



# **CITY OF VENICE, FLORIDA**

**Purchasing Department**

**401 W. Venice Avenue  
Venice, FL 34285**

## **Invitation to Bid**

**ITB Number 3044-16**

**Date of Issue: October 1, 2016**

**Submission Deadline: November 8, 2016 at 2:00 PM**

Title and Purpose of ITB:

**Water Main Replacement Program – Phase 4 Re-Bid**

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**CITY OF VENICE  
WATER MAIN REPLACEMENT PROGRAM – PHASE 4**

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City of Venice, Florida

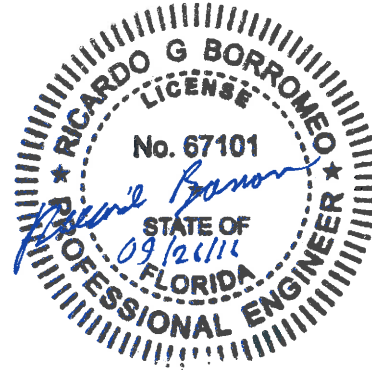
WATER MAIN REPLACEMENT PROGRAM  
PHASE 4

This Technical Manual is certified as follows:

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**Civil Engineer**

Wade Trim, Inc.  
8010 Woodland Center Boulevard  
Suite 1200  
Tampa, Florida 33614  
Ph. 813-882-4373  
Certificate of Authorization No. 3952



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Ricardo G. Borromeo, P.E., No. 67101

*09/26/16*

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Date

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## INVITATION TO BID

The City of Venice invites sealed bids from qualified bidders to provide the following goods or services, which is described in detail in the Specifications.

**Bid No.: 3044-16**

**Bid Title: Water Main Replacement Program – Phase 4 Re-Bid**

**PROJECT DESCRIPTION:** The Contractor shall furnish all labor, materials, equipment, tools, services and incidentals to complete all work required by these Specifications and as shown on the Drawings. The Contractor shall perform the work complete, in place and ready for continuous service, and shall include repairs, testing, permits, clean-up, replacements and restoration required as a result of damages caused during this construction. All materials, equipment, skills, tools and labor which is reasonably and properly inferable and necessary for the proper completion of the work in a substantial manner and in compliance with the requirements stated or implied by these Specifications or Drawings shall be furnished and installed by the Contractor without additional compensation, whether specifically indicated in the Contract Documents or not. The Contractor shall comply with all Municipal, County, State, Federal, and other codes which are applicable to the proposed construction work.

The project area is bound by San Marco Drive to the north, The Corso West to the south, The Rialto to the east and Golden Beach Boulevard to the west.

**BID OPENING LOCATION: City of Venice, Venice City  
Hall, Community Hall, room # 114, 401 West Venice Ave.,  
Venice FL 34285**

**BID SUBMITTAL DEADLINE and BID OPENING DATE & TIME:**

**November 8, 2016 at 2:00 PM**

**PRE-BID MEETING: YES DATE & TIME:**

**October 18, 2016 at 2:00 PM**

**LOCATION: City of Venice Eastside Water Reclamation Facility**

**3510 East Laurel Road, Nokomis FL 34275**

Specifications and Bid documents are available by calling Onvia DemandStar at (800) 711-1712 or by their Internet address at <http://www.demandstar.com>. Proposers may also pick up Bid documents at the City of Venice Procurement- Finance Department, Room 204, 401 West Venice Ave., Venice Florida 34285, (941) 882-7422 at no charge.

A non-mandatory pre-bid meeting will be held on October 18, 2016 at 2:00 p.m., City of Venice Eastside Water Reclamation Facility 3510 East Laurel Road, Nokomis FL 34275. Representatives from the City will be present to discuss the overall project and the Invitation to Bid. **Interested Firms are encouraged to attend.**

All questions, comments, or concerns about this ITB must be submitted in writing to Mr. Peter Boers, Procurement- Finance Department, for the City of Venice, Room 204, 401 West Venice Avenue, Venice, FL 34285 or e-mail at pboers@venicegov.com Mr. Boers is the only designated representative of the City authorized to respond to comments, questions, and concerns. The City will not respond to comments, questions or concerns addressed to any person other than Mr. Boers. If the City determines that a particular comment, question or concern necessitates a global response to all Proposers, the City will issue a clarifying memorandum or addendum. **The final day that the City will accept questions will be October 26, 2016 by 1:00 p.m.**

Bids must be submitted in **four sets** and at least one set must bear an original signature, in a sealed envelope marked **“Invitation to Bid # 3044-16: “Water Main Replacement Program – Phase 4 Re-Bid”** and mailed or delivered to the City of Venice- Purchasing Department, 401 W. Venice Ave. Room # 204, Venice, FL 34285, no later than the deadline specified. The City assumes no responsibility for bids received after the bid submittal time or at any location other than that specified, no matter what the reason. Late bids will be held unopened and will not be considered for award.

No bid will be received after the specified time for acceptance and no bidder may withdraw his bid within a period of ninety (90) days after the actual date of opening thereof.

Bids will be considered only from bidders who have the applicable license, if a license is required by the City of Venice and/or State of Florida, for the type of work specified. A copy of the applicable license must be submitted with bid if a license is required.

The City reserves the right to reject any or all bids in whole or in part, with or without cause, to waive any requirements, irregularities or technical defects therein, when it is deemed to be in the interest of the City.

CITY OF VENICE, FLORIDA

Publish: October 1, 2016  
October 5, 2016

City of Venice Utilities Department  
City of Venice, Florida

**Water Main Replacement Program – Phase 4 Re-Bid**

INSTRUCTIONS TO BIDDERS

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## ARTICLE 1 – DEFINED TERMS

- 1.01 Terms used in these Instructions to Bidders have the meanings indicated in the General Conditions and Supplementary Conditions. Additional terms used in these Instructions to Bidders have the meanings indicated below which are applicable to both the singular and plural thereof.
- A. Issuing Office: The office from which the Bidding Documents are to be issued and here the bidding procedures are to be administered.

## ARTICLE 2 – BIDS RECEIVED

- 2.01 Refer to the Invitation To Bid for information on receipt of Bids.

## ARTICLE 3 – LOCATION AND DESCRIPTION OF PROJECT

- 3.01 Refer to Section 01010, Summary of Work, in the General Requirements for the location and description of the Project.

## ARTICLE 4 – COPIES OF BIDDING DOCUMENTS

- 4.01 Refer to the Invitation To Bid for information on location where Bidders may examine and obtain the Bidding Documents.
- 4.02 (Not Used)
- 4.03 Complete sets of Bidding Documents shall be used in preparing Bids; neither Owner nor Engineer assumes any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.
- 4.04 Owner and Engineer in making copies of Bidding Documents available on the above terms, do so only for the purpose of obtaining Bids for the Work and do not grant permission for any other use.
- 4.05 Bidders who obtain solicitation documents from sources other than the Owner or download from <http://www.demandstar.com/> must officially register receipt of the solicitation with the City's Procurement – Finance Department in order to be placed on the notification list for any forthcoming addendum or other official communications. Failure to register as a prospective Bidder may cause your submittal to be rejected as non-responsive if you have submitted a response without acknowledgment of issued addenda. The Owner is not responsible for the accuracy of bid documents and information obtained from any source other than <http://www.demandstar.com/>.

## ARTICLE 5 – QUALIFICATIONS OF BIDDERS

- 5.01 Bidders shall be experienced in the kind of Work to be performed, shall have the necessary equipment therefor, and shall possess sufficient capital to properly execute the Work within the time allowed. Bids received from Bidders who have previously failed to complete work within the time required, or who have previously performed similar work in an unsatisfactory manner, may be rejected. A Bid may be rejected if Bidder cannot show that Bidder has the necessary ability, plant, and equipment to commence the Work at the time prescribed and thereafter to prosecute and complete the Work at the rate or within the times specified. A Bid may be rejected if Bidder is already obligated for the performance of other work which would delay the commencement, prosecution or completion of the Work.
- 5.02 To demonstrate qualifications to perform the Work, Bidder shall submit within 5 days after Bid opening, upon Owner's request, a separate Bidder Qualifications Statement that will be furnished by OWNER. An example of the Bidder Qualifications Statement is bound in the Project Manual.
- 5.03 Bidders shall be qualified to do business in the state where the Project is located or covenant to obtain such qualification prior to signing the Agreement.
- 5.04 Bids will be received only from contractors licensed or registered by the State of Florida.

## ARTICLE 6 – EXAMINATION OF BIDDING DOCUMENTS, OTHER RELATED DATA, AND SITE

- 6.01 Subsurface and Physical Conditions
- A. The Supplementary Conditions identify:
1. Those reports of explorations and tests of subsurface conditions at or contiguous to the Site that have been utilized by Engineer in preparation of the Bidding Documents.
  2. Those drawings of physical conditions relating to existing surface or subsurface structures (except Underground Facilities) which are at or contiguous to the Site, that have been utilized by Engineer in preparation of the Bidding Documents.
- B. Electronic copies of the reports and drawings referenced in Paragraph 6.01.A above will be made available by Owner to any Bidder on request. Those reports and drawings are not part of the Contract Documents, but the "technical data" contained therein upon which Bidder is entitled to rely as provided in Paragraph 4.02 of the General Conditions, has been identified and established in Paragraph SC-4.02 of the Supplementary Conditions. Bidder is responsible for any interpretation or conclusion drawn from any "technical data" or any other data, interpretations, opinions, or information contained in such reports or shown or indicated in such drawings.

6.02 Underground Facilities - Physical Conditions

- A. Information and data shown or indicated in the Bidding Documents with respect to existing Underground Facilities at or contiguous to the Site is based upon information and data furnished to Owner and Engineer by owners of such Underground Facilities, including Owner, or others.

6.03 Hazardous Environmental Condition

- A. Owner has no actual knowledge of a Hazardous Environmental Condition at the Site.

6.04 Provisions concerning responsibilities for the adequacy of data, furnished to prospective Bidders with respect to subsurface conditions, other physical conditions, and Underground Facilities, and possible changes in the Bidding Documents due to differing or unforeseen subsurface or physical conditions appear in Paragraphs 4.02, 4.03 and 4.04 of the General Conditions. Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with respect to a Hazardous Environmental Condition at the Site, if any, and possible changes in the Contract Documents due to any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work appear in Paragraph 4.06 of the General Conditions.

6.05 Other Related Data (Not Used)

6.06 On request, Owner will provide Bidder access to the Site to conduct such examinations, investigations, explorations, tests, and studies as Bidder deems necessary for preparing and submitting a Bid. Bidder shall fill all holes and clean up and restore the Site to its original conditions upon completion of such explorations, investigations, tests, and studies. Bidder shall comply with all Laws and Regulations relative to such explorations, investigations, tests, and studies.

6.07 A single Site visit has been scheduled following the pre-bid conference. No other Site visits will be allowed without Owner's approval.

6.08 (Not Used)

6.09 (Not Used)

6.10 It is the responsibility of Bidder, before submitting a Bid to:

- A. examine and carefully study the Bidding Documents, the other related data identified in the Bidding Documents and Addenda (if any);
- B. visit the Site and become familiar with and satisfy Bidder as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work;

- C. become familiar with and satisfy Bidder as to the Laws and Regulations that may affect cost, progress and performance of the Work;
- D. carefully study all:
  - 1. reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities), if any, that have been identified in the Supplementary Conditions in Paragraph SC-4.02 as containing reliable “technical data”, and
  - 2. reports and drawings of Hazardous Environmental Condition identified at the Site, if any, that have been identified in the Supplementary Conditions in Paragraph SC-4.06 as containing reliable “technical data”;
- E. consider the information known to Bidder; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and the Site-related reports and drawings identified in Bidding Documents with respect to the effect of such information, observation, and documents on
  - 1. the cost, progress and performance of the Work;
  - 2. the means, methods, techniques, sequences and procedures of construction to be employed by Bidder, including applying any specific means, methods, techniques, sequences and procedures of construction expressly required by the Bidding Documents; and
  - 3. Bidder’s safety precautions and programs;
- F. agree at the time of submitting its Bid that no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of its Bid for the performance of the Work at the price(s) bid and within the times required and in accordance with the other terms and conditions of the Bidding Documents;
- G. become aware of the general nature of work (if any) to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents;
- H. promptly give Engineer written notice of all conflicts, errors, ambiguities, and discrepancies that Bidder discovers in the Bidding Documents and confirm that the written resolution thereof by Engineer is acceptable to Bidder; and
- I. determine that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work.

6.11 The submission of a Bid will constitute an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article 6, that without exception the Bid is premised upon performing the Work required by the Bidding Documents and applying any specific means, methods, techniques, sequences, or procedures of construction that may be shown or indicated or expressly required by the Bidding Documents, that Bidder has given Engineer written notice of all conflicts, errors, ambiguities, and discrepancies that Bidder has discovered in the Bidding Documents and the written resolutions thereof by Engineer are acceptable to Bidder, and that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performing the Work.

#### ARTICLE 7 – PRE-BID MEETING

7.01 A non-mandatory Pre-Bid Meeting will be held at the date and time indicated in the Invitation To Bid. Representatives of the Owner and Engineer will be present to discuss the Project. Owner will transmit to all prospective Bidders of record such Addenda as Owner considers necessary in response to questions raised at the pre-Bid conference. Oral statements may not be relied upon and will not be binding or legally effective.

