Testing, and Disinfection:

1. Measurement: The quantity for payment shall be on a lump sum basis and shall include all items related to flushing, pressure testing, and disinfection of all newly installed water mains and services.

2. Payment: Payment of the lump sum price shall be full compensation for furnishing all labor, materials, and equipment necessary to flush, pressure test and disinfect water main including temporary flushing connections, flushing water, chlorination, flushing water dechlorination and disposal, sediment control/removal, associated restoration, etc.

S. Rehabilitation of Lift Station No. 1:

1. Measurement: The quantity for payment shall be on a lump sum basis.
2. Payment: Payment of the lump sum price shall include all items identified on Sheet Nos. 11 - 13 of the plans and related specifications. Work includes, but is not limited to, the following: bypass pumping; demolition; new piping, valves, and fittings; new pumps, floats, and control panel; associated electrical; and restoration.

T. Demobilization and Closeout:

1. Measurement: The quantity for payment shall be on a lump sum basis.
2. Payment: Payment of the applicable lump sum price shall be full compensation for demobilizing all materials and equipment from the work site(s), preparation of record drawing documents, and submittal of all required closeout documents.

U. Depot Park Pavilion and Storage Building:

1. Measurement: The quantity for payment shall be on a lump sum basis.
2. Payment: Payment of the lump sum price shall be full compensation for all labor, materials, equipment, and incidentals necessary to construct the Pavilion and Storage Building described in the Project Manual and within the building envelope.

V. Depot Park Sitework:

1. Measurement: The quantity for payment shall be on a lump sum basis.
2. Payment: Payment of the lump sum price shall be full compensation for the site improvements associated with the Pavilion and Storage Building described in the Project Manual.

W. Depot Park Conventional Framing:

1. Measurement: The quantity for payment shall be on a lump sum basis.
2. Payment: Payment of the lump sum price shall be full compensation for all labor, materials, equipment, and incidentals to modify the proposed base bid from pre-engineered roof trusses to a conventionally-framed roof system as described in the Project Manual.

X. Depot Park Additional Electrical and Lighting:

1. Measurement: The quantity for payment shall be on a lump sum basis.
2. Payment: Payment of the lump sum price shall be full compensation for all labor, materials, equipment, and incidentals to furnish and install the additional electrical and lighting elements described in the Project Manual.

Y. Depot Park Building Insulation:

1. Measurement: The quantity for payment shall be on a lump sum basis.
2. Payment: Payment of the lump sum price shall be full compensation for all labor, materials, equipment, and incidentals to furnish and install roof and wall insulation as described in the Project Manual.

END OF SECTION

SECTION 01300

SUBMITTALS

PART 1 - GENERAL

1.01 TYPES OF SUBMITTALS:

- A. Construction Schedules: The Contractor shall prepare and submit to the Owner and Engineer within two weeks of the "Notice to Proceed" a construction schedule showing the proposed dates for starting and completing each of the various branches of work. The schedule shall be in the form of a bar graph with a representation of the schedule of costs by months.
- B. Manufacturer's data shall include all standard published information describing products, systems, methods and performance. Include manufacturer's name and address, and associations with which manufacturer of his products comply.
- C. Shop drawings and schedules shall include items, products, materials, methods, anchorages, details, or any other information required to fabricate items of the work and complete the installation which is not specifically stated or described on manufacturer's data.
- D. Installation instructions shall include all information required from a manufacturer or fabricator to have his product installed. This may be included as a shop drawing if such are required.
- E. Warranties and Guarantees required by the Contract Documents shall begin on the official date of substantial completion of the project or any portion thereof, into which the warranted or guaranteed item was installed, constructed, or otherwise made operational. All warranties and guarantees shall be in effect for a minimum of one year unless specified for a longer period. Include all specific items covered, company names and addresses and names of persons authorized to warrant or guarantee item(s) if not a blanket coverage.
- F. Certifications and test reports of products, materials, and performance for compliance with specified requirements shall specifically address the work and shall contain the name and signature and address of persons authorized to make such certifications.
- G. Evidence of compliance to instructions shall be copies of transmittal letters or letter of verification duly signed by authorized persons.

- H. Operation and Maintenance Manuals shall include all literature required to properly operate and maintain any equipment installed in the work and shall include names and addresses of manufacturers and authorized service and/or parts representatives, and dealers and shall be delivered on or before data of beneficial occupancy.
- I. Samples required shall be as specified and shall include identifications of the specific item and specification section to which the sample applies.

1.02 COPIES OF SUBMITTALS:

- A. All submittals shall be made electronically via email.
- B. Operation and Maintenance Manuals may be submitted electronically for preliminary review. Upon approval of the Engineer, three (3) paper copies shall be submitted.
- C. If electronic submittal is not available, or if specifically requested by Owner, the minimum number of copies of submittals shall be submitted as follows and does not include numbers of copies required by the Contractor for his distribution purposes.

1.	Manufacturers Data:	4
2.	Shop Drawings and Schedules:	4
3.	Installation Instructions:	4
4.	Warranties and Guarantees:	4
5.	Certifications and Test Reports:	4
6.	Evidences:	4
7.	Operation and Maintenance Manuals:	3
8.	Samples:	3
9.	Progress Schedule:	4 Monthly

- D. As soon as practical, after the date of execution of the Owner/Contractor Agreement and within 30 days, the Contractor will make all required submittals.

1.03 REVIEW OF SUBMITTALS:

- A. All submittals required by the Contract Documents shall be sent to the Engineer.
- B. Copies of submittals to be returned for the Contractor's use will be processed and emailed/mailed to the Contractor within 14 days of receipt of each submittal by the Engineer.

- C. Review of submittals is only for conformance with the design concept of the project or work and does not relieve the Contractor of responsibility for any deviation from the requirements of the Contract Documents nor from responsibility for errors and omissions in the submittals.
- D. Submittals received without the Contractor's signed "Checked and Approved" stamp on each copy will be returned without action and noted as such or "RWA".
- E. Any submittals or portions thereof which are processed and returned to the Contractor will be marked "Approved", "Approved as Noted", "Revise and Resubmit". or "Not Approved".
- F. Submittals which refer to information or data not included in the submittal (excluding the Contract Documents) will not be checked.

1.04 DOCUMENTS:

- A. All documents including letters, letters of transmittal and requests, generated by the Contractor shall be on standard letter or legal size paper and include Contractor's name, the Owner's project number, Engineer's project number, date and be signed by authorized personnel.
- B. Letters of transmittal shall also clearly identify each part of the submittal with specification section number and indicate the number of copies of each part. Letter requesting substitutions shall contain the same information.
- C. All submittals for approval shall be individually numbered by the Contractor in sequence of order of submission. Resubmittal of revised submittals shall bear the same numbers and be clearly marked "Resubmittal No. _____".

1.05 COLORS:

- A. The Engineer, in noting and marking submittals, shall use the color green.
- B. The Contractor, in noting and marking submittals, shall use the color red.
- C. Marks or notations of any other color on submittals shall be disregarded.

1.06 ON-SITE RECORDS: The Contractor shall have at least one set of complete, approved submittals and shop drawings on the job site at all times when such work is in progress.

END OF SECTION

SECTION 01390

AUDIOVISUAL DOCUMENTATION

PART 1 - GENERAL

- 1.01 DESCRIPTION OF WORK:** Prior to commencing the Work, the Contractor shall have a continuous audio-video recording of the Project to serve as a record of preconstruction conditions.
- 1.02 APPROVAL:** No construction shall begin prior to review and approval of the recordings covering the construction area by the Engineer. The Engineer shall have the authority to reject all or any portion of a video recording not conforming to specifications and order that it be redone at no additional charge. The Contractor shall reschedule unacceptable coverage within five (5) days after being notified. The Engineer shall designate those areas, if any, to be omitted from or added to the audio-video coverage. Recordings shall not be made more than ninety (90) days prior to construction in any area.
- 1.03 SUBMITTAL:** A total of two sets shall be submitted as a shop drawing on a 4.7 GB format DVD, suitable for playing on a standard DVD player or computer DVD drive. The DVDs shall not be copyrighted or copy protected so that the Owner or Engineer will have the ability to make additional copies if necessary.

PART 2 - PRODUCTS

- 2.01 GENERAL:** All equipment, accessories, materials, and labor to perform this service shall be furnished by the Contractor.
- 2.02 QUALITY:** The total audio-video system shall reproduce bright, sharp, clear pictures with accurate colors and shall have minimal distortion, tearing, rolls, or other imperfections. The audio portion of the recording shall reproduce the commentary of the camera operator with proper volume and clarity and be free from distortion, wind noise and interruptions.
- 2.03 CAMERA:** The digital color video camera used in the recording system shall have image stabilization and shall have a minimum horizontal resolution of 1080 lines, a minimum luminance signal-to-noise ration of 80 db, and a minimum illumination requirement of no more than 0.5 Lux.

PART 3 - EXECUTION

3.01 VIDEO RECORDING PROCEDURES:

- A. Each recording shall begin with the current date, project name, and municipality and be followed by the general location, viewing side, and direction of progress. The audio track shall consist of an original live recording. The recording shall contain the narrative commentary of the videographer, recorded simultaneously with his fixed elevation video record of the zone of influence of construction. The recording shall be filmed in a forward-motion progression toward the objects being recorded.
- B. All video recordings must, by electronic means, periodically display transparent digital information to include the date and time of recording, and station numbers, if shown on the Drawings. The date information shall contain the month, day, and year. The time information shall contain the hour, minutes, and seconds. Additional information shall include but not be limited to project name, contract number, location, direction of travel, and the viewing side. The transparent information shall appear on the extreme upper left hand third of the screen.
- C. All recordings shall be done during times of good visibility. No recording shall be done during precipitation, mist, or fog. The recording shall be done only when sufficient sunlight is present to properly illuminate the subjects of recording and to produce bright, sharp video recordings of those subjects.
- D. The rate of speed on the general direction of travel of the vehicle used during recording shall not exceed 44 feet per minute ($\frac{1}{2}$ mph). Panning, zoom-in and zoom-out rates shall be sufficiently controlled to maintain a clear view of the object.
- E. Recording coverage shall include all surface features located within the zone of influence of construction supported by appropriate audio coverage. Such coverage shall include, but not be limited to, existing utility poles, valves, meter boxes, fire hydrants, driveways, sidewalks, curbs, pavements, striping, ditches, mailboxes, landscaping, culverts, fences, signs, walls, etc., within the area covered.
- F. When conventional wheeled vehicles are used, the distance from the camera lens to the ground shall not be less than eight (8) feet. In some instances, audio-video recording coverage may be required in areas not accessible by conventional wheeled vehicles. Such coverage shall be obtained by walking or special conveyance approved by the Engineer.

END OF SECTION

SECTION 01400

QUALITY CONTROL

PART 1 - GENERAL

1.01 DESCRIPTION OF REQUIREMENTS: Specified quality control requirements for the work are indicated throughout the Contract Documents and are not repeated herein. The requirements of this Section are primarily related to performance of the work beyond furnishing of manufactured products. The term "Quality Control" includes, but is not necessarily limited to, inspection and testing and associated requirements. This Section does not specify or modify Engineer's duties relating to quality control and Contract enforcement.

1.02 RESPONSIBILITY FOR INSPECTIONS AND TESTS:

- A. Unless otherwise noted, all testing and inspections required by these specifications shall be performed by a properly certified entity. All costs associated with the testing and inspections shall be the Contractor's responsibility. The Contractor shall also be responsible for all tests or inspections required by any entity having jurisdictional control over the work.
- B. Costs for those required services by independent testing laboratories are recognized to be included in the Contract Sum.
- C. It is recognized that required inspection and testing programs are intended to assist the Contractor, Owner, Engineer and governing authorities in nominal determination of probable compliance with requirements for certain elements of work. The program is not intended to limit the Contractor's regular quality control program as needed for general assurance of compliances.
- D. No failure of test agencies, whether engaged by Owner or Contractor, to perform adequate inspections or tests or to properly analyze or report results, shall relieve the Contractor of responsibility for fulfillment or requirements of Contract Documents.

1.03 QUALITY ASSURANCE:

- A. **General Workmanship Standards:** Except as more definitively specified, the Contractor shall comply with recognized workmanship quality standards within the industry as applicable to each unit of work. It is a requirement that each category of trades person or installer performing the work is prequalified, to the extent of being familiar with applicable and recognized quality standards for that category of work, and being capable of workmanship complying with those standards.

- B. The Contractor shall engage independent testing laboratories complying with "Recommended Requirements for Independent Laboratory Qualification" as published by American Council of Independent Laboratories and specializing in type(s) of inspections and tests required. Exception: where another qualification standard is indicated or use of prime product manufacturer's test facilities is acceptable.
- C. When requested by the Engineer, submit proof of qualification for agency(s) engaged or to be engaged to perform inspection and testing services. If, after review of the submitted information, the Engineer determines that the agency's qualifications are unsatisfactory, the Contractor shall engage an alternate agency at no additional cost to the Owner.

1.04 PRODUCT DELIVERY - STORAGE - HANDLING: Handle, store and protect materials and products, including fabricated components, by methods and means which will prevent damage, deterioration, and losses including theft (and resulting delays), thereby ensuring highest quality results as the performance of the work progresses. Control delivery schedules so as to minimize unnecessary long-term storage at project site prior to installation. Contractor shall provide covered storage for all new equipment on the site which is not intended for outside installation. Electrical, hydraulic and pneumatic connections on all equipment shall be protected from the elements.

1.05 CODES AND STANDARDS:

- A. Work of this Project shall comply with all applicable Codes and Standards in effect at the time of the Bid Opening Date of this Project. Codes include, but are not necessarily limited to, the following:
 - 1. Florida Building Code
 - 2. Florida Fire Prevention Code
 - 3. Florida Administrative Code
 - 4. Department of Economic Opportunity, Florida Building Commission
 - 5. National Fire Protection Agency
 - 6. American Society of Civil Engineers/Structural Engineering Institute
 - 7. Underwriter's Laboratory Assembly Requirements
 - 8. Florida Department of Transportation Standard Specifications for Road and Bridge Construction
 - 9. American Concrete Institute
 - 10. American Institute of Steel Construction Manual
 - 11. OSHA CFR 29, Parts 1926 and 1910

PART 2 - PRODUCTS

(Not Applicable)

PART 3 - EXECUTION

3.01 PREPARATION FOR INSTALLATION:

- A. Preinstallation Conferences: Well in advance of installation of every major unit of work which requires coordination with other work, the Contractor shall meet at project site with installers and representatives of manufacturers and fabricators who are involved in or affected by the unit of work, and in its coordination or integration with other work which has preceded or will follow.
- B. The Contractor shall advise the Engineer of scheduled meeting dates. At each meeting the Contractor shall review the progress of other work and preparations for the particular work under consideration, including requirements of Contract Documents, product data, quality control samples, possible conflicts, compatibility problems, time schedules, weather limitations, structural limitation, governing regulations, safety, inspection and testing requirements, required performance results, recording requirements, and protection. The Contractor shall record significant discussion of each conference, and agreements and disagreements, along with final plan of action. The Contractor shall distribute a record of the meeting promptly to all concerned parties, including the Engineer.
- C. The Contractor shall not proceed with the work if associated preinstallation conference cannot be concluded successfully. The Contractor shall instigate actions to resolve impediments to performance of the work and meet at earliest date feasible.
- D. Installer's Inspection of Conditions: The Contractor shall require the fabricator and installer of each major unit of work to inspect substrate to receive the work, and conditions under which the work will be performed, and to report unsatisfactory conditions (in writing to the Contractor and the Engineer). Do not proceed with the work until unsatisfactory conditions have been corrected in a manner acceptable to the fabricator and installer.

3.02 INSTALLATION QUALITY CONTROL:

- A. Manufacturer's Instructions: Where installation includes manufactured products, comply with manufacturer's applicable instructions and recommendations for installation, to whatever extent these are more explicit or more stringent than applicable requirements indicated in the Contract Documents.
- B. The Contractor shall inspect each item of materials or equipment immediately prior to installation and reject damaged and defective items.

- C. Provide attachment and connection devices and methods for securing work properly as it is installed; true to line and level, and within recognized industry tolerances, if not otherwise indicated. Allow for expansions and building movements. Provide uniform joint widths in exposed work, organized for best possible visual effect. Refer questionable visual effect choices to Engineer for final decision.
- D. The Contractor shall recheck measurements, dimensions, and elevations of the work as an integral step of starting each installation. The Contractor shall notify the Engineer of any discrepancies.
- E. Install work during conditions of temperature, humidity, exposure, forecasted weather, and status of project completion which will ensure best possible results for each unit of work, in coordination with entire work. Isolate each unit of work for noncompatible work as required to prevent deterioration.
- F. Coordinate enclosure (closing-in) of work with required inspections and tests, so as to avoid necessity of uncovering work for that purpose.
- G. Mounting Heights: Except as otherwise indicated, mount individual units of work at industry-recognized standard mounting heights, for applications indicated. Refer questionable mounting height choices to Engineer for final decision.
- H. Adjust, clean, lubricate, and restore marred finishes and protect newly installed work to ensure that it will remain without damage or deterioration during the remainder of the construction period.

END OF SECTION

SECTION 01500

CONSTRUCTION FACILITIES

PART 1 - GENERAL

1.01 DESCRIPTION: The following criteria shall govern the furnishing of and paying for temporary construction and service items. Such items shall be instituted at the beginning and maintained for the life of the work or until removal or termination is approved by the Engineer.

1.02 TEMPORARY FACILITIES:

- A. Drinking Water: The Contractor shall provide cool water with dispensing utilities.
- B. Construction Water: The Owner shall make available temporary water for construction through existing outlets at the project site, free of charge, provided the Contractor is not careless or wasteful with his water usage. The Contractor shall provide either meters or proper backflow devices in order to comply with regulations concerning backflow and cross connection.
- C. The Owner shall make available construction power through existing 120V power outlets at the project site. It shall be the Contractor's responsibility to provide additional temporary electrical power for construction should the Owner's existing outlets and distribution devices not be suitable for construction purposes.
- D. Toilet Facilities: The Contractor shall furnish a portable, job-site toilet enclosure facility through a local company specializing and licensed in this business. The toilet enclosure shall be located on the project site at a point approved by the Owner. It shall be maintained daily by the supplying company and removed from the project site upon completion of the project.

1.03 SITE MAINTENANCE:

- A. General: The Contractor shall provide security, as necessary or required, to protect work and property at all times.
- B. Rodents and Other Pests: The Contractor, through debris removal, etc., shall control the creation of rodent or pest problems. Should such develop, the Contractor shall secure services of exterminator to control.
- C. Debris Control: Keep premises clean and free from accumulation of debris and rubbish. Provide trash and debris receptacles and require use. Remove from site at least weekly.

- D. Cleaning: As work is completed by trades, areas of work shall be cleaned in preparation for next trade, inspections or general safety of property and person.
- E. Project Safety: The Contractor shall comply with all applicable governmental and insuring company requirements relative to construction and project safety. Either the superintendent or another company representative on the site during all working hours shall be trained in project safety and designated as Contractor's Safety Director in compliance with Owner's safety program, if applicable.

END OF SECTION

SECTION 01570

TEMPORARY TRAFFIC CONTROL

PART 1 - GENERAL

- 1.01 DESCRIPTION:** The work to be performed under this Section shall include furnishing all materials and labor necessary to regulate vehicular and pedestrian traffic in accordance with the requirements set forth and as shown on the drawings.
- 1.02 APPLICABLE CODES, STANDARDS AND SPECIFICATIONS:** The work under this Contract shall be in strict accordance with the following codes and standards.
- A. Local, Municipal, County, State and Federal Codes and Ordinances.
 - B. Florida Department of Transportation (DOT) Standard Index 600 Series.
- 1.03 SUBMITTALS:** Provide record copy of proposed project Temporary Traffic Control (TTC) including location of detours, signage, barricades, and personnel.

PART 2 - PRODUCTS

(Not Applicable)

PART 3 - EXECUTION

- 3.01 CONSTRUCTION IN LOCAL, COUNTY, STATE AND FEDERAL HIGHWAY RIGHT-OF-WAY:**
- A. Construction within local, county, state, and federal highway right-of-way shall be made in full compliance with all requirements of the Florida Department of Transportation and to the satisfaction of the local governing bodies.
 - B. All necessary barricades, flagmen, detours, message signs, lights, and other protective measures shall be provided for the protection of both pedestrian and vehicular traffic.
 - C. Detours and road closures lasting more than 8 hours shall be advertised a minimum of one (1) week in advance with lighted message boards in each direction of traffic.
 - D. The Contractor shall be responsible for coordinating with local emergency services regarding all detours or road closures prior to performing the work.

END OF SECTION

SECTION 01665

EQUIPMENT TESTING AND STARTUP

PART 1 - GENERAL

1.01 SCOPE OF WORK:

- A. Provide a competent field service technician to supervise installation, adjustment, initial operation and testing, performance testing, final acceptance testing, and startup of the equipment.
- B. Perform specified equipment field performance tests, final acceptance tests and startup services.

1.02 RELATED WORK:

- A. Operation and Maintenance Data is included in Section 01730.
- B. Performance and acceptance testing and startup requirements are included in the Specifications.

1.03 SUBMITTALS:

- A. If requested by Engineer, submit for review detailed testing procedures for shop tests, field performance tests and final acceptance tests. Test procedures shall be submitted in advance of the proposed test dates and shall include at least the following information:
 - 1. Name of equipment to be tested.
 - 2. Testing schedule of proposed dates and times for testing.
 - 3. Summary of power and water, etc. needs and identification of who will provide them.
 - 4. Outline specific assignment of the responsibilities of Contractor and manufacturers' factory representatives or field service personnel.
- B. Submit copies of test reports upon completion of specified shop, performance and acceptance tests. Test reports shall incorporate the information provided in the test procedures submittals, modified to reflect actual conduct of the tests and the following additional information.
 - 1. Copy of all test data sheets and results.

2. Summary comparison of specified test and performance requirements vs. actual test results.
3. Should actual test results fail to meet specified test and performance requirements, describe action to be taken prior to re-testing equipment.

1.04 REFERENCE STANDARDS:

- A. American Water Works Association (AWWA).
- B. American Society for Testing and Materials (ASTM).

1.05 QUALITY ASSURANCE:

- A. Field service technicians shall be competent and experienced in the proper installation, adjustment, operation, testing and startup of the equipment and systems being installed.
- B. Manufacturers' sales and marketing personnel will not be accepted as field service technicians unless they have equivalent training and experience.

PART 2 - PRODUCTS

(Not Applicable)

PART 3 - EXECUTION

3.01 PRELIMINARY REQUIREMENTS:

- A. After installation of the equipment has been completed and the equipment is presumably ready for operation, before it is operated by others, the manufacturer's field service technician shall inspect, operate, test and adjust the equipment. The inspection shall include at least the following points where applicable:
 1. Soundness (without cracks or otherwise damaged parts).
 2. Completeness in all details, as specified and required.
 3. Correctness of setting, alignment and relative arrangement of various parts.
 4. Adequacy and correctness of packing, sealing and lubricants.

- B. The operation, testing and adjustment shall be as required to prove that the equipment has been left in proper condition for satisfactory operation under the conditions specified.

3.02 WITNESS REQUIREMENTS:

- A. Shop tests or factory tests may be witnessed by Owner or Owner's Engineer.
- B. Field performance and acceptance tests shall be performed in the presence of Owner and/or the Owner's Engineer.

3.03 STARTUP AND ACCEPTANCE:

- A. General Requirements:
 - 1. Successfully execute the step-by-step procedure of startup and performance demonstration specified hereinafter.
 - 2. The startup and performance demonstration shall be successfully executed prior to Substantial Completion and acceptance by Owner.
 - 3. All performance tests and inspections shall be scheduled at least five working days in advance. All performance tests and inspections shall be conducted during the work week of Monday through Friday, unless otherwise specified.
- B. Preparation for Startup:
 - 1. All mechanical and electrical equipment shall be checked to insure that it is in good working order and properly connected.
 - 2. All instruments and controls shall be calibrated through their full range. All other adjustments required for proper operation of all instrumentation and control equipment shall be made.
 - 3. Perform all other tasks needed for preparing and conditioning the facilities for proper operation.
 - 4. No testing or equipment operation shall take place until it has been verified that all safety equipment has been installed and is in good working order.
 - 5. No testing or equipment operation shall take place until it has been verified that all lubricants, tools, maintenance equipment, and spare parts have been furnished as specified.

C. Facilities Startup:

1. Startup period shall not begin until all equipment has been tested as specified and are ready for operation. Purchaser shall receive spare parts, safety equipment, tools and maintenance equipment, lubricants, approved operation and maintenance data and the specified operation and maintenance instruction prior to the startup.
2. Demonstrate a 24-hour period of successful operation of the facility as a prerequisite for acceptance.
3. In the event of failure to demonstrate satisfactory performance of the facility on the first or any subsequent attempt, all necessary alterations, adjustments, repairs and replacements shall be made in cooperation with Owner's installing contractor. When the facility is again ready for operation, it shall be brought on line and a new test shall be started. This procedure shall be repeated as often as necessary until the facility has operated continuously to the satisfaction of Owner.
4. Owner will make available all operating personnel needed to operate equipment during the final test period; however, said personnel will perform their duties under Vendor's direct supervision.

END OF SECTION

SECTION 01700
PROJECT CLOSEOUT

PART 1 - GENERAL

1.01 DESCRIPTION:

- A. Summary of Work: The Contractor shall provide all final paperwork and perform all punch list work necessary to complete the project.

1.02 SUBMITTALS:

- A. One (1) copy of Redline Construction Drawings, for Engineer's review and comment.
- B. One (1) copy of the As-built Drawings in 24" x 36" sheet format, signed and sealed by Florida Registered Land Surveyor or Professional Engineer and certified by the Contractor with Contractor's original signature.
- C. Electronic files of final As-built Drawings in both AutoCAD (2007 or later) and PDF formats.
- D. Three (3) paper copies and an electronic PDF of the following Items:
 - 1. Final Request for Payment
 - 2. Final Release of Lien (Prime and Subprime)
 - 3. Consent of Surety
 - 4. Warranties and Bonds
 - 5. Inspection Certificates (Electrical, Plumbing, Equipment, etc.)
 - 6. Regulatory Testing Requirements (Hydrostatic, Leakage, Disinfection, etc.)
- E. Three (3) paper copies and electronic PDF version of Operation and Maintenance Manual Data.

PART 2 - PRODUCTS

2.01 AS-BUILT DRAWINGS:

- A. General:
 - 1. The following definitions shall apply to this section:
 - a. Redline Drawing(s):
 - 1) Applies to Work that is ongoing and documents the current installation progress of planned Work, or applies

to field observations and/or findings that represent a deviation, discovery, or change from expected conditions.

- 2) These drawings do not require certification by a Professional Land Surveyor or Professional Engineer.
- 3) They represent and document the current materials and location of installed work.

b. As-built(s):

- 1) Applies to Work involving new construction or replacement construction.
- 2) They are a revised set of construction drawings that represent and document the final materials and location of installed Work. They reflect all changes made by addendum, change order, or work directives during the construction process and show the exact dimensions, geometry, and location of all elements of the Work completed by a Contractor under the contract.
- 3) They are submitted by the Contractor and certified by a Professional Land Surveyor in the employ of the Contractor or by a Professional Engineer in the employ of the Contractor upon completion of a project or of a phase of a project.

c. Record Drawing(s):

- 1) They are a revised set of drawings prepared by the Engineer that represent and document the final materials and location of installed Work based on the As-built and Redline Drawing Information provided by the Contractor. They show the exact dimensions, geometry, and location of all elements of the Work.
- 2) These drawings do not require certification by a Professional Land Surveyor or Professional Engineer.

2. As-built drawings are required for all roadways, stormwater treatment systems, civil site improvements, vertical construction, potable water, wastewater, and reclaimed water pipelines, pump stations, treatment plants and facilities. Upon completion of the Work and prior to final payment, the Contractor shall furnish to Engineer As-built Drawings which indicate final as-built data and in accordance with all addenda, change orders, verbal field changes, work directives, and all requirements with respect to the drawings specified herein. Engineer's field representative shall verify that as-built information is consistent with observable field conditions.

3. An electronic file of the original Project drawings will be furnished to Contractor for the purpose of recording and preparing As-built

Drawings. As-built information shall be recorded daily and kept current during the progress of the work by the Contractor. The daily recordings may be verified by Engineer's field representative. All measurements are to be made by the certifying surveyor, professional engineer, or their employee. The Contractor shall provide access to buried facilities to allow for accurate horizontal and vertical measurements to be acquired by his surveyor or Engineer as needed. Should discrepancies exist, the Contractor shall verify buried facilities.

4. The cover page of the As-built Drawings shall bear the printed name and the signed as-built certification of the general contractor and the signed and sealed as-built certification of the professional surveyor and mapper (PSM) or registered professional engineer (PE) who provided the horizontal and vertical dimensions and elevations on the As-built Drawings. The signatures shall certify that the As-built Drawings do, in fact, reflect the true as-built conditions as located under the direct supervision of the registered surveyor and/or professional engineer.
 5. Upon completion of the work, Contractor shall deliver to the Engineer As-built Drawings in a .dwg (AutoCAD) format, including all xref files and in PDF format.
 6. Engineer will review the submittal for correctness and completeness and will return either an approval stamp or list of required changes for resubmission. Resubmittal of the As-built Drawings, with completed revisions, shall be accompanied by the Engineer's marked-up set of revision requirements.
- B. Drawing Requirements: When making changes to the AutoCAD drawing for as-built purposes, originally designed utility lines that were installed differently in the field shall be deleted with the applicable notes and the correct location, notes, and coordinates should be drawn in and/or added in to accurately portray the as-built conditions. Simply changing the coordinates, notes, or just adding notes is not acceptable. Do not strike through notes or elevation call-outs; change them in the drawing to reflect as-built conditions. As-built drawings should use the same line format and conventions as the original construction drawings.

Legibly mark the drawings to record the following:

1. Each document shall be labeled "AS-BUILT" in approximately 1" high printed letters and shall be submitted on 24" X 36" sheets.
2. Each document shall contain a graphic scale accurately representing the scale of the drawings.

3. Each document shall contain a north arrow.
4. As-builts shall utilize the State Plane Coordinate System using the Florida East Zone and the North American Datum of 1983 preferred for horizontal data; North American Vertical Datum (NAVD) 1988 Datum is preferred for elevation data. Benchmarks used must be shown and verified on the drawings.
5. Deflections that result in a change of more than one foot from the designed alignment shall be located and recorded regardless of the presence of a fitting.
6. The positional accuracy relative to the referenced published control points used shall not exceed 0.5' horizontally and 0.1' vertically. Elevations relative to the site facilities must be within 0.1' of each other.
7. Special detail drawings will be required where needed for clarity. Clarity is defined as pipe, fittings, valves, meter boxes, etc. clearly visible when printed to scale and when zoomed and viewed electronically.

C. Specific System Requirements:

1. Pressure Pipe Systems (Water, Wastewater, Reclaimed):
 - a. The location of all piping, valves, fittings, fire hydrants, meter boxes, backflow preventers, manholes, casings, pump outs, and points of connection to the existing system shall be referenced by coordinates.
 - b. The positional accuracy relative to the referenced published control points used shall not exceed 0.5' horizontally and 0.1' vertically. Elevations relative to the site facilities must be within 0.1' of each other.
 - c. Coordinates and elevations on the main and finished grade will be required at all pipe dead ends, size changes, points of connection to existing system, fittings, valves, meter boxes, at intersections/crossings of pipes, and at 100' maximum intervals from the nearest pipe or fitting elevation.
2. Gravity Wastewater Sewer Systems:
 - a. The location of all piping, casings, wyes, tees, manholes, cleanouts, and service laterals shall be referenced by coordinates.

- b. The positional accuracy relative to the referenced published control points used shall not exceed 0.5' horizontally and 0.1' vertically. Elevations relative to the site facilities must be within 0.1' of each other.
 - c. Runs of gravity sewer shall be identified (i.e., 300' of 8" PVC SDR26 at S=.004). A run is defined as a pipe line between manholes.
 - d. Service laterals shall be identified.
 - e. Top of pipe elevations and finished grade elevations at the property line shall be given for all service laterals.
 - f. Elevations shall be given for the north rim of the top of all manhole covers and all manhole inverts with the direction of the invert listed (N, E, S, W, NW, etc).
3. Water, Reclaimed, and Wastewater Pump Stations:
- a. Wetwell size and location shall be indicated and located relative to property lines and/or right-of-way lines.
 - b. Elevations shall be indicated at inverts; wetwell top (rim elevation); wetwell bottom; concrete slab corners; and underground piping, valves, and fittings.
 - c. All utilities materials and sizes of lines and fittings above and below ground shall be indicated.
 - d. All electrical panels, emergency pump-outs, hose station, above and underground electrical conduit, piping, valves, ARVs, fittings, manholes, generator and fuel tank (if applicable), transformer, fence, auxiliary electrical enclosures, and flowmeter shall be located, as applicable.
 - e. All buried electrical conduit shall be labeled and located including electrical service from utility transformer to station meter and to control panel.
4. Storm Drain Systems:
- a. The location of all piping, manholes, and inlets shall be referenced by coordinates.