#### ARTICLE 8 – SITE AND OTHER AREAS

8.01 The Site is identified in the Bidding Documents. Easements for permanent structures or permanent changes in existing facilities are to be obtained and paid for by Owner unless otherwise provided in the Bidding Documents. All additional lands and access thereto required for temporary construction facilities, construction equipment, or storage of materials and equipment, to be incorporated into the Work are to be obtained and paid for by Contractor.

#### ARTICLE 9 – INTERPRETATIONS AND ADDENDA

9.01 All questions about the meaning or intent of the Bidding Documents shall be submitted to Owner in writing. To receive consideration, questions must be received by Owner by the date indicated in the Invitation To Bid. Interpretations or clarifications considered necessary by Owner in response to such questions will be issued by Addenda mailed or delivered to all parties recorded by Owner as having received the Bidding Documents for receipt not later than three days prior to the date for the opening of Bids. Only questions answered by Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.

9.02 Addenda may also be issued to clarify, correct or change the Bidding Documents as deemed advisable by Owner or Engineer. Such Addenda, if any, will be issued in the manner and within the time period stated in Paragraph 9.01 of these Instructions to Bidders.

## ARTICLE 10 – BID SECURITY

- 10.01 A Bid shall be accompanied by Bid security made payable to Owner in the amount of 5% of Bidder's maximum Bid price and in the form of Bid bond.
- 10.02 Bid bond shall be on the form bound in the Project Manual. Bid bond shall be issued by a surety complying with the requirements of Paragraphs 5.01 and 5.02 of the General Conditions.
- 10.03 The Bid security of the Successful Bidder will be retained until such Bidder has executed the Contract Documents, furnished the required contract security, and complied with the other conditions of the Notice of Award, whereupon the Bid security will be returned. If the Successful Bidder fails to sign and deliver the Contract Documents and furnish the required contract security within 15 days after the Notice of Award, Owner may annul the Notice of Award and may retain from the Bid security an amount equal to the damages which Owner may suffer by reason of such failure. Said damages shall be the difference between that Bidder's Bid and the Bid of the next lowest, responsible and responsive Bidder, but such amount shall not exceed the Bid security amount, and, if there is no such next lowest, responsible and responsive Bidder, then the Bid security amount of that Bidder will be forfeited to the Owner as liquidated damages for such failure.
- 10.04 The Bid security of other Bidders whom Owner believes to have a reasonable chance of receiving the award may be retained by Owner until the earlier of the seventh day after the Effective Date of the Agreement or the ninety-first day after the Bid opening whereupon the Bid security furnished by such Bidders will be returned. The Bid security of Bidders whom Owner believes do not have a reasonable chance of receiving an award will be returned within seven days of the Bid opening.

## ARTICLE 11 – CONTRACT TIMES

- 11.01 The number of days within which Work is to be completed and ready for final payment (the Contract Times) are set forth in the Agreement.

## ARTICLE 12 – LIQUIDATED AND SPECIAL DAMAGES

- 12.01 Provisions for liquidated and special damages, if any, are set forth in the Agreement.

## ARTICLE 13 – SUBSTITUTE AND “OR EQUAL” ITEMS

- 13.01 The Contract, if awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents without consideration of possible substitute or “or-equal” items. Whenever it is specified or described in the Bidding Documents that a substitute or “or-equal” item of material or equipment may be furnished or used by Contractor if accepted by Engineer, application for such acceptance will not be considered by Engineer until after the Effective Date of the Agreement. The procedure for submittal

of any such application by Contractor and consideration by Engineer is set forth in the General Conditions which may be supplemented in the General Requirements.

- 13.02 Refer to Section 01300, Submittals, of the General Requirements for the period of time after the Effective Date of the Agreement during which the Engineer will accept applications for substitute items of material or equipment.

#### ARTICLE 14 – SUBCONTRACTORS, SUPPLIERS, AND OTHERS

- 14.01 If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, individuals, or entities to be submitted to Owner in advance of a specified date prior to the Effective Date of the Agreement, the apparent Successful Bidder, and any other Bidder so requested, shall within five days after Bid opening submit to Owner a list of all such Subcontractors, Suppliers, other individuals, and entities proposed for those portions of the Work for which such identification is required. Such list shall be accompanied by an experience statement with pertinent information regarding similar projects and other evidence of qualifications for each such Subcontractor, Supplier, individual, and entity if requested by Owner. If Owner or Engineer, after due investigation, has reasonable objection to any proposed Subcontractor, Supplier, individual, or entity, Owner may, before the Notice of Award is given, request the apparent Successful Bidder to submit an acceptable substitute without an increase in the Bid price.

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

- 14.03 (Not Used)

- 14.04 Contractor shall not be required to employ any Subcontractor, Supplier, individual, or entity against whom Contractor has reasonable objection.

#### ARTICLE 15 – PREPARATION OF BID

- 15.01 A Bid shall be made on the Bid Form bound in the Project Manual. The Bid Form shall not be separated from the Project Manual nor shall the Bid Form be altered in any way.

- 15.02 All blanks in the Bid Form shall be completed in ink and the Bid Form signed in ink. Erasures or alterations shall be initialed in ink by the person signing the Bid Form. A Bid price shall be indicated for each Bid item listed therein. In the case of optional alternatives the words “No Bid”, “No Change”, or “Not Applicable” may be entered. Ditto marks shall not be used.

15.03 A Bid shall be executed as stated below.

- A. A Bid by an individual shall indicate the Bidder's name and official address.
- B. A Bid by a partnership shall be executed in the partnership name and signed by a partner (whose title shall appear under the signature), accompanied by evidence of authority to sign. The official address of the partnership shall be indicated.
- C. A Bid by a joint venture shall be executed by each joint venturer in the manner indicated on the Bid Form. The official address of the joint venture shall be indicated.
- D. A Bid by a corporation shall be executed in the corporate name by an officer of the corporation and shall be accompanied by a certified copy of a resolution of the board of directors authorizing the person signing the Bid to do so on behalf of the corporation. The corporate seal shall be affixed and attested by the secretary or an assistant secretary of the corporation. The state of incorporation and the official corporate address shall be indicated.
- E. A Bid by a limited liability company shall be executed in the name of the firm by a member and accompanied by evidence of authority to sign. The state of formation of the firm and the official address of the firm shall be indicated below the signature.
- F. All names shall be printed in ink below the signature.
- G. If applicable, the Bid shall contain evidence of Bidder's authority and qualification to do business in the state where the Project is located.
- H. Contractor's license or registration number, if any, shall be entered in the space provided on the Bid Form.

15.04 The Bid shall contain an acknowledgment of the receipt of all Addenda, the numbers of which shall be filled in at the space provided on the Bid Form.

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

15.06 In addition to the Bid Form, the forms listed in the Required Forms List, which are bound in the Project Manual, shall be submitted with the Bid. Each document shall be executed in the manner described in Paragraph 15.03 unless another manner is indicated.

## ARTICLE 16 – BASIS OF BIDS; COMPARISON OF BIDS

16.01 Base Bid with Alternatives

- A. Bidder shall submit its Bid on the basis of a lump sum for the Base Bid and shall provide a separate Bid price for each additive alternative described in the Bidding Documents and as provided for on the Bid Form.
- B. For determination of the apparent low Bidder, Bids will be compared on the basis of the aggregate amount of the Base Bid, plus the additive alternative Bid prices providing the most features of the Work within the funds determined by the Owner to be available before Bids are opened. If the addition of another alternative Bid price in the listed order of priority would make the aggregate amount exceed such available funds for all Bidders, it will be skipped and the next subsequent alternative Bid price in a lower amount will be added if award thereon can be made within such funds.
- C. After the determination of the apparent low Bidder as stated, award in the best interest of the Owner may be made to said Bidder on its Base Bid and any combination of its additive alternative Bids for which Owner determines funds will be available at the time of award, provided that the award on any such combination of Base Bid and additive alternative Bids does not exceed the amount offered by any other Bidder for the same combination.

16.02 (Not Used)

16.03 Discrepancies between words and numerals will be resolved in favor of words. 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.

16.04 (Not Used)

#### ARTICLE 17 – SUBMITTAL OF BID

17.01 A Bid shall be received no later than the date and time prescribed and at the place indicated in the Invitation To Bid.

17.02 Bid shall be enclosed in an opaque sealed envelope plainly marked on the outside with the Project title, solicitation number, the name and address of the Bidder, and its license or registration number, if applicable. Bid shall be accompanied by Bid security and other required documents.

17.03 If the Bid is sent by mail or other delivery method, the sealed envelope containing the Bid shall be enclosed in a separate envelope plainly marked on the outside with the notation **“Invitation to Bid # 3044-16: “Water Main Replacement Program – Phase 4 Re-Bid”**. A mailed Bid shall be addressed to:

*Procurement – Finance Department  
City of Venice – Procurement  
401 West Venice Ave., Room #204  
Venice, FL, 34285*

## ARTICLE 18 – MODIFICATION OR WITHDRAWAL OF BID

### 18.01 Withdrawal Prior to Bid Opening:

- A. A Bid may be withdrawn by an appropriate document duly executed, in the manner that a Bid must be executed and delivered to the place where Bids are to be submitted prior to the date and time fixed for the opening of Bids. Upon receipt of such written notice, the unopened Bid will be returned to the Bidder.

### 18.02 Modification Prior to Bid Opening:

- A. If a Bidder wishes to modify its Bid, Bidder must withdraw its initial Bid in the manner specified in Paragraph 18.01.A of these Instructions to Bidders and submit a new Bid.

### 18.03 Withdrawal After Bid Opening

- A. After expiration of the period for receiving Bids, no Bid may be withdrawn or modified.

## ARTICLE 19 – OPENING OF BIDS

19.01 Bids will be opened at the time and place where Bids are to be submitted and, unless obviously non-responsive, read aloud publicly. An abstract of the Bids will be made available to Bidders after the opening.

19.02 Bids received by mail or otherwise after the date and time specified for the opening of Bids will not be accepted. It will be the Bidder's responsibility to make arrangements for the return of their submittal at their expense.

## ARTICLE 20 – DISQUALIFICATION OF BIDDERS

20.01 More than one Bid for the same Work from an individual or entity under the same or different names will not be considered. Reasonable grounds for believing that any Bidder has an interest in more than one Bid for the Work may be cause for disqualification of that Bidder and the rejection of all Bids in which that Bidder has an interest.

## ARTICLE 21 – BIDS TO REMAIN SUBJECT TO ACCEPTANCE

21.01 All Bids shall 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 that period.

## ARTICLE 22 – EVALUATION OF BIDS AND AWARD OF CONTRACT

22.01 Owner reserves the right to reject any or all Bids, including without limitation the right to reject any or all nonconforming, nonresponsive, unbalanced, or conditional Bids. Owner further reserves the right to reject the Bid of any Bidder whom it finds, after reasonable

inquiry and evaluation, to be not responsible. Owner also reserves the right to waive any informality not involving price, time or changes in the Work.

- 22.02 Owner reserves the right to reject any Bid not accompanied by specified documentation and Bid security.
- 22.03 Owner reserves the right to reject any Bid that, in its sole discretion, is considered to be unbalanced or unreasonable as to the amount bid for any lump sum or unit price item.
- 22.04 In evaluating Bidders, Owner will consider the qualifications of Bidders, whether or not their Bids comply with the prescribed requirements, the alternatives, if any, the lump sum and unit prices, and other data as may be requested in the Bid Form or prior to the Notice of Award.
- 22.05 Owner may consider the qualifications and experience of Subcontractors, Suppliers, and other individuals or entities proposed for those portions of the Work for which the identity of Subcontractors, Suppliers, and other individuals or entities must be submitted as provided in the Supplementary Conditions.
- 22.06 Owner may conduct such investigations as Owner deems necessary to establish the responsibility, qualifications, and financial ability of the Bidders to perform the Work in accordance with the Contract Documents. Owner reserves the right to reject the Bid of any Bidder who does not pass any such evaluation to Owner's satisfaction.
- 22.07 If a Contract is to be awarded, Owner will award the Contract to the lowest responsive and responsible Bidder who has neither been disqualified nor rejected pursuant to Article 20 of the Instructions to Bidders or this Article 22.
- 22.08 A notice of intent for award will be posted for review by interested parties in City Hall or on the City's website prior to submission through the appropriate approval process to the appropriate level for final approval of award.

#### ARTICLE 23 – CONTRACT SECURITIES

- 23.01 Performance Bond shall be in the form "Construction Performance Bond". Payment Bond shall be in the form "Construction Payment Bond". The amounts of and other requirements for Performance and Payment Bonds are stated in Paragraph 5.01 of the General Conditions. The requirements for delivery of Bonds are stated in Paragraph 2.01 of the General Conditions. Additional requirements may be stated in the Supplementary Conditions.
- 23.02 (Not Used)

## ARTICLE 24 – CONTRACTOR'S INSURANCE

- 24.01 The requirements for Contractor's insurance are stated in Article 5 of the General Conditions and in the Supplementary Conditions. The requirements for delivery of certificates of insurance and other evidence of insurance are stated in Paragraph 2.01.B of the General Conditions.
- 24.02 Successful Bidder shall within 15 days from the date of the Notice of Award deliver to Owner, for review and approval, the required policies of insurance. Upon approval, the policies will be returned to the Bidder and Bidder shall submit certificates of insurance and other evidence of insurance to the Owner as stated in the General Conditions.

## ARTICLE 25 – SIGNING OF AGREEMENT

- 25.01 When Owner issues a Notice of Award to the Successful Bidder, it will be accompanied by the required number of unsigned counterparts of the Agreement along with the other Contract Documents which are identified in the Agreement as attached thereto. Within 15 days thereafter, Successful Bidder shall sign and deliver the required number of counterparts of the Agreement and attached documents to Owner. Within ten days thereafter, Owner will deliver one fully signed counterpart to Successful Bidder with a complete set of the Drawings with appropriate identification.

## ARTICLE 26 – NOTICE TO PROCEED

- 26.01 Issuance of the Notice to Proceed shall be as stated in Article 2 of the General Conditions.

## ARTICLE 27 – PARTNERING (Not Used)

## ARTICLE 28 – SALES AND USE TAXES

- 28.01 Refer to the Paragraph SC-6.10 of the Supplementary Conditions for information on Owner's exemption from sales and use taxes on materials and equipment to be incorporated into the Work. Do not include said taxes in Bid.

## ARTICLE 29 – LOCAL PREFERENCE N/A

- ~~29.01 Unless otherwise noted in the solicitation, preference shall be given to a "local business" in the awarding of any Invitation to Bid (ITB), Request for Proposal (RFP) or Request for Qualifications (RFQ) in accordance with Section 2-217 of the City of Venice's Code. Local preference shall not apply to other types of solicitations unless explicitly stated in the subject solicitation.~~
- ~~29.02 "Local business" means the vendor has paid a local business tax to either Sarasota, Manatee, DeSoto or Charlotte County, whichever county the Bidder is located, if applicable prior to bid submission that authorizes the Bidder to provide the commodities or services to be purchased, and maintains a permanent physical business~~

~~address located within the limits of either Sarasota, Manatee, DeSoto or Charlotte County from which the Bidder operates or performs business, and at which at least one full time employee is located.~~

- ~~29.03 In addition, fifty percent (50%) or more of the employees based at the local business location must reside within Sarasota, Manatee, DeSoto or Charlotte County.~~
- ~~29.04 In the event the local office is not the primary location of the Bidder, at least ten percent (10%) of the Bidder's entire full time employees must be based at the local office location. Alternatively, this requirement may be satisfied if at least one corporate officer, managing partner or principal owner of the Bidder resides in Sarasota, Manatee, DeSoto or Charlotte County.~~
- ~~29.05 Bidders wishing to be given preference as a local business must submit with their Bid, all of the Local Preference documentation identified in the "Required Forms Section" of the solicitation.~~
- ~~29.06 For local preference to be granted, the name of the company represented on the required forms must be the same as the name on the Local Preference documentation.~~
- ~~29.07 Information regarding Sarasota County's Local Business Tax can be found at [www.sarasotataxcollector.governmax.com](http://www.sarasotataxcollector.governmax.com).~~
- ~~29.08 In case of a Bid submitted by more than one entity, any one of those entities can qualify the Bid for the local preference. Sub contractors or sub consultants cannot qualify a Bid for local preference.~~

#### ARTICLE 30 – PUBLIC RECORDS/TABULATION

- 30.01 Bids are not public records, subject to the provisions of Florida State Statutes, Chapters 119 and 120, until such time as notice of a decision or intended decision is provided, or within thirty (30) days after the bid opening, whichever is earlier. A copy of the tabulation results will be forwarded upon receipt of a stamped, self- addressed envelope. An electronic tabulation will be posted on Demand Star at the Internet Website at <http://www.demandstar.com/>.

#### ARTICLE 31 – INDEMNIFICATION/HOLD HARMLESS

- 31.01 The Bidder shall defend, indemnify and hold the Owner, the Owner's representatives or agents, and the officers, directors, agents, employees, and assigns of each harmless for and against any and all claims, demands, suits, judgments, damages to persons or property, injuries, losses or expenses of any nature whatsoever arising directly or indirectly from or out of any negligent act or omission of the Bidder, its sub-consultants and their officers, directors, agents or employees; any failure of the elected firm to perform its services hereunder in accordance with generally accepted professional standards; any material breach of the elected firm representations as set forth in the proposal or any other failure of the elected firm's to comply with the

obligations on its part to be performed under this contract.

#### ARTICLE 32 - PUBLIC ENTITY CRIMES/NON-COLLUSIVE AFFIDAVIT

- 32.01 Each Bidder shall complete the Non-Collusive Affidavit and the Public Entity Crimes Form and shall submit the forms with the submittal. Owner considers the failure of the Bidder to submit these documents to be a major irregularity and may be cause for rejection of their submittal.
- 32.02 A person or affiliate who has been placed on the convicted vendor list following a conviction for a public entity crime may not submit a response on a contract to provide any goods or services to a public entity, may not submit a response on a contract with a public entity for the construction or repair of a public building or public work, may not submit responses on leases of real property to a public entity, may not be awarded or perform work as a Bidder, supplier, Sub-Bidder, or consultant under a contract with any public entity, and may not transact business with any public entity in excess of the threshold amount provided in Section 287, for CATEGORY TWO for a period of 36 months from the date of being placed on the convicted vendor list.
- 32.03 Termination for Cause: Any Agreement with the Owner obtained in violation of this Section shall be subject to termination for cause. A Sub-Bidder who obtains a subcontract in violation of this Section shall be removed from the Project and promptly replaced by a Sub-Bidder acceptable to the City.

#### ARTICLE 33 – GRATUITIES AND KICKBACKS

- 33.01 Gratuities: It is unethical for any person to offer, give, or agree to give any employee or for any employee to solicit, demand, accept or agree to accept from another person, a gratuity or an offer of employment in connection with any decision, approval, disapproval, recommendation, preparation of any part of program requirement or a purchase request, influencing the content of any specification or procurement standard, rendering of advice, investigation, audit, or in any other advisory capacity in any proceeding or application, request for ruling, determination claim or controversy, or other particular matter, pertaining to any program requirement or an Agreement or subcontract, or to any solicitation or proposal therefore.
- 33.02 Kickbacks: It shall be unethical for any payment, gratuity, or offer of employment to be made by or on behalf of a Sub-Bidder under a Contract to Bidder or higher tier Sub-Bidder any person associated therewith, as an inducement of the award of a subcontract or order.
- 33.03 Contract Clause: The prohibition against gratuities and kickbacks prescribed in this section shall be conspicuously set forth in every Contract and subcontract and solicitation therefore.

## ARTICLE 34 – EQUAL EMPLOYMENT OPPORTUNITY

34.01 Bidder shall be in compliance with Executive Order 11426 Equal Opportunity as amended by Executive Order 11375, and as supplemented by the Department of Labor Regulations as applicable.

## ARTICLE 35 – CONFLICT OF INTEREST

35.01 No employee of an agency acting in his or her official capacity as a purchasing agent, or public officer acting in his or her official capacity, shall either directly or indirectly purchase, rent, or lease any realty, goods, or services for his or her own agency from any business entity of which the officer or employee or the officer's or employee's spouse or child is an officer, partner, director, or proprietor or in which such officer or employee or the officer's or employee's spouse or child, or any combination of them, has a material interest. Nor shall a public officer or employee, acting in a private capacity, rent, lease, or sell any realty, goods, or services to the officer's or employee's own agency, if he or she is a state officer or employee, or to any political subdivision or any agency thereof, if he or she is serving as an officer or employee of that political subdivision. The foregoing shall not apply to district offices maintained by legislators when such offices are located in the legislator's place of business or when such offices are on property wholly or partially owned by the legislator. This subsection shall not affect or be construed to prohibit contracts entered into prior to:

- October 1, 1975
- Qualification for elective office
- Appointment to public office
- Beginning public employment

## ARTICLE 36 – DRUG FREE WORKPLACE

36.01 The Owner has adopted a policy in observance of the Drug Free Work Place Act of 1988. Therefore, it is unlawful to manufacture, distribute, disperse, possess, or use any controlled substance in the Owner's workplace. The Owner requests the attached Drug Free Workplace Affidavit to accompany your response. This form has been adopted by the Owner in accordance with the Drug Free Workplace Act. The Owner will not disqualify any respondent who does not concur with the affidavit. The Drug Free Workplace Affidavit is primarily used as tiebreaker when two or more separate entities have submitted proposals at the same price, terms and conditions.

## ARTICLE 37 – APPLICABLE LAWS

37.01 Interested parties are advised that all Owner contracts and/or documentation pertinent to this solicitation are subject in full or in part to all legal requirements provided in applicable City Ordinances, State Statutes, and Federal Regulations. Uniform Commercial Code, Chapter 672, Florida State Statutes shall prevail, as the basis for contractual obligations between the Bidder and the Owner for any terms and conditions not specifically stated

within the context of this contract.

ARTICLE 38 – DISCLOSURE – PUBLIC OFFICER, PUBLIC EMPLOYEE OR  
ADVISORY BOARD MEMBER OF OWNER

- 38.01 Sections 112.313(3) and 112.313(7), Florida Statutes, prohibit any public officer, employee, or advisory board member of the Owner from holding any employment or contractual relationship with any business entity doing business with the Owner. Section 112.313(12) provides that a public officer, employee, or advisory board member will not be in violation of the prohibition if all three of the following conditions are met. The filing of the disclosure form with the Supervisor of Elections is the sole responsibility of the Proposer and must be filed prior to or at the time of submission of the proposal. A copy of the filed disclosure form shall be submitted as part of the proposal.
- 38.02 Bid is awarded under a sealed, competitive Bid to lowest or best Bidder system. Advisory board member is required to, prior to or at the time of the submission of the Bid, file a statement with the Supervisor of Elections, disclosing his interest and the nature of the intended business. The form is entitled "Form 3A Interest in Competitive Proposal for Public Business," a copy of which is available from the Owner's Procurement- Finance Department.
- 38.03 The public officer, employee, or advisory board member, spouse, or child is required to have in no way used or attempted to use his influence to persuade a member of the Owner or any of its personnel to enter into such a contract other than by the mere submission of the Bid.
- 38.04 The public officer, employee, or advisory board member, spouse, or child is required to have in no way participated in the determination of the Bid specifications or the determination of the lowest or best Bidder.

ARTICLE 39 – BID PROTESTS

- 39.01. In any case where a bidder wishes to protest either the results of, or the intended disposition of any bid, the bidder must:
- A. File a written notice to the city manager of the bidder's intention to protest within one business day of the bid opening or the city's declaration of intent with regard to the disposition. Upon receipt of a protest, the bid process shall be suspended until the protest procedure herein described has been completed.
  - B. Within five days of filing the written notice of intent to protest, the protester shall file a formal written protest with the city manager, acting as the bid protest officer, explaining in detail the nature of the protest and the grounds on which it is based. During this five-day period, the protester is encouraged to attempt to resolve the issue with the finance department.

- C. The protester must include with the formal written protest a bid protest bond in the form of a certified check, cashier's check or money order made payable to the city in an amount equal to five percent of the lowest acceptable bid or \$5,000.00 whichever is less. The bond will be deposited with the cashier's office where it will be put into an account and the protester will receive a receipt.

39.02 Upon timely receipt of the formal written protest and protest bond:

- A. The bid protest officer shall issue formal findings of fact and a written decision with regard to the validity or nonvalidity of the formal written protest within ten business days of the city's receipt of the protest.
- B. Within two business days of receipt of the formal findings of fact and written decision, the city shall notify the protester of the decision of the bid protest officer. Such notification shall be transmitted via certified return receipt mail.

39.03 Should the protest be found to be without merit or validity, the bid protest bond shall be forfeited to the city in its entirety, and the bid process may resume. If a decision favorable in whole or in part to the protest is rendered, a check for the full amount of the bond will be returned to the protester.

#### ARTICLE 40 – SCRUTINIZED COMPANIES

40.01 Pursuant to Section 287.135, F.S., a company that, at the time of bidding or submitting a proposal for a new contract or renewal of an existing contract, is on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, created pursuant to Section 215.473, F.S., is ineligible for, and may not bid on, submit a proposal for, or enter into or renew a contract with an agency or local governmental entity for goods or services of \$1 million or more. Any contract with an agency or local governmental entity for goods or services of \$1 million or more entered into or renewed on or after July 1, 2011, must contain a provision that allows for the termination of such contract at the option of the awarding body if the company is found to have submitted a false certification as provided under Subsection 287.135(5), F.S., or has been placed on either of the aforementioned lists. The Owner agrees to comply with the requirements of Section 287.135, F.S. in connection with the implementation of the Project.

Engineer: Wade Trim, Inc.  
8010 Woodland Center Boulevard  
Suite 1200  
Tampa, Florida 33614

++ END OF INSTRUCTIONS TO BIDDERS ++

## BID FORM

### CITY OF VENICE WATER MAIN REPLACEMENT PROGRAM – PHASE 4 RE-BID

#### TABLE OF ARTICLES

1. Bid Recipient
2. Bidder's Acknowledgements
3. Bidder's Representations
4. Bidder's Certifications
5. Basis of Bid
6. Time of Completion
7. Attachments to this Bid
8. Defined Terms
9. Bid Submittal
10. Required Forms

#### ARTICLE 1 - BID RECIPIENT

- 1.01 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 price(s) and within the times indicated in this Bid and in accordance with the Bidding Documents.

#### ARTICLE 2 - BIDDER'S ACKNOWLEDGEMENTS

- 2.01 Bidder accepts all of the terms and conditions of the Advertisement or Invitation to Bid and Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for 90 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of OWNER. Bidder will sign the AGREEMENT and will furnish the required contract security, and other required documents within the time periods set forth in the Bidding Documents.