- b. The positional accuracy relative to the referenced published control points used shall not exceed 0.5' horizontally and 0.1 vertically. Elevations relative to the site facilities must be within 0.1' of each other.
- c. Runs of storm wastewaters shall be identified (i.e., 300' of 15" RCP at S=.004).
- d. Elevations shall be given for the north rim of the top of all manhole covers and inlets and catch basins and all manhole, inlet, and catch basin inverts.
- e. Storm drain, manhole, inlet, and catch basin types shall be identified.

5. Street and Site Improvements:

- a. Locate and describe all vehicular use pavement including asphalt, concrete, limerock, gravel/stone, millings and dirt surfaces.
- b. Locate and describe all pedestrian use pavement including sidewalks, trails and paths of all materials.
- c. Locate and describe all curbing, ramps, wheel stops, bollards and ADA tactile warnings.
- d. Locate and describe all signage and striping.
- e. Locate and describe all fencing and gates.
- f. Locate and describe stormwater ponds, swales, permanent erosion control features, ditch blocks and overflow control structures.
- g. Locate and describe all street and site lighting including conduit and pull boxes.
- h. Locate and describe athletic fields, athletic equipment, bleachers, park equipment, exercise stations, gazebos, benches and other permanently installed elements.
- i. Locate and describe irrigation system elements.
- j. Locate and describe landscaping elements not including grass.

6. Buildings and Interior Equipment: As-built drawings for buildings shall be marked to indicate any and all changes made. As-built drawings shall also include the installed size, elevation, and location of all interior equipment, structures, and concealed materials, including plumbing, electrical conduits, ducts, air, and piping. The piping shall be identified as to its use. Internal backflow devices shall be clearly noted in drawings.
7. Horizontal Directional Drill (HDD): The beginning and ending points of the HDD main shall be provided by a registered Professional Surveyor and Mapper. The HDD contractor shall provide a certified as-built drawing, directional bore log plan, and profile of the HDD work indicating horizontal and vertical location data (continuous or data points not to exceed 25 LF of main) on the correct "As-built" sheet where drills are performed.

2.02 INSPECTION CERTIFICATES, BONDS, WARRANTIES, AND GUARANTEES:

Upon completion of project and prior to submission of certificate for final payment, the Contractor shall have the electrical, plumbing, and other work, as applicable, inspected by proper authorities as required by the Specifications and all applicable codes, laws, and ordinances. Before final payment will be made, the Contractor shall submit copies of all bonds and guarantees as required.

2.03 REGULATORY REQUIREMENTS: Aside from the testing of equipment, the facility cannot be started up and placed into operation without regulatory clearance. Regulatory clearance is a prerequisite for Substantial Completion.

1. Satisfactory hydrostatic test reports of all piping.
2. Satisfactory bacteriological test reports (as applicable).
3. Chemical clearances (if applicable).
4. As-built Drawings.

Upon regulatory clearance, startup of the facility and placement into satisfactory operation can be performed.

PART 3 - EXECUTION

3.01 SUBMITTAL: The Project shall not be considered to be in substantial completion until Final As-built Drawings have been submitted and accepted by the Engineer. Prior to final payment, the Final As-built Drawings shall be revised by the Contractor to reflect any changes which have occurred since the substantial completion submittal.

3.02 FINAL INSPECTION:

- A. Final inspection will be held upon completion of the project. The Contractor shall notify the Owner, upon completion, to arrange an inspection tour of the completed project.

B. The Contractor and the Owner's Representative shall be present for the inspection.

3.03 RELEASE OF LIEN STATEMENT: The Contractor shall submit with his request for final payment sworn statements from himself and each subcontractor, material, or labor suppliers who have filed a "Notice to Owner", that all work has been completed and that all bills for labor, materials, and subcontractors' work on the project have been paid in full.

3.04 CONSENT OF SURETY: The Contractor shall submit, with his request for final payment, a consent of Contractor's Surety to final payment.

3.05 WARRANTIES AND BONDS:

A. Warranties and bonds shall begin on the official date of Substantial Completion and shall be in effect for a minimum of one year from that date, unless a longer period is stated in the product technical specification.

B. Warranties and bonds shall include, at a minimum, all labor, materials, and equipment necessary to restore the installed product to a fully functional and satisfactory condition for a period of one year past Substantial Completion.

3.06 CLEANING: The Contractor shall remove all stains, spots, marks, and dirt from all finished surfaces caused by this work. All items shall be cleansed in accordance with the manufacturers' written instructions.

END OF SECTION

SECTION 01730

OPERATION AND MAINTENANCE MANUALS

PART 1 - GENERAL

1.01 SCOPE OF WORK: This Section includes procedural requirements for compiling and submitting operation and maintenance data required.

1.02 RELATED WORK: Section 01665, Equipment Testing and Startup.

1.03 SERVICES OF MANUFACTURER'S REPRESENTATIVE:

- A. Equipment furnished shall include the cost of a competent representative of the manufacturers of all equipment to supervise the installation, adjustment and testing of the equipment and to instruct Owner's operating personnel on operation and maintenance. This supervision may be divided into two or more time periods as required by the installation program.
- B. Refer to individual equipment specifications for additional requirements for furnishing the services of manufacturer's representatives.

1.04 OPERATION AND MAINTENANCE MANUALS:

- A. Three (3) complete sets of approved operation and maintenance manuals covering all equipment furnished shall be delivered directly to the Owner and one complete set delivered to the Engineer.
 - 1. The manual for each piece of equipment shall be a separate document with the following specific requirements:
 - a. Contents:
 - 1) Table of Contents.
 - 2) Brief description of each system and components.
 - 3) Starting and stopping procedures.
 - 4) Special operating instructions.
 - 5) Routine maintenance procedures.
 - 6) Troubleshooting Guide.
 - 7) Manufacturer's printed operating and maintenance instructions, parts list, illustrations and diagrams.
 - 8) One copy of each wiring diagram.
 - 9) One copy of each approved shop drawing and each Contractor's coordination and layout drawing.
 - 10) List of spare parts, manufacturer's price, and recommended quantity.

11) Name, address, and telephone numbers of local service representatives.

b. Material:

- 1) Loose leaf, punched paper.
- 2) Page size, 8-1/2-inch by 11-inch.
- 3) Diagrams, illustrations, and attached foldouts as required, or original quality, reproduced by dry copy method.
- 4) Covers: oil, moisture and wear resistant 9 by 12 size.

1.05 CONTENTS, EACH VOLUME:

- A. Table of Contents: Provide title of project, names, addresses, and telephone numbers of Purchaser, Contractor, and subcontractors with name of responsible parties; schedule of products and systems, indexed to content of the volume.
- B. For Each Product or System: List names, addresses, and telephone numbers of subcontractors and suppliers; including local source of supplies and replacement parts.
- C. Product Data: Mark each sheet to clearly identify specific products, component parts, and data applicable to installation. Delete inapplicable information pertaining to the models and options not actually furnished.
- D. Drawings: Supplemental product data to illustrate relations of component parts of equipment and systems to show control and flow diagrams.
- E. Type Text: As required to supplement product data. Provide logical sequence of instructions for each procedure, incorporating manufacturer's instructions specified.

1.06 MANUAL FOR EQUIPMENT AND SYSTEMS:

- A. For each item of Equipment and Each System provide the following:
 1. Overview of System and description of unit or system and component parts. Identify function, normal operating characteristics, and limiting conditions. Include performance curves, complete nomenclature, and commercial number of replaceable parts.
 2. Control Panel including electrical service characteristics, controls, communications, and color coded wiring diagrams as installed.

3. Operating Procedures: Include start-up, break-in and routine normal operating instructions and sequences; regulation, control, stopping, shut-down and emergency instructions; and summer, winter and any special operating instructions.
4. Maintenance Requirements:
 - a. Routine procedures and guide for trouble-shooting; disassembly, repair and reassembly instructions; and alignment, adjusting, balancing and checking instructions.
 - b. Servicing and lubrication schedule and list of lubricants required.
 - c. Manufacturer's printed operation and maintenance instructions.
 - d. Sequence of operation by controls manufacturer.
 - e. Original manufacturer's parts list, illustrations, assembly drawings and diagrams required for maintenance.
5. Control diagrams by controls manufacturer as installed.
6. List of original manufacturer's spare parts, current prices, and recommended quantities to be maintained in storage.

PART 2 - PRODUCTS

(Not Applicable)

PART 3 - EXECUTION

(Not Applicable)

END OF SECTION

SECTION 02230

SITE CLEARING, STRIPPING AND GRUBBING

PART 1 - GENERAL

1.01 DESCRIPTION OF WORK:

- A. The General Requirements are made a part of this section as fully as if repeated herein.
- B. Work includes but is not limited to:
 - 1. Site clearing.
 - 2. Stripping and removal or stockpiling topsoil.
 - 3. Grubbing and removal of vegetation within project boundaries or within limits shown on drawings.
 - 4. Tree removal within building and paving limits and as indicated.
 - 5. Protection of existing trees to remain.
 - 6. Protection of streets, roads, adjacent property, and other facilities to remain.
 - 7. Disposal of all cleared materials.
 - 8. Disposal of all grubbed materials.

1.02 SUBMITTALS:

- A. Permit for transportation and disposal of debris.
- B. Disposal tickets from landfill.

1.03 DISPOSITION OF MATERIAL: Remove all cleared and grubbed materials from project site.

1.04 REGULATORY REQUIREMENTS:

- A. See Section 02370 for FDEP NPDES Permit requirements.

PART 2 - PRODUCTS

(Not Applicable)

PART 3 - EXECUTION

3.01 GENERAL:

- A. Segregation of Materials: Contractor shall be responsible for segregating dissimilar materials. Suitable fill, unsuitable fill, organics and/or trash shall not be mixed. Contractor shall stockpile material types independent of each other.
- B. Safety Procedures: The performance of the work shall be in strict compliance with all Local, State and Federal Regulations. This shall include, but not be limited to, Florida Trench Safety Act (F.S. 553.6) and OSHA 29 CFR 1926.651 and 1926.652.
- C. Trench excavations over 5 feet deep must provide a protective system for all personnel in the hole. Trench excavations over 20 feet in depth must provide a protective system designed by a Florida Registered Professional Engineer.

3.02 CLEARING:

- A. Limits of Clearing: Remove trees and other vegetative matter only as required for construction of the project.
- B. Remove all trees and shrubs to ground level and grub as described below.
- C. Remove all dead trees, dead shrubs, rubbish, debris, weeds, vines and undergrowth to ground level.
- D. Remove all other obstructions resting on or protruding through surface of existing ground.
- E. Do not pull up or rip out roots of trees and shrubs that are to remain. If excavation through roots is required, excavate by hand and cut roots with fine tooth saw.

3.03 STRIPPING TOPSOIL:

- A. Strip existing vegetation layer from areas of site to receive improvements and remove from site prior to stripping topsoil for storage and reuse.

- B. After stripping vegetation layer, remove existing topsoil 6-inches deep minimum from areas of site to receive fill and store for later use. Coordinate with Owner for temporary storage location.
 - 1. Existing topsoil is property of Contractor (unless claimed by Owner) with restriction that topsoil is to be used first for Project landscape topsoil requirements and second for fill and backfill.
 - 2. After Project fill, backfill, and landscape topsoil requirements are satisfied, remove excess existing topsoil from site. Do not remove existing topsoil from site without Owner's prior approval.
- C. Do not include clay, stones larger than 3/4", weeds, roots, rubbish or any other foreign material in the stock piled topsoil.

3.04 GRUBBING:

- A. All areas to receive improvements shall be root raked; minimum of two (2) passes perpendicular to each other.
- B. Remove all stumps, roots over 1 inch in diameter, and matted roots to the following depths:
 - 1. Footings, slabs on grade, bottom slabs of structures: Completely.
 - 2. Walks: 24 inches.
 - 3. Roads and parking areas: 36 inches.
 - 4. Areas to be grassed or landscaped: 12 inches.
- C. In case of footings, slabs on grade, bottom slabs of structures, roads and parking areas, or other construction on fills, greater depth shall apply.
- D. Unless further cut is required, fill depressions made by grubbing and compact to density of surrounding soil.

3.05 PROTECTION OF TREES:

- A. A visible barrier shall be constructed of 2x4 lumber standing 48" high and placed continuously 6 feet from the trunk of the tree or plant to remain.
- B. Barrier shall be secured in place and covered in safety orange netting.
- C. Barriers shall be completely removed at the conclusion of construction activities.

- D. Protect root systems from damage due to materials in solution caused by runoff or spillage during mixing and placement of construction materials or drainage from stored materials. Protect root systems from flooding, erosion or excessive wetting resulting from dewatering operations.
- E. Repair and Replacement of Trees to Remain:
 - 1. Repair trees or plants damaged by construction operations in a manner acceptable to the Engineer. Make repairs promptly after damage occurs to prevent progressive deterioration of damaged trees.
 - 2. If trees die during the course of the project or within the warranty period, the Contractor shall remove them, and grind the stumps if the Owner so wishes, at no charge to the Owner.
 - 3. Trees that die during construction shall be replaced with same species, Grade A and 3" DBH. Trees shall be furnished and planted by the Contractor at no cost to the Owner.

3.06 CLEAN-UP:

- A. Remove from site trees, shrubs, uprooted stumps, vegetative layer, and surface debris. All material shall be disposed of legally.
- B. Remove and dispose of all stockpiled topsoil not claimed by Owner.
- C. Do not bury cuttings, stumps, roots, and other vegetative matter or burn waste material on site without prior authorization from Owner.
- D. Clean pavement, sidewalks and drainage features of debris and dirt.

END OF SECTION

SECTION 02240

DEWATERING

PART 1 - GENERAL

- 1.01 RELATED DOCUMENTS:** The General Provisions of the Contract, including the General Conditions, Supplementary Conditions and Special Conditions (if any), along with the General Requirements, apply to the work specified in this Section.
- 1.02 DESCRIPTION:** The Work to be performed under this section shall include furnishing all equipment and labor necessary to remove storm or subsurface waters from excavation areas in accordance with the requirements set forth and as shown on the drawings.
- 1.03 APPLICABLE CODES, STANDARDS AND SPECIFICATIONS:** The dewatering of any excavation areas and the disposal of the water shall be in strict accordance with the latest revision of all local and state government rules and regulations. The Contractor shall obtain any required dewatering permit from the appropriate agencies prior to commencing dewatering operations.
- 1.04 SUBMITTALS:** Prior to the start of construction the Contractor shall provide a dewatering plan describing the surfacewater and groundwater controls which will be employed to control water levels in excavations so that construction is not inhibited.
- A. Plan shall include temporary culverts, barricades and other protective measures to prevent damage to property or injury to any person or persons.
 - B. Plan shall indicate disposal method and location of point discharge.
 - C. Proof of Compliance with Florida Department of Environmental Protection Rule 62-621.300(2) F.A.C. See Paragraph 3.02 B.

PART 2 - PRODUCTS

(Not Applicable)

PART 3 - EXECUTION

3.01 PERFORMANCE:

- A. General:
 - 1. The Contractor shall provide adequate equipment for the removal of storm or subsurface waters which may accumulate in any excavation.

2. The Contractor shall maintain groundwater levels as follows:
 - a. 2 feet (24") below foundation bearing elevation.
 - b. 2 feet (24") below pavement base bearing elevation.
 - c. 1 foot (12") below bottom of utility pipes and structures.
 - d. Bottom of trench or other excavation shall be dry so that work can proceed.
 - e. 1 foot (12") below any other working surface.
 3. System shall intercept water on all sides of area to be drawn down.
 4. Contractor shall adhere to submitted Dewatering Plan.
 5. Engines driving any proposed dewatering pumps shall be equipped with residential type mufflers.
- B. Acceptable Methods:
1. Wellpoint System.
 2. Trench and Sock Drain: Dewatering by trench pumping will not be permitted if migration of fine grained natural material from bottom, side walls or bedding material will occur.

3.02 DISPOSAL:

- A. General:
1. Water pumped from an excavation shall be disposed (in strict compliance with all Local, State and Federal Regulations) or in the following:
 - a. Site Stormwater Pond or other Stormwater Facility serving the project.
 - b. Temporary disposal pit or trench.
 2. Direct discharge to waters of the state or other surface waters is strictly prohibited without prior written approval from the governing agency.

3. No flooding of streets, roadways, driveways or private property shall be permitted.
- B. Regulatory Requirements:
1. Contractor is responsible for acquiring and complying with all permits and approvals necessary to perform the dewatering activity.
 - a. The Florida Department of Environmental Protection may require testing of groundwater prior to dewatering (F.A.C. 62-621.300(2)) for each point source that discharges to waters of the State.
 2. All waterways shall be protected from turbidity during the dewatering operation.

3.03 RESTORATION:

- A. All temporary drains, pipe or other non-soil materials shall be removed at the conclusion of the dewatering activity.
- B. Soils disturbed by the removal process shall be recompacted and restabilized.

END OF SECTION

SECTION 02300

EARTHWORK

PART 1 - GENERAL

1.01 DESCRIPTION OF WORK:

- A. Scope of Work: All labor, materials and equipment to complete the earthwork. Includes but is not limited to:
1. Compaction of on-site material.
 2. Grading and reshaping site.
 3. Importing and compacting fill as required.
 4. Compaction of material beneath building and paving.
 5. Removal of unsuitable material.
 6. Excavation and construction of drainage ditch.
 7. Utility Trench Earthwork.
- B. Supervision and Testing: All work specified herein shall be under the supervision of a Soils Engineer. The Contractor shall pay for all testing specified in this Section of the Specifications.
- C. Field Engineering: The Owner has established lot lines and bench mark datum. The Contractor shall employ and pay for the services of a licensed surveyor who shall make all required surveys for establishing all points, lines, grades and levels, and otherwise fully and completely lay out all the work required by the Contract.
- D. Unusual Conditions: Should any unusual conditions arise, the Engineer shall be contacted for instructions prior to continuation of earthwork operations.

PART 2 - PRODUCTS

2.01 MATERIALS:

- A. Suitable On-Site or Imported Fill/Backfill:
1. Well graded material conforming to ASTM D2487 (SW, SP) free from debris, organic material, fat clays, brick, lime, concrete, and other material which would prevent adequate performance of the backfill.
 2. Fill shall consist of an inorganic, non-plastic, granular soil containing less than 10 percent material passing the No. 200 mesh sieve.

- B. Topsoil:
 - 1. Well graded sandy material with composited organic content in accordance with ASTM D5268.
 - 2. Material shall be friable, free draining, surface soil reasonably free of grass, roots, weeds, sticks, and trash.
 - 3. Material shall be free of odors.
 - 4. Material shall have a pH between 5.9 and 7.0 unless otherwise required by the sod supplier or landscaper.

- C. Crushed Stone/Gravel: Washed, narrowly graded mixture of crushed stone, or crushed or uncrushed gravel; ASTM D448; coarse-aggregate grading Size 57; with 100 percent passing a 1-1/2 inch sieve and 0 to 5 percent passing No. 8 sieve.

PART 3 - EXECUTION

3.01 PROCEDURE:

- A. General Excavation: Upon completion of site clearing, the area of the proposed structures shall be excavated to the subgrade elevation where excavation is required.

- B. Removal of Unsuitable Material: Where soft material occurs at subgrade elevations within the limits of construction, the Contractor shall excavate such material down to suitable foundation material or to a depth of two feet, whichever is less, and backfill with suitable material obtained from grading operations or borrow. Backfill shall be deposited in successive layers of not more than eight inches in thickness. Each layer shall be compacted to 95% as hereinafter specified.

- C. Soil Preparation: The term "95% relative compaction" shall mean soils densification to 95% of the materials theoretical maximum dry density as determined by Modified Proctor Test (ASTM D1557).
 - 1. The area beneath any building or structure should be cut or filled (12 inch lifts) to the proposed base of slab/foundation bearing elevation. The area should then be moisture conditioned and rolled with pneumatic-tired or vibratory compaction equipment until the underlying soils have been densified to 95% relative compaction to a tested depth of two (2) feet below the base of the slab/foundation including a distance 5' horizontally beyond the new construction in all directions.

2. The area beneath any proposed pavement should be cut or filled (12 inch lifts) to the proposed subgrade bearing elevation. The area should then be moisture conditioned and rolled with pneumatic-tired or vibratory compaction equipment until the underlying soils have been densified to 98% relative compaction to a tested depth of two (2) feet below the base of the slab/foundation including a distance 3' horizontally beyond the new construction in all directions.
3. All prepared areas shall be proof rolled prior to acceptance. Soft areas identified in the proof rolling process shall be overexcavated, backfilled with suitable material and recompacted until compliance is achieved.

D. Compaction and Preparation:

1. Existing soils shall be densified using a 3 to 4 ton static weight roller to 95% or 98% of the maximum material density in accordance with the Modified Proctor Analysis (ASTM D1557) as specified.
2. Additional fill shall be placed in loose lifts no greater than 12" in depth and densified to 95% or 98% of the maximum material density in accordance with the Modified Proctor Analysis (ASTM D1557) as specified.

3.02 TESTING:

A. Soil test shall be made as follows:

1. For each type of fill material used, obtain a moisture density relationship determination test in accordance with the Modified Proctor Method ASTM D1557.
2. Obtain in-place density test using the Nuclear, Sandcone or Shelby Tube Method. Two density tests shall be obtained in every lift for each structure. Areas which fail to meet the compaction requirements shall be re-compacted then retested until passing results are achieved. Density tests for pipeline trenches shall be the isolated footings and at three hundred foot intervals in the trench.

B. Location of in-place density tests shall be referenced to column lines, edge of pavement and to elevation datum. Reports shall be furnished to the Engineer as specified in the Section "Submittals".

END OF SECTION

SECTION 02310

FINISH GRADING

PART 1 - GENERAL

1.01 DESCRIPTION: To bring to finished elevations all earth materials as called for in Drawings. This general work includes the completion of finish grading so that surfaces of compacted material are correctly oriented with the requirements of the slabs, sidewalks, roadways, drainage facilities, as existed prior to construction, or as proposed on the Drawings.

PART 2 - PRODUCTS

2.01 MATERIALS:

- A. All fill shall be clean sand (AASHTO A-3 or USC SW, SP Soil Classifications), free from debris, vegetative matter, and other deleterious substances.
- B. Topsoil: All topsoil material on the site that is determined by the Engineer to be satisfactory for landscaping and/or grassing operations shall be stockpiled near the excavation limits for such use unless otherwise directed by the Engineer.

PART 3 - EXECUTION

3.01 SURVEYING: Where existing drainage swales are encountered, Contractor is responsible for restoring drainage swales to preconstruction condition. Surveying for elevation and slope of adjoining drainage swales is required to document preconstruction swale condition. Surveying of drainage swales shall be at Contractor's expense.

3.02 GRADING: Fill, backfill and rough grade as necessary to bring entire site level with elevations of undersides of concrete slabs, walks, paving and finished landscaping as indicated on Drawings or in Specifications.

3.03 FINISH GRADING:

- A. Where elevations are indicated on plans, obtain such finish elevations, and establish uniform slopes of finish grades between indicated elevations.

- B. Where elevations are not indicated, establish and obtain uniform slope from finished spot elevations at the exterior face of the building out to the nearest indicated elevations for existing grades as shown on the plans at a slope not to exceed 10:1.
- C. Where drainage swales are encountered, unless noted otherwise, establish and obtain elevations and slopes that existed prior to construction. Swales shall be finish graded to ensure proper drainage and avoid high and low points along the swale profile.

END OF SECTION

SECTION 02370

EROSION AND SEDIMENTATION CONTROL

PART 1 - GENERAL

1.01 RELATED DOCUMENTS: The General Provisions of the contract, including the General Conditions, Supplementary Conditions and Special Conditions, along with the General Requirements, apply to the work specified in this Section.

1.02 SUMMARY:

A. Includes But Not Limited To: Provide, install, maintain, and remove erosion and sedimentation controls as described in Contract Documents and as required by Contractors Pollution Prevention Plan.

B. Related Sections:

1. Section 02240, Dewatering.
2. Section 02300, Earthwork.

1.03 REFERENCES:

A. Florida Department of Transportation (Latest Editions):

1. Standard Specification for Road & Bridge Construction.
2. Design Standards for Design, Construction, Maintenance and Utility Operations on the State Highway System.

B. Florida Department of Environmental Protection:

1. Rule 62-621 Generic Permits.

C. Environmental Protection Agency (EPA):

1. National Manual of Stormwater Best Management Practices.

1.04 QUALITY ASSURANCE: Contractor shall be certified by the Florida Department of Environmental Protection as an Erosion and Sedimentation Control Professional.

1.05 SUBMITTALS:

A. Provide copy of application and stormwater pollution prevention plan as submitted to Florida Department of Environmental Protection as required by 02370 3.02 A.

- B. Provide a copy of Notice of Termination (NOT) of coverage under FDEP Generic Permit for Large and Small Construction Activities.
- C. Name of Certified FDEP Professional and a copy of the page of the permit application identifying the FDEP individual and their contact information.

PART 2 - PRODUCTS

2.01 MATERIALS:

- A. Filter Fabric: Florida Department of Transportation Class D-3 material.
- B. Sand Cement Bags:
 - 1. Portland Cement: ASTM C150 Type I/II material.
 - 2. Fine Aggregate: Clean silica sand or other inert natural material of similar characteristics.
 - a. 97% material passing No.4 sieve
 - b. 20% material passing No.100 sieve
 - c. 5% material passing No. 200 sieve
 - 3. Sacks: Provide sacks of uniform size made of jute, cotton or scrim reinforced paper capable of holding the sand cement mixture without leakage. Sacks shall provide a finished unit approximately 12x18x6 inches in measurement. Material shall be permeable and absorptive enough to permit passage of water to provide for hydration of cement. Materials shall be biodegradable and contain no asphalt, oil or plastic lamination.
- C. Rubble:
 - 1. Provide clean, hard, durable rubble free of pollutants consisting of broken stone, concrete or masonry. Material shall be free of reinforcing wire or steel rebar.
 - 2. Material shall have a minimum nominal dimension of 3 inches for any given piece of rubble.
- D. Fiber Rolls:
 - 1. Tube shaped rolls of straw, flax, rice, coconut fiber, or compost.
 - 2. Rolls shall be wrapped with UV degradable polypropylene netting or biodegradable netting.

- E. Silt Fence: Florida Department of Transportation Type III silt fence meeting all requirements of FDOT Index 103.
- F. Seed for Temporary Erosion Control:
 - 1. Winter Months (October to March): Annual Rye Grass.
 - 2. Summer Months (April to September): Millet Grass.
- G. Water: Clean and potable.

PART 3 - EXECUTION

3.01 PERFORMANCE:

- A. General:
 - 1. Provide and maintain temporary erosion and sedimentation control measures from time site is disturbed to time permanent controls, paving, landscaping, and site restoration measures are able to perform erosion and sedimentation control functions.
 - 2. Clean-out, repair, and maintain control structures as necessary to enable them to perform properly.
 - 3. Prevent pollution of streams, water impoundments, and channels leading to them with chemicals, fuels, lubricants, bitumens, raw sewage, and other harmful waste.
- B. Sediment Barriers/Silt Fence:
 - 1. Place fence as shown on Drawings and as necessary to maintain regulatory compliance with Contractor's Pollution Prevention Plan.
 - 2. As a minimum, Silt Fence shall be installed along all downstream project property lines and between any construction activity and all waterways, water bodies, sewer inlets and wetlands.
- C. Fiber Rolls: Place rolls as shown on Drawings and as necessary to maintain regulatory compliance with Contractor's Pollution Prevention Plan.
- D. Seed or Sod:
 - 1. All areas disturbed by construction, and to remain unpaved or outside the building envelope, shall be stabilized by permanent seed and mulch or sod, as described elsewhere in the contract documents. Refer to Section 02921 for permanent grassing requirements.

2. Areas that will be regraded or otherwise disturbed later during construction may be seeded with a temporary seed mix to obtain temporary erosion control.

E. Sand-Cement Bag Rip Rap:

1. Proportion sand and cement in the ratio of 5 cubic feet of sand to 94 lbs of cement.
2. Fill sacks to uniform size. Keep at least 6 inches of the sacks unfilled to allow for tying and closure.
3. Place sacks as shown on the Drawings. Place sacks in a running bond type pattern. Align sacks/bags so that continuous joints are perpendicular to the primary flow and staggered joints are parallel to the primary flow.
4. Stake alternating bags in place with an 18" length of #3 rebar centered in bag. Set top of bar 1" below surface of bag.
5. After placement saturate bags with water.

F. Rubble:

1. Place rubble as required by Drawings or Specifications.
2. Dump rubble in place so as to provide a minimum depth of 18 inches.
3. Ensure that rubble does not segregate so that smaller pieces evenly fill the voids between the larger pieces.

3.02 REGULATORY REQUIREMENTS:

A. Florida Department of Environmental Protection (FDEP) - NPDES Program.

1. Contractor shall notify Florida Department of Environmental Protection of proposed construction and file Notice of Intent (NOI) to use Generic Permit for Stormwater Discharge from Large and Small Construction Activities with Florida Department of Environmental Protection.
2. Contractor shall be responsible for application fee and preparation of all attachments. Attachments shall include a Pollution Prevention Plan.
 - a. The minimum requirements for pollution prevention are described on the Contract Drawings and in these Specifications.

- b. The Contractor may use the pollution controls presented in these documents as the basis for his Pollution Prevention Plan.
 - c. The Contractor shall supplement the Contract Drawings and Specifications as necessary to satisfy the Contractor's permit application and the Contractor's means and methods of construction.
- 3. It shall be the Contractor's responsibility to familiarize himself with the permit conditions and maintain the site in a condition that will be compliant with the permit.
 - 4. Any testing or other requirements required by the governing agency to remain compliant or in response to a non-compliance event shall be the financial and material burden of the Contractor.
 - 5. Contractor shall notify FDEP of conclusion of project and submit a notice of termination (NOT) coverage.

3.03 DUST CONTROL:

- A. Contractor shall make every effort to limit the transport of windborne dust and particulates from the disturbed site.
- B. Soil erosion due to wind shall be controlled with the application of water to dampen soil.

3.04 REPAIR AND RESTORATION:

- A. If any seed is washed out before germination, repair damage, refertilize and reseed.
- B. Maintain silt fence in a functional condition. Repair any damage immediately. Implement a routine maintenance schedule for all erosion schedule. All erosion control features shall be inspected immediately following all storm events.

3.05 CLEANING:

- A. Remove temporary controls and accumulated sediments when permanent facilities are able to perform function and when approved by Engineer.
- B. Remove accumulations of silt and other erosion products from all permanent facilities.

END OF SECTION

SECTION 02510

PIPE WORK - WATER DISTRIBUTION SYSTEM

PART 1 - GENERAL

1.01 DESCRIPTION: Work under this Section consists of furnishing all materials, supplies, equipment and labor in accordance with the requirements set forth herein and as shown on the Drawings.

1.02 APPLICABLE CODES, STANDARDS AND SPECIFICATIONS:

- A. The work under this Contract shall be in strict accordance with the following codes and standards.
1. All Local, County, Municipal and Federal Codes.
 2. American National Standards Institute (ANSI).
 3. American Society for Testing and Materials (ASTM).
 4. American Water Works Association (AWWA).
 5. American Association of State Highway and Transportation Officials (AASHTO).
 6. Florida Department of Transportation Specifications (DOT).
 7. Recommended Standards for Water Works, 10-States Standards.
 8. Florida Department of Environmental Protection (FDEP).

1.03 QUALITY ASSURANCE STANDARDS:

- A. American National Standards Institute, Inc. (ANSI)/American Water Works Association (AWWA):
1. ANSI/AWWA C104, Cement-Mortar Lining for Ductile-Iron Pipe and Fittings for Water.
 2. ANSI/AWWA C105, Polyethylene Encasement for Ductile - Iron Piping for Water and Other Liquids.
 3. ANSI/AWWA C111, Rubber-Gasket Joints for Ductile-Iron and Gray-Iron Pressure Pipe and Fittings.
 4. ANSI/AWWA C115, Flanged Ductile-Iron Pipe with Threaded Flanges.
 5. ANSI/AWWA C150, Thickness Design of Ductile-Iron Pipe.
 6. ANSI/AWWA C151, Ductile-Iron Pipe, Centrifugally Cast in Metal Molds or Sand-Lined Molds for Water or Other Liquids.
 7. ANSI/AWWA C153, Ductile-Iron Compact Fittings, 3 In. Through 16 In., for Water and Other Liquids.
 8. AWWA C502, Dry-Barrel Fire Hydrants.
 9. AWWA C504, Rubber-Seated Butterfly Valves.
 10. AWWA C515, Reduced Wall, Resilient-Seated Gate Valves for Water Supply Service.