#### ARTICLE 3 - BIDDER'S REPRESENTATIONS

- 3.01 In submitting this Bid, Bidder represents that:

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

Addendum No.	Date Received	Addendum No.	Date Received
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

- B. Bidder has visited the Site and become familiar with and is satisfied as to the general, local and Site conditions that may affect cost, progress, and performance of the Work.
- C. Bidder is familiar with and is satisfied as to all federal, state and local Laws and Regulations that may affect cost, progress and performance of the Work.
- D. Bidder has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) which have been identified in the Supplementary Conditions as provided in Paragraph 4.02 of the General Conditions, and (2) reports and drawings of Hazardous Environmental Conditions identified at the Site, if any, which that have been identified in the Supplementary Conditions as provided in Paragraph 4.06 of the General Conditions.
- E. Bidder has obtained and carefully studied (or accepts the consequences for not doing so) all additional or supplementary examinations, investigations, explorations, tests, studies and data concerning conditions (surface, subsurface and Underground Facilities) at or contiguous to the Site which may affect cost, progress or performance of the Work or which relate to any aspect of the means, methods, techniques, sequences and procedures of construction to be employed by Bidder, including applying the specific means, methods, techniques, sequences, and procedures of construction expressly required by the Bidding Documents to be employed by Bidder, and safety precautions and programs incident thereto.
- F. Bidder does not consider that any further examinations, investigations, explorations, tests, studies or data are necessary for the determination of this Bid for performance of the Work at the price(s) bid and within the times and in accordance with the other terms and conditions of the Bidding Documents.
- G. Bidder is aware of the general nature of work (if any) to be performed by OWNER and others at the Site that relates to the Work as indicated in the Bidding Documents.

- H. Bidder has correlated the information known to Bidder, information and observations obtained from visits to the Site, reports and drawings identified in the Bidding Documents, and all additional examinations, investigations, explorations, tests, studies and data with the Bidding Documents.
- I. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and the written resolution thereof by Engineer is acceptable to Bidder.
- J. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work for which this Bid is submitted.

3.02 Bidder further represents that:

- A. this Bid is genuine and is not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any agreement or rules of any group, association, organization or corporation;
- B. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid; Bidder has not solicited or induced any individual or entity to refrain from bidding;
- C. Bidder has not sought by collusion to obtain for itself any advantage over any other Bidder or over OWNER; and
- D. No person or persons acting in any official capacity for the OWNER are directly or indirectly interested in this Bid, or in any portion of the profit thereof.

#### ARTICLE 4 – BIDDER’S CERTIFICATIONS

4.01 Bidder certifies that:

- A. this Bid is genuine and is not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any agreement or rules of any group, association, organization or corporation;
- B. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid
- C. Bidder; has not solicited or induced any individual or entity to refrain from bidding; and
- D. Bidder has not engaged in corrupt, fraudulent, collusive or coercive practices in competing for the Contract. For the purposes of the Paragraph 4.01.D;
  - 1. Corrupt practice” means the offering, giving, or soliciting of anything of value likely to influence the action of a public official in the bidding process

2. "Fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition.
3. "Collusive practice" means to 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.
4. "Coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

#### ARTICLE 5 - BASIS OF BID

5.01 Bidder will complete the Work in accordance with the Contract Documents for the following price(s):

**BID ITEMS: WATER MAIN REPLACEMENT PROGRAM - PHASE 4**

Item No.	Estimated Quantity	Unit	Description	Unit Bid Price (In Numbers)	Total Amount (In Numbers)
1	2700	LF	6" Water Main Installed by Horizontal Drill Method		
2	1300	LF	6" Water Main Installed by Open Cut Method		
3	9	EA	6" Resilient Wedge Gate Valves with Box		
4	3	LF	6" Tapping Sleeves and Valves		
5	8	LF	Fire Hydrant Assemblies		
6	52	EA	Water Services with New Meter Box (Near Side Single)		
7	9	EA	Water Services with New Meter Box (Near Side Tandem)		
8	66	EA	Water Services with New Meter Box (Far Side Single)		
9	23	EA	Water Services with New Meter Box (Far Side Tandem)		
10	7	EA	Water Services without New Meter Box (Near Side Single)		
11	1	EA	Water Services without New Meter Box (Near Side Tandem)		
12	20	EA	Relocated Reduced Pressure Principal Assemblies		
13	19	EA	Relocated Dual Check Valve Assemblies		
14	16100	LF	Water Service Pipe from Meter Assemblies to Water Service Connection and/or Irrigation System		
15	19500	SF	Private Property Restoration - Sod		
16	600	SF	Private Property Restoration - Brick Pavers		
17	400	SF	Private Property Restoration - Asphalt/Concrete Driveway		
18	600	SF	Private Property Restoration - Asphalt/Concrete Walkway		
19	750	SF	Private Property Restoration - Loose Stone/Gravel		
20	300	EA	Private Property Restoration - Landscaping		
21	2	EA	Private Property Restoration - Unavoidable Obstructions (e.g. wall, wood deck)		

22	173	Property	Contractor/Property Owner Coordination		
23	1	LS	Abandonment of Existing Water Mains		
24	1	EA	6" Line Stop		
25	1200	SY	Asphalt Restoration		
26	1	LS	Maintenance of Traffic and Traffic Control		
27	1	LS	Mobilization and Demobilization		
			<b>BASE BID SUBTOTAL</b>		
28	1	LS	General Conditions (Max 5% or Base Bid Subtotal)		
29	1	LS	Owner's Allowance	\$100,000	\$100,000
30	1	LS	Permit Fee Allowance	\$ 15,000	\$ 15,000
			<b>BASE BID TOTAL</b>		

Bidder agrees to furnish and install equipment from the above circled manufacturers in accordance with the provisions and under the terms of the Contract Documents.

**TOTAL BID PRICE IN WORDS:** \_\_\_\_\_

**NAME OF BIDDER:** \_\_\_\_\_

**ADDRESS OF BIDDER:** \_\_\_\_\_

**BIDDER'S SIGNATURE:** \_\_\_\_\_

**CURRENT LICENSE NUMBER:** \_\_\_\_\_

**DATE:** \_\_\_\_\_

- 5.04 Unit prices have been computed in accordance with Paragraph 11.03.B of the General Conditions.
- 5.05 Bidder acknowledges that estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids, and final payment for all Unit Price items will be based on actual quantities of Unit Price Work determined as provided in the Contract Documents.
- 5.06 All specified cash allowances are included in the price(s) set forth above and have been completed in accordance with Paragraph 11.02 of the General Conditions.

#### ARTICLE 6 - TIME OF COMPLETION

- 6.01 Bidder agrees that the Work will be substantially complete within 330 calendar days after the date when the Contract Times commence to run as provided in Paragraph 2.03 of the General Conditions, and will be completed and ready for final payment in accordance with paragraph 14.07.B of the General Conditions within 360 calendar days after the date when the Contract Times commence to run, which days will be entered by OWNER into the AGREEMENT as the Contract Times.
- 6.02 Bidder accepts the provisions of the AGREEMENT as to liquidated and special damages, if any, in the event of failure to complete the Work within the Contract Times.

#### ARTICLE 7 - ATTACHMENTS TO THIS BID

- 7.01 The following documents are attached to and made a condition of this Bid:
  - A. Required Bid security.
  - B. Required Bidder Qualifications Statement with supporting data.
  - C. Miscellaneous Bid Forms

#### ARTICLE 8 - DEFINED TERMS

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

ARTICLE 9 - BID SUBMITTAL

9.01 This Bid submitted on \_\_\_\_\_, 20\_\_ by:

If Bidder is:

Individual

Name (Typed or Printed): \_\_\_\_\_

By \_\_\_\_\_  
(Individual's Signature)

Doing business as \_\_\_\_\_

License or Registration Number: \_\_\_\_\_

Business Address: \_\_\_\_\_  
\_\_\_\_\_

Phone No.: \_\_\_\_\_ Facsimile: \_\_\_\_\_

A Partnership

Partnership Name: \_\_\_\_\_

By: \_\_\_\_\_  
(Signature of General Partner - Attach evidence of authority to sign)

(Name (Typed or Printed): \_\_\_\_\_

License or Registration Number: \_\_\_\_\_

Business Address: \_\_\_\_\_  
\_\_\_\_\_

Phone No.: \_\_\_\_\_ Facsimile: \_\_\_\_\_

A Corporation

Corporation Name: \_\_\_\_\_

\_\_\_\_\_  
(State of Incorporation)

By \_\_\_\_\_  
(Signature - Attach evidence of authority to sign)

Name and Title (Typed or Printed): \_\_\_\_\_

(CORPORATE  
SEAL)

Attest: \_\_\_\_\_  
(Secretary)

License or Registration Number: \_\_\_\_\_

Business Address: \_\_\_\_\_

\_\_\_\_\_

Phone No.: \_\_\_\_\_ Facsimile: \_\_\_\_\_

Limited Liability Company

By: \_\_\_\_\_  
(Firm Name)

\_\_\_\_\_  
(State of Formation)

By: \_\_\_\_\_  
(Signature of Member/Authorized to Sign)

\_\_\_\_\_  
(Printed or Typed Name and Title of Member Authorized to Sign)  
(Attach evidence of authority to sign.)

License or Registration Number: \_\_\_\_\_

Business Address: \_\_\_\_\_

\_\_\_\_\_

Phone No.: \_\_\_\_\_ Facsimile: \_\_\_\_\_

A Joint Venture

Name of Joint Venture: \_\_\_\_\_

First Joint Venturer Name: \_\_\_\_\_

By: \_\_\_\_\_

(Signature of First Joint Venturer - Attach evidence of authority to sign)

Name (Typed or Printed): \_\_\_\_\_ (Title)

Title: \_\_\_\_\_

Second Joint Venturer Name: \_\_\_\_\_

By: \_\_\_\_\_

(Signature of Second Joint Venturer - Attach evidence of authority to sign)

Name (Typed or Printed): \_\_\_\_\_ (Title)

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

Business Address: \_\_\_\_\_

Phone and FAX number and address for receipt of communications to joint venture:

Phone: \_\_\_\_\_ Facsimile: \_\_\_\_\_

## ARTICLE 10 – REQUIRED FORMS

### Required Forms Check List: ITB# 3044-16: Water Main Replacement Program – Phase 4 Re-Bid

- Proposal Bond
- Co-operative Procurement with Other Jurisdictions
- Form 3A- Interest in Competitive Bid for Public Business
- Indemnification/Hold Harmless
- FDEP & U.S. EPA Construction Notices of Intent (NOI)
- Statement of References for Contractor
- Contractor’s Statement of Sub-contractors
- Drug Free Workplace Certification
- Non-Collusive Affidavit
- Public Entity Crime Information
- Statement of “No Bid” (if applicable)
- Bidders Qualification Statement

**All required forms are included in this package. All forms must be filled out and returned with the firm’s proposal.**

**Failure to do so will result in the firm being considered non-responsive and their proposal will be disallowed.**

**Mark N/A if not applicable to your firm**

**PROPOSAL BOND**

*\*Not to be completed if a certified check is submitted.*

KNOW ALL MEN BY THESE PRESENTS: That we, the undersigned,

\_\_\_\_\_ as Principal,

and \_\_\_\_\_ as Surety

are held and firmly bound unto the City of Venice, Florida, in the sum of

\_\_\_\_\_ \$\_\_\_\_\_, for the payment of which, well and truly to be made, we hereby jointly and severally bind ourselves, our heirs, executors, administrators, successors and assigns.

The condition of the above obligation is such that if the attached Proposal of Principal and Surety for work specified as:

\_\_\_\_\_

all as stipulated in said Proposal, by doing all work incidental thereto, in accordance with the plans and specifications provided heretofore, all within Sarasota County, is accepted and the bidder shall within ten (10) days after notice of said award, enter into a contract, in writing, and furnish the required Performance Bond with surety or sureties to be approved by the Director of Purchasing, this obligation shall be void; otherwise the same shall be in full force and virtue by law and the full amount of this Proposal Bond will be paid to the City as stipulated or liquidated damages.

Signed this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_.

\_\_\_\_\_  
Principal

\_\_\_\_\_  
Surety

**Principal must indicate whether corporation, partnership, company, or individual.**

The person signing shall, in his own handwriting, sign the Principal's name, his own name, and his title. The person signing for a corporation must, by affidavit, show his authority to bind the corporation.

**COOPERATIVE PROCUREMENT WITH OTHER JURISDICTIONS**

The vendor, by submitting a bid, authorizes other Public Agencies to "Piggy-Back" or purchase equipment or services being proposed in this invitation to bid at prices bid unless otherwise noted on the proposal sheet.

Yes \_\_\_\_\_ No \_\_\_\_\_

**AUTHORIZED SIGNATURE**

By submission of the ITB, the undersigned certifies that:

1. He/She has not paid or agreed to pay any fee or commission, or any other thing of value contingent upon the award of this contract, to any City of Venice, Florida employee or official or to any current consultant to the City of Venice, Florida;
2. He/She has not paid or agreed to pay any fee or commission or any other thing of value contingent upon the award of this contract to any broker or agent or any other person;
3. The prices contained in this proposal have been arrived at independently and without collusion, consultation, communication or agreement intended to restrict competition.
4. He/She has the full authority of the Offeror or to execute the proposal and to execute any resulting contract awarded as the result of, or on the basis of, the proposal.

Authorized Representative: \_\_\_\_\_

Signature: \_\_\_\_\_

Title: \_\_\_\_\_

Company Name: \_\_\_\_\_

Address: \_\_\_\_\_

City, State, ZIP: \_\_\_\_\_

Telephone Number: \_\_\_\_\_

Fax Number: \_\_\_\_\_

E-mail address: \_\_\_\_\_

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# FORM 3A INTEREST IN COMPETITIVE BID FOR PUBLIC BUSINESS

LAST NAME — FIRST NAME — MIDDLE INITIAL			OFFICE / POSITION HELD
MAILING ADDRESS			AGENCY
CITY	ZIP	COUNTY	ADDRESS OF AGENCY

## WHO MUST FILE THIS STATEMENT

Sections 112.313(3) and 112.313(7), Florida Statutes, prohibit certain business relationships on the part of public officers and employees, their spouses, and their children. See Part III, Chapter 112, Florida Statutes, and/or the brochure entitled "A Guide to the Sunshine Amendment and Code of Ethics for Public Officers and Employees" for more details on these prohibitions. However, Section 112.313(12), Florida Statutes, provides certain limited exemptions to the above-referenced prohibitions, including one where the business is awarded under a system of sealed, competitive bidding; the public official has exerted no influence on bid negotiations or specifications; AND where disclosure is made, prior to or at the time of the submission of the bid, of the official's or his spouse's or child's interest and the nature of the intended business. This form has been promulgated by the Commission on Ethics for such disclosure, *if and when applicable* to a public officer or employee.

## INTEREST IN COMPETITIVE BID FOR PUBLIC BUSINESS *(Required by § 112.313(12)(b), Fla. Stat.)*

1. The competitive bid to which this statement applies has been / will be (strike one) submitted to the following government agency:		
2. The person submitting the bid is:	NAME ▼	POSITION ▼
3. The business entity with which the person submitting the bid is associated is:		
4. My relationship to the person or business entity submitting the bid is as follows:		
5. The nature of the business intended to be transacted in the event that this bid is awarded is as follows:		
a. The realty, goods, and / or services to be supplied specifically include: _____		
b. The realty, goods, and / or services will be supplied for the following period of time: _____		
c. Will the contract be subject to renewal without further competitive bidding? <input type="checkbox"/> Yes <input type="checkbox"/> No. If so, how often?		
6. Additional comments:		
7. SIGNATURE	DATE SIGNED	DATE FILED

## FILING INSTRUCTIONS

If you are a state officer or employee required to disclose the information above, please file this form with the Department of State in Room 316, R.A. Gray Building, 500 South Bronough Street, Tallahassee, Florida 32399-0250. If you are an officer or employee of a political subdivision of this state and are subject to this disclosure, please file the statement with the Supervisor of Elections of the county in which the agency in which you are serving has its principal office.

NOTICE: UNDER PROVISIONS OF FLORIDA STATUTES §112.017, A FAILURE TO MAKE ANY REQUIRED DISCLOSURE CONSTITUTES GROUNDS FOR AND MAY BE PUNISHED BY ONE OR MORE OF THE FOLLOWING: IMPEACHMENT, REMOVAL OR SUSPENSION FROM OFFICE OR EMPLOYMENT, DEMOTION, REDUCTION IN SALARY, REPRIMAND, OR A CIVIL PENALTY NOT TO EXCEED \$10,000.

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**INDEMNIFICATION/HOLD HARMLESS**

The elected firm shall (if required by City) defend, indemnify and hold the City, the City's representatives or agents, and the officers, directors, agents, employees, and assigns of each harmless for and against any and all claims, demands, suits, judgments, damages to persons or property, injuries, losses or expenses of any nature whatsoever (including attorneys' fees at trial at appellate level) arising directly or indirectly from or out of any negligent act or omission of the elected firm, its Sub-Offerrors and their officers, directors, agents or employees; any failure of the elected firm to perform its services hereunder in accordance with generally accepted professional standards; any material breach of the elected firm's representations as set forth in the proposal or any other failure of the elected firm to comply with the obligations on its part to be performed under this contract.

I, \_\_\_\_\_, being an authorized representative of the firm of  
\_\_\_\_\_ located at City  
\_\_\_\_\_, State \_\_\_\_\_, Zip Code \_\_\_\_\_ Phone:  
\_\_\_\_\_ Fax: \_\_\_\_\_. Having read and  
understood the contents above, hereby submit accordingly as of this Date,  
\_\_\_\_\_, 20\_\_.

\_\_\_\_\_  
Please Print Name

\_\_\_\_\_  
Signature

This signed document shall remain in effect for a period of one (1) year from the date of signature or for the contract period, whichever is longer.

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**CITY OF VENICE, FLORIDA**  
**FDEP & U.S. EPA CONSTRUCTION NOTICES OF INTENT (NOI)**

The undersigned bidder acknowledges the requirement of the U.S. Environmental Protection Agency (EPA) and the Florida Department of Environmental Protection (FDEP) which have published the rules for NPDES General Permits for stormwater discharges from construction sites and said bidder agrees to assist the owner in the preparation of these permits and associated plans. The bidder acknowledges that he has taken these permits and associated construction costs into account in the preparation of his lump sum bid. These permits are mandated under Section 402(p) of the Clean Water Act for "Stormwater Discharge from Construction Activities (including clearing, grading, and excavation activities) that result in the disturbance of five (5) or more acres total land area, including areas that are part of a larger common plan of development or sale." The EPA has published summary guidance for: "Developing Prevention Plans and Best Management Practices" (EPA 833-R-92-001, October 1992).

The EPA permit format is a *Notice of Intent (NOI) for Stormwater Discharges Associated with Construction Activity to be covered under a NPDES Permit*, and it is to be submitted according to the NOI instructions. The Stormwater Pollution Prevention Plan which must accompany the NOI must be signed by authorized representatives of the contractor and subcontractors as well as the facility Owner. Copies of the EPA NOI must be provided to state and local agencies who have issued stormwater management, grading, or land alteration permits or approvals.

An NOI must also be submitted to the Florida Department of Environmental Protection, NPDES Stormwater Notices Center, MS 2510, 2600 Blair Stone Road, Tallahassee, FL 32399. FDEP forms may be downloaded from the State's web site <http://www.dep.state.fl.us/water/stormwater/npdes/> or phone 850-921-9870 if you have questions.

Acceptance of the bid to which this certification and disclosure applies in no way represents the Owner or its Representative has evaluated and thereby determined that the information is adequate to comply with the applicable U.S. EPA or FDEP requirements nor does it in any way relieve the contractor of its sole responsibility to comply with the applicable U.S. EPA and FDEP requirements, including inspection of all control measures at least once each week and following any storm (rainfall) event of 0.5 inches or greater and maintaining reports of each inspection.

Bidder (Company): \_\_\_\_\_

Name and Title: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone: \_\_\_\_\_

**BY SIGNATURE BELOW OF AUTHORIZED REPRESENTATIVE, CONTRACTOR ACKNOWLEDGES RECEIPT OF A COPY OF CITY ORDINANCES 95-12 and 96-09 AND AGREES TO ABIDE BY THE REQUIREMENTS OF SAID ORDINANCES.**

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Printed name/title:

## ORDINANCE 95-12

AN ORDINANCE OF THE CITY OF VENICE, FLORIDA, AMENDING THE CODE OF ORDINANCES BY AMENDING CHAPTER 9, HEALTH AND SANITATION, ARTICLE IV, DISPOSAL OF EXCRETA, SECTION 9-71, DISCHARGE OF RAW SEWAGE INTO STORMWATER; DELETING ARTICLE V, PROHIBITED STORMWATER DISCHARGES; ADDING CHAPTER 19, WATER AND SEWERS, ARTICLE VI, STORMWATER QUALITY; DELETING CHAPTER 15, STREETS AND SIDEWALKS, ARTICLE IV, EXCAVATIONS, SECTION 15-53, STORM DRAINAGE AND POLLUTION; PROVIDING FOR CONFLICT WITH OTHER ORDINANCES; PROVIDING FOR A SEVERABILITY CLAUSE AND PROVIDING AN EFFECTIVE DATE.

**WHEREAS**, control of stormwater runoff is necessary from individual lots that do not require a permit from the Southwest Florida Water Management District and requiring compliance with the provisions of the Clean Water Act 33 U.S.C.1251 et.seq., as amended by the Water Quality Act of 1987; and

**WHEREAS**, the City is desirous of complying with its U.S. Environmental Protection Agency National Pollutant Discharge Elimination System Permit and its Stormwater Master Plan, therefore, stormwater runoff and any discharge to the City storm sewer system will be closely monitored and regulated; and

**WHEREAS**, the control of stormwater runoff is the responsibility of each individual property owner; and

**WHEREAS**, the City is desirous of controlling stormwater runoff and insuring compliance with the Comprehensive Plan.

**NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF VENICE, FLORIDA:**

SECTION 1. Chapter 9, Water and Sewers, Article IV, Disposal of Excreta, Section 9-71, Discharge of Raw Sewage into Storm Sewer, is amended to read as follows:

**Sec. 9-71. Discharge of raw sewage into storm sewer.**

It shall be unlawful for any person to discharge raw sewage or to discharge the effluent of and from any septic tank into the storm sewer system of the city or to construct or maintain any system of drainage, pipes, conduits or other apparatus whereby raw sewage or the effluent of and from any septic tank shall or may be discharged into or through the storm sewer system of the city.

SECTION 2. Chapter 9, Water and Sewers, Article V, Prohibited Stormwater Discharges, is deleted in its entirety.

SECTION 3. Chapter 19, Water and Sewers, Article VI, Stormwater Quality is added to read as follows:

### **ARTICLE VI. STORMWATER QUALITY**

**Sec. 19-141. Definitions.**

As used in this article "industrial stormwater" means stormwater runoff from a site with industrial activities, as defined under 40 CFR Section 122.26(a)(14) U.S. Environmental Protection Agency regulation.

As used in this article "construction sites" refers to all sites.

As used in this article, "illicit discharge" is any discharge of anything other than stormwater to the municipal separate storm sewer system (MS4) or the waters of the State of Florida or the United States.

As used in this article "industrial wastewater" refers to liquids used by an entity in their course of business, that if discharged to the MS4, would degrade the quality of stormwater.

**Sec. 19-142. Disposal of industrial stormwater discharges.**

The following types of discharges to the municipal separate storm sewer of the city must be controlled as indicated.

(1) **Industrial wastewater/illicit discharge:** Industrial wastewater/illicit discharge may not be discharged to the city's municipal separate storm sewer system.

(2) **Industrial stormwater:** As required to comply with NPDES regulations, the quality of industrial stormwater which is discharged through the city's municipal separate storm sewer system may be subject to regulation or permitting, and any violation of such regulation or permit may be subject to an order to immediately cease such

discharge.

**Sec. 19-143. Runoff stormwater and Best Management Practice (BMPs) for construction sites.**

BMPs shall be implemented as necessary, to insure that all discharges from construction activities are in compliance with the City of Venice EPA/NPDES Stormwater Permit and the Stormwater Master Plan, or the SWFWMD Permit or EPA's NPDES Construction Activity General Permit, whichever is most stringent in its requirements.

**Best Management Practices include but are not limited to, the following requirements:**

- (a) All site grading shall be conducted in such a manner that all stormwater management facilities located adjacent to the site are not altered in any way which will diminish their designated flow or pollutant removal capacity or the shape of the drainage facility.
- (b) Maintenance of vegetative buffers or use of a silt fence and/or staked hay bales which minimize erosion and retain sediment on site, shall be implemented prior to any construction activities taking place at sites which discharge to surface water or the municipal separate storm sewer system (MS4). These controls, when utilized, shall be secured and properly maintained during construction activities until the site has been stabilized with sod and/or seed and mulch. A double silt fence may be required as an additional measure to insure that discharges from the site are in compliance with water quality standards as established by the EPA/NPDES Stormwater Permit. Undisturbed vegetative buffers shall be maintained intact to the maximum extent possible to reduce erosion and the discharge of sediment from stormwater runoff. All areas of exposed soil shall be stabilized within 72 hours of attaining final grade.
- (c) Storm sewer systems (eg. inlets, pipes and ditches, etc.) adjacent to the site must be protected by a silt fence and/or staked hay bales during construction, to keep solids from entering conveyance systems.
- (d) Vehicles such as concrete or dump trucks and other construction equipment shall not be washed at locations where the runoff will flow directly into a lake, wetland, watercourse or stormwater conveyance system. Special areas must be designated for washing vehicles. In all new subdivisions, a wash area may be established by the owner/developer which can be used by the site contractor and home builders. If established, wash areas shall be located where the wash water will spread out and evaporate or infiltrate directly into the ground, or where the runoff can be collected in a temporary holding or seepage basin. Gravel or rock bases are recommended for temporary holding or seepage basins, to minimize mud generation. Underdrains shall be installed where infiltration basins are provided as required by the owner/developer's engineer or the Southwest Florida Water Management District. Upon completion of the project, the wash areas shall be graded and stabilized and any trash or waste shall be collected and disposed of properly.
- (e) Fuel, chemicals, cements, solvents, paints, topsoil, or other potential water pollutants shall be stored in areas where they will not cause runoff pollution. Toxic chemicals and materials, such as pesticides, paints, and acids, must be stored in accordance with manufacturer's guidelines. Groundwater resources shall be protected from leaching by placing a plastic mat, packed clay, tar paper, or other impervious material on any areas where toxic liquids are to be opened and stored.
- (f) A minimum of one permitted driveway must be established prior to construction and shall be used as the only access for ingress/egress during construction in order to provide minimum disturbance of drainage facilities and vegetative cover on site.