11. AWWA C600, Installation of Ductile-Iron Water Mains and Their Appurtenances.
12. AWWA C605, Underground Installation of Polyvinyl Chloride (PVC) Pressure Pipe and Fittings for Water.
13. AWWA C651, Disinfecting Water Mains.
14. AWWA C701, Cold-Water Meters - Turbine Type, for Customer Service.
15. AWWA C800, Underground Service Line Valves and Fittings.
16. AWWA C900, Polyvinyl Chloride (PVC) Pressure Pipe, 4 In. Through 12 In., for Water Distribution.
17. AWWA C905, Polyvinyl Chloride (PVC) Pressure Pipe and Fabricated Fittings, 14 In. through 48 In. for Water Transmission and Distribution.

B. American Society for Testing and Materials (ASTM):

1. D1785, Poly (Vinyl Chloride) (PVC) Plastic Pipe, Schedules 40, 80 and 120.
2. D2464, Threaded Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 80.
3. D2467, Socket Type Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 80.
4. D2564, Solvent Chemicals for Poly (Vinyl Chloride) (PVC) Plastic Pipe and Fittings.
5. D2855, Making Solvent Cemented Joints with Poly (Vinyl Chloride) (PVC) Pipe and Fittings.

C. Manufacturer's name and model numbers are listed to establish a standard of quality. Equivalent items of other manufacturers are acceptable.

1.04 SUBMITTALS:

- A. Submit manufacturer's certification of materials' conformance to specifications.
- B. Submit manufacturer's literature, catalog data and installation instructions.
- C. Submit certified field pressure test reports.

1.05 PRODUCT DELIVERY AND HANDLING:

- A. Exercise care to prevent damage of product during loading, transporting, unloading and storage.
- B. Do NOT drop pipe or fittings.

- C. Do not store directly on ground and assure that materials are kept clean. Pipe shall be kept bundled and strapped until it is ready for installation in order to prevent warping or disfiguring.
- D. Store material in areas approved by the Owner.
- E. Store material in such a manner as to not create a nuisance or safety hazard.

PART 2 - PRODUCTS

2.01 PIPE:

- A. General: Pipe shall be furnished free from defects impairing strength and durability and should be of best commercial quality for purpose specified. Structural properties shall be sufficient to safely sustain or withstand strains to which it is normally subjected. All pipe shall bear the National Sanitation Foundation Seal for potable water pipe.
- B. Pipe Materials:
 - 1. Ductile Iron (D.I.) ANSI/AWWA C151:
 - a. Metal Thickness, ANSI/AWWA C150:
 - 1) 3 Inch through 12 Inch: Pressure Class 350.
 - 2) 14 Inch and Larger: Pressure Class 250.
 - 3) Jack and Bore Crossings: Pressure Class 350.
 - b. Interior Lining, ANSI/AWWA C104: mortar lined.
 - c. Exterior Coating, Bituminous Coating, 1 mil thick.
 - 2. Polyvinyl Chloride (PVC) 14 In. and larger:
 - a. Specification: AWWA C905.
 - b. Compound: PVC 12454-B, ASTM D1784.
 - c. Thickness: Class 165, DR 25.
 - 3. Polyvinyl Chloride (PVC) 4 In. Through 12 In.:
 - a. Specification: AWWA C900.
 - b. Compound: PVC 12454-B, ASTM D1784.
 - c. Thickness: Class 235, DR 18.

4. Polyvinyl Chloride (PVC), 3 In.:
 - a. Specification: ASTM D2241.
 - b. Compound: PVC 12454-B, ASTM D1784.
 - c. Thickness: Class 200, SDR 21.
5. Polyvinyl Chloride (PVC), 2-1/2 In. and Smaller:
 - a. Specification: ASTM D1785.
 - b. Compound: PVC 12454-B, ASTM D1784.
 - c. Thickness: Schedule 80.

C. Pipe Joints:

1. Ductile Iron:
 - a. Mechanical: ANSI/AWWA C111.
 - b. Push On: ANSI/AWWA C111, single gasket type.
 - c. Flanged: ANSI B16.1, 125 lb.
 - d. Restrained: Acceptable: Lock-Fast, TR Flex, Super-Lock, Megalug 1100 and 1700 Series.
2. Polyvinyl Chloride, 3 In. and Larger:
 - a. Push On: ASTM F477 Elastomeric Gaskets.
 - b. Restrained: UNI-BELL B-13, Uni-Flange Restrainer; Megalug 2000 PV and 1600 Series.
3. Polyvinyl Chloride, 2-1/2 In. and Smaller:
 - a. Screwed: ASTM D2464.
 - b. Solvent Weld: ASTM D2855.
 - c. Solvent: ASTM D2564.

D. Pipe Fittings:

1. Ductile Iron and Polyvinyl Chloride (PVC) 3 In. and Larger:
 - a. ANSI/AWWA C153, ductile iron compact fittings.
 - b. ANSI/AWWA C104, cement mortar lined.
 - c. Mechanical: ANSI/AWWA C111.
 - d. Push On: ANSI/AWWA C111.
 - e. Flanged: ANSI B16.1, 125 lb.
 - f. Restrained-Ductile Iron: Same as Ductile Iron Pipe Joints.
 - g. Restrained-PVC: Same as PVC Pipe Joints.

2. Polyvinyl Chloride (PVC) 2-1/2 In. and Smaller:
 - a. ASTM D2464, Schedule 80 PVC threaded fittings.
 - b. ASTM D2467, Schedule 80 PVC socket type fittings.
 - c. ASTM D2855, Solvent Weld Joints.

E. Pipe Marking and Identification:

1. Ductile Iron Pipe: Permanent marking tape, with the words "WATER MAIN" printed along the tape shall be placed in the trench over the pipe, six to twelve inches below finished grade, of the entire length of pipe.
2. PVC Pipe:
 - a. All non-metallic water main pipe installed underground shall have trace wire (blue in color) attached for locating purposes. Half hitches shall be made behind each pipe bell and on each side of a valve or fitting. Branch splices shall be made at all tees, fire hydrants, and service lines. Trace wire shall be run into valve boxes. Watertight splicing connectors shall be utilized for all splices. Contractor shall be responsible for continuity of trace wire between valve boxes.
 - b. All PVC water main pipe shall be manufacturer's standard blue color or shall have permanent marking tape with the words "WATER MAIN" printed along the tape placed in the trench over the pipe, six to twelve inches below finish grade, for the entire length of pipe.

2.02 GATE VALVES:

- A. Larger Than Two Inch: Shall be AWWA C515, iron body, resilient wedge, resilient seat, non-rising bronze stem with 2" square operating nut on buried valves, turn to left (counter clockwise) to open.
 1. Working pressure of 200 psi.
 2. Internal Metal Surfaces shall have two-part thermosetting epoxy coating, 4 mils thick.
 3. Sealing Mechanism shall have zero leakage at 200 psi with flow in either direction.

4. End Conditions:
 - a. Above ground, \geq 2-inch: Flanged Joint
 - b. Below ground, \geq 3-inch: Mechanical Joint
 - c. Below ground, 2-inch and 2-1/2-inch: Threaded Joint
 5. Acceptable: Mueller, American, or equal.
- B. Two Inch and Smaller:
1. Type III (double wedge disc, rising stem, inside screw).
 2. Class B (150 lb. steam rating).
 3. Threaded ends.

2.03 TAPPING SLEEVES AND VALVES:

- A. Tapping Sleeves: Shall have flanged outlet to mate to a standard tapping valve. Tapping sleeve shall be all stainless steel (including hardware) and shall have a fully gridded gasket and test plug. Provide tapping sleeves and gaskets which are specifically designed for the size and material of pipe to be tapped. Tapping sleeve and valve shall be restrained in accordance with pipe specifications. Acceptable manufacturers: Ford Style FAST, Romac No. SST, or equal.
- B. Tapping Valves: Shall be specifically designed for the purpose of tapping pressurized mains. Valves used for tapping shall be gate valves meeting the requirements of Paragraph 2.02.

2.04 VALVE BOXES:

- A. Provide at all manually operated valves installed on underground lines.
- B. ASTM A48, cast iron, Class 30-B, 2-piece extension type, with cover marked "WATER" and flared base to suit valve furnished.
- C. Acceptable: Figure No. F-2450, Clow Corporation; Catalog No. H10357, Mueller Co.; Figure No. E-3002, M & H Valve and Fittings Co., or equal.

2.05 FIRE HYDRANTS:

- A. AWWA C502 Dry-Barrel type fire hydrant with 5-1/4" main valve.
- B. Working Pressure Rating 150 psi.
- C. Provided with two 2 1/2 Inch hose connections and one 4 1/2 In. pumper connection.

D. Acceptable: American Darling B-62-B; Clow Medallion Hydrant, Mueller BSR 5-1/4", or equal.

2.06 TAPPING SADDLES: All tapping saddles shall be suitable for the size and type of pipe being tapped. Saddle for pipe 4-inch and larger shall be brass with stainless steel double band and bolts. Acceptable: Ford 202BS, or equal. Saddles for pipe less than 4-inch diameter shall be Ford S70 or 202B, as required, or equal.

2.07 CORPORATION STOPS: Corporation Stops shall be Mueller, Hayes, or Ford threaded on the inlet side with MIP threads and the outlet side fitted with connections to suit the connecting pipe.

2.08 CURB STOPS:

A. Curb stops shall be Mueller, Hayes, or Ford.

B. All curb stops shall have a locking wing.

2.09 SERVICE PIPE: Service piping shall be polyethylene, SDR 9, AWWA C901, ASTM D2737, PE 3408, colored blue, NSF Seal, with Type 316 stainless steel inserts.

2.10 PLASTIC LOCATING AND MARKING TAPE: Tape shall be plastic coated foil with a minimum width of 2 inches. Tape shall be highly visible and shall have the words "WATER MAIN" in at least 1" letters printed at least every 36 inches along the tape. Tape shall be located one foot below ground surface directly above the centerline of the pipe. Tape shall be Allen Marking Tape, or equal.

2.11 LOCATE WIRING: Locate wire shall be installed on all PVC, ductile iron and HDPE water main piping, and services 10 LF or greater in length. No wire shall be installed on above ground installations (must meet minimum installation requirements, see details). Locate wiring for direct bury shall be 12 gauge, copper wire with 0.03 inches (minimum) HDPE insulation thickness, 0.141 inches (minimum) O.D. rated break load 250 lbs., 30 volt, 21% IACS. The outside color of the wire shall be blue. Acceptable: Copperhead and Protrace tracer wire, or approved equal.

2.12 PIPE COUPLINGS: The Contractor shall furnish and install pipe couplings as required to complete the work. Pipe couplings used to join two pieces of ductile iron pipe or PVC pipe shall be sized to match the outside diameter of the pipeline. Transition couplings shall be used to join pipes of different outside diameters. The coupling sleeve shall be manufactured of ductile iron conforming to ASTM A536 and be coated with 14 mils of epoxy. The bolts shall be manufactured of a metal of high corrosion resistance and shall conform to ANSI 21.11 (AWWA C111). Gaskets shall be wedge-type and manufactured of virgin SBR for water and sewer service. The installation of all couplings shall be in accordance with latest manufacturer's recommendations. Unless approved otherwise by the Engineer, the maximum gap between pipe ends shall be: (based upon sleeve length) 5" sleeve, 1" gap; 7" sleeve, 2" gap, 10" sleeve, 3-1/2" gap; other per manufacturer's recommendation. Couplers

and adapters for polyethylene pipe shall be brass conforming to AWWA C800 and shall be female IPS, pack joint, or compression nut.

PART 3 - EXECUTION

3.01 EXCAVATION:

- A. General: The Contractor shall perform all excavation of every description and of whatever substances encountered to the depths indicated on the Drawings or as necessary. This shall include all necessary clearing and grubbing of any foreign substance encountered within the structure or trench area. Excavated material suitable for backfill shall be piled in an orderly manner at a sufficient distance from the trench to prevent slides or cave-ins.
- B. Protection of Existing Facilities and Utilities: All existing improvements such as pavements, conduit, poles, pipes and other structures, shall be carefully supported and fully protected from injury and, in case of damage, they shall be restored, pressure tested and disinfected by the Contractor without compensation. Existing utilities and other underground obstructions are shown on the plans, but the accuracy of the locations and depths is not guaranteed. The Contractor shall contact all utilities prior to construction and arrange for the necessary assistance in locating and protecting the existing utilities. The Contractor shall be responsible for damages to these existing utilities and shall, in case they are damaged, restore them to their original condition.
- C. Trench Excavation: Shall be in accordance with the Florida Trench Safety Act. The minimum width of the trench shall be equal to the outside diameter of the pipe at the joint plus 8 in. each side of pipe for unsheeted or sheeted trench, with the maximum width of trench, measured at the top of the pipe, not to exceed the outside pipe diameter, plus 24 in., unless otherwise shown on the Drawings. Trench walls shall be maintained vertical from the bottom of the trench to a line measured at the top of the pipe. From the top of the pipe to the surface of the trench walls shall be as vertical as possible under soil conditions.

No more than 300 linear feet of trench shall be open in advance of the completed pipe laying operation without prior approval of the Engineer. Pipe trenches across roadways and driveways shall be backfilled as soon as the pipe is installed. Where, in the opinion of the Engineer, adequate detour facilities are not available, no trench shall be left open across a roadway or commercial property driveway where adequate detour routes are not available for a period in excess of 30 minutes, or as directed by the governing authority. No trench shall be left open across any roadway or driveway for more than 24 hours. It shall be the Contractor's responsibility to provide traffic control and barricades as necessary.

- D. Shoring, Sheeting, and Bracing: The Contractor shall do all shoring, sheeting, and bracing or provide other approved facilities required to perform and protect the excavation and as necessary for the safety of the public, the employees, and the preservation of existing roads, structures and other utilities. The top of such sheeting left in place shall be cut off at a minimum elevation of 2.5 ft. below finished grade.
- E. Pavement Removal: The Contractor shall remove pavements as part of the trench excavation. The material from permanent pavement removal shall be carefully separated from trench excavation material and properly disposed of by the Contractor.
- F. Boulder Removal: All rocks, stones, boulders, or concrete having any dimension larger than permitted to be used for backfill in the paragraph entitled "Backfilling" of these Specifications shall be removed from the site and disposed of by the Contractor.
- G. Unsuitable Soil Conditions and Overdepth Excavation: Where determined by Engineer or his representative that the soils encountered in the utility trench excavation are unsuitable for pipe bedding and/or backfill, the depth of excavation shall be increased as directed by Engineer or his representative. The bottom of the excavation shall be brought up to the proper excavation elevation utilizing suitable and properly-compacted backfill material or bedding material as directed by the Engineer or his representative. Bedding material if required, shall consist of ½" to 1" diameter gravel placed in the bottom of the trench at a thickness of 4 to 6 inches. Suitable backfill material shall then be installed and compacted over pipe as described in Paragraph 3.04. Contractor shall be compensated for removal and replacement of unsuitable soils in accordance with the applicable bid items.
- H. Disposal of Excess Material: The Contractor shall dispose of the excavated materials not required or suitable for backfill. All surplus excavated material which is unsuitable for fill shall become the property of the Contractor and shall be disposed of by the Contractor at his expense. Pieces of broken asphalt shall be carefully separated from suitable fill material and hauled to an asphalt plant for disposal or shall be disposed of by some other acceptable means by the Contractor at no expense to Owner. All excavated material not suitable for backfill (e.g., concrete, boulders, roots, etc.) shall be carefully separated from suitable fill material and disposed of by the Contractor at no expense to Owner. Owner has the option to accept suitable backfill material from the Contractor.

3.02 INSTALLATION OF WATER MAINS AND SERVICES:

- A. General: Unless otherwise noted on the Drawings or in other sections of this Specification, the pipe shall be handled and installed in strict accordance with the manufacturer's instructions and with the applicable AWWA or ASTM Standards.
1. Ductile Iron Pipe: AWWA C600.
 2. Polyvinyl Chloride Pipe: ASCE Manual No. 37, ASTM D2321.
 3. If a conflict exists between the manufacturer's instructions and the AWWA or ASTM Standards, the manufacturer's instructions shall govern.
 4. Examine area to receive pipe work for defects that adversely affect execution of work or cause deviation beyond allowable tolerances for piping clearances.
 5. Carefully examine each section of pipe or valve before installation. Do not use defective or damaged pipe or materials. Remove such pipe or material from project site immediately.
- B. Preparation: The Contractor shall use every precaution during construction to protect the pipe against the entry of nonpotable water, dirt, wood, small animals and other foreign material that would hinder the operation of the pipeline. All valves installed in main shall be kept tightly closed until flushing and testing are to be performed. Where the groundwater elevation is above the bottom of the trench, the Contractor shall provide suitable dewatering equipment. All piping shall be placed in a dry trench, unless wet trench installation is approved by the Engineer.
- C. Depth of Cover: Unless otherwise shown on the Drawings, or otherwise authorized by the Engineer, the pipe shall have a minimum cover of 36 inches.
- D. Connections to Existing Mains: The Contractor shall make connections to existing mains as shown on the Drawings. Connections shall be made only after arrangements have been completed by the Contractor with the Owner of the system and shall be under the System Owner's immediate supervision. Contractor shall be required to restrain existing pipe as necessary in accordance with pipe restraint schedule.
- E. Pipe Thrust Restraints: Mechanical restrainers shall be installed as required to properly restrain all piping systems. At a minimum, restrainers shall be provided on all below-grade valves and fittings and at the required number of pipe joints in each direction. Required lengths of restrained pipe shall be

as shown in pipe restraint schedule at end of this paragraph for the type of soil encountered. For above-grade piping, all valves and fittings shall be threaded, flanged or solvent welded with supports as required.

PIPE RESTRAINT SCHEDULE

**MINIMUM LENGTH OF PIPE (IN FEET) REQUIRED TO BE
RESTRAINED ON EACH SIDE OF A VALVE OR FITTING
FOR SANDY SOILS (SW, SP, SM, SC)**

PIPE TYPE	PIPE SIZE	90° BEND	45° BEND	≤22.5° BEND	TEE OR CROSS	VERTICAL		REDUCER ^b	VALVE	DEAD END
						LOW	HIGH			
P V C P I P E	≤4	18	18	18	18	18	22	36	18	52
	6	24	18	18	18	18	30	38	36	73
	8	31	18	18	18	18	40	69	36	96
	10	37	18	18	18	18	48	93	54	115
	12	43	18	18	18	18	56	99	54	136
	14	49	20	18	18	18	64	101	72	155
	16	55	23	18	18	18	72	103	72	174
	18	60	25	18	36	20	80	104	72	192
	20	65	27	18	36	21	87	105	72	211
	24	75	31	18	36	25	102	134	90	246
	30	88	37	18	36	29	122	185	90	295

PIPE TYPE	PIPE SIZE	90° BEND	45° BEND	≤22.5° BEND	TEE OR CROSS	VERTICAL		REDUCER ^b	VALVE	DEAD END
						LOW	HIGH			
D U C T I L E I R O N	≤4	18	18	18	18	18	18	18	18	33
	6	20	18	18	18	18	19	35	36	47
	8	26	18	18	18	18	25	44	36	61
	10	31	18	18	18	18	30	60	54	73
	12	37	18	18	18	18	36	63	54	86
	14	41	18	18	18	18	41	64	72	98
	16	46	19	18	36	18	46	66	72	111
	18	51	21	18	36	18	51	66	72	122
	20	56	23	18	36	18	56	67	72	134
	24	64	27	18	36	21	65	85	90	156
	30	75	31	18	36	25	78	118	90	188

PIPE RESTRAINT SCHEDULE

**MINIMUM LENGTH OF PIPE (IN FEET) REQUIRED TO BE
RESTRAINED ON EACH SIDE OF A VALVE OR FITTING
FOR CLAYEY AND SILTY SOILS (CL, CH, ML, MH)**

PIPE TYPE	PIPE SIZE	90° BEND	45° BEND	≤22.5° BEND	TEE OR CROSS	VERTICAL OFFSET ^a		REDUCER ^b	VALVE	DEAD END
						LOW	HIGH			
P V C P I P E	≤4	19	18	18	18	18	23	36	18	55
	6	26	18	18	18	18	32	40	36	77
	8	35	18	18	18	18	42	73	36	101
	10	42	18	18	18	18	50	98	54	121
	12	50	21	18	18	18	59	104	54	143
	14	57	23	18	36	20	67	106	72	163
	16	64	27	18	36	23	76	109	72	183
	18	71	29	18	36	25	84	109	72	202
	20	78	32	18	36	28	92	110	72	221
	24	92	38	18	36	33	107	140	90	258
	30	110	46	22	54	40	127	193	90	308

PIPE TYPE	PIPE SIZE	90° BEND	45° BEND	≤22.5° BEND	TEE OR CROSS	VERTICAL OFFSET ^a		REDUCER ^b	VALVE	DEAD END
						LOW	HIGH			
D U C T I L E I R O N	≤4	18	18	18	18	18	18	18	18	35
	6	22	18	18	18	18	20	25	36	49
	8	29	18	18	18	18	27	46	36	64
	10	35	18	18	18	18	32	62	54	77
	12	41	18	18	18	18	37	66	54	90
	14	47	20	18	18	18	43	67	72	103
	16	53	22	18	36	19	48	68	72	115
	18	59	24	18	36	21	53	69	72	127
	20	65	27	18	36	23	58	70	72	140
	24	76	31	18	36	27	67	89	90	162
	30	91	38	18	36	32	80	122	90	194

- Assumptions:
1. Pipe Test Pressure = 150 PSI
 2. Minimum Pipe Depth = 3.0 Feet
 3. Laying Condition = Type 5
 4. Safety Factor = 2.0

- a “Low” represents the minimum length of pipe (in feet) required to be restrained on the low side of the vertical offset, which is typically downstream of the offset fitting. “High” represents the minimum length of pipe (in feet) required to be restrained on the high side of the vertical offset, which is typically upstream of the offset fitting. Required restrained lengths assume an offset angle $\leq 45^\circ$.
- b Distance represents the linear feet of large diameter pipe upstream of the reducer required to be restrained. Restrain small diameter pipe at reducer at a minimum. If there is an unobstructed run downstream of the reducer (i.e. small diameter pipe) of at least 2.5 times the required length of large diameter pipe to be restrained, then restraint is required only at the reducer fitting. If small end of reducer is more than three pipe sizes smaller than large end, consult Engineer for required length to be restrained.

3.03 WATER AND SEWER LINE ORIENTATION:

A. Horizontal Separation:

1. New or relocated, underground water mains shall be laid to provide a horizontal distance of at least three feet between the outside of the water main and the outside of any existing or proposed storm sewer, stormwater force main, or pipeline conveying reclaimed water.
2. New or relocated, underground water mains shall be laid to provide a horizontal distance of at least six feet, and preferably ten feet, between the outside of the water main and the outside of any existing or proposed gravity- or pressure-type sanitary sewer, wastewater force main, or pipeline conveying reclaimed water. The minimum horizontal separation distance between water mains and gravity-type sanitary sewers shall be reduced to three feet where the bottom of the water main is laid at least six inches above the top of the sewer.

B. Vertical Separation:

1. New or relocated, underground water mains crossing any existing or proposed gravity- or vacuum-type sanitary sewer or storm sewer shall be laid so the outside of the water main is at least six inches, and preferably 12 inches, above or at least 12 inches below the outside of the other pipeline. However, it is preferable to lay the water main above the other pipeline.
2. New or relocated, underground water mains crossing any existing or proposed pressure-type sanitary sewer, wastewater or stormwater force main, or pipeline conveying reclaimed water shall be laid so the outside of the water main is at least 12 inches above or below the outside of the other pipeline. However, it is preferable to lay the water main above the other pipeline.

3. At the utility crossings described in Paragraphs B.1. and B.2. above, one full length of water main pipe shall be centered above or below the other pipeline so the water main joints will be as far as possible from the other pipeline. Alternatively, at such crossings, the pipes shall be arranged so that all water main joints are at least three feet from all joints in vacuum-type sanitary sewers, storm sewers, stormwater force mains, or pipelines conveying reclaimed water, and at least six feet from all joints in gravity- or pressure-type sanitary sewers, wastewater force mains, or pipelines conveying reclaimed water.

C. Alternate Separation:

1. Where an underground water main is being laid less than the required minimum horizontal distance from another pipeline and where an underground water main is crossing another pipeline and joints in the water main are being located less than the required minimum distance from joints in the other pipeline, equivalent separation can be achieved by:
 - a. Use of pressure-rated pipe conforming to the American Water Works Association standards C-900 or C-905 for the other pipeline if it is a gravity- or vacuum-type pipeline;
 - b. Use of welded, fused, or otherwise restrained joints for either the water main or the other pipeline; or
 - c. Use of watertight casing pipe or concrete encasement at least six inches thick for either the water main or the other pipeline.
2. Where an underground water main is being laid less than three feet horizontally from another pipeline and where an underground water main is crossing another pipeline and is being laid less than the required minimum vertical distance from the other pipeline, equivalent separation can be achieved by:
 - a. Use of ductile iron carrier or casing pipe, or concrete encasement at least four inches thick for the water main; and
 - b. Use of ductile iron carrier or casing pipe, or concrete encasement at least four inches thick for the other pipeline if it is new and is conveying wastewater or reclaimed water.

- D. Concrete Encasement of Pipe: Where concrete encasement of pipe is required for obtaining separation from other pipes or for other reasons (e.g., inadequate cover), the pipe shall be encased with 3,000 psi concrete having a minimum thickness of 6 inches all around the outside of the pipe. Pipe must be supported in trench to allow 6 inches of concrete on all sides. Concrete must be mechanically vibrated into place. The Engineer or his representative must be present at the time of encasement.

3.04 BACKFILLING:

- A. Material: All backfill shall be excavated material, essentially free of organic material, asphaltic concrete, clay, concrete, boulders and other deleterious material.
1. Bedding and Pipe Embedment: The material in the bedding, around the pipe and to a depth of 1 ft. over the pipe, shall be sand or a mixture of sand, shell or crushed stone properly graded and mixed so that fine grain material from the side walls of the trench or backfill above the embedment will not migrate into the backfill material. The backfill shall meet the following limitations.
 - a. Ductile Iron Pipe: All material shall pass through a 3/4 in. square opening laboratory sieve.
 - b. Plastic Pipe: All materials shall pass through a 1/2 in. square opening laboratory sieve.
 2. Above Pipe Embedment: The material shall be sand or a mixture of sandy material with rock, stone and shell. Rock, stone and shell shall pass through a 3-1/2 inch ring.
 3. Top of Backfill: The top 12 inches of the backfill shall be topsoil and/or sandy material.
 4. Additional Fill: If sufficient suitable backfill material is not available from the excavation, additional fill meeting the above requirements shall be provided by the Contractor.
- B. Placing and Compaction:
1. Under Pavement: Where the excavation is made through existing or proposed pavements, including shoulders, curbs, driveways, sidewalks, or structures, the entire backfill to the subgrade of the pavement or structures shall be made with predominantly sandy material free from rock, stones or organic matter, except that rocks passing a 3-1/2 inch ring will be permitted in the backfill between the elevation one foot above the top of the pipe and the bottom of the pavement subgrade.

The entire backfill material, including the material placed around and one foot above the pipe, shall be compacted to a density of not less than 98% of the maximum density, as determined by AASHTO T-180. Particular care shall be taken to insure that the backfill at the haunch is free from voids and is properly compacted. Compaction by flooding or puddling will be permitted only by written authorization from the Engineer.

Roads, walks and driveways consisting of broken stone, gravel, clay, marl, shell, shellrock, or a conglomerate of such materials, are not considered as being permanent pavement.

2. In Areas Not Under Permanent Pavement: Within rights-of-way or other areas where permanent pavement does not exist or is not proposed, including roads, walks, and driveways consisting of broken stone, gravel, clay, marl, shell, shellrock, or conglomerate, the entire backfill to the subgrade of the pavement or structures shall be made with predominantly sandy material free from rock, stones, or organic matter, except that rocks having a maximum dimension of 3½ inch will be permitted in the backfill between the elevation 1 ft. above the top of the pipe and 1 ft. below the surface. Particular care shall be taken to insure that the backfill at the haunch is free from voids and is properly compacted. The bedding and embedment shall be compacted to a density of not less than 98 percent of maximum as determined by AASHTO T-180. The backfill material above 1 ft over the pipe shall be compacted to a density of not less than 90 percent of the maximum density, as determined by AASHTO T-180. Compaction by flooding or puddling will be permitted only by written authorization from the Engineer.

In areas where unpaved, stabilized roads exist, the Contractor shall restore the road to its original grade and condition. The finished stabilized road shall have a minimum LBR value of 50 for the top 12" of the roadbed.

3. Miscellaneous: Backfilling around meter boxes, valve boxes and other structures shall be accomplished in the same manner as the connected pipe. Extreme care shall be used in backfilling wellpoint holes to prevent voids and settlement. If necessary, the holes should be plugged with a concrete slurry, such plugging to be at the expense of the Contractor.
4. Compaction Tests: The Engineer or his representative may at any time instruct the Contractor to partially excavate a previously backfilled trench or temporarily backfill a short section of the trench for the purpose of obtaining measurements of the density of the backfill. All density tests shall be paid for by the Contractor. Density tests shall be taken along the pipe a minimum of every 300 feet, at each road lane crossing, and as directed by Engineer. Density tests shall be taken in one foot lifts from bottom of trench to finished grade.

3.05 CULVERT REMOVAL AND REPLACEMENT:

- A. Culverts, catch basins and other drainage structures that are removed or damaged during construction shall be replaced with materials and structures equal and similar to those removed or damaged. Manhole covers and gratings shall be set at the original elevations unless otherwise directed.
- B. The Contractor shall take precautions against the entry of excavated and other loose material resulting from his operations from entering catch basins, culverts and other drainage structures in the vicinity of his operations. He shall maintain the cleanliness of these drainage structures in a condition equal to that prior to the commencement of his operations during the construction. The Contractor shall be responsible for all damage to persons, roads, buildings, vehicles and other property resulting from the failure of the Contractor to maintain these drainage structures.

3.06 TESTING AND DISINFECTION:

- A. Flushing of Completed Pipelines: Each section of completed pipeline shall be thoroughly flushed. A minimum flow shall be used for flushing that will insure a velocity in the pipe of 2.5 ft. per second. Water required for testing and flushing will be furnished by the Owner at existing pipes and outlets. Contractor shall slowly fill system to eliminate air pockets, then flushed to remove particulates. Flushing shall comply with Figures 1 and 2, and Table 3 of AWWA C651. Provide corporation stops at any high points in line in order to bleed air from pipe. Contractor shall make provisions to properly dispose of water from his flushing operations. Flooding of streets and private property shall not be permitted. Contractor shall arrange with Owner 72 hours in advance of the time of flushing for the availability of water. Water required for testing and flushing will be furnished by the Owner from a potable water source satisfactory to the Owner.
- B. Leakage Test: Leakage and pressure tests shall be conducted in the presence of the Engineer. The Contractor shall provide all necessary apparatus including a pump, flow measuring device, piping connections and fittings and the necessary labor to conduct the tests. The test shall be of not less than two (2) hours in duration. During the test, the pipe being tested shall be maintained at a pressure of not less than 150 psi. All leaks evident at the surface shall be repaired and leakage eliminated regardless of total leakage shown by test. Lines which fail to pass tests shall be repaired and retested as necessary until test requirements are complied with. Defective materials, pipes, valves, and accessories shall be removed and replaced. The pipe lines shall be tested in sections between every consecutive in-line valve unless otherwise directed by the Engineer. The line shall be filled with water and all air removed, and the test pressure shall be maintained in the pipe for the entire test period by means of a force pump to be furnished by the Contractor. Accurate means shall be provided by the Contractor for measuring the makeup water required to maintain this pressure. Leakage is

defined as the quantity of makeup water added to the pipe being tested during the test period. No pipe installation will be accepted if the leakage exceeds the quantities specified in AWWA C605, which is represented by the following equation.

$$Q = \frac{LD\sqrt{P}}{148,000}$$

Where:

Q = Quantity of makeup water (allowed) in gallons per hour

L = Length of pipe section being tested, in feet

D = Nominal diameter of the pipe, in inches

P = Average test pressure during the hydrostatic test, in pounds per square inch (gauge)

- C. Testing Plan: The Contractor must review his plan for testing with the Engineer at least two (2) working days before starting the test. The Contractor shall remove and adequately dispose of all blocking material and equipment after completion and acceptance of the field hydrostatic test, unless otherwise directed by the Engineer. Any damage to the pipe coating shall be repaired by the Contractor. Lines shall be totally free of debris prior to final acceptance.
- D. Disinfection: The disinfection of water main piping shall be conducted in accordance with AWWA C651 using the continuous-feed method and shall be performed by specialty trained personnel. The new water piping shall be kept isolated from the existing distribution system using a physical separation (Figure 1 of AWWA C651) until satisfactory bacteriological testing has been completed. Provide all temporary filling, flushing and testing connections (complying with Figures 1 and 2 of AWWA C651), potable water, chemicals, sampling and bacteriological test results. The continuous-feed method shall include slowly and completely filling the main to remove air pockets, preliminary flushing, and filling the main with chlorinated water having a free chlorine concentration of no less than 25 mg/l. At the end of a 24-hour contact time, the heavily chlorinated water, having a free chlorine residual of not less than 10 mg/l, shall be flushed from the main until the chlorine concentration leaving the main is no higher than that prevailing in the existing distribution system. Neutralize the heavily chlorinated water leaving the main with one of the chemicals named in Appendix C of AWWA C651. Make final, permanent connections to existing mains in accordance with Section 4.6 of AWWA C651. Conduct bacteriological sampling and testing in accordance with Section 5 of AWWA C651. After sampling, maintain a minimum pressure of 20 psig in the mains until regulatory permission is granted to place the mains into service. Provide satisfactory test results consisting of two consecutive sets of samples, taken at least 24 hours apart, showing the absence of total coliform organisms and the presence of a chlorine residual. If necessary, re-disinfect until satisfactory test results are obtained.

3.07 PROTECTION: At the end of each workday the mains under construction shall be plugged to prevent the entry of small animals or rodents. Temporary plugs shall be provided for this purpose. Keep all valves closed during construction.

3.08 RESTORATION OF DAMAGED SURFACES, STRUCTURES AND PROPERTY: Where pavement, trees, shrubbery, fences or other property and surface structures not designated as pay items, have been damaged, removed or disturbed by the Contractor, whether deliberately or through failure to carry out the requirements of the Contract Documents, state laws, municipal ordinances or the specific direction of the Engineer, or through failure to employ usual and reasonable safeguards, such property and surface structures shall be replaced and repaired at the expense of the Contractor to a condition equal to that before work began within a time frame approved by the Engineer.

3.09 RESTORATION AND CLEANUP:

A. Restoration:

1. General: Restoration of areas disturbed by the Contractor's operations shall begin as soon as practical. Contractor's restoration operations shall keep pace with utility installation. Engineer reserves the right to halt utility installation until restoration and cleanup requirements are satisfied.
2. Time Frame for Restoration: Restoration of areas disturbed by the Contractor's operations shall begin no later than 14 days and shall be completed (excluding punch list items) no later than 28 days from the time construction first began in the area. No more than 1,000 LF along the path of the work may be completely unrestored (excluding punch list items) at the end of each day.

B. Clean-up: The Contractor shall maintain the site of the work in a neat condition. The Contractor shall remove all excess materials, excess excavated materials, and all debris resulting from his operations a minimum of once per week.

END OF SECTION

SECTION 02590

UNDERGROUND FACILITIES

PART 1 - GENERAL

1.01 DESCRIPTION: Work under this Section consists of furnishing all tools, equipment, and labor as described herein.

1.02 SUBMITTALS:

- A. Submit sketches of all conflicts and proposed resolution of conflicts.
- B. Record Drawings shall depict all Underground Facilities encountered in the work.

PART 2 - PRODUCTS

(Not Applicable)

PART 3 - EXECUTION

3.01 INSTALLATION:

- A. Location of Underground Facilities:
 - 1. Underground Facilities are underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any other encasements containing such facilities, including those which convey electricity, gases, compressed air, steam, liquid petroleum products, telephone or other communications, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.
 - 2. Prior to excavation, the Contractor shall conduct an investigation into the location of all Underground Facilities. The objective of this investigation is to determine the locations of Underground Facilities in advance of actual construction in order to resolve ahead of time conflicts with the proposed work. Underground Facilities that are shown or indicated are based on limited information. The locations shown or indicated are only approximate and it is probable that there are Underground Facilities that are not shown or indicated.

3. The Contractor shall, by means of standard geophysical prospecting techniques, designate (to indicate by marking) the presence and approximate depths of Underground Facilities along the routes of proposed construction. All Underground Facilities within five (5) feet of the proposed work shall be designated.
4. The Contractor shall locate Underground Facilities to obtain accurate horizontal and vertical positions and may utilize any methods or procedures he deems appropriate for locating, but not damaging, the Underground Facilities. These methods may include, but not be limited to, careful hand excavation, pot-holing, and the use of ground penetrating radar (GPR). All Underground Facilities shall be located, both those shown or indicated and those that are not shown or indicated. The Contractor shall have full responsibility for the safety and protection of all Underground Facilities and repairing any damage thereto resulting from the work.
5. If an Underground Facility is uncovered or revealed which constitutes an unforeseen obstruction, the Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any work in connection therewith, give notice to the Engineer. The Engineer will promptly review the Underground Facility and determine the extent, if any, to which a change is needed in the Contract to reflect and document the consequences of the existence or location of the Underground Facility. During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.

END OF SECTION

SECTION 02750

CONCRETE PAVING, SIDEWALK AND CURB

PART 1 - GENERAL

1.01 RELATED DOCUMENTS: The General Provisions of the contract, including the General Conditions, Supplementary Conditions and Special Conditions, along with the General Requirements, apply to the work specified in this Section.

1.02 REFERENCES: All work shall be in accordance with Section 522 Concrete Sidewalk, Section 350 Cement Concrete Pavement, and Section 520 Concrete Gutter, Curb Elements & Traffic Separator of the latest edition of the "Florida Department of Transportation Standard Specifications for Road and Bridge Construction" unless specifically stated or directed otherwise.

1.03 SUBMITTALS:

- A. Material Certificates: Provide copies of material certificates including design mixes, signed by the Contractor, certifying that each specified material complies with, or exceeds requirements.
- B. Provide manufacturer's literature and installation instructions for all concrete accessories such as joint filler and detectable warning textures.
- C. Copies of all compliance testing and retests.
- D. Comply with Section 01300, Submittals.

PART 2 - PRODUCTS

2.01 CONCRETE MIX, DESIGN AND TESTING:

- A. Comply with requirements of applicable FDOT Section 346 for Class I concrete mix design, sampling and testing, and quality control, and as herein specified.
- B. Design the mix to produce standard weight concrete consisting of portland cement, aggregate, air-entraining admixture and water to produce the following properties.
 - 1. Compressive Strength:
 - a. Sidewalks: 3,000 psi @ 28 days
 - b. Pavement: 4,000 psi @ 28 days
 - c. Curb: 3,000 psi @ 28 days
 - 2. Air Content: 3% to 6%.

C. Concrete placement slump shall not exceed plus or minus 1 inch from approved design slump.

D. Aggregates: Aggregate shall be 3/8" round with the following sieve graduation:

<u>Size</u>	<u>% Passing</u>
1"	100
3/4"	100
3/8"	90-100
#4	40-60
#8	0-10

E. Water: Potable, clean, fresh, free from oil, acid, organic matter or other deleterious substances.

2.02 WELDED WIRE FABRIC: ASTM A185, welded steel wire fabric, 65 ksi, flat sheets only.

2.03 DEFORMED BARS: ASTM A615, carbon steel, Grade 60.

2.04 DETECTABLE WARNING TEXTURE: Prefabricated resin mat with embeds for attachment to wet concrete or predrilled for manufacturer recommended anchor system. Truncated dome surface shall conform to ADAAG 4.29.2. Color shall contrast with concrete surface. Provide federal yellow or brick red as appropriate.

2.05 JOINT MATERIAL: Closed cell expanded polyethylene foam of dimensions shown on Drawing.

2.06 FORM MATERIALS: Unless otherwise indicated, construct formwork with plywood, metal, metal framed plywood faced or other acceptable panel type materials to provide continuous, straight, smooth, exposed surfaces.

PART 3 - EXECUTION

3.01 CONCRETE SIDEWALK & PAVEMENT INSTALLATION:

A. General: Sidewalk, Curb and Pavement shall be installed where indicated on the drawings. Width of surface shall be as called out on the drawings.

1. All sidewalk shall be a minimum of 4-inches thick and unreinforced.
2. All sidewalk at driveways or other areas subject to vehicular traffic shall be 6-inches thick with 6x6, W1.4xW1.4 welded wire fabric reinforcement. The length of 6-inch thick sidewalk shall extend 5' each side of gated entries.

3. All pavement shall be thickness described on drawings.

B. Surface Preparation:

1. Construct stabilized sub-grade within limits of proposed sidewalk or pavement and level with the underside of concrete. Stabilization material and procedures shall be as described in the FDOT Standard Specifications for Road and Bridge Construction.
 - a. Sidewalks: Construct 6" thick stabilized subgrade.
 - b. Pavement and Curb: Construct 12" thick stabilized subgrade.
2. Proof-roll prepared sub-grade surface to check for unstable areas and the need for additional compaction.
3. Remove loose material from the compacted sub-grade surface immediately before placing the concrete.
4. Sub-grade for sidewalks shall be compacted to a minimum of 95 percent of AASHTO T 180 density and achieve an LBR value of 40.
5. Density tests shall be required for every 300 LF of sidewalk installed, at a minimum.
6. Where failing density tests occur, Contractor shall be required to recompact and retest area in both directions from point of failure to insure proper compaction has been achieved.
7. Subgrade preparation and construction for a concrete pavement section shall be subject to the subgrade requirements described in Section 02740 Asphaltic Concrete Paving including all testing requirements.

C. Concrete Placement:

1. Do not place concrete until sub-base and forms have been checked for line and grade. Moisten if required to provide a uniform dampened condition at the time concrete is placed. Do not place concrete around meter boxes or other structures until they are completed to required finish elevation and alignment.
2. Place concrete using methods which prevent segregation of the mix. Consolidate concrete along the face of forms and adjacent to transverse joints with an internal vibrator. Keep vibrator away from joint assemblies, reinforcement, or side forms. Use only square-faced shovels for hand-spreading and consolidation. Consolidate with care to prevent dislocation of reinforcing, dowels and joint devices. Do not use vibrators to push or move concrete in forms or chute.

3. Deposit and spread concrete in a continuous operation between transverse joints as far as possible. If interrupted for more than $\frac{1}{2}$ hour place a construction joint.
4. Joints: Construct expansion, weakened-plane (contraction), and construction joints true-to-line with face perpendicular to surface of the concrete, unless otherwise indicated. Construct transverse joints at right angles to the centerline, unless otherwise indicated. When joining existing structures, place transverse joints to align with previously placed joints, unless otherwise indicated.
 - a. Weakened-Plane Joints: Construct weakened-plane joints for a depth equal to at least 1 $\frac{1}{4}$ -inch thickness or $\frac{1}{4}$ the pavement thickness whichever is greater, by sawing within six to eight hours of placement or formed during finishing operations. Place joints as described on drawings.
 - b. Construction Joints: Place construction joints at the end of all pours and at locations where placement operations are stopped for a period of more than $\frac{1}{2}$ hour, except where such pours terminate at expansion joints. Construction joints shall be standard metal keyway-section form of appropriate height.
 - c. Expansion Joints:
 - 1) Provide premolded joint filler for expansion joints abutting concrete curbs, catch basins, manholes, inlets, structures, walks and other fixed objects, unless otherwise indicated.
 - 2) Locate expansion joints as described on the drawings.
 - 3) Extend joint fillers full-width and depth of joint, and not less than $\frac{1}{2}$ " below finished surface where joint sealer is indicated. If no joint sealer, place top of joint filler flush with finished concrete surface.
 - 4) Furnish joint fillers in one-piece lengths for the full width being placed, wherever possible. Where more than one length is required, lace or clip joint filler sections together. Pieces shorter than 4' shall not be used unless specifically shown as such.
 - 5) Protect the top edge of the joint filler during concrete placement with a metal cap or other temporary material. Remove protection after concrete has been placed on both sides of joint.
 - 6) Fillers and Sealants: Comply with the requirements of these specifications for preparation of joints, materials installation, and performance and as herein specified.

D. Concrete Finishing:

1. After striking-off and consolidating concrete, smooth the surface by screeding and floating. Use hand methods only where mechanical floating is not possible. Adjust the floating to compact the surface and produce a uniform texture.
2. All sidewalk surfaces shall be cross sloped (1.0%) to provide positive drainage towards curbing or grassed area.
3. All pavement surfaces shall be sloped to grades shown on the drawings.
4. After floating, test surface for trueness with a 20' straightedge. Variations exceeding 1/4" for any two points within 10' shall not be acceptable. Distribute concrete as required to remove surface irregularities, and refloat repaired areas to provide a continuous smooth finish.
5. Work edges of slabs, gutters, back top edge of curb, and formed joints with an edging tool, and round 10 1/2" radius, unless otherwise indicated. Eliminate any tool marks on concrete surface.
6. After completion of floating and when excess moisture or surface sheen has disappeared, broom finish surface by drawing a fine-hair broom across concrete surface, perpendicular to the line of traffic.
7. Do not remove forms for 24 hours after concrete has been placed. After form removal, clean up ends of joints and point-up any minor honeycombed areas.

E. Curing: Protect and cure finished concrete paving and walks, as required. Use moist-curing methods for initial curing whenever possible or approved concrete curing compounds.

F. Repairs and Protections:

1. Repair or replace broken or defective concrete as directed by the Engineer.
2. Drill test cores where directed by the Engineer, when necessary to determine magnitude of cracks or defective areas. Fill drilled core holes in satisfactory pavement areas with portland cement concrete bonded to pavement with epoxy resin grout.
3. Protect concrete from damage until acceptance of work. When construction traffic is permitted, maintain pavement as clean as possible by removing surface stains and spillage of materials as they occur.

4. Sweep concrete pavement and wash free of stains and discolorations, dirt and other foreign material just prior to final inspection.

END OF SECTION

SECTION 02921

GRASSING, SEEDING AND SODDING

PART 1 - GENERAL

1.01 RELATED DOCUMENTS: The General Provisions of the Contract, including the General Conditions, Supplementary Conditions and Special Conditions (if any), along with the General Requirements, apply to the work specified in this Section.

1.02 SCOPE: The work specified in this Section consists of the establishing of a stand of grass within the areas disturbed by construction, or otherwise described on the drawings, and maintaining such areas until completion and final acceptance of the project. The methods specified herein are grassing by seeding and grassing by sodding.

1.03 JOB CONDITIONS:

- A. Sodding: It is the intent of this section that all areas disturbed by construction and to remain unimproved by hardscape shall be stabilized with sod.
- B. Seeding: Seeding shall be required by the Engineer for temporary erosion control at his discretion.

1.04 QUALITY CONTROL:

- A. All work in this section shall be in accordance with Section 570-1 through 570-4 of the FDOT Standard Specifications (Latest Edition) for Road and Bridge Construction, except as modified herein.
- B. All grassing operations shall provide a thick and vibrant covering of disturbed areas by final completion of the work. The requirement for adequate growth and coverage shall not be waived due to seasonal influences.
- C. The Contractor shall be responsible for scheduling the work to ensure grass has adequate time to take hold and to adjust mixes (with Engineer's approval) to meet the quality assurance standards required by this Section.

PART 2 - PRODUCTS

2.01 SEED MIXTURE:

- A. Unless other types of seed are called for, seed shall be a mixture of twenty (20) parts of hulled Millet seed and eighty (80) parts of Bermuda seed thoroughly dry mixed immediately before sowing.

- B. Seed which has become wet or moldy shall not be used.
- C. During the period from October 15 to February 15, rye grass seed shall be added and thoroughly dry mixed with the regular mixture at the rate of twenty (20) pounds rye seed per one hundred (100) pounds of regular seed mixture.

2.02 MULCH: The mulch shall consist of Millet, Rye, or Bahia straw. Other types of mulch may be used only when approved by the Engineer.

2.03 SOD:

- A. Types:
 - 1. Generally, sod shall be Common Bermuda Grass or Argentine Bahia in all typical applications and in non-maintained areas.
 - 2. Where proposed sod abuts other established stands of grass the Engineer or his representative may, at his discretion, require the Contractor to match the existing grass for all or a portion of the abutment. No additional compensation shall be allowed for providing other sod types.
- B. The sod shall be taken up in commercial-size rectangles, preferably 12 x 24 inches or larger, or continuous rolls. The sod shall be sufficiently thick to secure a dense stand of live grass. The sod shall be green, live, fresh, and uninjured, at the time of planting. It shall have a soil mat of sufficient thickness adhering firmly to the roots to withstand all necessary handling. It shall be reasonably free of weeds and other grasses. It shall be planted as soon as possible after being dug and shall be shaded and kept moist from the time it is dug until it is planted. The source of the sod may be inspected and approved by the Engineer prior to being cut for use in the work. After approval, the area from which the sod is to be harvested shall be closely mowed and raked as necessary to remove excessive top growth and debris.
- C. Approved devices, such as sod cutters, shall be used for cutting the sod and due care shall be exercised to retain the native root soil intact.

2.04 WATER: The water shall be free of excess and harmful chemicals, acids, and alkalies or any substance which might be harmful to plant growth or obnoxious to traffic. Salt water shall not be used. The Contractor shall make all arrangements for obtaining and transporting water to the job site. All grassing shall be watered until grass is well established at the Contractor's expense.

PART 3 - EXECUTION

3.01 SCHEDULE: Grass shall be in place by substantial completion of the project.

3.02 PREPARATION OF GROUND:

- A. Final grading and clearing shall be completed prior to preparation of ground for grassing. Sod installer is not responsible for final grades, but shall not lay sod on soil that has not been properly prepared or is obviously damaged by erosion or heavy equipment, etc.
- B. The areas to be grassed shall be scarified or loosened to a depth of at least six (6) inches.
- C. All areas shall be smooth and free of large clods, roots, and other materials which may interfere with the work or future mowing and maintenance operations.
- D. No subsequent operations shall be commenced until the Engineer, or designated representative, has approved the condition of prepared areas.
- E. Sod shall not be laid on soil too hot receive new grass. If in question the Contractor shall lightly water the exposed soil and keep soil damp until sod is laid.

3.03 APPLICATION:

- A. Seeding: Where required, seeding shall be done while the soil is loose and moist. The seed shall be scattered uniformly over the area to be grassed by a mechanical hand spreader or other approved type of spreader.
 - 1. Mechanical Spreader:
 - a. Sow $\frac{1}{2}$ of seed in one direction and sow remainder at right angles to the first sowing.
 - b. Seeded areas shall be harrowed, raked, or otherwise worked to ensure seed is covered by soil.
 - c. After seeding firm entire area with appropriate rolling equipment or cultipacker.
- B. Mulch:
 - 1. Immediately after completion of mechanical seeding, dry mulch shall be uniformly applied over the seeded area approximately one inch (1"), loose thickness.

2. The mulch shall then be cut uniformly into the soil so as to produce a loose mulched thickness of two inches (2") and rolled with a cultipacker, traffic roller, or other suitable equipment.
3. After seeding and mulching is completed, the entire area shall be watered so as to provide optimum growth conditions for establishment of the grass.

C. Placement of Sod:

1. Sodding shall be incorporated into the project at the earliest practical time in the life of the Contract but no later than project substantial completion.
2. No sod which has been cut for more than seventy-two (72) hours shall be used unless specifically authorized by the Engineer, or his representative, after his careful inspection thereof.
3. Any sod which is not planted within twenty-four (24) hours after cutting shall be stacked in an approved manner and maintained properly moistened.
4. Sodding shall not be performed when weather and soil conditions are, in the Engineer's opinion, unsuitable for proper results.
5. The sod shall be placed on the prepared surface, with edges in close contact, and shall be firmly and smoothly embedded by rolling with approved roller.
6. Where sodding is used in drainage ditches, the setting of the pieces shall be staggered, such as to avoid a continuous seam along the line of flow. Along the edges of such staggered areas the offsets of individual strips shall not exceed six inches (6"). In order to prevent erosion caused by vertical edges at the outer limits, the outer pieces of sod shall be tamped so as to produce a featheredge effect.
7. On areas where the sod may slide, due to height and slope, the Engineer may direct that the sod be pegged, with pegs driven through the sod blocks into firm earth, at suitable intervals. Any pieces of sod which, after placing, show an appearance of extreme dryness, shall be removed from the work.

- D. Watering of Grassed Areas: The grassed areas shall be watered for the duration of the Contract so as to provide optimum growth conditions for the establishment of the grass. The water used shall be at the Contractor's expense.

- E. All areas of sod installation shall be rolled to remove bumps and ruts.

3.04 MAINTENANCE OF GRASSED AREAS:

- A. The Contractor shall, at his expense, maintain the planted areas in a satisfactory condition until Final Acceptance of the Project. Such maintenance shall include:
 - 1. Watering and mowing of all grassed areas.
 - 2. Filling, leveling, grading, repairing, and regrassing of any washed or eroded areas as may be necessary.

3.05 ACCEPTANCE:

- A. All turf must be established upon final acceptance of the work. Established shall mean:
 - 1. Grass is rooted (leaves break before plant separates from soil).
 - 2. No bare spots greater than 1 SF.
 - 3. No deformation of grass due to Contractor equipment.
 - 4. No obviously diseased, infested, or dead zones.
 - 5. No exposed sod netting.
 - 6. No noxious weeds.
- B. Areas in which the establishment of the grass is not achieved, due to disease, infestations, bare spots or dead zones, shall be removed and replaced. All other areas shall be repaired in place prior to final payment.
- C. If a planted area must be replanted, replacement shall be at the Contractor's expense.

- 3.06 CLEAN-UP:** All excess materials associated with this activity shall be removed from the site. Site shall be left in a neat and tidy condition, free from trash and debris.

END OF SECTION

SECTION 02960

ASPHALT AND CONCRETE REPLACEMENT

PART 1 - GENERAL

- 1.01 REFERENCES:** Section numbers and Article numbers specified are those contained in the latest edition of the "Florida Department of Transportation Standard Specifications for Road and Bridge Construction".
- 1.02 RESTORATION:** All surfaces, as described shall be completed as soon as is reasonable. In no case shall the pavement replacement operation be unfinished for more than 45 days after backfilling unless otherwise directed by the Engineer. Replace all damaged or cut pavement due to Contractor's operations; restore all pavement outside of trench area that is damaged by the Contractor at no expense to the Owner.
- 1.03 JOB CONDITIONS:**
- A. Weather Limitations: Apply prime and tack coats only when ambient temperature is above 50 degrees F and when temperature has not been below 35 degrees F for 12 hours immediately prior to application. Do not apply when base contains an excess of moisture.
 - B. Construct asphalt concrete surface only when atmospheric temperature is above 40 degrees F and when base is dry. Base course may be placed when air temperature is above 30 degrees F and rising.
- 1.04 GUARANTEE:** All restored areas within the public right-of-way shall be guaranteed for one year. In the event of settlement of paved areas more than 1/4 in. below the undisturbed adjacent permanent pavement, the Contractor shall make the necessary repairs to restore the pavement level within ten calendar days after notification by the Owner. The cost of such repairs shall be paid by the Contractor.
- 1.05 SUBMITTALS:** The Contractor shall submit the mix design for the asphaltic concrete and material specifications sheets for the tack coat and pavement markings. Upon completion of construction, the Contractor shall provide the results of core tests taken at 500' intervals.

PART 2 - PRODUCTS

- 2.01 SUBGRADE:** Stabilized subgrade, as required, shall comply with Section 160, Stabilizing, of the FDOT Standard Specifications for Type "B" stabilization.

- 2.02 BASE COURSE:** Limerock Base - Material shall be as specified in Section 911, Limerock Material for Base and Stabilized Base, of the Standard FDOT Specifications.
- 2.03 PRIMING:** Prime coat shall be emulsified asphalt of a grade applicable to the base used meeting the requirements of Section 916, Bituminous Material of the FDOT Standard Specifications. Cover material for prime coat shall be hot asphalt coated sand meeting the requirements of Section 902, Fine Aggregate of the FDOT Standard Specifications.
- 2.04 TACK COAT:** Tack coat shall be emulsified asphalt, Grade RA-500, complying with DOT Specifications, Section 916-2.
- 2.05 ASPHALTIC CONCRETE PAVEMENT:** Asphalt pavement shall be Type SP 9.5. Materials shall conform to the following: Section 334, Superpave Asphalt Concrete; Section 901, Coarse Aggregate; Section 902, Fine Aggregate; Section 916, Bituminous Material; and Section 917, Mineral Filler of the FDOT Standard Specifications.
- 2.06 PAVEMENT PAINTS:** Marking and striping shall utilize traffic paint meeting or exceeding requirements as specified below.
- A. Thermoplastic Pavement Marking materials shall comply with the following: Section 971-1, General Requirements; Section 971-5, Thermoplastic Materials for Traffic Stripes of the FDOT Standard Specifications.
 - B. Painted Centerline and Edge Striping materials shall comply with the following: Section 971-1, General Requirements; Section 971-9, Two Reactive Component Materials For Traffic Stripes And Marking, or Section 971-4, Fast Dry Solvent Traffic Paint; and Section 971-2, Glass Spheres of the FDOT Standard Specifications.
- 2.07 ROCK, GRAVEL, SHELL AND MARL REPLACEMENT:** Roads, streets or driveways constructed of rock, gravel, shell or marl shall be restored to a condition equal to or better than prior to construction.
- 2.08 CONCRETE MIX, DESIGN AND TESTING:**
- A. Comply with requirements of applicable FDOT Section 345 for concrete mix design, sampling and testing, and quality control, and as herein specified.
 - B. Concrete shall be rated for 4,000 psi, at a minimum.

PART 3 - EXECUTION

3.01 PAVEMENT REPLACEMENT:

- A. Replace pavement in accordance with the details shown on drawings. The thickness of the new base and pavement shall be as shown on the details but shall also be at least as thick as the existing road in the case of heavier existing conditions.
- B. Bearing: Bearing values shall be determined by the limerock bearing ratio method in accordance with FDOT Specification FM-5-515 "Florida Method of Test for Limerock Bearing Ratio."
- C. Field Quality Control: All work shall meet the requirements of the FDOT.
- D. All asphalt or concrete which is removed and is to be replaced, shall be removed from the project site and shall be properly disposed of by the Contractor.

3.02 EDGE TRIMMING: Trim edges of the existing pavement with a concrete saw or other approved method to provide a clean, straight edge prior to removal and replacement of the existing pavement.

3.03 INSTALLATION:

- A. Subgrade: Constructed stabilized subgrade shall be compacted to a depth of 12 inches and a limerock bearing ratio of 40. The subgrade shall be constructed as specified in Section 160, Stabilizing of FDOT Standard Specifications.
- B. Limerock Base Course: Thickness shall be as shown on the drawings (6 inches minimum) and shall be constructed as specified in Section 200, Rock Base of the FDOT Standard Specifications.
- C. Priming and Tacking: Prime coat and tack coat shall be applied in accordance with Section 300, Prime and Tack Coats For Base Courses of the FDOT Standard Specifications, applied at the average rate of 0.10 gallons per square yard. Cover material for prime coat shall be applied with approved distributor. Application of the tack coat shall follow the application of the prime coat and be immediately prior to the placing of the surface course. The application rate for the tack coat shall be at the average rate of 0.08 gallons per square yard. The bituminous quantities are considered as average and are subject to some variation at the discretion of the Engineer and at no additional cost.

- D. Asphaltic Concrete Pavement: Thickness and Type shall be as shown on the drawings and shall be constructed as specified in Section 320, Hot Bituminous Mixtures-Plant, Methods, and Equipment; Section 330, Hot Bituminous Mixtures. General Construction Requirements and Acceptance Procedures; and Section 334, Superpave Asphaltic Concrete of the FDOT Standard Specifications.
- E. Pavement Paints: Repaint, stripe or otherwise mark the pavement to match the pre-existing conditions. Pavement marking and striping shall be applied in accordance with Section 709, Traffic Stripes and Markings-Two Reactive Components; Section 710, Painted Pavement Markings; and Section 711, Thermoplastic Traffic Stripes and Markings of the FDOT Standard Specifications.

3.04 TEMPORARY PAVEMENT: Temporary pavement shall be installed as follows:

- A. Residential Streets: In residential streets the Contractor shall, after completion and acceptance of the backfill, construct a base course in accordance with the typical section meeting the requirements of the DOT Specifications, Section 200. The top of the base course shall be constructed flush with the adjacent asphalt surface. Upon completion of the base construction, it shall be primed and sanded in accordance with FDOT Specification, Section 300. Prime shall be applied at the rate of 0.50 gallon per square yard or as directed by the Engineer.
- B. Arterial Streets: In arterial streets, the Contractor shall after completion and acceptance of the backfill construct a base course in accordance with the typical section. Upon completion of the base course, the Contractor shall construct an asphaltic concrete surface course in accordance with FDOT Specification, Section 334. The top of the surface course shall be constructed flush with the adjacent asphalt surface. Thickness of the replaced course shall match the thickness of the existing surface course.

3.05 ADJUSTMENT OF UTILITIES LOCATED WITHIN LIMITS OF ROADWAY: It shall be the Contractor's responsibility to adjust the elevation of utilities (i.e., manhole covers, valve box covers, etc., whether new or existing) as necessary in order to make them flush with any new pavement installed as a result of Contractor's operations. Method for adjusting utilities shall be as approved by the Engineer. Adjusted utilities must be flush within 1/4" of pavement. Cost for such utility adjustment shall be borne by the Contractor.

3.06 TRAFFIC CONTROL AND SIGNALIZATION DEVICES: Any traffic control and/or signalization devices disturbed as a result of Contractor's operations (e.g., open cut or overlay of roads) shall be repaired by the Contractor subject to the requirements of the governing authority (i.e., FDOT, County, City, etc.). Such devices may include, but are not limited to, traffic loops, traffic signs, signal boxes, traffic signals, etc. Cost for all repairs to traffic and signalization devices shall be borne by the Contractor.

3.07 SIDEWALK, CONCRETE DRIVEWAY, CONCRETE DITCH PAVEMENT, CURB AND COMBINED GUTTER REMOVAL AND REPLACEMENT:

A. Surface Preparation:

1. Remove loose material from the compacted sub-base surface immediately before placing the concrete.
2. Proof-roll prepared subbase surface to check for unstable areas and the need for additional compaction. Do not begin paving work until such conditions have been corrected and are ready to receive paving. Comply with requirements of FDOT Section 230.

B. Concrete Placement:

1. Do not place concrete until subbase and forms have been checked for line and grade. Moisten if required to provide a uniform dampened condition at the time concrete is placed. Do not place concrete around manholes or other structures until they are completed to required finish elevation and alignment.
2. Place concrete using methods which prevent segregation of the mix. Consolidate concrete along the face of forms and adjacent to transverse joints with an internal vibrator. Keep vibrator away from joint assemblies, reinforcement, or side forms. Use only square-faced shovels for hand-spreading and consolidation. Consolidate with care to prevent dislocation of reinforcing, dowels and joint devices. Do not use vibrators to push or move concrete in forms or chute.
3. Deposit and spread concrete in a continuous operation between transverse joints as far as possible. If interrupted for more than 1/2 hour, place a construction joint.
4. Curbs and Gutters: Automatic machine may be used for curb and gutter placement at Contractor's option. If machine placement is to be used, submit revised mix design and laboratory test results which meet or exceed the minimum herein specified. Machine placement must produce curbs and gutters to the required cross-section, lines, grades, finish and jointing as specified for formed concrete. If results are not acceptable, remove and replace with formed concrete as specified.
5. Joints: Construct expansion, weakened-plane (contraction), and construction joints true-to-line with face perpendicular to surface of the concrete, unless otherwise indicated. Construct transverse joints at right angles to the centerline, unless otherwise indicated. When

joining existing structures, place transverse joints to align with previously placed joints, unless otherwise indicated.

- a. Weakened-Plane Joints: Provide weakened-plane (contraction) joints sectioning concrete into areas. Construct weakened-plane joints for a depth equal to at least 1/4 concrete thickness, by sawing within 24 hours of placement or formed during finishing operations. Place joints at intervals not to exceed 10' if not otherwise indicated.
- b. Construction Joints: Place construction joints at the end of all pours and at locations where placement operations are stopped for a period of more than 1/2 hour, except where such pours terminate at expansion joints. Construction joints shall be as shown or, if not shown, use standard metal keyway-section form of appropriate height.
- c. Expansion Joints:
 - 1) Provide premolded joint filler for expansion joints abutting concrete curbs, catch basin, manholes, inlets, structures, walks and other fixed objects, unless otherwise indicated.
 - 2) Locate expansion joints at 20' o.c. for concrete walks unless otherwise indicated.
 - 3) Extend joint fillers full-width and depth of joint, and not less than 1/2" below finished surface where joint sealer is indicated. If no joint sealer, place top of joint filler flush with finished concrete surface.
 - 4) Furnish joint fillers in one-piece lengths for the full width being placed, wherever possible. Where more than one length is required, lace or clip joint filler sections together. Pieces shorter than 4" shall not be used unless specifically shown as such.
 - 5) Protect the top edge of the joint filler during concrete placement with a metal cap or other temporary material. Remove protection after concrete has been placed on both sides of joint.
 - 6) Fillers and Sealants: Comply with the requirements of these specifications for preparation of joints, materials installations, and performance and as herein specified.

C. Concrete Finishing:

1. After striking-off and consolidating concrete, smooth the surface by screeding and floating. Use hand methods only where mechanical floating is not possible. Adjust the floating to compact the surface and produce a uniform texture.