**Sec. 19-44. Owner responsibility for stormwater runoff.**

- (a) The control of stormwater runoff is the responsibility of each individual property owner.
- (b) Any property owner constructing or causing to be constructed any building which requires an elevated slab and the elevation of the building pad is higher than that of adjoining properties, will control stormwater runoff during construction. Likewise, any property that is filled more than twelve inches above the adjacent property must provide additional control measures for stormwater during construction. Upon completion of the work, all stormwater runoff shall flow to its natural preconstruction drainage swale, ditch, etc., or be retained in a retention or detention pond(s) designed and constructed for that purpose.
- (c) For any construction where the elevation of the building pad or site fill will be higher than adjoining properties, construction plans certified by a professional engineer registered with the State of Florida, retained by the property owner, will be provided to the City prior to issuance of a building permit.
- (d) Any single lot not covered under Southwest Florida Water Management District rules, exceeding forty-five percent in impervious coverage (including buildings, drives, sidewalks, patios, etc.) shall require stormwater retention facilities to be designed by a Florida registered engineer. The design is to meet the City of Venice EPA/NPDES Permit requirements for quantity and quality of treatment.
- (e) The property owner's engineer will be required to certify to the City Engineer that construction was completed in accordance with the certified plans, prior to issuance of a Certificate of Occupancy.

(f) All improvements to property affecting stormwater drainage must be done in compliance with the City's Comprehensive Plan.

**Sec. 19-145. Illicit discharges.**

It shall be unlawful for any person to discharge anything other than stormwater into the city's municipal separate storm sewer system whether such discharges occur through piping connections, runoff, exfiltration, infiltration, seepage, or leaks. No person may maintain, use, or establish any direct or indirect connection to any storm sewer owned by the city that results in any discharge in violation of any provision of federal, state, city, or other law or regulation. This provision is retroactive to January 1, 1995, and applies to connections made prior to the effective date of this provision, regardless of whether made under a permit, or other authorization, or whether permissible under laws or practices applicable or prevailing at the time the connection was made.

No materials other than those composed entirely of stormwater shall be disposed of, dumped, or spilled into the city's municipal separate storm sewer system, whether such materials are in a solid or liquid form.

**Sec. 19-146. Inspections.**

It shall be the duty of the city engineer or designee to carry out all inspections, surveillance, and monitoring procedures necessary to determine compliance with this article.

SECTION 4. Chapter 15, Streets and Sidewalks, Article IV, Excavations, Section 15-53, Storm Drainage and Pollution, is deleted in its entirety.

SECTION 5. To the extent of any conflict between the provisions of this Ordinance, and any other Ordinance, Resolution, or Agreement of the City of Venice, Florida, the provisions of this Ordinance shall prevail.

SECTION 6. Severability. If for any reason a provision of this Ordinance or the application thereof to any person, group of persons, or circumstances is held invalid, the invalidity shall not effect other provisions or applications of the Ordinance which can be given effect without the invalid provision or application, and to this end the provisions of the Ordinance are severable.

SECTION 7. Effective Date. This Ordinance shall take effect immediately upon its adoption, as required by law.

**PASSED BY THE COUNCIL OF THE CITY OF VENICE, FLORIDA, THIS 23RD DAY OF MAY, 1995.**

First Reading: May 9, 1995 - Final Reading: May 23, 1995 - ADOPTION: May 23, 1995

ATTEST: /s/LORI STELZER, CMC, CITY CLERK                      /S/ MERLE L. GRASER, MAYOR

I, LORI STELZER, City Clerk of the City of Venice, Florida, a municipal corporation in Sarasota County, Florida, do hereby certify that the foregoing is a full and complete, true and correct copy of an Ordinance duly adopted by the Venice City Council, at a meeting thereof duly convened and held on the 23rd day of May, 1995, a quorum being present.

WITNESS my hand and the official seal of said City this 24th day of May, 1995.

/S/ LORI STELZER, CMC, CITY CLERK    Approved as to form: /S/ ROBERT C. ANDERSON, CITY ATTORNEY

## ORDINANCE 96-09

AN ORDINANCE OF THE CITY OF VENICE, FLORIDA, AMENDING THE CODE OF ORDINANCES BY AMENDING CHAPTER 19, WATER AND SEWERS, ARTICLE VI, STORMWATER QUALITY, SECTION 19-141, DEFINITION FOR INDUSTRIAL STORMWATER, SECTION 19-146, INSPECTIONS, PROVIDING FOR CONFLICT WITH OTHER ORDINANCES; PROVIDING FOR A SEVERABILITY CLAUSE AND PROVIDING AN EFFECTIVE DATE.

**WHEREAS**, the City of Venice is responsible for the conservation, management, protection, control, use and enhancement of stormwater within its corporate limits, and for the acquisition, management, maintenance, extension, and improvement of the stormwater systems in the City; and

**WHEREAS**, the Environmental Protection Agency/National Pollutant Discharge Elimination System (EPA/NPDES) permit requires certain amendments to the existing Ordinance and extension of inspection authority on private properties.

**NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF VENICE, FLORIDA:**

SECTION 1. Chapter 19, Water and Sewers, Article VI, Stormwater Quality, Section 19-141, Definition, for Industrial Stormwater is amended to read as follows:

**Sec. 19-141. Definitions.**

As used in this article, "industrial stormwater" means stormwater runoff from a site with industrial activities, as defined under 40 CFR Section 122.26 (a) (b) (14), U.S. Environmental Protection Agency regulation.

SECTION 2. Chapter 19, Water and Sewers, Article VI, Stormwater Quality, Section 19-146, Inspections, is amended to read as follows:

**Sec. 19-146. Inspections.**

It shall be the duty of the city engineer or designee to carry out all inspections, surveillance, and monitoring procedures necessary to determine compliance with this article. The city engineer or his duly authorized agents may enter at all reasonable times in or upon any private or public property for the purpose of inspecting and investigating conditions and practices which may be a violation of this ordinance, regulation or permit. The city engineer may, whenever necessary, make an inspection of construction sites to enforce any of the provisions of this ordinance, regulation or permit issued hereunder, or whenever an authorized official has reasonable cause to believe there exists any condition constituting a violation of this ordinance, regulation or permit issued hereunder. The city engineer shall inspect the work and shall require the owner to obtain services to provide adequate on-site inspection. If the city engineer finds that eroded soils are leaving the construction site, the city engineer may direct the owner(s) or his agents or his contractor on the site by written order to install any and all erosion controls that are deemed necessary to prevent said soil erosion from migrating off site. Notwithstanding the existence or pursuit of any other remedy, the City may maintain an action in its own name in any court of competent jurisdiction for an injunction or other process against any person to restrain or prevent violations of this ordinance.

SECTION 3. To the extent of any conflict between the provisions of this Ordinance, and any other Ordinance, Resolution, or Agreement of the City of Venice, Florida, the provisions of this Ordinance shall prevail.

SECTION 4. Severability. If for any reason a provision of this Ordinance or the application thereof to any person, group of persons, or circumstances is held invalid, the invalidity shall not effect other provisions or applications of the Ordinance which can be given effect without the invalid provision or application, and to this end the provisions of the Ordinance are severable.

SECTION 5. Effective Date. This Ordinance shall take effect immediately upon its adoption, as required by law.

**PASSED BY THE COUNCIL OF THE CITY OF VENICE, FLORIDA, THIS 26TH DAY OF MARCH, 1996.**

First Reading: March 12, 1996 - Final Reading: March 26, 1996 - ADOPTION: March 26, 1996

ATTEST: /s/LORI STELZER, CMC, CITY CLERK                      /S/ MERLE L. GRASER, MAYOR

I, LORI STELZER, City Clerk of the City of Venice, Florida, a municipal corporation in Sarasota County, Florida, do hereby certify that the foregoing is a full and complete, true and correct copy of an Ordinance duly adopted by the Venice City Council, at a meeting thereof duly convened and held on the 26th day of March, 1996, a quorum being present.

WITNESS my hand and the official seal of said City this 27th day of March, 1996.

/S/ LORI STELZER, CMC, CITY CLERK Approved as to form: /S/ ROBERT C. ANDERSON, CITY ATTORNEY.

**STATEMENT OF REFERENCES**  
**FOR CONTRACTOR**

NAME OF CONTRACTOR: \_\_\_\_\_

BUSINESS ADDRESS: \_\_\_\_\_

How many years have you been engaged in the business under the present firm name? \_\_\_\_\_

List previous business experience: \_\_\_\_\_

\_\_\_\_\_

List at least three construction references:

(1) Person to contact: \_\_\_\_\_

Company Name: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone: \_\_\_\_\_ Date work performed: \_\_\_\_\_

(2) Person to contact: \_\_\_\_\_

Company Name: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone: \_\_\_\_\_ Date work performed: \_\_\_\_\_

(3) Person to contact: \_\_\_\_\_

Company Name: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone: \_\_\_\_\_ Date work performed: \_\_\_\_\_

(4) Person to contact: \_\_\_\_\_

Company Name: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone: \_\_\_\_\_ Date work performed: \_\_\_\_\_

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**CONTRACTOR'S STATEMENT OF  
SUBCONTRACTORS TO BE USED FOR THIS WORK**

NAME OF CONTRACTOR: \_\_\_\_\_

BUSINESS ADDRESS: \_\_\_\_\_

LIST SUBCONTRACTORS TO BE USED IN THE PROJECT:

(1) Company Name: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone: \_\_\_\_\_ Phase of Work Sublet: \_\_\_\_\_

(2) Company Name: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone: \_\_\_\_\_ Phase of Work Sublet: \_\_\_\_\_

(3) Company Name: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone: \_\_\_\_\_ Phase of Work Sublet: \_\_\_\_\_

(4) Company Name: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone: \_\_\_\_\_ Phase of Work Sublet: \_\_\_\_\_

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## **DRUG FREE WORKPLACE CERTIFICATION**

If identical tie bids exist, preference will be given to the vendor who submits a certification with their bid/proposal certifying they have a drug-free workplace in accordance with Section 287.087, Florida Statutes. The drug-free workplace preference is applied as follows:

**IDENTICAL TIE BIDS:** Preference shall be given to businesses with drug-free workplace programs. Whenever two or more bids, which are equal with respect to price, quality, and service, are received by the State or by any political subdivision for the procurement of commodities or contractual services, a bid received from a business that certifies that it has implemented a drug-free workplace program shall be given preference in the award process. Established procedures for processing tie bids will be followed if none of the tied vendors have a drug-free workplace program.

As the person authorized to sign this statement, I certify that this firm complies fully with the following requirements:

- 1) This firm publishes a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in the workplace and specifying the actions that will be taken against employees for violations of such prohibition.
- 2) This firm informs employees about the dangers of drug abuse in the workplace, the business's policy of maintaining a drug-free workplace, any available drug counseling, rehabilitation, and employee assistance programs, and the penalties that may be imposed upon employees for drug abuse violations.
- 3) This firm gives each employee engaged in providing the commodities or contractual services that are under bid a copy of the statement specified in subsection (1).
- 4) In the statement specified in subsection (1), this firm notifies the employees that, as a condition of working on the commodities or contractual services that are under bid, the employee will abide by the terms of the statement and will notify the employer of any conviction of, or plea of guilty or nolo contendere to, any violation of chapter 893 or of any controlled substance law of the United States or any state, for a violation occurring in the workplace no later than five (5) days after such conviction.
- 5) This firm imposes a sanction on or requires the satisfactory participation in a drug abuse assistance or rehabilitation program if such is available in the employee's community, by any employee who is so convicted.
- 6) This firm will continue to make a good faith effort to maintain a drug-free workplace through implementation of this section.

---

Contractor's Name Signature

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**NON-COLLUSIVE AFFIDAVIT**

State of \_\_\_\_\_

County of \_\_\_\_\_

} SS.

\_\_\_\_\_ being first duly sworn, deposes and says that:

1. He/she is the \_\_\_\_\_, (Owner, Partner, Officer, Representative or Agent) of \_\_\_\_\_ the Offeror that has submitted the attached Proposal;
2. He/she is fully informed respecting the preparation and contents of the attached Proposal and of all pertinent circumstances respecting such Proposal;
3. Such Proposal is genuine and is not a collusive or sham Proposal;
4. Neither the said Offeror nor any of its officers, partners, owners, agents, representatives, employees or parties in interest, including this affiant, have in any way colluded, conspired, connived or agreed, directly or indirectly, with any other Offeror, firm, or person to submit a collusive or sham Proposal in connection with the Work for which the attached Proposal has been submitted; or have in any manner, directly or indirectly sought by agreement or collusion, or have in any manner, directly or indirectly, sought by agreement or collusion, or communication or conference with any Offeror, firm, or person to fix the price or prices in the attached Proposal or of any other Offeror, or to fix any overhead, profit, or cost elements of the Proposal price or the Proposal price of any other Offeror, or to secure through any collusion, conspiracy, connivance, or unlawful agreement any advantage against (Recipient), or any person interested in the proposal Work.

Signed, sealed and delivered in the presence of:

\_\_\_\_\_  
\_\_\_\_\_

By: \_\_\_\_\_

\_\_\_\_\_  
(Printed Name)

\_\_\_\_\_  
(Title)

**ACKNOWLEDGEMENT**

State of \_\_\_\_\_

County of \_\_\_\_\_

On this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, before me, the undersigned Notary Public of the State of \_\_\_\_\_, personally appeared \_\_\_\_\_ and (Name(s) of Individual(s) who appeared before notary) whose name(s) in/are Subscribed to the written instrument, and he/she/they acknowledge that he/she/they executed it.