2. After floating, test surface for trueness with a 20' straightedge. Variations exceeding 1/3" for any two points within 10' shall not be acceptable. Distribute concrete as required to remove surface irregularities and refloat repaired areas to provide a continuous smooth finish.
 3. Work edges of slabs, gutters, back top edge of curb, and formed joints with an edging tool, and round 10-1/2" radius, unless otherwise indicated. Eliminate any tool marks on concrete surface.
 4. After completion of floating and when excess moisture or surface sheen has disappeared broom finish sidewalks by drawing a fine-hair broom across concrete surface, perpendicular to a line of pedestrian traffic.
 5. Do not remove forms for 24 hours after concrete has been placed. After form removal, clean ends of joints, and point-up any minor honeycombed areas.
- D. Curing: Protect and cure finished concrete paving and walks, complying with Section 520-8 (Concrete Gutter, Curb & Gutter) and Section 353-8 (Concrete Slabs) of the FDOT Standard Specifications. Use moist-curing methods for initial curing whenever possible of approved concrete curing compounds.
- E. Repairs and Protections:
1. Repair or replace broken or defective concrete as directed by the Engineer.
 2. Drill test cores where directed by the Engineer, when necessary to determine magnitude of cracks or defective areas. Fill drilled core holes in satisfactory pavement areas with portland cement concrete bonded to pavement with epoxy resin grout.
 3. Protect concrete from damage until acceptance of work. When construction traffic is permitted, maintain pavement as clean as possible by removing surface stains and spillage of materials as they occur.
 4. Sweep concrete pavement and wash free of stains and discolorations, dirt and other foreign material just prior to final inspection.

END OF SECTION

SECTION 03300

CAST-IN-PLACE CONCRETE

PART 1 - GENERAL

1.01 DESCRIPTION OF WORK: The extent of concrete work required is as shown in the drawings.

1.02 QUALITY ASSURANCE:

A. Codes and Standards:

1. Comply with the provisions of the following codes, specifications and standards, except where more stringent requirements are shown or specified.
 - a. ACI 301, Specifications for Structural Concrete.
 - b. ACI 304, Guide for Measuring, Mixing, Transporting and Placing Concrete.
 - c. ACI 305, Guide to Hot Weather Concreting.
 - d. ACI 306, Guide to Cold Weather Concreting.
 - e. ACI 311, Guide for Concrete Inspection.
 - f. ACI 318, Building Code Requirements for Structural Concrete and Commentary.
 - g. ACI 347, Guide to Formwork for Concrete.
 - h. ACI 350R-01, Code Requirements for Environmental Engineering Concrete Structures.
 - i. Concrete Reinforcing Steel Institute, (CRSI), Manual of Standard Practice.

B. Workmanship: The Contractor is responsible for correction of concrete work which does not conform to the specified requirements, including strength, tolerances and finishes. Correct deficient concrete as directed by the Engineer.

1.03 SUBMITTALS:

A. Shop Drawings, Concrete Reinforcement: Submit shop drawings for fabrication, bending and placement of concrete reinforcement. Comply with the ACI 315 "Manual of Standard Practice for Detailing Reinforced Concrete Structures" showing bar schedules, stirrup spacing, diagrams of bent bars, arrangements of concrete reinforcement. Include special reinforcement required at openings through concrete structures.

- B. Laboratory Test Reports, Concrete Work: Submit copies of laboratory test reports for concrete compressive cylinder test.

PART 2 - PRODUCTS

2.01 REINFORCING MATERIALS:

- A. Reinforcing Bar: ASTM A615 and as follows. Provide Grade 60 except where other shown for Rebar Nos. 3 to 18.
- B. Welded Wire Fabric: ASTM A1064, carbon-steel wire and welded wire reinforcement, plain and deformed for concrete.
- C. Supports for Reinforcement: Provide supports for reinforcement including bolsters, chairs, spacers and other devices for spacing, supporting and fastening reinforcing bars and welded wire fabric in place. Use wire bar type support complying with CRSI recommendations unless otherwise indicated. Wood, brick and other devices will not be acceptable. For slabs-on-grade use supports with sand plates or horizontal runner where wetted base materials will not adequately support chair legs.

2.02 CONCRETE MATERIALS:

- A. Concrete: Air entrained ready mix concrete, ASTM C94.
- B. Cement: ASTM C150, Type II.
- C. Aggregates: ASTM C33
 - 1. Fine Aggregate: Fineness modulus, 2.10 to 2.50.
 - 2. Coarse Aggregate: Size Number 57.
- D. Water: Potable

2.03 RELATED MATERIALS:

- A. Expansion Joint Material:
 - 1. Preformed, closed cell PVC or polyurethane foam.
 - a. Acceptable: Rescor, W.R. Meadows, Inc.; Rodofoam, Grade 327, W.R. Grace & Co., or equal.
- B. Moisture Barrier: Provide moisture barrier cover over prepared base material where shown on drawings. Use only materials which are resistant to deterioration and decay from soil when tested in accordance with ASTM-E154. Polyethylene sheet not less than 10 mils thick. Seams to overlap 1'-0" min. Turn polyethylene up 3" at penetrations and tape seal.

- C. Moisture-retaining Cover: One of the following, complying with ASTM C171:
 1. Waterproof paper.
 2. Polyethylene film.
 3. Polyethylene-coated burlap.
- D. Membrane-forming Curing Compound: ASTM C309, Type 1, colored unless other type is acceptable to the Engineer.
- E. Form Release Agent: If a form release agent is used, it shall not be a petroleum based material. The selected material shall be compatible with the waterproofing material which is being used at the chlorine contact chamber which is specified in Section 09910.

2.04 PROPORTIONING AND DESIGN OF MIXES:

- A. Prepare design mixes for each type and strength of concrete in accordance with applicable provisions of ASTM-C94.
- B. Design mixes to provide normal weight concrete with the following properties:
 1. Slump: Unless indicated otherwise, 4½ inch + 1 inch.
 2. Air Content: 2 percent ± 1 percent.
 3. Mix Proportioning:

Class	Strength (f'c)	Cement Content (Minimum)	Water/Cement Ratio (Maximum)
A	4,000 psi	565 lbs. (6 bags)	4-3/4 gals/bag

*Compressive strength of laboratory cured cylinder at 28 days.

- C. Adjustment of Concrete Mixes: Mix design adjustments may be requested by the Contractor when characteristics of materials, job conditions, weather, test results or other circumstances warrant at no additional cost to the Owner. Laboratory test data for revised mix design and strength results must be submitted to and approved by the Engineer before using in the work.

2.05 CONCRETE MIXING:

- A. Provide a batch ticket for each batch discharged and used in the work, indicating the project identification name and number, date, mix type, mix time, quantity and amount of water introduced.
- B. Ready-Mix Concrete: Comply with the requirements of ASTM C94 and as herein specified.

2.06 SCHEDULE:

Class A: All concrete unless specified or indicated otherwise.

PART 3 - EXECUTION

3.01 FORMS:

- A. Construct forms complying with ACI 347, to sizes, shapes, lines and dimensions shown and to obtain accurate alignment, location, grades, level and plumb work in finished structures. Provide for openings, offsets, sinkages, keyways, recesses, moldings, rustications, reglets, chamfers, blocking, screeds, bulkheads, anchorages and inserts, and other features required to work. Use selected materials to obtain required finishes. Solidly butt joints and provide back-up joints to prevent leakage of cement paste.
- B. Chamfer exposed corners and edges as shown using wood, metal, PVC or rubber chamfer fabricated to produce uniform smooth lines and tight edge joints. Chamfer to be 3/4" unless otherwise noted.
- C. Provisions for Other Trades: Provide openings in concrete formwork to accommodate work of other trades. Determine size and location of openings, recesses and chases from trades providing such items. Accurately place and securely support items built into forms. Insert sleeves as required.
- D. Cleaning and Tightening: Thoroughly clean forms and adjacent surfaces to receive concrete. Remove chips, wood, sawdust, dirt or other debris just before concrete is placed. Retighten forms after concrete placement if required to eliminate mortar leaks.

3.02 PLACING REINFORCEMENT:

- A. Comply with the specified codes and standards and Concrete Reinforcing Steel Institute's recommended practice for "Placing Reinforcing Bar," for details and methods of reinforcement placement and supports, and as herein specified.
- B. Clean reinforcement of loose rust and mill scale, earth, ice and other materials which reduce or destroy bond with concrete.
- C. Accurately position, support and secure reinforcement against displacement by formwork, constructions or concrete placement operations. Locate and support reinforcing by metal chairs, runners, bolsters, spacers and hangers as specified or required.

- D. Place reinforcement to obtain at least the minimum coverages required for concrete protection. Arrange space and securely tie bars and bar supports to hold reinforcement in position during concrete placement operations. Set wire ties so ends are directed into concrete not toward exposed concrete surfaces.
- E. Install welded wire fabric in as long lengths as practicable. Lap adjoining at least one full mesh and lace splices with wire. Offset end laps in adjacent widths to prevent continuous laps in either directions.
- F. Dovetail anchor slots shall be positioned accurately and supported against displacement. Provide in precast or poured in place concrete where masonry units meet concrete wall or column.

3.03 JOINTS:

- A. Construction Joints: Locate and install construction joints, which are not shown on the drawings, so as not to impair the strength and appearance of the structure as acceptable to the Engineer.
- B. Provide keyways at least 1½" deep by 1/3 member thickness in all construction joints in walls, slabs and between walls and footings or as otherwise detailed on drawings.
- C. Place construction joints perpendicular to the main reinforcement. Continue all reinforcement across construction joints.

3.04 CONCRETE PLACEMENT:

- A. General: Comply with ACI 304 and as herein specified.
 - 1. Deposit concrete continuously or in layers of such thickness that no concrete will be placed on concrete which has hardened sufficiently to cause the formation of seams or planes of weakness within the section. If a section cannot be placed continuously, provide construction joints as herein specified. Deposit concrete as nearly as practicable to its final location to avoid segregation due to rehandling or flowing.
 - 2. Placing Concrete in Forms: Deposit concrete in forms in horizontal layers no deeper than 24" and in a manner to avoid inclined construction joints. Where placement consists of several layers, place each layer while preceding layer is still plastic to avoid cold joints.
 - 3. Consolidate placed concrete by mechanical vibrating equipment supplemented by hand-spading, rodding or tamping. Use equipment and procedures for consolidation of concrete in accordance with the

recommended practices for ACI 309 to suit the type of concrete and project conditions.

4. Do not use vibrators to transport concrete inside of forms. Insert and withdraw vibrators vertically at uniformly spaced locations not farther than the visible effectiveness of the machine. Place vibrators to rapidly penetrate the placed layer of concrete and at least 6" into the preceding layer. Do not insert vibrators into lower layers of concrete that have begun to set. At each insertion limit the duration of vibration to the time necessary to consolidate the concrete and complete embedment of reinforcement and other embedded items without causing segregation of the mix.
5. Chuting: Provide equipment of proper size and design to insure continuous flow of concrete in chute. Minimum slope of 1 to 3 and maximum of 1 to 2 horizontal. Provide spout and baffles at discharge and to prevent segregation of concrete. Do not allow free fall in excess of 5 ft. Keep lower end of spout as close as possible to surface.

B. Cold Weather Placing:

1. Protect concrete work from physical damage or reduced strength which could be caused by frost, freezing actions or low temperatures in compliance with ACI 306 and as herein specified.
2. When air temperature has fallen to or is expected to fall below 40°F, uniformly heat all water and aggregates before mixing as required to obtain a concrete mixture temperature of not less than 50°F and not more than 80°F at point of placement.
3. Do not use frozen materials or materials containing ice or snow.
4. Do not place concrete on frozen subgrade or on subgrade containing frozen materials.
5. Do not use calcium chloride, salt and other materials containing antifreeze agents or chemical accelerators unless otherwise accepted in mix designs.

C. Hot Weather Placing:

1. When hot weather conditions exist that would seriously impair the quality and strength of concrete, place concrete in compliance with ACI 305 and as herein specified.
2. Cool ingredients before mixing to maintain concrete temperature at time of placement below 90°F for Type I cement and below 95°F for

Type II cement. Mixing water may be chilled or chopped ice may be used to control the concrete temperature provided the water equivalent of the ice is calculated to the total amount of mixing.

3. Cover reinforcing steel with water soaked burlap if it becomes too hot so that the steel temperature will not exceed the ambient air temperature immediately before embedment in concrete.

3.05 FINISH OF FORMED SURFACES:

- A. Rough Form Finish: For formed concrete surfaces not exposed to view in the finish work or by other construction unless otherwise indicated. This is the concrete surface having the texture imparted by the form facing material used with tie holes and defective areas repaired and patched and fins and other projections exceeding 1/4" in height rubbed down or chipped off.
- B. Smooth Form Finish: For formed concrete surfaces exposed to view, or that are to be covered with a coating materials applied directly to the concrete, or a covering material applied directly to the concrete, or a covering material bonded to the concrete, such as waterproofing, dampproofing, painting or other similar system. This is the as-cast concrete surface as obtained with selected form facing material, arranged orderly and symmetrically with a minimum of seams. Repair and patch defective areas with all fins or other projections completely removed and smoothed.
- C. Smooth Rubbed Finish: Provide smooth rubbed finish to exposed concrete surfaces, which have received smooth form finish treatment, no later than the day after form removal. Moisten concrete surfaces and rub with carborundum brick or other abrasive until a uniform color and texture is produced. Do not apply cement grout other than that created by the rubbing process.

3.06 MONOLITHIC SLAB FINISHES:

- A. Float Finish: Apply float finish to monolithic slab surfaces that are to receive trowel finish and other finishes as hereinafter specified, and slab surfaces which are to be covered with membrane or elastic waterproofing, membrane or elastic roofing, and as otherwise shown on drawings or in schedules.
- B. After screeding and consolidating concrete slabs, do not work surface until ready for floating. Begin floating when surface water has disappeared or when concrete has stiffened sufficiently to permit operation of power-driven floats or by hand-floating if area is small or inaccessible to power units. Check and level surface plane to a tolerance not exceeding 1/4" in 10' when tested with a 10' straightedge. Immediately after leveling, refloat surface to a uniform, smooth, granular texture.

- C. Trowel Finish: Apply trowel finish to monolithic slab surfaces that are to be exposed to view, unless otherwise shown, and slab surfaces that are to be covered with resilient flooring, paint or other thin film finish coating system.
- D. Non-slip Broom Finish: Apply non-slip broom finish to exterior concrete platforms, steps and ramps, and elsewhere as shown on drawings or in schedules. Immediately after trowel finishing, slightly roughen concrete surface by brooming with fiber bristle broom perpendicular to main traffic route. Coordinate required final finish with the Engineer before application.

3.07 CONCRETE CURING AND PROTECTION:

- A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperature and maintain without drying at a relatively constant temperature for a period of time necessary for hydration of cement and proper hardening.
 - 1. Start initial curing as soon as free water has disappearing from concrete surface after placing and finishing. Weather permitting, keep continuously moist for not less than 6 days.
 - 2. Begin final curing procedures immediately following initial curing and before concrete has dried. Continue final curing for at least 7 days and in accordance with ACI 301 procedures. Avoid rapid drying at end of final curing period.
- B. Curing Methods: Perform curing of concrete by moist curing or by moisture-retaining cover curing or by membrane curing, or by combinations thereof.

3.08 REMOVAL OF FORMS:

- A. Formwork not supporting weight of concrete, such as sides of beams, walls, columns, and similar parts of the work, may be removed after cumulatively curing not less than 50°F for 24 hours after placing concrete, provide concrete is sufficiently hard to not be damaged by form removal operations, and provided curing and protection operations are maintained.
- B. Formwork supporting weight of concrete, such as beams, soffits, joints, slabs and other structural elements, may not be removed in less than 14 days and until concrete has attained design minimum compressive strength at 28 days. Determine potential compressive strength of in-place concrete location or members. Reshore per above for minimum 14 days.

3.09 CONCRETE SURFACE REPAIRS:

- A. Patching Defective Areas: Repair and patch defective areas with cement mortar immediately after removal of forms but only when acceptable to the

Engineer. A latex bonding agent is to be used on all repair surfaces. Use in accordance with manufacturer's recommendations.

- B. Cut out honeycomb, rock pockets, voids over 1/4" in any dimension, and holes left by tie rods and bolts, down to solid concrete but, in no case to a depth of less than 1". Make edges of cuts perpendicular to the concrete surface. Before placing cement mortar or proprietary patching compound, thoroughly clean. Dampen with water and brush-coat the area to be patched with approved proprietary bonding agent.
- C. For exposed-to-view surfaces, blend white Portland cement and standard Portland cement so that when dry patching mortar will match color of surrounding. Provide test areas at inconspicuous location to verify mixture and color match before proceeding with patching. Compact mortar in place and strike-off slightly higher than surrounding surface.
- D. Repair of Unformed Surfaces: Test unformed surfaces, such as monolithic slabs, for smoothness and to verify surface plane to tolerances specified for each surface and finish. Correct low and high areas as herein specified. Test unformed surfaces sloped to drain for trueness of slope, in addition to smoothness, using a template having required slope.
 - 1. Repair finished unformed surfaces that contain defects which adversely affect durability of concrete. Surface defects, as such, include crazing, cracks in excess of 0.01" wide or which penetrate to reinforcement or completely through non-reinforced sections regardless of width, spalling, pop-outs, honeycomb, rock pockets and other objectionable conditions.
 - 2. Correct low areas in unformed surfaces during, or immediately after completion of surface finishing operations by cutting out low areas and replacing with fresh concrete. Finish repaired areas to blend into adjacent concrete. Proprietary patching compounds may be used when approved by the Engineer.
- E. Repair defective areas, except random cracks and single holes not exceeding 1" diameter, by cutting out and replacing with fresh concrete. Remove defective areas to sound concrete with clean, square cuts and expose reinforcing steel with at least 3/4" clearance all around. Dampen concrete surfaces in contact with patching concrete and brush with concrete bonding agent. Mix patching concrete of same materials to provide concrete of the same type or class as original concrete. Place, compact and finish to blend with adjacent finished concrete. Cure in the same manner as adjacent concrete.
- F. Repair isolated random cracks and single holes not over 1" in diameter by dry-pack method. Groove top of cracks and cut-out holes to sound concrete and clean of dust, dirt and loose particles. Dampen cleaned concrete

surfaces and brush with concrete bonding agent. Mix dry-pack, consisting of one part Portland cement to 2½ parts fine aggregate passing a No. 16 mesh sieve, using only enough water as required for handling and placing. Compact dry-pack mixture in place and finish to match adjacent concrete. Keep patched areas continuously moist for not less than 72 hours.

- G. Use epoxy-based mortar for structural repairs where directed by the Engineer.
 - 1. Repair methods not specified above may be used only with specific approval of the Engineer.

3.10 QUALITY CONTROL TESTING DURING CONSTRUCTION:

- A. Notify testing laboratory of time and place of each concrete placement requiring testing.
 - 1. Allow adequate time between notification and placement for testing laboratory personnel to arrive at site approximately 3 hours in advance of concrete placement.
- B. Sampling and testing for quality control during the placement of concrete may include the following as directed by the Engineer:
 - 1. Sampling Fresh Concrete: ASTM C172, except modified for slump to comply with ASTM C94.
 - 2. Slump: ASTM C143; one test for each concrete load at point of discharge; and one test for each set of compressive strength test specimens.
 - 3. Air Content: ASTM C231 pressure for normal weight concrete; one for each set of compressive strength test specimens.
 - 4. Concrete Temperature: Test hourly when air temperature is 40°F and below, and when 80°F to 90°F; and each time a set of compression test specimens are made. When air temperature is above 90°F, test temperature of mix on arrival and retest in chute every 15 minutes. Do not place concrete when mix is above 95°F.
 - 5. Compression Test Specimen: ASTM C31; one set of 3 standard cylinders for each compressive strength test unless otherwise directed. Mold and store cylinders for laboratory cured test specimens except when field-cure test specimens are required. 1 specimen tested at 7 days; 1 specimen tested at 28 days; and one specimen retained in reserve for later testing.

- C. Test results will be reported in writing to the Engineer, the Owner and the Contractor on the same day that tests are made. Reports of compressive strength tests shall contain the project identification name and number, date of concrete placement, name of concrete testing service, concrete type and class, location of concrete batch in the structure, design compressive strength at 28 days, concrete mix proportions and materials, breaking strength and type of break for both 7-day test and 28-day test.

- D. Additional Tests: The testing service will make additional test of in-place concrete when test results indicate the specified concrete strengths and other characteristics have not been attained in the structure as directed by the Engineer. The testing service may conduct tests to determine adequacy of concrete by cored cylinders complying with ASTM C42 or by other methods as directed. Contractor shall pay for such tests conducted, and any other additional testing as may be required, when unacceptable concrete is to be verified.

END OF SECTION

SECTION 06100
ROUGH CARPENTRY

PART 1 - GENERAL

1.01 QUALITY ASSURANCE:

- A. Factory-mark each piece of lumber with type, grade, mill, and grading agency identification.
- B. Comply with applicable sections of American Lumber Standard Committee (ALSC), American Society of Testing & Materials (ASTM), American Wood Preservers' Association (AWPA), National Timber Piling Council, Inc. (NTPC), AWPI and APA.

1.02 REFERENCES:

- A. 2020 Florida Building Code (FBC), with Revisions.
- B. Minimum Design Loads for Buildings & Other Structures (ASCE 7-16).
- C. American Wood Council (AWC): National Design Specification.

1.03 SUBMITTALS:

- A. Truss System Shop Drawings:
 - 1. Base truss shop drawings on Roof Framing Plans and on truss loads shown on Drawings and on requirements of Contract Documents. Determine member forces from exact analysis method as defined by TPI.
 - 2. Include following information on submitted truss system shop drawings:
 - a. Allowable loads in lbs per effective nail or lbs per sq inch for lumber and plates used.
 - b. Stress reduction factors used for plates and lumber.
 - c. Top and bottom chord design loads in psf.
 - d. Size, thickness, and exact location by dimension of plates.
 - e. Lumber species and grades used.

- f. Combined stress ratio for each member.
 - g. Location of temporary and permanent web bracing and chord bracing.
 - h. Raised seal and original signature of Florida Registered Truss Design Engineer responsible for preparation of shop drawings.
 - i. Name and trademark of Plate Manufacturer if metal plates are used.
 - j. Name and address of Truss Fabricator and Project name and address.
 - k. Provide details of all truss to truss connections and the mechanical anchoring system required.
 - l. Provide truss layout plan which locates all trusses within the truss system.
- B. Provide manufacturers product data for all posts, beams and headers. Include lumber species, grade, allowable stresses, load tables, installation requirements, and instructions as applicable.
- C. Provide chemical used and saturation rate for all pressure treated material.
- D. Provide load rating, fastener requirements, material, and finishes of all connectors, tie downs, and anchors.

PART 2 - PRODUCTS

2.01 MATERIALS:

- A. Dimension Lumber:
- 1. Meet requirements of PS 20-70 and National Grading Rules for softwood dimension lumber.
 - 2. Bear stamp of WWPA, SPIB, or other association recognized by American Lumber Standards Committee identifying species of lumber by grade mark or by Certificate of Inspection.
 - 3. Lumber 2 inches or less in nominal thickness shall not exceed 19 percent in moisture content at time of fabrication and installation and be stamped 'S-DRY', 'K-D', or 'MC15'.

4. Lumber shall be S4S.
 5. Pressure Treated Plates / Sills:
 - a. 2x4: Standard and better Douglas Fir, Southern Pine, HemFir.
 - b. 2x6 and Wider: No. 2 Douglas Fir, Southern Pine, HemFir.
 - c. Permanently identify treated lumber with name of inspection agency, preservative used, name of treating plant, retention in lbs/cu ft, and suitable end use.
 - d. Treat pressure treated material in accordance with American Wood Preservers Association (AWPA) requirements.
- B. Anchorage and Fastening Materials: If not otherwise shown on the drawings, select proper type, size, material and finish for each application. Comply with the following:
1. Nails and Staples: FS FF-N-105.
 2. Tacks: FS FF-N-103.
 3. Wood Screws: FS FF-S-111.
 4. Bolts and Studs: FS FF-B-575.
 5. Washers: FS FF-W-92.
 6. Lags Screws and Lag Bolts: FS FF-B-561.
 7. Masonry Anchoring Devices for expansion shields, nails, and drive screws, comply with FS FF-S-235.
 8. Toggle Bolts: FS FF-B-588.
 9. Bar or Strap Anchors: ASTM A575 carbon steel bars.
- C. Unless otherwise specified, all connectors, tie downs, fasteners, and anchors shall be hot dip galvanized to a G90 rating.
- D. All fasteners to be used in Pressure Treated Lumber which is treated with alkaline copper quat (ACQ Types B and D) or copper azole (CBA-A, CA-B) shall be hot dipped galvanized (post fabrication) to a G185 rating or electro-galvanized to a Class 40 rating.

E. Wall, Floor, and Roof Sheathing:

1. Meet requirements of PS 1-95, PS 2-92, PRP-108 (APA), or PRP-133 (TECO). Except where plywood is specifically indicated on Drawings, oriented strand board (OSB) is acceptable.
2. Every sheet of sheathing shall be stamped as follows:
 - a. Appropriate APA, TECO, or PFS grade stamp identifying thickness and span rating.
 - b. Sheathing shall be stamped 'Sized for Spacing'.
 - c. Exposure 1 or Exterior.
3. Sheathing shall not exceed 18 percent moisture content when fabricated nor more than 19 percent when installed in Project.
4. Sheathing 3/4 inch thick and thicker used for single-layer subflooring shall be tongue and groove.
5. Sheathing used for same purpose shall be of same thickness. Thicknesses specified are minimum required regardless of span rating.
6. Minimum span ratings for given thicknesses shall be as follows:

<u>Thickness</u>	<u>Span Rating</u>
3/8 inch	24/0
15/32 inch actual	32/16
1/2 inch nominal	32/16
19/32 inch actual	40/20
5/8 inch nominal	40/20
23/32 inch actual	48/24
3/4 inch nominal	48/24

7. Nails:
 - a. 3/8-inch Panel: 8d common.
 - b. 15/32-inch and Thicker Panels: 10d common.

2.02 WOOD TRUSSES:

A. General:

1. Roof trusses shall be engineered and fabricated by a company who has been manufacturing wood trusses for a minimum of 5 years.

2. The roof truss design shall provide a complete truss system.
 3. Shop drawings shall be submitted showing details of construction, materials, and loads.
 4. All shop drawings shall be signed and sealed by a professional engineer registered in the State of Florida.
- B. Minimum Design Loads:
1. Roof Truss:
 - a. Top chord live load 20 p.s.f.
 - b. Top chord dead load 10 p.s.f.
 - c. Bottom chord live load 10 p.s.f. (non-concurrent)
 - d. Bottom chord dead load 10 p.s.f.
 - e. Attic Live Load: 20 p.s.f.
- C. Basic Wind Speed: Refer to Drawings for wind speed and exposure classification.
- D. Deflection limitations:
1. Roof Truss:
 - a. $L/240$ for liveloads and wind load.
 - b. $L/180$ for liveloads plus deadload.
- E. Materials:
1. Top and Bottom Chord: No. 2 Southern Yellow Pine, minimum. Material shall be sized to provide 125% of the design stresses.
 - a. Main trusses shall utilize a minimum 2x6 chord member.
 - b. Hip and jack trusses shall utilize a minimum 2x4 chord member.
 2. Webs: Use wood species necessary to achieve stress requirements of truss design.
 3. Gusset Plates: All plates shall be galvanized steel. Plates shall be sized to meet 135% of the design stresses and be a minimum of 20 gauge material.

F. Fabrication:

1. Fabricate trusses from approved shop drawings.
2. Fabricate trusses in jigs with members accurately cut to provide good bearing at joints. Joints shall be acceptable if the average opening between ends of members immediately after fabrication is less than 1/16 inch, except that truss compression chord joints at splices and ridges shall have full contact between members.
3. Each chord section shall be involved in two panel points before being spliced.
4. No panel point shall have more than one plate per truss side.
5. Plates shall have minimum bite of 2-1/2 inches on members. Measure bite along center line of webs and perpendicular to chord axes. Orient plate axis parallel with truss chord axis except where chords change pitch or terminate. Plates may be placed parallel with webs at single web joints.

2.03 ENGINEERED BEAMS:

A. Treated LVL (Exterior):

1. These products shall be designed and manufactured to the standards referenced in the APA Report PR-L233, PR-L329, and ESR-3834.
2. Treated LVL is to be treated with Propiconazole Tebuconazole Imidacloprid (PTI) as part of the in-blue-line treatment during the LVL manufacturing process for fungal decay and termite resistance.
 - a. Interior use.
 - b. Exterior use above ground (not ground contact).
3. Code Reports: Materials shall comply with APA Report PR-L233, PR-L329, and ESR-3834.
4. Adhesives: Adhesives shall be of the waterproof type conforming to the requirements of ASTM D2559.
5. Grade: MOE - 2.0E. F_b - 2,800 psi.
6. Treatment Retentions: PWT-treated LVL shall be treated throughout the entire member to the following retentions:
 - a. 600 ppm - Propiconazole (Fungicide, Integral & Envelope).
 - b. 600 ppm - Tebuconazole (Fungicide, Integral & Envelope).

- c. 60 ppm - Imidacloprid (Insecticide, Integral & Envelope).
- d. 100 ppm - Bifenthrin (Insecticide, Integral).
- e. 200 ppm - Permethrin (Insecticide, Envelope).

Basis of Design: PWT LVL, Pacific Woodtech, 1850 Park Lane, Burlington, WA 98233, (360) 707-2200, www.PacificWoodtech.com.

B. Standard LVL (Interior):

- 1. Construction: 1-3/4" and 3-1/2" thick pressure-bonded, lap-jointed wood veneers, with grain of veneers running parallel in the long direction.
- 2. Standard Beam Depths: 7-1/4", 9-1/4", 9-1/2", 11-1/4", 11-7/8", 14", 16", 18", and 24" as described in the Drawings.
- 3. Acceptable Products: 2.0E, 1.5E, Georgia-Pacific, GP LAM LVL floor and roof beams, or approved equal.

PART 3 - EXECUTION

3.01 FRAMING INSTALLATION:

A. General:

- 1. Set carpentry accurately to required levels and lines with members plumb and true.
- 2. Securely attach carpentry work to substrates by anchoring and fastening as shown and as required by recognized standards.

B. Fasteners:

1. Nails:

- a. Meet requirements of ASTM F1667.
- b. Unless noted otherwise, nails listed on Drawings or in Specifications shall be common nail diameter, except 16d nails shall be box diameter.

2. Powder Actuated Fasteners:

a. Acceptable Manufacturers:

- 1) Hilti, Tulsa, OK (800) 333-1150 or (918) 252-6000
- 2) Ramset / Redhead Division of ITW, Wood Dale, IL (630) 350-0370

3) Equals as approved by Engineer through shop drawing submittal before installation.

3. Wood Screws: Standard type and make for job requirements.
4. Do not wax or lubricate fasteners that depend on friction for holding power.
5. Select fasteners of size that will not penetrate member where opposite side will be exposed to view or will receive finish materials.
6. Make tight connections between members. Install fasteners without splitting of wood; predrill as required. Do not drive threaded friction type fasteners; turn into place.
7. Tighten bolts and lag screws at installation and retighten as required for tight connections prior to closing in or at completion of work.
8. Provide galvanized washers under bolt heads and nuts in contact with wood.

C. Floors:

1. Place with crown side up at 16 inches on center unless indicated otherwise.
2. Support where indicated by steel joist hangers.
3. Provide accurately fitted header and trimmer joists of same size as regular joists around floor openings, unless detailed otherwise, and support by steel joist hangers. Double joists under partitions paralleling run of joists.

D. Walls:

1. Tolerances:
 - a. 1/4 inch in 20 feet, non-cumulative in length of wall.
 - b. 1/8 inch in 10 feet with 1/4 inch maximum in height of wall.
 - c. Distances between parallel walls shall be 1/4 inch maximum along length and height of wall.
2. Openings: Four studs minimum, each side, two (jack) supporting header and two (king) continuous between top and bottom plates. Add one king each side for each additional 32 inches of opening or fraction thereof over and above an initial 48 inches, except where shown otherwise.

3. Corners and Partition Intersections: Triple studs.
4. Top Plates:
 - a. Bearing Partitions: Doubled or tripled plate and all joints lapped. Stagger joints at least 48 inches. Lap at all corners and intersections.
 - b. Non-bearing Partitions: Double plate and all joints lapped. Stagger joints at least 24 inches. Lap at all corners and intersections
5. Sill Plates:
 - a. Shear Walls and Bearing Walls:
 - 1) Provide anchor bolts 12 inches maximum and 4 inches minimum from each end of each plate.
 - 2) Fasten either with bolts embedded in concrete or with epoxied rods in pre-drilled holes.
 - b. Non-bearing Walls: Fasten with powder actuated fasteners.
 - c. In addition to the requirements of paragraphs 'a' and 'b' above, set sill plates of interior walls measuring less than three feet in length in solid bed of specified construction adhesive, except where sill sealer is used.
 - d. Install specified seal sealer under sill plates of exterior walls of main building and of acoustically insulated interior walls.
6. Posts and Columns:
 - a. Frame wood columns and posts to true end bearings.
 - b. Extend posts or columns down to supports of such design as to hold them securely in position.
 - c. Securely fasten column at top to beam or girder using anchors described in Contract Documents.
 - d. Unless shown otherwise, nail members of multiple member columns together with 16d at 6 inches on center from each side.

7. Headers, Beams, and Girders:

a. Built-up Members:

- 1) Stagger individual members of multiple span beams and girders so over any one support no more than half the members will have a joint. In all cases, however, joints shall occur over supports.
- 2) Unless shown otherwise on Drawings, nail two-ply built-up members with 10d nails at 12 inches on center top and bottom, staggered on opposite sides. Nail three-ply built-up members with 16d nails at 12 inches on center, top and bottom, staggered on opposite sides. Set with crown edge up with full bearing at ends and intermediate supports.

b. Pre-fabricated Members:

- 1) Engineered Laminated Veneer Lumber (LVL) with dimensional properties shown on Drawings.
- 2) Solid LVL members may be used in place of built-up LVL or 2x framing members. Size shall be same as sum of built-up members.

c. Wood shims are not acceptable under ends.

d. Do not notch framing members unless specifically shown in Drawing detail.

e. Headers: Unless otherwise noted on the drawings, headers over windows and doors shall be as follows:

- 1) 0 to 5' Rough Opening:
 - a) 2x4 wall studs: (2) 2x8
 - b) 2x6 wall studs: (3) 2x8
- 2) > 5' to 8' Rough Opening:
 - a) 2x4 wall studs: (2) 2x12
 - b) 2x6 wall studs: (3) 2x12
- 3) All headers shall use continuous 1/2" plywood spacers between members to provide a flush finish for other trades.

8. Nailing:

a. Stud to Sill Plate and Top Plate:

- 1) Nominal Dimension Lumber Studs:

		<u>End Nail</u>	<u>Toe Nail</u>
a)	2x4	Two 16d	Four 8d
b)	2x6	Three 16d	Six 8d

- b. Top Plates: Spiked together with (2) 16d nails, 16 inches on center.
 - c. Top Plate Laps: Lap members 48 inches minimum and nail with (4) 16d nails each side of lap.
 - d. Top Plates: Intersections, three 16d.
 - e. Backing and Blocking: Three 8d, each end.
 - f. Built-up Corner Studs and Angles: Face Nail 16d, 16 inches on center.
- E. Roof and Ceiling Framing:
- 1. Place conventional with crown side up at 16 inches on center unless noted otherwise.
 - 2. Install structural blocking and bridging as necessary and as described in Contract Documents.
 - 3. Special Requirements:
 - a. Roof and Ceiling Joists: Lap joists 4 inches minimum and secure with code approved framing anchors.
 - b. Roof Rafters and Outlookers:
 - 1) Cut level at wall plate and provide at least 2-1/2 inches bearing where applicable. Toe-nail to plate with three 16d nails.
 - 2) Attach to trusses or other end supports with framing anchors described in Contract Documents.
 - 3) Provide for bracing at bearing partitions.
- F. Nailers, Blocking, and Sleepers: Provide wherever shown and as required for attachment of other work. Form to shapes shown and cut as required for true line and level of work to be attached.
- G. Attach lumber materials to substrates securely with anchor bolts or other attachment devices as required to support applied loading. Countersink bolts and nuts flush with surfaces, unless otherwise indicated.

3.02 SHEATHING INSTALLATION:

- A. General:
- 1. Top of nail heads shall be flush with sheathing surface.
 - 2. Use edge clips to provide spacing between sheathing panels.

B. Wall Sheathing:

1. Spacing: Provide 1/8 inch space between sheets at end and edge joints.
2. Edge Bearing and Blocking:
 - a. Panel edges shall bear on framing members and butt along their center lines.
 - b. Back block panel edges which do not bear on framing members with 2 inch nominal or 3 inch nominal framing.
3. Nailing: Place nails not less than 3/8 inch in from edge, 12 inches on center along intermediate supports, and 4 inches on center along panel edge and into studs connected to hold-down anchors, unless shown otherwise on Drawings.
4. Size:
 - a. 15/32 inch actual minimum thickness.
 - b. Do not install any piece of wall sheathing with shortest dimension of less than 24 inches, except where noted otherwise on Drawings.

C. Roof Sheathing:

1. Placing:
 - a. Lay face grain/strength axis across supports. Provide blocking for support where framing turns at roof overhang.
 - b. Provide 1/8 inch space between sheets at end and side joints.
 - c. Stagger panel end joints.
 - d. Sheathing shall be continuous over two supports minimum.
2. Nailing:
 - a. Place nails at least 3/8 inch in from edge.
 - b. Nail 6 inches on center along supported edges.
Nail 12 inches on centers on intermediate supports.

- c. Nail 4 inches on center at:
 - 1) Diaphragm boundaries.
 - 2) Blocking above plywood sheathed walls and block masonry walls.
 - 3) At shear wall struts and fascias.
- 3. Size:
 - a. 19/32 inch actual minimum thickness.
 - b. Do not install any piece of roof sheathing with shortest dimension of less than 24 inches.

3.03 WOOD TRUSS INSTALLATION:

- A. Handle, erect, and brace wood trusses in accordance with ANSI/TPI 1-2014.
- B. Do not install damaged or broken wood trusses. Replace wood trusses that are broken, damaged, or have had members cut out during course of construction.
- C. Provide construction bracing for trusses in accordance with TPI DSB-89.
- D. Provide continuous 2x4 horizontal web bracing as shown on truss shop drawings.
 - 1. Secure bracing to each truss with two 16d nails.
 - 2. Lap splice bracing by placing bracing members side by side across two common web members. Butt splices are not acceptable.
- E. Unless directed or shown otherwise, provide diagonal 2x4 bracing between trusses at each line of horizontal web bracing.
 - 1. This diagonal bracing shall be continuous and extend from junction of web and top chord of one truss to junction of web and bottom chord of different truss.
 - 2. Install bracing at approximately 45 degree angle. Bracing will extend over four trusses minimum or more as determined by height of trusses and 45 degree installation angle.
 - 3. Install brace on side of web opposite horizontal web bracing and nail to each web with two 16d nails.
 - 4. Install one brace every 10 feet as measured from top of brace to top of next brace.

- F. Provide continuous horizontal top and bottom chord bracing at each truss panel point or as described on the drawings.
- G. For gable end walls provide diagonal minimum 2x4 bracing horizontally and vertically along top and bottom chords at 4' o.c. or as shown on the drawings.
 - 1. Bracing shall engage a minimum of 4 trusses and extend a minimum of 8 feet from wall

3.04 CLEAN-UP: Remove and dispose of all unused scrap lumber, plywood, nails and other debris associated with this section.

END OF SECTION

SECTION 07200

BUILDING INSULATION

PART 1 - GENERAL

1.01 SUBMITTALS: Manufacturer's data and product certification, including specifications and installation instructions, must be submitted on each type of insulation.

PART 2 - PRODUCTS

2.01 MATERIALS:

- A. Provide the following building insulation types as shown on the drawings.
1. Type A: 10" thick, foil-faced, inorganic glass fiber batts with an insulation value of R-30, vapor transmission of 0.5 perm or less and meets ASTM C-665, Type III, Class B, Category 1.
 2. Type B: 5½" thick, foil faced inorganic glass fiber batts with an insulation value of R-19, vapor transmission of 0.5 perm or less and meets ASTM C-665, Type III, Class B, Category 1.

PART 3 - EXECUTION

3.01 INSTALLATION: Install the work of this section in strict accordance with the original design, requirements of governmental agencies having jurisdiction, and the manufacturer's recommended installation procedures as approved by the Engineer, anchoring all components firmly into position.

END OF SECTION

SECTION 07250

WEATHER BARRIERS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS: Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specifications, apply to this Section.

1.02 SUMMARY:

A. Section Includes:

1. Weather Barrier Membrane.
2. Seam Tape.
3. Self-adhered Flashing.
4. Weather Barrier Accessories - Fasteners.

1.03 REFERENCES:

A. ASTM - American Society for Testing Materials International:

1. ASTM C920, Standard Specification for Elastomeric Joint Sealants.
2. ASTM C1193, Standard Guide for Use of Joint Sealants.
3. ASTM D882, Test Method for Tensile Properties of Thin Plastic Sheeting.
4. ASTM D1117, Standard Guide for Evaluating Non-woven Fabrics.
5. ASTM E84, Test Method for Surface Burning Characteristics of Building Materials.
6. ASTM E96, Test Method for Water Vapor Transmission of Materials.
7. ASTM E1677, Specification for Air Barrier Material or System for Low-rise Framed Building Walls.
8. ASTM E2178, Test Method for Air Permeance of Building Materials.

B. AATCC - American Association of Textile Chemists and Colorists:

1. Test Method 127 Water Resistance: Hydrostatic Pressure Test.

C. TAPPI - Technical Association of Pulp and Paper Industry:

1. Test Method T-410, Grams of Paper and Paperboard (Weight per Unit Area).
2. Test Method T-460, Air Resistance (Gurley Hill Method).

1.04 SUBMITTALS:

- A. Refer to Section 01300, Submittals.
- B. Product Data: Submit manufacturer current technical literature for each component.
 - 1. For weather barrier, include data on air and water-vapor permeance based on testing in accordance with referenced standards.
- C. Shop Drawings: Show details of weather barrier at terminations, openings, and penetrations. Show details of flexible flashing applications.

1.05 QUALITY ASSURANCE:

- A. Installer Qualifications: A qualified firm that is certified by weather barrier system manufacturer to install manufacturer's product in accordance with manufacturer's installation guidelines and recommendations.
- B. Manufacturer's Field Service: Register project with weather barrier manufacturer prior to installation of weather barrier, and comply with weather barrier manufacturer's project registration and observation process.
- C. Source Limitations: Provide weather barrier and accessory materials produced by single manufacturer.

1.06 DELIVERY, STORAGE, AND HANDLING:

- A. Deliver weather barrier materials and components in manufacturer's original, unopened, undamaged containers with identification labels intact.
- B. Store weather barrier materials as recommended by system manufacturer. Do not store near heat source or open flame.

1.07 WARRANTY:

- A. Manufacturer's Product Warranty: To repair or replace weather barrier product that fails in materials within specified warranty period when all terms of warranty are met.
 - 1. Warranty Period: Ten (10) years from date of purchase.

PART 2 - PRODUCTS

2.01 BASIS OF DESIGN: DuPont Performance Building Solutions, 200 Powder Mill Road, DuPont Experimental Station 356, Wilmington, Delaware 19803, (800) 448-9835, building.dupont.com.

2.02 PERFORMANCE REQUIREMENTS: Installed weather barrier and accessories shall withstand specified wind pressures, liquid water penetration, and water vapor pressures, without failure due to defective manufacture of products.

2.03 WEATHER BARRIER:

A. Basis of Design: Spunbonded polyolefin, non-woven, non-perforated, weather barrier is based upon DuPont Tyvek HomeWrap and related assembly components.

2.04 WEATHER BARRIER FLASHING:

A. Conformable Weather Barrier Flashing: Composite flashing material composed of micro-creped, polyethylene laminate with a 100 percent butyl-based adhesive layer; AAMA 711 Class A (no primer), Level 3 thermal exposure, 176°F for seven (7) days.

2.05 WEATHER BARRIER ACCESSORIES:

A. Building Wrap Seam Tape: 2" or 3" wide, pressure-sensitive plastic tape recommended by weather barrier manufacturer for sealing joints and penetrations in building wrap.

1. Basis-of-Design Product: DuPont Safety & Construction, DuPont de Nemours, Inc. DuPont Tyvek Tape.

B. Fasteners with Self-gasketing Washers: Building wrap manufacturer's recommended pneumatically or hand-applied fasteners with 1", 2" diameter, high-density polyethylene cap washers with UV inhibitors.

1. Basis-of-Design Product: DuPont Safety & Construction, DuPont de Nemours, Inc. DuPont Tyvek Wrap Caps.

C. Sealants: Provide sealants that comply with ASTM C920, elastomeric polymer sealant to maintain watertight conditions.

PART 3 - EXECUTION

3.01 EXAMINATION:

- A. Examine substrates, with Installer present, for compliance with requirements.
- B. Verify that substrate and surface conditions are in accordance with commercial weather barrier manufacturer recommendations prior to installation.
 - 1. Verify that rough sill framing for doors and windows is sloped downwards towards the exterior and is level across width of the opening.
- C. Verify that surfaces to receive weather barrier flashing are clean, dry, and free of frost.
- D. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 WEATHER BARRIER INSTALLATION:

- A. General: Comply with weather barrier manufacturer's written instructions and warranty requirements.
- B. Cover exposed exterior surface of sheathing with weather barrier securely fastened to structure per manufacturer's written instructions immediately after sheathing is installed.
- C. Seams: Seal seams with building wrap tape per manufacturer's recommended installation instructions.
 - 1. Shiplap horizontal seams in weather barrier to facilitate proper drainage.
- D. Fastener: Use weather barrier manufacturer's recommended fasteners to secure weather barrier and install fasteners according to weather barrier manufacturer's installation guidelines.
 - 1. Do not use temporary fasteners to permanently attach weather barrier.
 - 2. Do not place fasteners with gasketing washers where weather barrier flashing will be installed.
 - 3. Install fasteners with gasketing washers through flashing where recommended by manufacturer.

- E. Openings: Completely cover openings with weather barrier, and then cut weather barrier membrane at openings according to weather barrier manufacturer's installation guidelines.
 - 1. Provide head and jamb flaps and seam overlaps to maintain continuous drainage.
 - 2. Repair damage to weather barrier using method recommended by weather barrier manufacturer.
 - 3. Install flashing according to weather barrier manufacturer's installation guidelines.

3.04 WEATHER BARRIER FLASHING:

- A. Installation: Remove wrinkles and bubbles, reposition weather barrier as necessary to produce a uniform, smooth surface.
- B. Rough Openings: Shiplap flashing with weather barrier in a shingle manner to maintain a continuous downward drainage plane and air and water barrier in accordance with manufacturer's written instructions.
- C. Penetrations: Seal weather barrier around each penetration with weather barrier manufacturer's recommended self-adhered flashing product. Integrate products with flanges into the weather barrier.
- D. Terminations: Provide minimum 2" overlap using strip flashing on adjoining roof and base of wall systems to maintain continuous downward drainage plane.
 - 1. Secure weather barrier with fasteners and weather barrier flashing.
- E. Flashing Patches: Apply weather barrier manufacturer's recommended weather barrier flashing patches behind fastening plates, such as brick-tie base plates, metal-flashing clips, and metal channels.

3.05 CLEANING: Immediately remove release paper and scrap from work area and dispose of material.

3.06 PROTECTION:

- A. Protect installed weather barrier from the following:
 - 1. Damage from cladding, structure, or a component of the structure (e.g., window, door, or wall system).

2. Contamination from building site chemicals, premature deterioration of building materials, or non-standard use or application of products.
3. Foreign objects or agents, including the use of materials incompatible with weather barrier products.
4. UV exposure in excess of products' stated limits

END OF SECTION

SECTION 07320

FIBERGLASS ROOFING SHINGLES

PART 1 - GENERAL

1.01 SUBMITTALS: Manufacturer's Literature: Manual containing material description, available colors, detail drawings and recommended installation procedures.

1.02 WARRANTY:

- A. Materials: Manufacturer's limited warranty against defects for 30 years.
- B. Workmanship: Applicator limited warranty against defects for five years.

1.03 QUALITY ASSURANCE:

- A. Shingles shall carry Underwriters Laboratories Labels:
 - 1. UL 790, Class A Fire Resistance
 - 2. ASTM D 3161 Wind Resistance
 - 3. ASTM D 3462 Asphalt Shingle Specification
 - 4. CSA A123.5 Canadian Fiberglass Shingle Standard
 - 5. ASTM D 7158 (UL2390/ASTM D 6381) Wind Resistance
 - 6. UL 2218 Impact Resistance
- B. Install shingles to meet requirements of published manufacturer's instructions.
- C. Product shall have a valid product approval code number.

PART 2 - PRODUCTS

2.01 ASPHALT SHINGLES:

- A. Fiber glass-based asphalt shingles complying with ASTM specifications E 108 Class A or UL 790 Class A, D 3462, D 3161 Class "F", D 3161 Class "A" D 7158 (UL2390/D6381) Class H, D 3018 Type 1, D 3018, CSA A123.5, UL 2218, Cool Roof Rating Council (CRRC), Energy Star, Florida Building Code (FBC), Miami-Dade County Approved and International Code Council (ICC) Evaluation Report.
- B. Shingles shall be architectural grade and employ woven fabric reinforcing in the nailing zone.
- C. Hip and ridge shingles shall be shaped for the specific purpose.

2.02 ASPHALT-SATURATED ROOFING FELT (UNDERLAYMENT): 15# specification felt conforming to ASTM D 4869, Type IV and ASTM D 226, Type II roof felt. Rolls shall be a nominal 36" wide and pre-marked for LAP requirements.

2.03 FASTENERS:

- A. Fastener requirement: Use galvanized steel, stainless steel, or aluminum nails minimum 12 gauge shank with 3/8" diameter head. Fasteners shall comply with ASTM F 1667.
- B. All fasteners must be driven flush with the shingle surface and penetrate at least 3/4" into the wood deck. Where the deck is less than 3/4" thick, the fastener should be long enough to penetrate fully and extend at least 1/8" through APA rated roof sheathing.
- C. Nails are the preferred method of attaching shingles to wood decking or other available substrates. If staples are used they must be, corrosion resistant, zinc-coated, 16-gauge minimum with minimum 15/16" crown width. Staples must be long enough to penetrate at least 3/4" into solid decking, or extend a minimum of 1/8" through the APA-rated sheathing.

PART 3 - EXECUTION

3.01 INSTALLATION:

- A. Remove existing asphalt shingles, tar paper and associated materials. Protect roof area from weather during entire process.
- B. Underlayment:
 - 1. Starting at the eave edge, apply one course of felt horizontally along roof line. Lap and seal end joints 12" minimum.
 - 2. Apply the next course and each succeeding course in the same manner, allowing a 2" overlap.
- C. Roof Shingles:
 - 1. Start at eave edge with starter course and then lay successive rows of regular shingles using a minimum of 6 roofing nails per shingle or as required by the Florida Building Code and manufacturer's recommendations.
 - 2. Installation shall be in accordance with manufacturer's written instructions and Florida Product Approval Code.

END OF SECTION

SECTION 08200

WOOD AND STEEL DOORS

PART 1 - GENERAL

1.01 STANDARDS:

- A. AWI/AWMAC - Architectural Woodwork Institute.
- B. UL (BMD) - Building Materials Directory, Underwriters Laboratory.
- C. 2020 Florida Building Code.
- D. ANSI 250.8 - SDI 100 Recommended Specifications for Standard Steel Doors and Frames.

1.02 QUALITY ASSURANCE: Doors installed in the building envelope must be stamped with the applicable Florida Product Approval Code.

1.03 SUBMITTALS:

- A. Manufacturer's Data: Submit door manufacturer's product data specifications and installation instructions for each type of door required, including other data as may be required to show compliance with specified requirements.
 - 1. Elevations of each door type.
 - 2. Details of doors, including vertical- and horizontal-edge details and metal thicknesses.
 - 3. Frame details for each frame type, including dimensioned profiles and metal thicknesses.
 - 4. Locations of reinforcement and preparations for hardware.
 - 5. Details of each different wall opening conditions.
 - 6. Details of anchorages, joints, field splices, and connections.
 - 7. Details of accessories.
 - 8. Details of moldings, removable stops, and glazing.
- B. Warranty, Metal, and Wood Doors: Warranty shall be in effect for five (5) years after the date of Substantial Completion.

- C. Product Schedule: For hollow metal doors and frames prepared by, or under, the supervision of supplier, using same reference numbers for details and openings as those on Drawings. Coordinate with final door hardware schedule.
- D. Product Test Reports: For each type of fire-rated hollow metal door and frame assembly for tests performed by a qualified testing agency indicating compliance with performance requirements.
- E. Florida Product Approval for exterior hollow metal door and frame assemblies.

1.04 DELIVERY AND STORAGE:

- A. Product must arrive in manufacturer's packaging.
- B. Do not store in damp or wet areas.
- C. Do not expose to excessive sunlight.
- D. Follow manufacturer's recommendations.

PART 2 - PRODUCTS

2.01 METAL DOOR FRAMES:

- A. Frames for doors shall be 16 gauge, zinc coated and bonderized steel type as shown on the Plans.
- B. Frames are to be adequately reinforced, drilled, and tapped for 1½ pairs of 4" x 4" mortise template hinges. Furnished with each door frame lock types as specified in Section 08710, Finish Hardware. All hardware to be located in accordance with the manufacturer's standards. Frame manufacturer to furnish with each door frame two (2) rubber door silencers.
- C. All frames to be provided with a minimum of three (3) anchors per jamb. Anchors to be manufacturer's standard design suitable for wall construction indicated. Furnish with each door frame a temporary removable spreader for attachment to bottom of each door frame. Provide suitable floor clips or angles, each having two holes to permit secure fastening of jambs to floor construction.
- D. Painting shall be as specified in Section 09910 of these Specifications.

2.02 METAL DOORS:

- A. Provide hollow metal, flush-type doors of design and sizes as called for and shall be constructed of two outer sheets of not less than No. 18 gauge steel formed and rigidly connected and reinforced inside with continuous interlocking No. 20 gauge stiffeners a maximum of 6" on centers. Doors shall be insulated with 2" thick, 6 to 7 lb. density industrial mineral wool felt compressed to 1³/₄" thick, or other equal standard recognized sound deadening materials as approved by the Engineer, placed between stiffeners and outer sheets. Provide for glass panels and louvers as scheduled including moldings for holding same. All assembly joints are to be welded and made smooth and invisible. All exterior doors shall have closed top for weatherproofing.
- B. Mortise and reinforce with No. 11 gauge materials for hardware from templates furnished by the hardware contractor.
- C. After all welds and joints are ground smooth, the doors shall be thoroughly cleaned of all oil, grease and other impurities, and given a coat of rust inhibitive primer, after all irregularities are filled and made flush.

2.03 BARN DOORS:

- A. Doors shall be exterior grade, solid wood with single x-brace full height of door.
- B. Doors shall be bypass type (where required) with cane bolt or other locking mechanism which secures each panel individually or collectively.
- C. Door shall be fitted with channel or other mechanism that interlocks panels when in the closed position.
- D. Floor guides shall be used as recommended or required by the door manufacturer.
- E. Provide box rail bypass door track suitable for panels provided.
- F. All hardware shall be 304/316 stainless steel.
- G. Door panels shall be 1-3/4" minimum thickness.

PART 3 - EXECUTION

3.01 INSTALLATION:

- A. Fitting Doors: Align doors to frame for proper fit and uniform clearance at each edge. Seal any cut surfaces that must be altered or re-machined for proper fit.
- B. Clearances: Provide clearances of 1/8" at jambs and heads, 1/8" at meeting stiles for pairs of doors, and 1/2" from bottom of door to top of decorative floor finish or covering. Where threshold is provided, 1/4" clearance from bottom of door to top of threshold. Provide 1" clearance at bottom of door for interior door for "undercut".
- C. Fire labeled doors and frames must be installed in strict accordance with manufacturer's instructions and the latest revision of NFPA 80.

END OF SECTION

SECTION 08710
FINISH HARDWARE

PART 1 - GENERAL

1.01 DESCRIPTION OF WORK:

- A. The required types of builders' hardware include, but are not necessarily limited to, the following:
1. Butts and hinges.
 2. Lock cylinders and key systems.
 3. Lock and latch sets.
 4. Flush bolts.
 5. Push/pull units.
 6. Closers.
 7. Stripping and seals.
 8. Thresholds.
 9. Door stops.
 10. Silencers.

1.02 QUALITY ASSURANCE:

- A. Acceptable Manufacturers: Listed herein are the acceptable manufacturers for the primary items of builders hardware.
1. Locksets, Latchsets, Cylinders:
 - a. Russwin.
 - b. Sargent.
 - c. Yale.
 2. Closers:
 - a. Russwin.
 - b. Sargent.
 - c. Yale.
 - d. LCN.
 3. Butts and Hinges:
 - a. Stanley.
 - b. Hager.
 - c. H. Soss.
 - d. McKinney.

- 4. Panic Devices:
 - a. Russwin.
 - b. Sargent.
 - c. Von Duprin.

- 5. Weatherstripping, Seals and Thresholds:
 - a. Pemko.
 - b. Reese.
 - c. NGP.

B. Manufacturer: Obtain each kind of hardware (latch and lock sets, hinges, closers, etc.) from only one manufacturer, even though several may be indicated as acceptable manufacturers.

C. Hardware selected must be compatible with approved doors.

1.03 SUBMITTALS: Manufacturer's Data, Builder's Hardware: Submit manufacturer's product data for each item of hardware. Include whatever information may be necessary to show compliance with requirements and include instruction for installation and for maintenance of operating parts and exposed finishes. Wherever needed, furnish templates to fabricators of other work which is to receive finish hardware.

A. Proof of Compliance with the Florida Building Code Requirements for wind-borne debris resistance and the component cladding wind pressures described on the Drawings for all installations in exterior walls.

B. Florida Product Approval Code.

1.04 GUARANTEE: The hardware supplier shall guarantee that all materials specified in this section shall be free from defects and blemishes and shall perform satisfactorily for a period of one year from date of occupancy.

PART 2 - PRODUCTS

2.01 GENERAL: All products installed in exterior walls shall be compliant with the 2007 Florida Building Code Requirements for resistance to wind-borne debris in hurricane prone areas.

2.02 HARDWARE SCHEDULE:

A. Single Doors - Exterior:

- 1. 1 1/2 Pair Butts.
- 2. 1 Lockset.

3. 1 Doorstop.
4. 1 Deadbolt.
5. Weatherstripping.
6. 1 Threshold.
7. 1 Door Closer.

B. Barn Doors:

1. Wall-mount box rail system.
2. Floor guide system.
3. Panel hanger and trolley system.
4. Panel interlock device (multi-panel bypass door system only).
5. Cane bolt or other locking mechanism.
6. All hardware shall be 304/316 stainless steel.

2.03 MATERIALS AND FABRICATION: Base Metals: Produce hardware units of the basic metal and forming method indicated, using the manufacturer's standard metal alloy, composition, temper and hardness, but in no case,, of less than commercially recognized quality. All exposed metal shall be 304/316 series satin stainless steel.

2.04 THRESHOLDS: Extruded aluminum, smooth commercial finish. Product must be ADA compliant.

PART 3 - EXECUTION

3.01 INSTALLATION:

- A. Install each hardware item in compliance with the manufacturer's instructions and recommendations.
- B. Set unit level, plumb and true to line and location. Adjust and reinforce the attachment substrate as necessary for proper installation and operation.
- C. Drill and countersink units which are not factory-prepared for anchorage fasteners. Space fasteners and anchors in accordance with industry standards.

END OF SECTION

SECTION 09611

CONCRETE FLOOR STAINING

PART 1 - GENERAL

1.01 SECTION INCLUDES:

- A. Specifications for applying interior stained and sealed concrete flooring.
 - 1. Concrete Floor Stain.
 - 2. Polyurethane Concrete Floor Protectant Coating.

1.02 SUBMITTALS:

- A. Provide Manufacturer's Product Data Including:
 - 1. Color Palette.
 - 2. Installation Procedures and Requirements.

1.03 QUALITY ASSURANCE:

- A. The manufacturer shall have a minimum of 10 years' experience in the production, sales, and technical support of interior stained concrete products.
- B. The applicator shall have a minimum of 3 years' experience in installation of the stamped concrete paving as confirmed by the manufacturer in all phases of concrete placement and application of the products specified.
- C. System shall be in compliance with requirements of ACI 301.
- D. Materials shall be obtained from the same source.

1.04 PRODUCT DELIVERY, STORAGE, AND HANDLING:

- A. Packing and Shipping: All components of the system shall be delivered to the site in the manufacturer's packaging, clearly identified with the product type and batch number.
- B. Storage and Protection:
 - 1. The applicator shall be provided with a storage area for all components. The area shall be between 60°F and 90°F, dry, out of direct sunlight, and in accordance with the manufacturer's recommendations and relevant health and safety regulations.

2. Copies of Safety Data Sheets (SDS) for all components shall be kept on site for review by the Engineer or other personnel.
- C. Waste Disposal: The applicator shall be provided with adequate disposal facilities for non-hazardous waste generated during installation of the system.

1.05 PROJECT CONDITIONS: Maintain manufacturer specified environmental conditions (temperature, humidity, and ventilation) within recommended limits to ensure optimal results. Do not apply materials in environmental conditions outside of manufacturer's absolute limits.

PART 2 - PRODUCTS

2.01 MANUFACTURERS:

- A. Basis of Design: SureCrete LLC, 15246 Citrus Country Drive, Dade City, FL 33523; Phone (352) 567-7973; Fax (352) 567-6545; Email specs@surecretedesign.com; Web www.SureCreteDesign.com.

2.02 INTERIOR STAINED CONCRETE FLOORING:

- A. Water-based Concrete Stain:

1.	Color	By Owner
2.	UV Resistant	Yes
3.	VOC	0 g/L
4.	Coverage Rate	200 sq ft per gal uncut

- B. Water-based Clear Polyurethane Coating:

1.	Sheen (Gloss or Stain)	By Owner
2.	UV Resistant	Yes
3.	VOC	72 g/L
4.	Solids Content	57%
5.	Application Temperature	50°F-90°F (10°-32°C)

PART 3 - EXECUTION

3.01 EXAMINATION:

- A. Do not begin installation until substrates have been properly prepared.
- B. If substrate preparation is the responsibility of another installer, notify Engineer of unsatisfactory preparation before proceeding.

- C. Interior Applications: Concrete substrates must have a moisture vapor emission rate of less than 5 lbs/1,000 sq ft per 24 hour based on a 72-hour test period, according to ASTM F1869.

3.02 PREPARATION:

- A. Clean surfaces thoroughly, in accordance with manufacturer's instructions.
- B. Protection:
 - 1. Protect walls and surrounding surfaces not to receive concrete floor stain.
 - 2. Do not allow stain to come in contact with wood or metal surfaces.
- C. Prepare concrete surface in accordance with manufacturer's instructions.
- D. Concrete shall be as specified in Section 03300. Ensure concrete is a minimum of 28 days old.
- E. Ensure surface is clean, dry, structurally sound, and free from dirt, dust, oil, grease, solvents, paint, wax, asphalt, concrete curing compounds, sealing compounds, surface hardeners, bond breakers, adhesive residue, and other surface contaminants.

3.03 WATER-BASED CONCRETE STAIN APPLICATION:

- A. Install in accordance with manufacturer's instructions and current recommendations.
- B. Apply stain in accordance with manufacturer's instructions at locations indicated on the Drawings.
- C. Control depth of color by adjusting volume of stain applied.
- D. Apply 2 coats of stain. Do not scrub clean between coats.
- E. When multiple colors are required, product can be applied wet on wet or wet on dry. Use same technique as approved sample.
- F. Allow to completely dry.

3.04 SEALING APPLICATION:

- A. Conduct a moisture vapor emission test prior to applying any coating. Refer to the specific sealer's Technical Data Bulletin for acceptable MVER.

- B. Apply coating according to the coating manufacturer's printed instructions at a rate of 300 to 400 square feet per gallon per coat. Maintain a wet edge at all times.
- C. Allow sealer to completely dry, while staying within the re-coat window, before applying additional coats.
- D. Apply second application of the coating, at 90 degrees to the direction of the first coat, using the same application method and rates.

3.05 PROTECTION OF STAINED CONCRETE FLOORING:

- A. The General Contractor is responsible for using Temporary Floor Protection throughout the project to safeguard the surface quality of concrete slabs before and after application of decorative finishes or installations of other materials.
- B. All concrete floors that will not be covered by other materials will be protected throughout the project. The concrete slab must be treated as a finished floor at all times during construction.
- C. Temporary Floor Protection will be removed, only while finish work to the concrete is being performed, and will be replaced after the final finish has cured sufficiently.
- D. Protect surfaces from foot traffic for a minimum of 24 hours.
- E. Do not wash surfaces for a minimum of 48 hours.

3.06 MAINTENANCE: Maintain stained and sealed concrete floors by sweeping. Clean spills when they occur and rinse dirt off with water. Wet-clean heavily soiled areas by mopping or by scrubbing with a rotary floor machine equipped with a scrubbing brush and a suitable, high-quality commercial detergent. Maintain interior floors that require polishing by using a compatible, premium-grade, emulsion-type commercial floor polish, according to manufacturer's printed instructions and safety requirements.

END OF SECTION

SECTION 09700
FIBER CEMENT SIDING

PART 1 - GENERAL

1.01 SUMMARY:

- A. Section Includes:
 - 1. Fiber cement lap siding.
 - 2. Trim, flashings, and accessories.

- B. Related Sections:
 - 1. Division 01: Administrative, procedural, and temporary work requirements.
 - 2. Section 06100 - Rough Carpentry.

1.02 REFERENCES:

- A. American Society of Civil Engineers (ASCE) 7 - Minimum Design Loads for Buildings and Other Structures.