\_\_\_\_\_  
NOTARY PUBLIC, STATE OF \_\_\_\_\_

NOTARY PUBLIC  
SEAL OF OFFICE:

\_\_\_\_\_  
(Name of Notary Public: Print, stamp, or type as commissioned)

Personally known to me, or  Produced Identification: \_\_\_\_\_  DID take an oath, or  DID NOT take an oath

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**PUBLIC ENTITY CRIME INFORMATION**

A person or affiliate who has been placed on the State of Florida’s convicted vendor list following a conviction for a public entity crime may not submit a BID/ITB proposal on a contract to provide any goods or services to a public entity, may not submit a response on a contract with a public entity for services in the construction or repair of a public building or public work, may not submit bids on leases of real property to a public entity, may not be awarded or perform work as a Contractor, supplier, Sub-Contractor, or Contractor under a contract with any public entity, and may not transact business with any public entity in excess of the threshold amount provided in **Section 2876.017, for CATEGORY TWO for a period of 36 months from the date of being placed on the convicted vendor list.**

I, \_\_\_\_\_, being an authorized representative  
of the firm of \_\_\_\_\_, located at City:  
\_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_, have  
read and understand the contents of the Public Entity Crime Information and of this  
formal BID/ITB package, hereby submit our proposal accordingly.

Signature: \_\_\_\_\_  
Phone: \_\_\_\_\_  
Federal ID#: \_\_\_\_\_

Date: \_\_\_\_\_  
Fax: \_\_\_\_\_

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**NO BID RESPONSE**

**IMPORTANT:** If you choose not to submit a bid for the attached "Invitation To Bid," please complete and return this form only on/before bid closing date. Failure to respond will result in your company being negatively registered as non-responsive. In the event five (5) "no responses" are posted, you will be automatically dropped from our mailing list for future solicitations for the described product/service.

Thank you for taking this opportunity to help us update and improve the solicitation process.

Bid Open/Close Date: **November 8, 2016 at 2:00 PM**

Bid Number: **3044-16**

Description: The project will relocate existing water mains from the backyard easements to within the ROW and re-establish the service connections to the residences. The project will include the installation of approximately 3,100 LF of new water main; abandonment of approximately 9,400 LF of rear lot water mains and the relocation of approximately 158 water services.

Contact: Peter Boers, Procurement- Finance Department

Please check the appropriate response. We respectfully submit "No bid" for the following reason(s):

- 1. We are unable to meet the required delivery date
- 2. We cannot provide a product to meet the required specifications.
- 3. We no longer provide the requested product.
- 4. We do not represent the required brand name product.
- 5. The bid closing date does not allow adequate time to prepare a response.
- 6. The specifications are too restrictive.
- 7. We have chosen not to do business with the City
- 8. Other (feel free to provide our response on your company letterhead.)

Company Name \_\_\_\_\_ Vendor No. \_\_\_\_\_

Authorized Signature \_\_\_\_\_

Print Name \_\_\_\_\_

Title \_\_\_\_\_

Date \_\_\_\_\_ Telephone No. \_\_\_\_\_

++ END OF BID FORM ++

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**SAMPLE CONTRACT**

THIS CONTRACT, pursuant to City Council approval granted on \_\_\_\_\_, is made and entered into this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, by and between the City of Venice, Florida, hereinafter referred to as the City, and \_\_\_\_\_, hereinafter referred to as the Contractor.

W I T N E S S E T H:

THAT FOR and in consideration of the mutual covenants and obligations hereafter set forth, the parties hereto agree as follows:

(1) The Contract Documents consist of this Contract, Performance and Payment Bonds attached hereto as composite Attachment A and, the City’s Invitation to Bid (ITB) # **3044-16 Water Main Replacement Program – Phase 4 Re-Bid**, including: standard general conditions, supplemental conditions, special conditions, technical specifications, drawings, Contractor’s bid proposal for ITB 3044-16, all of which are incorporated herein by reference. All of the Contract Documents are made a part of this Contract.

(2) The Contractor shall perform all the work required by the Contract Documents and shall include installation of the listed items per the bid specifications.

(3) The work to be performed under this Contract shall be completed within Three Hundred (**300**) days of the issuance of the Notice to Proceed by the City.

(4) The City shall pay the Contractor for the performance of the work, in accordance with Exhibit B, subject to the terms and conditions of the Contract Documents and any written change orders, the contract sum not to exceed: \_\_\_\_\_ & \_\_\_/100s (\$ \_\_\_\_\_).

(5) Time is of the essence in this contract. In the event that the work is not completed within the required time as specified in Section 3 herein, then from the compensation otherwise to be paid to the Contractor, the City may retain the sum of **one thousand five hundred thirty-two dollars (\$ 1532.00) per day** for each calendar day that the work remains incomplete beyond the time limit, which sum shall represent the actual damage which the City will have sustained per day by failure of the Contractor to complete the work within the required time, said sum not being a penalty but being the stipulated damages the City will have sustained in the event of such default by the Contractor.

(6) In connection with the performance of work under this Contract, the Contractor agrees not to discriminate against any employee or applicant for employment because of race, sex, religion, color, or national origin. The aforesaid provision shall include, but not be limited to, the following: employment, upgrading, demotion or transfer, recruitment or recruitment advertising, lay-off or termination, rates of pay or other forms of compensation, and selection for training, including apprenticeship. The Contractor agrees to post hereafter in conspicuous places, available for employees or applicants for employment, notices to be provided by the contracting officer setting

forth the provisions of the non-discrimination clause. The Contractor further agrees to insert the foregoing provisions in all contracts hereunder, including contracts or agreements with labor unions and/or workers' representatives, except subcontracts for standard commercial supplies or raw materials.

(7) Contractor must secure and maintain any and all permits and licenses required to complete the work under this Contract, unless the Contract Documents provide otherwise.

(8) Throughout the term of this Contract the Contractor must maintain insurance in at least the amounts and coverage required as shown in Exhibit C. The Contractor must provide a Certificate of Insurance to the City evidencing such coverage prior to issuance of the Notice to Proceed by the City.

(9) Contractor agrees to comply with Florida's public records law by keeping and maintaining public records that ordinarily and necessarily would be required by the public agency in order to perform the Engineering Services; upon the request of the City's Custodian of Public Records, by providing the City with copies of or access to public records on the same terms and conditions that City would provide the records and at a cost that does not exceed the cost provided by Florida law; by ensuring that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed excepts as authorized by law for the duration of the term of the Contract and following completion of the Contract if the Contractor does not transfer the records to the City; and upon completion of the Contract by transferring, at no cost, to City all public records in possession of Contractor or by keeping and maintaining all public records required by the City to perform the Engineering Services. If the Contractor transfers all public records to the City upon completion of the Contract, the Contractor shall destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. If the Contractor keeps and maintains public records upon completion of the Contract, the Contractor shall meet all applicable requirements for retaining public records. All records stored electronically must be provided to the City, upon request from the City's custodian of public records, in a format that is compatible with the information technology systems of the City.

**IF THE CONTRACTOR HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO THE CONTRACTOR'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS CONTRACT, CONTACT THE CITY'S CUSTODIAN OF PUBLIC RECORDS LORI STELZER, MMC, CITY CLERK, AT 401 W. VENICE AVENUE, VENICE, FLORIDA 34285, (941) 882-7390, LSTELZER@VENICEGOV.COM.**

(10) Contractor shall indemnify, pay the cost of defense, including attorneys' fees, and hold harmless the City from all suits, actions, or claims of any kind brought on account of any injuries or damages received or sustained b any person or property by or from the Contractor or in consequence of any neglect in safeguarding the work; or by the use of any unacceptable materials related to the work; or on account of any act or omission, neglect or misconduct of the Contractor; or on account of any claim or amounts received under the "Workers' Compensation Law" or any other laws or ordinances, except only such injury or damage as shall have been caused by the negligence of the City. The first ten dollars (\$10.00) of compensation received by the Contractor

represents specific consideration for this indemnification obligation.

(11) Contractor shall be responsible for compliance with the requirements under Chapter 556, Florida Statutes, the "Underground Facility Damage Prevention and Safety Act." Contractor's obligations to defend, indemnify, and hold harmless the City, as provided for under Section 10 of this Contract, shall specifically apply to any violations alleged against the City under the Underground Facility Damage Prevention and Safety Act related to the performance of the work under this Contract. Contractor acknowledges that included in the various items of the proposal and in the total bid price, are costs for complying with the Florida Trench Safety Act (90-96 Laws of Florida) effective October 1, 1990.

(12) Termination. This Contract may be terminated by the City without cause, by giving thirty (30) days prior written notice to contractor of the intention to cancel. or with cause at any time contractor fails to fulfill or abide by any of the terms or conditions specified. Failure of contractor to comply with any of the provisions of this agreement shall be considered a material breach of contract and shall be cause for immediate termination of the agreement at the discretion of the city. This Contract may be terminated by the Contractor only by mutual consent of both parties. If this Contract is terminated before performance is completed, the Contractor shall be paid only for that work satisfactorily performed for which costs can be substantiated.

(13) The laws of the State of Florida shall govern all provisions of this Contract. Venue for any dispute shall be Sarasota County, Florida. If any court proceeding or other action occurs between the parties as a result of this Contract or any other document or act required by this Contract, the prevailing party shall be entitled to recover attorney's fees and all court costs, including attorney's fees and court costs incurred in any pre-trial, trial, appellate, and/or bankruptcy proceedings, as well as, attorney's fees and costs incurred in determining entitlement to and reasonableness of fees and costs.

(14) This Contract and the Contract Documents constitute the entire agreement of the parties and may not be changed or modified, except by a written document signed by both parties hereto. This Contract shall be binding upon the successors and assigns of the parties.

IN WITNESS WHEREOF, the parties to the agreement have hereunto set their hands and seals and have executed this agreement, the day and year first above written.

(SEAL)

ATTEST:

CITY OF VENICE  
IN SARASOTA COUNTY, FLORIDA

\_\_\_\_\_  
CITY CLERK

BY: \_\_\_\_\_  
MAYOR JOHN HOLIC

ATTEST:

\_\_\_\_\_

\_\_\_\_\_

BY: \_\_\_\_\_

\_\_\_\_\_  
Signed by (typed or printed)

\_\_\_\_\_  
Signed by (typed or printed)

Approved as to Form and Correctness

\_\_\_\_\_  
David Persson, City Attorney

## EXHIBIT A

### SURETY BONDS

At the time of executing the Contract Documents, the successful proposer shall append to this sheet separate performance and payment bonds each equal to one-hundred percent (100%) of the contract amount. Said bonds become an integral part of these Contract Documents and shall meet the following requirements:

1. Surety bonds submitted shall be written by a surety company that is approved by the City Finance Director and authorized to do business in the State of Florida, shall be accompanied by evidence of the authority of the issuing agent, and shall be on a form to be approved by the City Attorney. No bond in an amount greater than \$5,000 required by the City Charter, the Ordinances of The City of Venice, or the laws of the State of Florida shall be approved by the City Finance Director unless the surety company executing the bond is listed by the United States Treasury Department as being approved for writing bonds for Federal projects and its current list in an amount not less than the amount of the bond tendered to The City of Venice.

2. Both the separate payment and performance bonds shall be in the general form of AIA documents A311. Additionally, the payment bond shall state as follows:

“This bond is issued in compliance with Section 255.05, Florida Statutes (1994 Supp.), as may be amended. A claimant, except a laborer, who is not in privity with the contractor and who has not received payment for his labor, materials, or supplies shall, within 45 days after beginning to furnish labor, materials, or supplies for the prosecution of the work, furnish the contractor with a notice, that he intends to look to the bond for protection. A claimant who is not in privity with the contractor and who has not received payment for his labor, materials, or supplies shall, within 90 days after performance of the labor or after complete delivery of the materials or supplies, or with respect to rental equipment, within 90 days after the date that the rental equipment was last on the job site available for use, deliver to the contractor and to the surety written notice of the performance of the labor or delivery of the materials or supplies and of the nonpayment. No action for the labor, materials, or supplies may be instituted against the contractor or the surety unless both notices have been given. No action shall be instituted against the contractor or the surety on the payment bond or the payment provisions of a combined payment and performance bond after 1 year from the performance of the labor or completion of delivery of the materials or supplies. A claimant may not waive in advance his right to bring an action under the bond against the surety. In any action brought to enforce a claim against a payment bond under this section, the prevailing party is entitled to recover a reasonable fee for the services of his attorney for trial and appeal or for arbitration, in an amount to be determined by the court, which fee must be taxed as part of his costs, as allowed in equitable actions.”

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**PUBLIC WORKS PAYMENT BOND**

KNOW ALL MEN BY THESE PRESENTS:

THAT \_\_\_\_\_, as Principal, hereinafter called Contractor; and \_\_\_\_\_, a corporation of the State of Florida, as surety, hereinafter called Surety, are held and firmly bound unto the City of Venice as Obligee, hereinafter called the City, in the amount of (\$\_\_\_\_\_) \_\_\_\_\_/100's, for the payment whereof Contractor and Surety bind themselves, their heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

WHEREAS, Contractor has by written agreement dated the \_\_\_\_\_day of \_\_\_\_\_, 20\_\_, entered into a Contract with the City for the following described project: **ITB# 3044-16 Water Main Replacement Program – Phase 4 Re-Bid** which contract is by reference incorporated herein and made a part hereof, and is hereinafter referred to as the Contract.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that if Contractor shall promptly make payments to all persons supplying Contractor labor, materials and supplies, used directly or indirectly by the said Contractor or Subcontractors in the prosecution of the work provided for in said Contract, then this obligation shall be null and void; otherwise it shall remain in full force and effect.