- B. ASTM International (ASTM):
 - 1. B221, Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.
 - 2. C1186, Standard Specification for Flat, Non-Asbestos, Fiber-Cement Sheets.
 - 3. E84, Standard Test Method for Surface Burning Characteristics of Building Materials.
 - 4. E119, Standard Test Methods for Fire Tests of Building Construction and Materials.
 - 5. E136, Standard Test Method for Behavior of Materials in a Vertical Tube Furnace at 750 degrees C.
 - 6. E330, Standard Test Method for Structural Performance of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference.

- 1.03 SYSTEM DESCRIPTION:** Design and install panel system to withstand minimum wind pressures in accordance with ASCE 7 and the Florida Building Code tested to ASTM E330.

1.04 SUBMITTALS:

- A. Product Data: Indicate panel profiles, sizes, fastening methods, surface texture, and finish.
- B. Warranty: Sample warranty form.

1.05 QUALITY ASSURANCE:

- A. Single Source Responsibility: Panels, metal trim, and fasteners furnished by single manufacturer.
- B. Installer Qualifications: Minimum of two (2) years of experience in work of this Section.

1.06 WARRANTIES:

- A. Provide manufacturer's non-prorated 30-year warranty providing coverage against hail and termite damage and defects in materials and workmanship.
- B. Provide manufacturer's 15-year warranty providing coverage against peeling, cracking, and chipping of panel finish.
- C. Provide installer's one (1) year warranty providing coverage against defects in installation.

PART 2 - PRODUCTS

2.01 MANUFACTURERS:

- A. James Hardie Commercial Siding.
- B. Allure Fiber Cement Panels.
- C. Substitutions: Considered under provisions of Division 01.

2.02 MATERIALS:

- A. Fiber Cement Vertical Panel System:
 - 1. Meet ASTM C1186, Grade A, Type II.
 - 2. Formulated from Portland cement, ground sand, cellulose fibers, additives, and water; formed under pressure to required profile.
 - 3. Size: 5-1/4" wide x 12' long.

4. Thickness: 5/16 inch.
5. Surface texture: Smooth.
6. Combustibility; Noncombustible, tested to ASTM E136.
7. Finish: Factory prime painted, for field-applied paint finish. Coordinate with Owner.

B. Soffit:

1. Thickness: 1/4"
2. Length: 12'
3. Style: Smooth
4. Width: 24"
5. Ventilated
6. Factory primed and ready for field-applied paint.

2.03 ACCESSORIES:

- A. Fasteners: Stainless steel, Tor pan head type as recommended by panel manufacturer, of equal or greater holding power than required by manufacturer's Code compliance reports.
- B. Edge Sealer: Type recommended by panel manufacturer.
- C. Joint Sealers: ASTM C920 Grade N S, Class 25 latex joint sealant complying with ASTM C835.
- D. Backer Rod: Closed cell extruded polyethylene compatible with joint sealant.
- E. Starter Strip for lap siding.
- F. Outside corner trim overlapping siding.
- G. Inside corner trim butting siding.
- H. 26GA HDG sheet metal flashing.
- I. Building Wrap: Tyvek sheets.

PART 3 - EXECUTION

3.01 INSTALLATION:

- A. Install siding system in accordance with manufacturer's instructions and approved Shop Drawings.
- B. Provide minimum 6-inch clearance between siding system and finished grade.
- C. Maintain 2-inch clearance between siding system and horizontal surfaces other than at grade.
- D. Allow minimum vertical clearance between edge of siding system and adjacent materials in accordance with manufacturer's instructions.
- E. Cut siding to fit around penetrations with maximum 1/4-inch gaps. Smooth and seal cut edges.
- F. Fasten siding system at maximum spacing per manufacturer's Code compliance reports. Countersink all fasteners. Install fasteners a minimum of 3/8-inch from siding edges and 2-inches from top and bottom edges at siding corners, in orderly fastening pattern.
- G. Apply joint sealer at all siding edges. Install backer rod as necessary. Provide smooth flush finish.
- H. Apply sealant to all fastener heads and provide smooth flush finish.
- I. Clean-up: Remove all waste materials and restore any damaged surfaces to like-new condition.

END OF SECTION

SECTION 09910
PAINTING AND COATINGS

PART 1 - GENERAL

1.01 SCOPE OF WORK:

- A. The work included in this section consists of furnishing all labor, equipment, materials, tools, rigging, lighting, ventilation, and other related items necessary for the proper surface preparation, coating application, curing, and clean-up of the facilities specified herein and/or indicated on the drawings.
- B. All work shall be performed by skilled workmen in a safe and workmanlike manner using equipment and procedures as specified herein and consistent with good coating practices.

1.02 QUALITY ASSURANCE:

- A. The Contractor is responsible for a satisfactory coating system which will adhere without peeling, flaking, blistering or discoloration. Before application of any painting materials, the Contractor shall submit a Letter of Certification from the manufacturer of materials to be used. The letter shall state that the manufacturer recommends the materials selected for the application proposed.
 - 1. Carboline Company.
 - 2. PPG Industries.
 - 3. Sherwin-Williams.
 - 4. Tnemec Company.
 - 5. Approved Equals.

1.03 SUBMITTALS: Contractor shall submit for Engineer's review and/or approval the following items:

- A. Materials List: Complete list of materials to be furnished including descriptive literature and surface on which they will be utilized.
- B. Certification Letter: Letter from coating system manufacturer stating that proposed materials are suitable for application proposed.
- C. Color Samples: Manufacturer's color chips or color charts for color selection by Engineer/Owner.
- D. NSF Approval: Certification that all paints which will come in contact with potable water are EPA/NSF approved.

- E. Equipment: A complete list of equipment to be utilized including painting, blasting, lighting, ventilation, heating, welding, and inspection equipment.

1.04 DELIVERY AND STORAGE OF MATERIALS:

- A. Delivery: All coating materials shall be delivered to the work site in the original, factory-sealed containers bearing the manufacturer's labels identifying, where applicable, the product number, name, color, and instructions for use.
- B. Storage: Prior to use, all coating materials shall be stored in an area as supplied by the Contractor and/or as designated by the Owner or Engineer. This storage area shall be secure and shall provide the coating materials with protection from weather and temperature extremes below 40°F and above 100°F. The area shall be maintained in a safe, neat, and clean manner and free from fire, explosion, or other hazards.

1.05 WORKING CONDITIONS:

- A. Weather Conditions:
 - 1. No surface preparation or coating application work shall be done under unfavorable weather conditions unless the work is adequately protected from such conditions, and then only with the specific approval of the Engineer.
 - 2. All material temperatures prior to mixing and use shall be between 70°F and 90°F unless specifically permitted by manufacturer or otherwise approved by the Engineer.
 - 3. Surface preparation and coating application shall proceed only when air and surface temperatures are above 50°F and below 125°F, and the surface temperature is at least 5 degrees above the dew point.
 - 4. In the event heating devices are used at any time to create and/or maintain temperature conditions in compliance with the specification requirements, these devices shall be explosion-proof and of the type that does not exhaust sooty or oily residues or any other contaminants into the air. Heating devices shall not be used when, in conjunction with existing temperature and humidity conditions, these devices may create dew point conditions.
 - 5. Painting shall be timed to ensure the area of work is essentially dust free.

B. Lighting and Ventilation:

1. Adequate explosion-proof lighting shall be provided during surface preparation and coating operations as necessary. This lighting shall be sufficient to illuminate clearly the working area without shadows.
2. Ventilation for Confined Areas: Adequate explosion-proof ventilation shall be continuously maintained during all surface preparation and coating operations during all recoat and curing periods. This ventilation shall be of the suction type and shall be of sufficient capacity to maintain throughout the confined area a clear atmosphere that is well below explosion and toxic limits. The ventilation system, including all fans and temporary duct-work, shall be arranged such that fresh air is drawn into the confined area and permits no still air spaces to exist in any area. Particular attention shall be given to floor level or lower spaces and pocket areas where heavier-than-air solvents and particulate matter are likely to accumulate. All equipment involved shall be OSHA approved. The Contractor shall be solely responsible for supplying, rigging and operating all ventilation equipment in accordance with OSHA requirements.

C. Safety:

1. General: The Contractor shall make all necessary provisions with regard to materials, equipment, personnel, procedures and practices to assure that the work shall be done in a safe manner and that the working area is maintained free of all health and safety hazards. Contractor shall pay particular attention to OSHA confined space requirements.
2. Employee Education: The Contractor shall direct his personnel's attention to all product warnings and information given on the labels of all components of the coating materials specified herein.
3. Protective Wear: While coating materials are being applied, all application and mixing personnel in the area should wear adequate protective clothing and devices (including respirators).
4. Control of Open Flame: No item which may produce sparks or open flames should be permitted in the immediate working area (including equipment, matches, cigarette lighters, etc.) and no smoking should be permitted in the area.
5. Warning Signs: Appropriate warning signs shall be posted to apprise unsuspecting personnel of the hazards in the area and appropriate barriers shall be erected where required.
6. Partially Used Containers: Partially used coating materials that are to be retained should, at the completion of each work day, be returned

to their original containers. These containers should be tightly resealed, material spills wiped clean and the containers returned to the designated storage area.

7. Disposal of Materials: Waste coating material (such as unused catalyzed coating, dirty cleanup solvents, etc.) and contaminated disposable items (such as empty cans, rags, etc.) should be removed from the job site and disposed of at the completion of each work day. Disposal should be in sealed containers, at sanitary landfills and in accordance with local, state, and federal regulations.
8. Protection of Existing Facilities: The Contractor shall be responsible for taking adequate precautions for protecting against fire and soiling or damage to adjacent equipment, structures, surfaces, processes or products. Floors, paved areas and other adjacent surfaces shall be protected against spatter or spillage. No spray painting shall be performed in areas where welding is in progress or near operations involving open flame, sparks, or high heat.
9. Special Operations of Owner: The Contractor shall determine any special operations of the Owner which could influence the safe workmanship of personnel with respect to electrical, mechanical, chemical, or fire hazard situations.

1.06 EQUIPMENT:

- A. General: All equipment and tools shall be explosion proof and non-sparking, satisfactory for the intended use and shall be maintained in good working order.
- B. Spray Equipment: Spray equipment shall be suitable for the material being sprayed; shall be capable of supplying sufficient air at the required pressures; shall be equipped with air and moisture separators; and shall be thoroughly cleaned before and after each use with the appropriate cleaning solvents.
- C. Inspection Equipment: The inspection equipment to be utilized on the project shall be furnished by the Contractor. Acceptable equipment for the various inspection tests required shall be as follows or equal:
 1. Air Temperature and Relative Humidity: Bacharach Sling Psychrometer, Model #12-7012 as supplied by KTA-Tator, Pittsburgh, PA., (412) 788-1300.
 2. Surface Temperature: Surface Temperature Thermometer, Model #PTC/312F, 0-250°F as supplied by KTA-Tator, Pittsburgh, PA., (412) 788-1300.

3. Material Temperature: Model #6212 Taylor Paint Thermometer, 25° - 125°F, 8-inch stem as supplied by KTA-Tator, Pittsburgh, PA., (412) 788-1300.
4. Wet Film Thickness: Nordson West Film Gage, Model #790-010, 0-20 mils supplied by KTA-Tator, Pittsburgh, PA., (412) 788-1300.
5. Dry Film Thickness: Mikrotest III, Model #FM, Dry Film Thickness Gage as supplied by KTA-Tator, Pittsburgh, PA., (412) 788-1300.
6. Anchor Pattern: Keane-Tator Profile Comparator as supplied by KTA-Tator, Pittsburgh, PA., (412) 788-1300.
7. Surface Preparation: NACE Visual Surface Preparation Standards as supplied by the National Association of Corrosion Engineers, Katy, Texas.
8. Holiday Detection: Model M-1 Holiday Detection as supplied by KTA-Tator, Pittsburgh, PA., (412) 788-1300.
9. Visual Surface Inspection: 1 - Flash-O-Lens #372/1 as supplied by KTA-Tator, Pittsburgh, PA., (412) 788-1300.

PART 2 - PRODUCTS

2.01 GENERAL REQUIREMENTS: The film thickness designated and/or the number of coats to be applied shall not be decreased and shall be increased where required to meet manufacturer's recommendations. Manufacturer's recommendations as to which finish coat should be used with a particular primer shall be observed. In all cases, the painting system shall be from the same manufacturer. All paint shall be mildew resistant.

2.02 COATING MATERIALS: The following materials (or approved equals) shall be utilized on the various surfaces of the items to receive new coating systems.

A. Non-Submerged Ferrous Metals:

1. Surface Preparation: SSPC-SP-6 Commercial Blast Cleaned Finish.
2. Primer: High-build epoxy primer applied at 6.0 mils DFT.
3. Finish: Polyurethane Enamel applied at 4.0 mils DFT.

Minimum system dry film thickness 10.0 mils

B. Submerged Ferrous Metals:

1. Surface Preparation: SSPC-SP-10 Near White Blast Cleaned Finish
2. Primer: Two component high build polyamide epoxy with catalyst applied at 6.0 mils DFT

3. Finish: Two component high build polyamide epoxy with catalyst applied at 6.0 mils DFT

Minimum system dry film thickness 12.0 mils.

C. Interior Non-submerged Concrete and Masonry:

1. Surface Preparation: Remove all grease, oil, dirt, mildew, and other foreign matter by solvent or detergent washing. Masonry shall have cured for at least 30 days.
2. Block Filler Primer: non-aggregate type, latex filler coating for masonry.
3. Concrete HS Epoxy Primer: High solids coating for concrete.
4. Finish: High solids polyamide cured epoxy coating applied at 4.0 mils DFT.

D. Exterior Non-Submerged Concrete, Masonry, and Fiber-reinforced Cement Boards:

1. Surface Preparation: Remove all grease, oil, dirt, mildew, and other foreign matter by solvent or detergent washing.
2. Concrete HS Epoxy Primer: High solids coating for concrete.
3. Finish: High solids polyamide cured epoxy coating applied at 4.0 mils DFT.

E. Exterior Wood:

1. Surface Preparation: All holes and cracks shall be filled with suitable wood filler. All new or unfinished wood surfaces shall be sanded with aluminum oxide sandpaper prior to painting. All knots, sap streaks and pitch areas shall be sealed with shellac prior to painting.
2. Primer: Acrylic Latex Primer at 5.0 mils DFT.
3. Finish: Acrylic Latex Gloss Paint at 6.0 mils DFT.

F. Interior Wood:

1. Remove splits, splinters, and loose material.
2. Stain: One (1) coat as specified by manufacturer.
3. Coordinate color with Owner.

- 2.03 CAULKING MATERIALS:** Shall be general purpose, mildew resistant, gun grade, interior/exterior acrylic latex caulk complying with ASTM C-834-76. Caulk shall be compatible with specified coating system, paintable, colorfast, non-staining, and non-bleeding.
- 2.04 THINNERS:** Where thinning is necessary, only the products for the particular purpose, and by the manufacturer furnishing the coating system, shall be allowed. All thinning shall be done strictly in accordance with the manufacturer's instructions.
- 2.05 STENCILING:** All piping coated pursuant to Paragraph 2.02, and all new chemical feed piping, shall be labeled in accordance with the 10 State Standard requirements and flow arrows shall be provided. Stenciling shall be accomplished through painting or vinyl tape. All lettering shall be two inches high, appear on both sides of pipes and be spaced on 10-foot intervals.

PART 3 - EXECUTION

3.01 GENERAL PREPARATION:

- A. Protection of Existing Facilities: Remove, mask, or otherwise protect hardware, hardware accessories, machined surfaces, plates, lighting fixtures, and similar items in contact with painted surfaces and not to be coated, prior to surface preparation and coating operations. Reinstall removed items following completion of coating.
- B. Preparation of Welded Surfaces: Prior to beginning surface preparation, the Contractor shall have repaired all ferrous metal surfaces and fabrication imperfections resulting from his metal fabrication/welding operations. All welds shall be continuous, relatively smooth, and free of pinholes, blowholes, depressions, sharp projections, inclusions, and other imperfections.

3.02 SURFACE PREPARATION:

- A. Solvent Cleaning: All grease, oil, dirt, and other surface contaminants shall be removed from all metal surfaces identified to receive new coating systems by solvent cleaning in accordance with SSPC SP1. It is intended that solvent cleaning be used prior to the surface preparation methods specified herein, for the removal of rust, mill, scale, or painting.
- B. Pressure Washing: Exterior concrete block shall be pressure washed to remove all contaminants such as dirt, grease, oil, chemicals, etc., to obtain a clean, sound surface. All loose scaling, poorly bonded coating material, and all surface chalk shall be removed.
- C. Caulking: Application of any specified caulking shall be done only after the last coat of paint has been applied and has dried hard. Any caulking material used must be of a type that is compatible with the specific coating system.

- D. Rate of Application: Shall be as recommended by coating manufacturer for the surface involved and/or to provide Dry Film Thickness (DFT) specified.
- E. Time Limits for Coating: All blasted surfaces shall have the first coating applied within eight (8) hours and before rust or contamination can occur, except that there shall remain unpainted a 4" to 6" border of blasted steel at the end of each work day. When blast cleaning resumes the following work day, this border shall be reblasted up to and including 1" to 3" of the previously applied coating.
- F. Protection of Coated Areas: During all blasting operations, extra care shall be taken to prevent damage or abrasive impingement upon previously applied coated area.

3.03 CURING OF COATING SYSTEMS: Contractor shall comply with recommendation of coating manufacturer for drying time between succeeding coats. Before succeeding coats are applied to a surface, the preceding coat shall have been inspected and approved by the Engineer. Additional coats shall not be applied, nor shall units be placed in service, until coatings are thoroughly dry. Longer drying times may be necessary for confined areas and/or "non-normal" weather conditions.

3.04 TESTING AND INSPECTION:

- A. General: The Owner and/or Engineer shall have access to the work in progress at all times and shall reserve the right to inspect this work at any time for compliance with all requirements of the specifications. The Engineer shall also reserve the right to approve each phase of the work before further work may be done, to halt all work deemed to be improper or not in compliance with the specifications, and to require that the Contractor promptly correct all improper practices and defective or deficient work.
- B. Testing Requirements: In order to assure compliance with these specifications, the Contractor shall perform the following tests and/or inspections as the work progresses:
 - 1. Humidity and Air Temperature: The relative humidity and surface and air temperature shall be determined in the immediate working area using suitable instruments specified herein each day before work begins and at least one other time in the middle of the work day.
 - 2. Material Temperature: Material temperature shall be similarly measured using a suitable instrument as specified herein prior to mixing and/or application.
 - 3. Anchor Pattern Determination: For each area to be coated, the degree of surface preparation and anchor pattern shall be determined by comparison of work with visual surface preparation standards as specified herein.

4. Wet Film Thickness: As coatings are applied, the wet film thickness shall be periodically and routinely measured using a suitable instrument specified herein for each coat applied.
 5. Dry Film Thickness: Dry film thickness of each coat of paint shall be measured with a suitable magnetic gauge as specified herein. Measurements in each area shall be made on no greater than 100 square foot areas and then only on coating that has dried to the point where it can no longer be indented by depression of a finger nail under moderate pressure.
 6. Holiday Testing: Following application of the finish coat and when the coating system has dried hard, all coated areas shall be checked for pinholes or other holidays with a suitable low voltage (100 volts or less) wet sponge holiday detector as specified herein using clean fresh water. All deficient areas shall be clearly marked by circling with a greaseless chalk. These deficient areas shall be touched up by wiping off the chalk with a clean rag and immediately applying a spot coat (preferably by smooth, even brush coat). The surface must be thoroughly dry and free of any surface residues or contamination before any tough-up coat of paint is applied.
- C. Final Inspection: Upon completion of the work, the Owner and/or Engineer shall, in the presence of the Contractor, conduct a final inspection and shall either approve the work as satisfactory and in compliance with the specification, or disapprove the work and direct the Contractor to make all necessary corrections of all defects or deficiencies. The Contractor shall provide all necessary inspection equipment, labor, rigging, lighting, and other equipment to facilitate this inspection. The final inspection shall include the following:
1. Holiday Detection: Holiday detection with a suitable direct current instrument specified herein.
 2. Visual Inspection: Visual surface inspection by the naked eye and/or a suitable magnifying instrument for runs, sags, drips, cracks, alligating, and blisters.

3.05 CORRECTION OF DEFICIENCIES: The Contractor shall correct all items found to be deficient in an expedient manner. Any expenses incurred for corrective measures required as the result of improper practices and/or defective or deficient work shall be borne by the Contractor and the extent of these corrective measures shall be at the discretion of the Engineer.

END OF SECTION

SECTION 10200
BUILDING LOUVERS

PART 1 - GENERAL

1.01 DESCRIPTION OF WORK:

- A. The extent of louvers is shown on the drawings.
- B. The types of louvers required include:
 - 1. Fixed Louver.

1.02 QUALITY ASSURANCE:

- A. Provide each type of louver as a complete unit, produced by a single manufacturer, including necessary mounting accessories, fittings and fastenings.
- B. Color: Provide clear anodized louvers as specified by the Engineer from manufacturer's standards.

1.03 SUBMITTALS:

- A. Manufacturer's Data: Submit manufacturer's technical data and installation instruction for louvers.
- B. Color samples of all exposed finishes.
- C. Shop drawings showing all information required for a complete installation not fully described or shown on manufacturer's data.
- D. Provide copies of air capacity charts or graphs showing static pressure drop and varying air flow rates.

PART 2 - PRODUCTS

2.01 FIXED LOUVER:

- A. Provide aluminum fixed vane 4" deep storm-proof exterior with drainable louver and bird screen, equal to Model DFL as manufactured by Air Conditioning Products Company.

- B. Frames and Blades: Extruded aluminum 6063-T52 alloy, with reinforcing bosses are required. Head, sill and jambs to be one piece structural members and to have integral caulking slot and retaining bead. All fasteners to be stainless steel.
- C. Structural supports to be designed by the louver manufacturer to carry a wind load of not less than 25 pounds per square foot.
- D. Screens: Louver shall be furnished with mesh aluminum insect screen secured by an extruded aluminum frame. Screen shall be secured to the interior of louver with stainless steel screws.
- E. Finish: Louver shall have a clear anodized finish.

PART 3 - EXECUTION

3.01 INSTALLATION:

- A. Install and secure architectural louvers at the locations shown on the drawings and in accordance with the manufacturer's instructions for a plumb, level, rigid, and flush installation.
- B. Space fastenings as required and apply through back-up reinforcing plates where necessary to prevent metal distortion. Conceal all fasteners wherever possible.
- C. Install clips, angles and brackets as required to provide a flush, hairline joint against adjacent surfaces. Install with fasteners concealed from the exterior.
- D. Touch-up marred finishes, or replace if not acceptable to the Engineer. Use only materials and finishes as recommended or furnished by the louver manufacturer.
- E. Install sealants where shown or recommended in accordance with manufacturer's instructions for water/weather-tight installations.

END OF SECTION

SECTION 10800
TOILET ACCESSORIES

PART 1 - GENERAL

1.01 DESCRIPTION OF WORK: The type of toilet accessories required for each bathroom include the following:

- A. 1 - Electric Hand Dryer
- B. 1 - Liquid Soap Dispenser per Lavatory
- C. 1 - Toilet Tissue Dispenser per Water Closet
- D. 1 - Mirror per Lavatory
- E. 2 - Handicap Grab Rails per Accessible Water Closet

1.02 QUALITY ASSURANCE:

- A. Acceptable Manufacturers:
 - 1. Accessory Specialties, Inc.
 - 2. American Dispenser Company, Inc.
 - 3. Bobrick Washroom Equipment, Inc.

1.03 SUBMITTALS: Submit manufacturer's technical data and installation instructions for each toilet accessory.

PART 2 - PRODUCTS

2.01 MATERIALS:

- A. Stainless Steel: AISI, Type 302/304, with satin finish, unless otherwise indicated.
- B. Brass: Cast or forged quality alloy, FS WW-P-541.
- C. Sheet Steel: Cold rolled, commercial quality, ASTM A366. Surface preparation and metal pretreatment as required for applied finish.
- D. Galvanized Steel Sheet: ASTM A527, G60.

- E. Galvanized Steel Mounting Devices: ASTM A386, hot-dip galvanized after fabrication.

2.02 FABRICATED ITEMS:

- A. Hand Dryer: Stainless steel construction.
- B. Liquid Soap Dispenser: Surface-mounted, stainless steel.
- C. Toilet Tissue Dispenser: Two-roll capacity.
- D. Mirror: Full width of vanity.
- E. Handicap Grab Rails: Stainless steel construction, meeting ANSI A117.1.

PART 3 - EXECUTION

3.01 INSTALLATION:

- A. Use concealed fastenings as specified by manufacturers.
- B. Secure toilet room accessories in accordance with the manufacturer's instruction for each item and each type of substrate construction.

END OF SECTION

SECTION 15400

PLUMBING

PART 1 - GENERAL

1.01 DESCRIPTION:

- A. The work includes the providing of all labor, materials, and services necessary to install the indicated systems, complete with hangers, supports, equipment, and connections required to any fixture or equipment indicated or specified.
- B. The work includes, but is not limited to, the following:
 - 1. Sanitary waste and vent piping systems
 - 2. Domestic hot and cold water piping systems

1.02 QUALITY ASSURANCE:

- A. Standards:
 - 1. American Society for Testing and Materials (ASTM):
 - a. B88, Copper Pipe and Fittings
 - b. A518, Corrosion Resisting Pipe and Fittings
 - 2. Plumbing and Drainage Institute (PDI):
 - a. WH20, Water Hammer Arresters
- B. Requirements of Regulatory Agencies:
 - 1. Florida Building Code (7th Edition) with revisions
 - 2. 10D-9 Rules of the State of Florida
 - 3. Code Requirements of City and/or County having Jurisdiction

1.03 MANUFACTURERS: A basis of design is provided on the Drawings.

1.04 SUBMITTALS:

- A. Material and Equipment Schedule:
 - 1. Submit complete list of materials and equipment to be incorporated in work.

2. Submit cut sheet and manufacturer's information on all items in list and identified in plumbing schedules.
3. Riser diagrams as required by AHJ.

1.05 PIPING AND DRAWINGS: The drawings are diagrammatic and not intended to show in detail all features of the work. The location of all piping shall be coordinated to determine that it clears all openings and structural members, that piping indicated as concealed can be properly concealed in walls or partitions of finished rooms, and that it does not interfere with lights, ductwork, or equipment having fixed locations. Conceal all piping except where otherwise indicated.

1.06 GUARANTEE: All equipment, material, accessories, and installation shall carry a guarantee against defects for a period of one year from the date of acceptance. Each system as a whole, and in all its parts, shall be guaranteed to function correctly up to the specified capacity. Should a system, or any part thereof, fail to meet the performance requirements, necessary replacements, alternations, or repairs shall be made to bring performance up to specified requirements. Building construction finishes damaged or marred shall be restored to the satisfaction of the Owner's representative. All of the above described shall be done without cost to the Owner.

PART 2 - PRODUCTS

2.01 PIPE AND FITTINGS:

- A. General: All piping shall be run straight, plumb, and properly graded in direction indicated on the drawings. Cut pipe shall be squarely cut and properly reamed to remove all cuttings and burrs before making up the joints. Fittings and nipples shall be of the same materials as the pipe.
- B. Above-ground Domestic Water Piping: Copper watertube shall be Type K, copper tubing, ASTM B88. Fittings shall be wrought copper, ANSI B16.3, with lead-free solder-ASTM approved.
- C. Buried Domestic Water Piping: Plastic pipe and fittings shall be Schedule 80 PVC conforming to ASTM D1785. Fittings shall be PVC conforming to ASTM D2466. Solvent cement shall conform to ASTM D2564.
- D. Waste Piping: Pipe and fittings shall be Schedule 40 PVC conforming to ASTM D1785. Fittings shall be PVC conforming to ASTM D2466. Solvent cement shall conform to ASTM D2564.

2.02 BACKFLOW PREVENTERS: Where indicated and/or required by code provide a reduced pressure type backflow preventer meeting the requirements of the local authorities having jurisdiction. Backflow preventers shall be installed at all domestic water/mechanical equipment connections. Minimum size shall be line size.

2.03 PLUMBING FIXTURES:

- A. As scheduled on the drawings.
- B. Provide control-stop valves in each supply to each fixture.
- C. The finish of fittings, accessories and supplies exposed to view shall be chromium plated.
- D. Carrier Systems: All wall mounted fixtures shall be supported by an appropriate carrier support system as recommended by the fixture manufacturer.
- E. All fixtures shall be "first quality".

2.04 TRAPS:

- A. Each fixture, equipment drain, or floor drain shall be separately trapped, unless otherwise indicated or specified.
- B. Floor drains shall be fitted with an automatic trap primer.

2.05 FLOOR DRAINS: Furnish with seepage flange in floors where installed with pans or flashing; furnish clamping ring. Locate drains to suit equipment approved for installation. All floor drains shall be provided with automatic trap primer and installed per manufacturer's recommendations. See Drawings for specifications.

2.06 VALVES:

- A. Ball Valves: Full port ball valves with stainless steel stem and ball with Teflon seat and rings.
- B. Hose Bibb: Woodford Model 24 hose bibb shall be key operated.
- C. Exterior valves 1-1/2" and smaller shall be curb-stop type. 2" and larger shall be cast iron resilient wedge type. Wedge shall be totally encapsulated with rubber, non-rising stem with bonnet, and O-ring plate fusion bond epoxy coated.

2.07 CLEAN-OUTS:

- A. Where indicated and at the base of all risers. Additional clean-outs at the Contractor's option for the convenience of testing and erection. Clean-outs installed in floors with waterproof membrane shall be provided with clamping rings. Install clean-out frames and covers to be flush with adjoining architectural finishing material.
- B. Clean-out Plugs: Josam 58540-20.
- C. Clean-outs in Wall: Josam 58790-22.
- D. Clean-outs in Concrete and Terrazzo Floor Finishes: Josam 58410.
- E. Clean-outs in Vinyl Tile Floor Finishes: Josam 56004-2-15.
- F. Carpeted Floor Finishes: Josam 58410-14.

2.08 THERMAL INSULATION:

- A. General: No insulation shall be installed until the piping systems have been checked and found free of all leaks. Surfaces shall be clean and dry before attempting to apply insulation. Insulation shall be installed by a professional insulation contractor with adequate experience and ability to perform the work. The Contractor shall verify that all materials comply with the Specifications.
- B. Domestic Hot Water Piping:
 - 1. Material: Shall be insulated with one-inch thick "Imcolock" or "Arctitherm" polyethylene pipe insulation.
 - 2. Application: Pipe insulation shall be secured in place by applying pressure to the pressure sensitive closure system. Elbows and tees shall be insulated with miter-cut fittings. Valves and other irregular fittings shall be insulated per manufacturer's installation guidelines.
- C. Domestic Cold Water Piping Exposed to Exterior and Horizontal Storm Water Piping (if applicable):
 - 1. Material: Shall be the same material and applied in the same manner as specified above for domestic hot water piping, except the insulation thickness shall be ½ inch.
- D. Waste lines from electric water coolers and waste piping exposed, piping in crawl space, or in exterior walls shall be insulated with 3/8 inch "Imcolock" or "Arctitherm".

PART 3 - EXECUTION

3.01 INSTALLATION:

- A. Piping Layout:
 - 1. Complete installation to present a neat, orderly appearance.
 - 2. Run piping parallel to walls of building unless otherwise indicated.
 - 3. Keep piping free from contact with structure of installed items.
- B. Plumbing Fixtures: Install all fixtures in a clean and secure manner and in accordance with the manufacturer's instructions.
- C. Penetrations of masonry or concrete shall be made perpendicular to the running direction of the structure.
- D. Below-grade penetrations of footings or stemwalls shall be sleeved (2 pipe sizes larger) for the length of the penetration. Request additional information if sleeve will interfere with reinforcing.
- E. Above-grade wall penetrations shall be sealed against weather and the entrance of insects and vermin by means acceptable to the Engineer.

3.02 CUTTING AND PATCHING: Where required, the Contractor shall do the cutting and patching using workers who are skilled in the trade involved.

3.03 UNIONS AND FLANGES:

- A. Install on one side of each valve or connection to equipment
- B. Unions and flanges may not, in every case, be shown on the Drawings but are to be provided where necessary and adjacent to all equipment installed or provided for under this contract.

3.04 CLEARANCE: Prior to acceptance of the work, all plumbing lines shall be sanitized and cleared for service in accordance with the Florida Building Code and the local building department.

3.05 CLEAN-UP: Contractor shall remove all excess or waste material and clean installed work suitable for use.

END OF SECTION

SECTION 16050

GENERAL ELECTRICAL REQUIREMENTS

PART 1 - GENERAL

1.01 SECTION INCLUDES: General information on electrical installation not covered elsewhere. This section applies to all other electrical sections.

1.02 DEFINITIONS: For the purposes of this contract, the term "Provide" shall mean to furnish and install services, material, and equipment complete and ready for intended use.

1.03 ELECTRICAL SUBCONTRACTOR QUALIFICATIONS: The electrical Subcontractor shall have at least 5 years of experience with projects of similar size and scope. Submit three example projects that verify this experience. Provide contact name and phone number for customer for each project.

1.04 PROJECT DESCRIPTION:

- A. This project includes all necessary labor and materials, including, but shall not be limited to the following:
1. Temporary electric service and electrical distribution for construction purposes.
 2. Permanent building service entrance equipment and feeder distribution.
 3. All underground electrical work.
 4. Motor control centers, panelboards and feeder and branch circuits to electrical devices, lighting fixtures, and other electrically operated equipment.
 5. Electrical equipment including disconnects, devices, switches, and light fixtures.
 6. Empty conduits and outlets for telephone system.
 7. Emergency standby power system. Including temporary backup power system, as necessary.
 8. Coordination with other subcontractors.

1.05 INTERPRETATION:

- A. Specifications and Drawings shall be considered as supplementary to each other, requiring materials and labor indicated, specified, or implied by either Specifications or Drawings. Contradictions shall be presented to the Engineer for resolution.
- B. Interpretation of Specifications or Drawings, where deemed necessary, shall be made only by the Engineer.

1.06 CODES, STANDARDS, ORDINANCES, AND PERMITS:

- A. The National Electrical Code (NEC), The Florida Building Code, National Electric Safety Code and OSHA shall establish the minimum requirements for installation, but in addition, all work shall also comply with Local, County or Municipal Code requirements. If there is a conflict between the NEC and local, state, county, or municipal codes, conform to the more stringent of the two. Similarly, if the local Authority Having Jurisdiction has not adopted the latest revision of the NEC and is still using an earlier version, conform to the more stringent of the two.
- B. Be familiar with local Code requirements and local Utility Company Standards for electrical service requirements, and make installation in accordance with such requirements.
- C. In case of conflict between the Contract Documents and a governing code or ordinance, such conflict shall be immediately brought to the attention of the Engineer for resolution.
- D. Apply for, obtain, and pay for all required permits and inspection certificates. Final payment is contingent upon delivery of such permits and certificates to the Engineer.

1.07 SITE INSPECTION: Visit the site and thoroughly inspect conditions affecting the Work before submitting Bid.

1.08 CUTTING AND PATCHING:

- A. Place all sleeves, inserts, conduit hangers, etc. as construction progresses to avoid any unnecessary cutting of structural members. Cooperate with other Subcontractors in location of electrical equipment that may conflict with location of other equipment.
- B. Obtain authorization from the Engineer for any necessary cutting of building structure to facilitate installation of this work and do not proceed until authorization has been received. Limit necessary cutting and patching to the minimum size required for installation of conduit or apparatus.

1.09 SUBMITTALS:

- A. Submit Shop Drawings, catalog sheets, wiring diagrams, or other descriptive data with sufficient information to establish design, quality and performance. Data shall describe apparatus, equipment, panels, fixtures, and other items requiring descriptive literature. Provide submittals as a single package including all required electrical items. Partial packages will not be reviewed. Submittals items shall be in accordance with the individual specification sections and include, but shall not be limited to, the following:
 - 1. Service Equipment
 - 2. Panelboards
 - 3. Starters
 - 4. Disconnects and Fuses
 - 5. Switches
 - 6. Wiring Devices
 - 7. Wiring and Conduit
 - 8. Surge Protective Devices
 - 9. Transformers
 - 10. Light Fixtures and Ballasts
 - 11. Light Poles
 - 12. Automatic Transfer Switches
 - 13. Standby Generators
 - 14. Evidence of Contractor Qualifications and Experience (see para. 1.03)

1.10 MAINTENANCE DATA:

- A. Collect and retain maintenance and service data supplied with equipment furnished and installed under this Contract until job completion, at which time deliver to the Engineer. Comply with Section 01730.
- B. Keep one set of prints current of any changes or variations by marking prints in a legible manner. Maintain As-Built drawings on a daily basis.

1.11 TEMPORARY ELECTRIC SERVICE:

- A. Provide complete temporary system of power and lighting wiring for use during construction and for testing of equipment.
- B. When proposed work will interrupt an existing backup power system the contractor shall provide an appropriately sized temporary backup power system capable of providing interim coverage. The contractor shall provide a written plan of action to ensure back-up power is available at all times during construction of the project. All costs associated with the temporary back-up power system shall be the contractor's responsibility including, but not limited to: generator, fuel supply, automatic transfer switch, junction boxes, conduit, conductors, grounding, etc.

- C. Comply with OSHA and NEC including personnel ground-fault protection requirements.

1.12 ELECTRIC SERVICE:

- A. Primary electrical service and service transformer(s) will be provided by local utility. The configuration and equipment locations indicated are tentative. Contact Utility in advance and verify availability and configuration of electrical service as indicated.
- B. Provide all labor, materials and equipment not provided by the Utility in accordance with Utilities' installation policies and procedures. Should a significant installation conflict occur, notify the Engineer immediately for resolution before starting any work. The Contractor shall include any and all fees associated with establishing electrical power service in their bid.

1.13 TELEPHONE SERVICE: Provide all labor, materials and equipment not provided by the telephone company in accordance with the telephone company's installation policies and procedures. The Contractor shall include any and all fees associated with establishing telephone service in their bid.

1.14 COORDINATION - GENERAL:

- A. Drawings are generally diagrammatic. Review all project Drawings and coordinate all work with different trades prior to installing any work so that interferences between electrical work and ducts, piping, equipment, and structural work will be avoided. Do not install conduits, boxes and fittings in spaces required for equipment or piping.
- B. Furnish all necessary offsets in raceways, fittings, etc., required to properly install work so as to take up minimum space. Install all equipment to provide code required "working space".
- C. In case interference develops, the Contractor will decide which trade work must be relocated regardless of which was installed first. Damage from interference or rework caused by inadequate coordination with other trades shall be rectified without additional cost.
- D. Within 30 days following award of Contract, report to the Engineer in writing all real or potential errors, ambiguities and/or conflicts on electrical work or between trades.

1.15 COORDINATION - ELECTRICAL/MECHANICAL:

- A. Unless specifically required otherwise, make all power wiring connections to all water heaters, pumps, machinery, appliances, water coolers and other electrically-operated equipment as indicated on the

Drawings or as required. Furnish and install disconnect switches, starters and protective devices as indicated on the Drawings, except for items furnished with integral disconnect switches and/or starters. Coordinate the exact location of receptacles, flexible conduit, and disconnects for mechanical and plumbing equipment with the mechanical or plumbing contractor.

- B. Review approved Shop Drawings and verify final electrical characteristics and wiring before rough-in of power feeds to any equipment. When electrical data on approved Shop Drawings differs from contemplated design, make necessary adjustments to wiring, disconnect, and branch-circuit protection for equipment actually installed.

PART 2 - PRODUCTS

2.01 MATERIALS:

- A. All materials used in this project shall be new, unless otherwise noted, and listed by the Underwriters' Laboratories, Inc. as conforming to its standards where such standards have been established. These materials shall bear the UL label.
- B. Before purchasing any equipment, the Contractor shall reconfirm the availability of the project's voltage, phase, and service configuration with the Drawings.
- C. Where materials, equipment, apparatus or other products are specified by manufacturer, brand name, type or catalog number, such designation is to establish standards of desired design or quality and shall be basis of Bid.

PART 3 - EXECUTION

- 3.01 CLEAN-UP:** After electrical installation, remove all rubbish, trash, and debris from the site and dispose of in an approved manner.

END OF SECTION

SECTION 16060

GROUNDING AND BONDING

PART 1 - GENERAL

1.01 SECTION INCLUDES:

- A. Grounding electrodes and conductors, equipment grounding conductors, and bonding to complete grounding system consisting of:
 - 1. Metal underground water pipe, if available.
 - 2. Effectively bonded and grounded metal frame of the building.
 - 3. Concrete-encased electrode.
 - 4. Rod electrodes.

1.02 REFERENCES: NFPA 70 - National Electrical Code, NFPA (edition adopted by Authority Having Jurisdiction).

1.03 PERFORMANCE REQUIREMENTS: Grounding System Resistance: 5 ohms.

1.04 QUALITY ASSURANCE:

- A. Conform to requirements of NFPA 70.
- B. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years documented experience with service facilities within 100 miles of Project.
- C. Products: Listed and classified by Underwriters Laboratories, Inc. as suitable for the purpose specified and indicated.

PART 2 - PRODUCTS

2.01 ELECTRODES:

- A. Rod Electrodes: Copper.
 - 1. Diameter: 3/4 inch (19 mm).
 - 2. Length: 10 feet (3000 mm).
- B. Concrete Encased Electrode: Per NEC 250.52(A)(3), provide concrete encased electrode. The electrode shall be encased in at least 2 inches of concrete, located within and near the bottom of a concrete foundation or footing that is in direct contact with the earth. The electrode shall consist of

at least 20' of conductive steel reinforcing bars or rods of not less than 1/2" diameter or 20' of bare copper conductor not smaller than no. 4.

2.02 CONNECTORS AND ACCESSORIES:

- A. Equipment Grounding Conductor: THWN Stranded copper with green coding.
- B. Grounding Electrode Conductor: Size to meet NFPA 70 requirements.

PART 3 - EXECUTION

3.01 EXAMINATION: Verify existing conditions prior to beginning work.

3.02 INSTALLATION:

- A. Install ground electrodes at locations indicated. Install additional rod electrodes as required to achieve specified resistance to ground.
- B. Provide grounding electrode conductor and connect to metal water pipe (if available), ground rods, reinforcing steel in foundation footing, structural steel, and any other items required by NEC Article 250 and local codes. Bond steel together.
- C. Provide bonding to meet requirements described in Quality Assurance.
- D. Bond equipment such as metallic housing and feeder metallic conduits to grounding conductor. Use grounding bushings, on service conduit and at other points where grounding continuity is broken.
- E. Provide a bonding jumper for any equipment, motor, fixture or device to which current carrying conductors are connected that is not bonded directly to the grounded system. Connect bonding jumper to approved lugs and grounding conduit bushings or clamps.
- F. Equipment Grounding Conductor: As indicated on Drawings, provide separate, insulated grounding conductor within each feeder and branch circuit raceway (sized per NEC Section 250 if not indicated). Terminate each end on suitable lug, bus, or bushing. Metal raceways shall not be used as the sole method of grounding.

3.03 FIELD QUALITY CONTROL:

- A. Test grounding system to ensure continuity and that resistance to ground is not excessive (above 5 ohms). Test each ground rod for resistance to ground before making connections to rod; tie grounding system together and test for resistance to ground. Make resistance measurements in dry weather, not earlier than 48 hours after rainfall.
- B. Provide ground test results.

END OF SECTION

SECTION 16075

ELECTRICAL IDENTIFICATION

PART 1 - GENERAL

1.01 SECTION INCLUDES: Nameplates and labels.

1.02 REFERENCES: NFPA 70 - National Electrical Code, National Fire Protection Association (edition adopted by Authority Having Jurisdiction).

1.03 QUALITY ASSURANCE:

- A. Conform to requirements of NFPA 70.
- B. Products: Listed and classified by Underwriters Laboratories, Inc. As suitable for purpose specified and shown.

PART 2 - PRODUCTS

2.01 NAMEPLATES AND LABELS:

- A. Nameplates: Engraved three-layer laminated plastic, black letters on white background.
- B. Locations:
 - 1. Each electrical distribution and control equipment enclosure.
- C. Letter Size:
 - 1. Use 1/8 inch (3 mm) letters for identifying individual equipment and loads.
 - 2. Use 1/4 inch (6 mm) letters for identifying grouped equipment and loads.
- D. Labels (for Power Outlets): Embossed adhesive tape, with 1/8 inch (3 mm) black letters on clear background. Use only for identification of appliances and equipment with their own branch circuits. Label outlet with name of load, panel and circuit number.

PART 3 - EXECUTION

3.01 PREPARATION: Degrease and clean surfaces to receive nameplates and labels.

3.02 INSTALLATION:

- A. Install nameplates and labels parallel to equipment lines.
- B. Secure nameplates to equipment front.
- C. Secure nameplates to inside surface of door on panelboards that are recessed in finished locations.

END OF SECTION

SECTION 16123

WIRE AND CABLE

PART 1 - GENERAL

1.01 SECTION INCLUDES:

- A. Wire and cable for 600 volts and less.
- B. Wiring connectors and connections.

1.02 REFERENCES:

- A. NECA (INST) - NECA Standard of Installation; National Electrical Contractors Association.
- B. NFPA 70 - National Electrical Code, National Fire Protection Association (edition adopted by Authority Having Jurisdiction).

1.03 QUALITY ASSURANCE:

- A. Conform to requirements of NFPA 70.
- B. Manufacturer Qualifications: Company specializing in manufacturing the Products specified in this section with minimum three years documented experience and with service facilities within 100 miles (160 km) of Project.
- C. Products: Furnish products listed and classified by Underwriters Laboratories Inc. as suitable for the purpose specified and indicated.

PART 2 - PRODUCTS

2.01 WIRING REQUIREMENTS:

- A. Use only wire with Type THWN/THHN (dual rated) insulation in raceway. Wire shall be color coded per the NEC and as follows:
 - 1. 480/277V, 3 Phase, 4 Wire System: Brown, Orange, Yellow with White Neutral and Green Ground.
 - 2. 120/240V, 120/208V 1 Phase, 3 Wire System: Red and Black with White Neutral and Green Ground.
 - 3. 120/240V, 120/208V, 3 Phase, 4 Wire System: Black, Red, Blue with White Neutral and Green Ground.

- B. Use solid conductor for feeders and branch circuits #10 AWG and smaller. Use stranded conductors for feeders and branch circuits #8 AWG and larger.
- C. Use stranded conductors for control circuits.
- D. Use conductor not smaller than 12 AWG for power and lighting circuits.
- E. Use conductor not smaller than 14 AWG for control circuits.
- F. Provide 10 AWG conductors for 20 ampere, 120 volt branch circuits longer than 75 feet (25 m) or as indicated.
- G. Conductor sizes are based on copper. Wire shall be copper unless indicated otherwise.
- H. All single-phase circuits from 120/240V and 120/208V 3-phase panelboards shall have separate neutral conductors originating in the panelboard.

2.02 WIRE:

- A. Description: Single conductor insulated wire.
- B. Conductor: Copper.
- C. Insulation Voltage Rating: 600 volts.
- D. Insulation: Thermoplastic material rated 90° C.

2.03 INSTRUMENTATION CABLE: Tinned copper, stranded, polyethylene insulated conductors; twisted pair, 100% aluminum/polyester shield with a No. 20 AWG tinned copper drain wire. Single pair cables shall be No. 18 AWG. Jacket insulation shall be rated not less than 300 volts and 60° C. Belden 9463, or equal.

PART 3 - EXECUTION

3.01 PREPARATION: Completely and thoroughly swab raceway before installing wire.

3.02 INSTALLATION:

- A. Route wire and cable as required to meet project conditions.
- B. Wire and cable routing indicated is intended to be diagrammatic.
- C. Where wire and cable destination is indicated and routing is not shown, determine exact routing and lengths required.

- D. Include wire and cable of lengths required to install connected devices within 10 ft (3000 mm) of location shown.
- E. No wiring shall be installed until the required raceway system, including junction, outlet and device boxes is completed. Install wiring before painting begins and protect against being painted.
- F. Branch circuit sizes are noted on the Drawings and must be continuous without reduction in size throughout their length except where connecting to fixtures or devices.
- G. Branch circuit wire sizes shall be increased as required where long runs will cause excessive voltage drop per NEC.
- H. Install wire and cable in accordance with the NECA "Standard of Installation."
- I. Use wiring methods indicated.
- J. Pull all conductors into raceway at same time.
- K. Use suitable wire pulling lubricant.
- L. Neatly train and lace wiring inside boxes, equipment, and panelboards.
- M. Clean conductor surfaces before installing lugs and connectors.
- N. Make splices, taps, and terminations to carry full capacity of conductors with no perceptible temperature rise.
- O. Use split bolt connectors for copper conductor splices and taps, #4 AWG and larger. Tape uninsulated conductors and connector with electrical tape to 150 percent of insulation rating of conductor.
- P. Use solderless pressure connectors with insulating covers for copper conductor splices and taps, 8 AWG and smaller.

3.03 FIELD QUALITY CONTROL:

- A. Perform field inspection and testing in accordance with Section 01400.
- B. Test wiring rated 600 volts and less to verify that no short circuits or accidental grounds exist. Perform insulation resistance tests on wiring No. 4 AWG and larger diameter using an instrument which applies voltage of approximately 500 volts to provide direct reading of resistance. Minimum resistance shall be 250,000 ohms.

END OF SECTION

SECTION 16131

CONDUIT

PART 1 - GENERAL

1.01 SECTION INCLUDES:

- A. Conduit, fittings and conduit bodies.

1.02 REFERENCES:

- A. ANSI C80.1, American National Standard Specification for Rigid Steel Conduit - Zinc Coated; 1995.
- B. ANSI C80.3, American National Standard Specification for Electrical Metallic Tubing - Zinc Coated; 1995.
- C. ANSI C80.5, American National Standard Specification for Rigid Aluminum Conduit; 1995.
- D. NECA (INST) - NECA Standard of Installation; National Electrical Contractors Association; 1993.
- E. NEMA FB 1 - Fittings, Cast Metal Boxes, and Conduit Bodies for Conduit and Cable Assemblies; National Electrical Manufacturers Association; 1993.
- F. NEMA RN 1 - Polyvinyl Chloride (PVC) Externally Coated Galvanized Rigid Steel Conduit and Intermediate Metal Conduit; National Electrical Manufacturers Association; 1989.
- G. NEMA TC 2 - Electrical Plastic Conduit (EPC-40 and EPC-80); National Electrical Manufacturers Association; 1990.
- H. NEMA TC 3 - PVC Fittings for Use with Rigid PVC Conduit and Tubing; National Electrical Manufacturers Association; 1990.
- I. NFPA 70 - National Electrical Code, National Fire Protection Association (edition adopted by Authority Having Jurisdiction).

1.03 QUALITY ASSURANCE:

- A. Conform to requirements of NFPA 70.
- B. Products: Listed and classified by Underwriters Laboratories, Inc. as suitable for purpose specified and shown.

1.04 DELIVERY, STORAGE, AND HANDLING:

- A. Accept conduit on site. Inspect for damage.
- B. Protect conduit from corrosion and entrance of debris by storing above grade. Provide appropriate covering.
- C. Protect PVC conduit from sunlight.

PART 2 - PRODUCTS

2.01 CONDUIT REQUIREMENTS:

- A. Conduit Size: Comply with NFPA 70.
 - 1. Minimum Size: 3/4 inch unless otherwise specified. This minimum size does not apply to flexible conduit.

2.02 METAL CONDUIT:

- A. Rigid Steel Conduit: ANSI C80.1.
- B. Rigid Aluminum Conduit: ANSI C80.5.
- C. Fittings and Conduit Bodies: NEMA FB 1; material to match conduit.

2.03 PVC COATED METAL CONDUIT:

- A. Description: NEMA RN 1; rigid steel conduit with external PVC coating, 20 mil (0.05 mm) thick.
- B. Fittings and Conduit Bodies: NEMA FB 1; steel fittings with external PVC coating to match conduit.

2.04 FLEXIBLE METAL CONDUIT:

- A. Description: Interlocked steel construction.

- B. Fittings: NEMA FB 1.

2.05 LIQUIDTIGHT FLEXIBLE METAL CONDUIT:

- A. Description: Interlocked steel construction with PVC jacket.
- B. Fittings: NEMA FB 1.

2.06 NONMETALLIC CONDUIT:

- A. Description: NEMA TC 2; Schedule 40 PVC where underground,
- B. Fittings and Conduit Bodies: NEMA TC 3.

PART 3 - EXECUTION

3.01 EXAMINATION: Verify routing and termination locations of conduit prior to rough-in.

3.02 INSTALLATION:

- A. Install conduit in accordance with NECA Standard of Installation.
- B. All wiring shall be in conduit. Routing of conduit shown on Drawings is intended to be diagrammatic and where changes are necessary as a result of structural conditions, apparatus, or other causes, routing shall be changed to meet conditions. Conduit risers and offsets are not indicated on Drawings, but are intended to be installed as required. Conduit shall be selected according to location and code requirements.
- C. Liquid-tight flexible conduit shall be used for final connections to motors, appliances and vibrating equipment and shall be a maximum of 24-inches in length (regular flexible metal conduit may be used for final connection to interior light fixtures).
- D. Flexible Metal Conduit or MC Cable or shall only be used for final connection to equipment with a maximum length of six feet. Nonmetallic flex conduit or tubing shall not be used.
- E. Underground conduit or conduit in concrete shall be PVC Schedule 40 (Type-EPC) unless indicated otherwise. Conduit under slab-on-grade shall be buried at least 12" below the vapor barrier. Conduit embedded in concrete slabs, walls, or beams shall not have an outside dimension more than one-third the overall thickness of the concrete in which they are imbedded. Conduit shall not be run lengthwise in footings. PVC conduit

shall not be used aboveground unless specifically noted otherwise in the Drawings. Conduit containing signal wires for instruments shall be PVC coated aluminum.

- F. All exposed conduit shall be aluminum. All conduits, couplings, and fittings shall have a factory-applied gray or black PVC coating of not less than 20 mils thickness. Conduit supports, channels and mounting apparatus shall be stainless steel.
- G. Per NEC paragraph 300-5 (d), provide warning tape or ribbon 12" above a service lateral conduit that is not encased in concrete.
- H. All metallic conduit terminating in outlet, junction or pull boxes and cabinets must terminate with bushing and double locknuts except exposed cast boxes, where they may be omitted. Conduit sizes 1-1/4" and above shall have insulating fiber bushings with double locknuts. Grounding type bushings must be used at points where grounding continuity is broken and at service entrance equipment.
- I. Arrange supports to prevent misalignment during wiring installation.
- J. Do not support conduit with wire or perforated pipe straps. Remove wire used for temporary supports.
- K. Do not attach conduit to ceiling support wires.
- L. Arrange conduit to maintain headroom and present neat appearance.
- M. Route exposed conduit parallel and perpendicular to walls. Do not run conduit exposed in occupied areas unless noted otherwise.
- N. Route conduit installed above accessible ceilings parallel and perpendicular to walls.
- O. Route conduit in and under slab from point-to-point.
- P. Do not cross conduits in slab.
- Q. Maintain adequate clearance between conduit and piping.
- R. Maintain 12 inch (300 mm) clearance between conduit and surfaces with temperatures exceeding 104 degrees F (40 degrees C).
- S. Cut conduit square using saw or pipecutter; de-burr cut ends.
- T. Bring conduit to shoulder of fittings; fasten securely.

- U. For conduit installed in floors that are in place before conduit is installed, properly seal around conduit, including any required fire chalk.
- V. Install no more than equivalent of four 90 degree bends between boxes. Use conduit bodies to make sharp changes in direction, as around beams. Use hydraulic one shot bender to fabricate bends in metal conduit larger than 2 inch (50 mm) size.
- W. Avoid moisture traps; provide junction box with drain fitting at low points in conduit system.
- X. Provide suitable fittings to accommodate expansion and deflection where conduit crosses seismic and expansion joints complete with copper bonding jumper.
- Y. Provide suitable pull string in each empty conduit except sleeves and nipples.
- Z. Use suitable caps to protect installed conduit against entrance of dirt and moisture.
- AA. Ground and bond conduit under provisions of Section 16060.

END OF SECTION

SECTION 16140
WIRING DEVICES

PART 1 - GENERAL

1.01 SECTION INCLUDES:

- A. Wall switches
- B. Wall dimmers
- C. Receptacles

1.02 REFERENCES:

- A. NECA (INST) - NECA Standard of Installation; National Electrical Contractors Association.
- B. NEMA WD 1 - General Requirements for Wiring Devices; National Electrical Manufacturers Association.
- C. NEMA WD 6 - Wiring Device -- Dimensional Requirements; National Electrical Manufacturers Association.
- D. NFPA 70 - National Electrical Code, National Fire Protection Association (edition adopted by Authority Having Jurisdiction)

1.03 SUBMITTALS:

- A. See Section 01300: Submittals, for submittal procedures
- B. Product Data: Provide manufacturer's catalog information showing dimensions, colors, and configurations.

1.04 QUALITY ASSURANCE:

- A. Conform to requirements of NFPA 70.
- B. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years documented experience.
- C. Products: Provide products listed and classified by Underwriters Laboratories, Inc. as suitable for the purpose specified and indicated.

PART 2 - PRODUCTS

2.01 MANUFACTURERS: All devices shall be specification grade and shall be the product of one manufacturer throughout the project except as otherwise noted.

2.02 WALL SWITCHES:

- A. Wall Switches: NEMA WD 1, Heavy Duty, AC only general-use snap switch, quiet type with side wire terminals. Switches shall be single or multi-pole as indicated on the Drawings. Provide Leviton Decora Switches, or equal, if indicated on drawings.
1. Body and Handle: plastic with toggle handle unless otherwise indicated. Color shall be as determined by Owner.
 2. Ratings:
 - a. Voltage: 120 - 277 volts, AC.
 - b. Current: 20 amperes.

2.03 RECEPTACLES:

- A. Receptacles: NEMA WD 1, Heavy duty.
1. Duplex receptacles shall be straight blade, grounding type, with side wiring terminals. Conductors shall be connected to all receptacles using screws (not spring connectors).
 2. Device Body: plastic unless otherwise indicated. Color as determined by owner.
 3. Configuration: NEMA WD 6, type as specified and indicated.
- B. Convenience Receptacles: Type 5 - 20.
- C. Duplex Convenience Receptacles
- D. GFCI Receptacles: Convenience receptacle with integral ground fault circuit interrupter to meet regulatory requirements. Also, provide GFCI receptacles where indicated. GFCI type receptacles shall have "test" and "reset" buttons.
- E. Weatherproof receptacles shall be in a cast metal box with gasketed, weatherproof, cast-metal cover plate and gasketed cap over each receptacle opening. Provide caps with a spring-hinged flap. Weatherproof receptacles shall be UL listed for use in "wet locations with plug in use" and shall be GFCI rated.

- F. Floor-mounted receptacles shall have a brass plate and cover, unless noted otherwise.
- G. Special purpose outlets shall be as indicated on the Drawings and have matching cover plates.

2.04 WALL PLATES:

- A. Decorative Cover Plates: smooth plastic unless otherwise indicated. Color as determined by owner.
- B. Weatherproof Cover Plates: Gasketed cast metal with hinged.

PART 3 - EXECUTION

3.01 EXAMINATION:

- A. Verify that outlet boxes are installed at proper height.
- B. Verify that wall openings are neatly cut and will be completely covered by wall plates.
- C. Verify that floor boxes are adjusted properly.
- D. Verify that branch circuit wiring installation is completed, tested, and ready for connection to wiring devices.

3.02 PREPARATION:

- A. Provide extension rings to bring outlet boxes flush with finished surface.
- B. Clean debris from outlet boxes.

3.03 INSTALLATION:

- A. Install in accordance with NECA "Standard of Installation."
- B. Install devices plumb and level.
- C. Install switches with OFF position down.
- D. Do not share neutral conductor on load side of dimmers.
- E. Install receptacles with grounding pole on bottom.
- F. Connect wiring device grounding terminal to outlet box with bonding jumper.

- G. Do not cut cover plate.
- H. Install decorative plates on switch, receptacle, and blank outlets in finished areas.
- I. Connect wiring devices by wrapping conductor around screw terminal.

3.04 INTERFACE WITH OTHER PRODUCTS:

- A. Install wall switch 48 inches (1.2 m) above finished floor, unless otherwise indicated.
- B. Install convenience receptacle 18 inches (450 mm) above finished floor, unless otherwise indicated.
- C. Install convenience receptacle with bottom 6 inches (150 mm) above counter.
- D. Install dimmer 48 inches (1.2 m) above finished floor, unless otherwise indicated.

3.05 FIELD QUALITY CONTROL:

- A. Perform field inspection, testing, and adjusting in accordance with Section 01400.
- B. Inspect each wiring device for defects.
- C. Operate each wall switch with circuit energized and verify proper operation.
- D. Verify that each receptacle device is energized.
- E. Test each receptacle device for proper polarity.
- F. Test each GFCI receptacle device for proper operation.

3.06 ADJUSTING: Adjust devices and wall plates to be flush and level.

3.07 CLEANING: Clean exposed surfaces to remove splatters and restore finish.

END OF SECTION

SECTION 16510
INTERIOR LUMINARIES

PART 1 - GENERAL

1.01 SECTION INCLUDES:

- A. Interior luminaries and accessories
- B. Emergency lighting units
- C. Exit signs
- D. Ballasts
- E. Lamps
- F. Luminaries accessories

1.02 REFERENCES:

- A. ANSI C78.379, American National Standard for Electric Lamps - Reflector Lamps - Classification of Beam Patterns.
- B. ANSI C82.1, American National Standard Specifications for Fluorescent Lamp Ballasts.
- C. ANSI C82.4, American National Standard for Ballasts for High-Intensity-Discharge and Low Pressure Sodium Lamps (Multiple-Supply Type).
- D. NEMA WD 6, Wiring Devices - Dimensional Requirements; National Electrical Manufacturers Association.
- E. NFPA 70, National Electrical Code, National Fire Protection Association (edition adopted by Authority Having Jurisdiction).
- F. NFPA 101, Code for Safety to Life from Fire in Buildings and Structures; National Fire Protection Association (edition adopted by Authority Having Jurisdiction).

1.03 SUBMITTALS: Product Data (including ballasts and lighting contactors): Provide dimensions, ratings, and performance data.

1.04 QUALITY ASSURANCE:

- A. Conform to requirements of NFPA 70 and NFPA 101.
- B. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years documented experience.
- C. Products: Listed and classified by Underwriters Laboratories, Inc. as suitable for the purpose specified and indicated.

1.05 EXTRA MATERIALS: Furnish one replacement lamp for each lamp type.

PART 2 - PRODUCTS

2.01 LUMINARIES:

- A. Furnish products as indicated in Schedule included on the Drawings. Confirm that the fixtures scheduled are the correct, voltage, wattage, size and mounting type and are listed for location used (i.e. damp or wet locations) before ordering fixtures, ballasts, and lamps.
- B. Although not specifically shown or specified, all light fixtures shall be provided with all necessary optional accessories and mounting hardware for installation as indicated or required.

2.02 BALLASTS AND CONTROL UNITS:

- A. Fluorescent Ballasts:
 - 1. Ballasts for fluorescent fixtures shall be as noted on Fixture Schedule. Energy efficient type ballasts shall be specifically approved for operation with the specified lamps. Electronic ballasts shall have low total harmonic distortion (less than or equal to 20 percent) to avoid excessive harmonics and overloading of neutrals. All ballasts shall have an A noise rating.
 - 2. Voltage: Match luminary voltage.
- B. High Intensity Discharge (HID) Ballasts: ANSI C82.4, metal halide lamp ballast, suitable for lamp specified.
 - 1. Ballast for HID fixtures shall be high power factor type selected for type and wattage of lamp supplied. All ballasts shall have an A noise rating.

2. Voltage: Match luminary voltage.

2.03 LAMPS: Reflector Lamps: Beam patterns in accordance with ANSI C78.379.

PART 3 - EXECUTION

3.01 INSTALLATION:

- A. Install suspended luminaries and exit signs using pendants supported from swivel hangers. Provide pendant length required to suspend luminary at indicated height.
- B. Support luminaries larger than 2 x 4 foot (600 x 1200 mm) size independent of ceiling framing.
- C. Locate recessed ceiling luminaries as indicated on reflected ceiling plan.
- D. Install surface mounted luminaries and exit signs plumb and adjust to align with building lines and with each other. Secure to prevent movement.
- E. Connect single-connected fixtures, surface or stem hung, with heat resistant fixture wire. Connect multiple-connected fluorescent fixtures, surface or stem hung, with type THHN heat resistant thermoplastic wire of a size indicated for branch circuit.
- F. Install clips to secure recessed grid-supported luminaries in place.
- G. Provide sloped ceiling adaptors and all other required hardware as necessary to properly install ceiling mounted light fixtures in sloped ceilings.
- H. Install wall mounted luminaries, emergency lighting units, and exit signs at height as indicated on Drawings.
- I. Install accessories furnished with each luminary.
- J. Connect luminaries and exit signs to branch circuit outlets provided under Section 16138 using flexible conduit.
- K. Make wiring connections to branch circuit using building wire with insulation suitable for temperature conditions within luminary.
- L. Bond products and metal accessories to branch circuit equipment grounding conductor.
- M. Install specified lamps in each emergency lighting unit, exit sign, and luminary.

3.02 FIELD QUALITY CONTROL: Operate each luminary after installation and connection. Inspect for proper connection and operation.

3.03 ADJUSTING:

- A. Aim and adjust luminaries as indicated.
- B. Position exit sign directional arrows as indicated.

3.04 CLEANING:

- A. Clean electrical parts to remove conductive and deleterious materials.
- B. Remove dirt and debris from enclosures.
- C. Clean photometric control surfaces as recommended by manufacturer.
- D. Clean finishes and touch up damage. Also remove all instruction tags.

3.05 DEMONSTRATION AND INSTRUCTIONS: Demonstrate luminary operation for minimum of two hours.

3.06 PROTECTION: Relamp luminaries that have failed lamps at Substantial Completion.

3.07 SCHEDULE- SEE DRAWINGS

END OF SECTION