PROVIDED FURTHER, that the said Surety for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract or to the work to be performed thereunder or the Specifications accompanying the same shall in anywise affect its obligation on this Bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the Contract or to the work or to the Specifications.

PROVIDED FURTHER, that this Bond is issued pursuant to Section 255.05, Florida Statutes, and reference is hereby made to the notice and time limitations in said statute for making claims against this Bond.

PROVIDED FURTHER, that any suit under this Bond must be instituted before the expiration of one (1) year from the performance of the labor or completion of delivery of the materials or supplies.

PROVIDED FURTHER, no right of action shall accrue on this Bond to or for the use of any person or corporation other than the City named herein and those persons or corporations provided for by Section 255.05, Florida Statutes, their heirs, executors, administrators, successors or assigns.

SIGNED AND SEALED this \_\_\_\_\_ day of \_\_\_\_\_, A.D., 20\_\_.

IN THE PRESENCE OF:

CONTRACTOR

\_\_\_\_\_

BY: \_\_\_\_\_

INSURANCE COMPANY

BY: \_\_\_\_\_  
Agent and Attorney-in-Fact

**PUBLIC WORKS PERFORMANCE BOND**

KNOW ALL MEN BY THESE PRESENTS:

THAT \_\_\_\_\_, as Principal, hereinafter called Contractor; and \_\_\_\_\_, a corporation of the State of Florida, as surety, hereinafter called Surety, are held and firmly bound unto the City of Venice as Obligee, hereinafter called the City, in the amount of (\$ \_\_\_\_\_) & \_\_\_\_\_/100's, for the payment whereof Contractor and Surety bind themselves, their heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

WHEREAS, Contractor has by written agreement dated the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_, entered into a contract with the City of Venice for the following described project: **ITB# 3044-16 Water Main Replacement Program – Phase 4 Re-Bid** which contract is by reference incorporated herein and made a part hereof, and is hereinafter referred to as the contract.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that if the Contractor shall promptly and faithfully perform the Contract during the original term thereof and any extensions thereof which may be granted by the City with or without notice to the Surety and during any guarantee or warranty period, including the obligation to correct any latent defects not discovered until after acceptance of the project by the City, and if he shall satisfy all claims and demands incurred under said Contract and shall fully indemnify and save harmless the City, its agents, Engineer and employees from all losses, damages, expenses, costs and Attorney's Fees, including appellate proceedings which it may suffer by reason of failure to do so, and shall reimburse and repay the City all outlay and expense which the City may incur in making good any default, then this obligation shall be null and void; otherwise it shall remain in full force and effect.

PROVIDED FURTHER, whenever Contractor shall be, and declared by the City to be in default under the Contract, the City having performed its obligations thereunder, the Surety may promptly remedy the default or shall promptly:

- (1) Complete the Contract in accordance with its terms and conditions; or
- (2) Obtain a bid or bids for submission to the City for completing the Contract in accordance with its terms and conditions and upon determination by the City and Surety of the lowest responsible bidder, arrange for a contract between such bidder and City and make available as work progresses (even though there should be a default or a succession of defaults under the Contract or Contracts of completion arranged under this paragraph) sufficient funds to pay the cost of completion, less the balance of the contract price; but not exceeding, including other costs and damages for which the Surety may be liable hereunder, the amount set forth in the first paragraph hereof. The term "balance of the contract price" as used in this paragraph, shall mean the total

amount payable by the City to Contractor under the Contract and any amendments thereto, less the amount properly paid by the City to the Contractor.

PROVIDED FURTHER, the Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract or to the work to be performed thereunder or the Contract Documents accompanying the same shall in any waive notice of any such change, extension of time, alteration or addition to the terms of the Contract or to the work or to the Contract Documents.

PROVIDED FURTHER, any suit under this bond must be instituted before the expiration of two (2) years from the date on which final payment under the Contract falls due; except that, when the action involves a latent defect, suit must be instituted within four (4) years from the time the defect is discovered or should have been discovered with the exercise of due diligence.

PROVIDED FURTHER, no right of action shall accrue on this bond to or for the use of any person or corporation other than the City, its successors or assigns.

SIGNED AND SEALED this \_\_\_\_\_ day of \_\_\_\_\_, AD., 20\_\_.

IN THE PRESENCE OF:

CONTRACTOR

\_\_\_\_\_

BY: \_\_\_\_\_

INSURANCE COMPANY

BY: \_\_\_\_\_  
Agent and Attorney-in-Fact

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**EXHIBIT B**

(Bid Form to be Supplied)



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## EXHIBIT C

Before performing any work, the Contractor shall procure and maintain, during the life of the Contract, insurance listed below. The policies of insurance shall be primary and written on forms acceptable to the City and placed with insurance carriers approved and licensed by the Insurance Department in the State of Florida and meet a minimum financial AM Best and Company rating of no less than A:VII. No changes are to be made to these specifications without prior written specific approval by the City.

1. The City of Venice is to be specifically included as an **ADDITIONAL INSURED**.
2. The City of Venice shall be named as Certificate Holder. *Please Note that the Certificate Holder should read as follows:*

*The City of Venice  
401 W. Venice Avenue  
Venice, FL 34285*

No City Division, Department, or individual name should appear on the certificate. **NO OTHER FORMAT WILL BE ACCEPTABLE.**

3. The “Acord” certification of insurance form shall be used.
  4. Required Coverage
    - a) **Commercial General Liability:** including but not limited to bodily injury, property damage, contractual liability, products and completed operations, and personal injury with limits of not less than \$ \$1,000,000 per occurrence, \$1,000,000 aggregate covering all work performed under this Contract. Include broad form property damage (provide insurance for damage to property under the care custody and control of the contractor)
    - b) **Business Auto Policy:** including bodily injury and property damage for all vehicles owned, leased, hired and non-owned vehicles with limits of not less than \$1,000,000 combined single limit covering all work performed under this Contract.
    - c) **Workers Compensation:** Contractor will provide Workers Compensation Insurance on behalf of all employees, including sub-contractors, who are to provide a service under this Contract, as required under Florida Law, Chapter 440, and Employers Liability with limits of not less than \$100,000 per employee per accident; \$500,000 disease aggregate; and \$100,000 per employee per disease.
    - d) **Installation Floater/Installation Builders’ Risk–Property Coverage:** Policy to cover direct physical loss or damage to materials, supplies, machinery, and equipment being installed, constructed or rigged by the contractor in conjunction with its installation or construction. All items involved in the project including drainage/water sewer pipes, etc. (as included in description of project) need to be insured for the total completed replacement value. Coverage should include perils of fire, theft, vandalism, windstorm/hail, collapse and transit, sewer backup, testing, equipment breakdown, waterborne property. Coverage shall start when the items to be installed are transported
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to City premises and remain in place until the interest of the contractors ceases or the City accepts possession whichever comes first. Coverage should apply to owned property and non-owned property in the contractor's care, custody and control. The installation coverage forms shall provide coverage for building materials and supplies at the construction site, in transit to the site and similar property intended for the construction project at other locations as necessary or because of lack of storage space at the construction site. Coverage should apply on a Primary basis and should include a Waiver of Subrogation. Contractor should be responsible for any deductibles.

#### 5. Policy Form:

- a) All policies required by this Contract, with the exception of Workers Compensation, or unless specific approval is given by the City, are to be written on an occurrence basis, shall name the City of Venice, its Elected Officials, Officers, Agents, Employees as additional insured as their interest may appear under this Contract. Insurer(s), with the exception of Workers Compensation, shall agree to waive all rights of subrogation against the City of Venice, its Elected Officials, Officers, Agents, and Employees.
  - b) Insurance requirements itemized in this Contract, and required of the Contractor, shall be provided on behalf of all subcontractors to cover their operations performed under this Contract. The Contractor shall be held responsible for any modifications, deviations, or omissions in these insurance requirements as they apply to subcontractors.
  - c) Each insurance policy required by this Contract shall:
    - (1) apply separately to each insured against whom claim is made and suit is brought, except with respect to limits of the insurer's liability;
    - (2) be endorsed to state that coverage shall not be suspended, voided or canceled by either party except after thirty (30) calendar days prior written notice by certified mail, return receipt requested, has been given to the City of Venice's Director of Administrative Services.
  - d) The City shall retain the right to review, at any time, coverage form, and amount of insurance.
  - e) The procuring of required policies of insurance shall not be construed to limit Contractor's liability nor to fulfill the indemnification provisions and requirements of this Contract.
  - f) The Contractor shall be solely responsible for payment of all premiums for insurance contributing to the satisfaction of this Contract and shall be solely responsible for the payment of any deductible and/or retention to which such policies are subject, whether or not the City is an insured under the policy. In the event that claims in excess of the insured amounts provided herein are filed by reason of operations under the contract, the amount excess of such claims, or any portion thereof, may be withheld from any payment due or to become due to the contractor until such time the contractor shall furnish additional security covering such claims as may be determined by the City.
  - g) Claims Made Policies will be accepted for professional and hazardous materials and such other risks as are authorized by the City. All Claims Made Policies contributing
-

to the satisfaction of the insurance requirements herein shall have an extended reporting period option or automatic coverage of not less than two years. If provided as an option, the Contractor agrees to purchase the extended reporting period on cancellation or termination unless a new policy is affected with a retroactive date, including at least the last policy year.

- h) Certificates of Insurance evidencing Claims Made or Occurrence form coverage and conditions to this Contract, as well as the City's Bid Number and description of work, are to be furnished to the City's Director of Administrative Services, 401 West Venice Avenue, Venice, FL 34285, ten (10) business days prior to commencement of work and a minimum of thirty (30) calendar days prior to expiration of the insurance policy.
  - i) Notices of Accidents and Notices of Claims associated with work being performed under this Contract, shall be provided to the Contractor's insurance company and the City's Director of Administrative Services, as soon as practicable after notice to the insured.
  - j) All property losses shall be payable to, and adjusted with, the City.
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**CONTRACTOR'S RELEASE OF LIEN**

BEFORE ME, the undersigned authority in said County and State, appeared \_\_\_\_\_, who being first duly sworn, deposes and says that he is \_\_\_\_\_ of \_\_\_\_\_ a company and/or corporation authorized to do business under the laws of Florida, which is the contractor on Project known as City of Venice Bid # 3044-16, located in the City of Venice, County of Sarasota, Florida, under contract with the City of Venice, dated the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, that the said deponent is duly authorized to make this affidavit by resolution of the Board of Directors of said company and/or corporation; that deponent knows of his own knowledge that said contract has been complied with in every particular by said contractor and that all parts of the work have been approved by the City Engineer; that there are no bills remaining unpaid for labor, material or otherwise, in connection with said contract and work, and that there are no suits pending against the undersigned as contractor or anyone in connection with the work done and materials furnished or otherwise, under said contract.

DEPONENT further says that the final estimate which has been submitted to the City simultaneously with the making of this affidavit, constitutes all claims and demands against the City on account of said contract or otherwise, and that acceptance of the sum specified in said final estimate will operate as a full and final release and discharge of the City from any further claims, demands or compensation by contractor under the above contract.

DEPONENT further agrees that all guarantees under this contract shall start and be in full force from the date of this release as spelled out in the contract documents.

Signature: \_\_\_\_\_

Printed Name:

STATE OF FLORIDA )  
COUNTY OF )

Signed before me this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_,  
by \_\_\_\_\_ who is personally known to me or has produced  
\_\_\_\_\_ as identification.  
\_\_\_\_\_

Notary Public  
My Commission Expires:  
Commission Number:

WE, the \_\_\_\_\_, having heretofore executed a performance bond and a payment bond for the above named contractor covering project and section as described above in the sum of (\$ \_\_\_\_\_) \_\_\_\_\_ Dollars, hereby agree that the Owner may make full payment of the final estimate, including the retained percentage, to said contractor.

IT IS fully understood that the granting of the right to make the payment of the final estimate to said contractor and/or his assigns, shall in no way relieve this surety company of its

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obligations under its bonds, as set forth in the specifications, contract, and bonds pertaining to the above project.

IN WITNESS WHEREOF, the \_\_\_\_\_ has caused this instrument to be executed on its behalf by its \_\_\_\_\_, and/or its duly authorized attorney in fact, and its corporate seal to be hereunto affixed, all on this \_\_\_\_\_ day of \_\_\_\_\_, A.D., 20\_\_.

\_\_\_\_\_  
Surety Company

\_\_\_\_\_  
Attorney in Fact

Power of Attorney must be attached if executed by Attorney in Fact.

STATE OF )

COUNTY OF )

BEFORE ME, the undersigned authority, appeared \_\_\_\_\_, who is personally known to me or has produced \_\_\_\_\_ as identification, and who executed the foregoing instrument in the name of \_\_\_\_\_ as its \_\_\_\_\_ and the said \_\_\_\_\_ acknowledged that he executed said instrument in the name of \_\_\_\_\_ as its \_\_\_\_\_ and/or \_\_\_\_\_, for the purpose therein expressed and that he had due and legal authority to execute the same on behalf of said \_\_\_\_\_, a corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and official seal at \_\_\_\_\_ this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_.

\_\_\_\_\_  
Notary Public

My Commission Expires:

**CERTIFICATE OF SUBSTANTIAL COMPLETION**

PROJECT NO.

PROJECT:

CONTRACTOR CONTRACT DATE

CONTRACT FOR

Project or Specified Part Shall Include:

**DEFINITION OF SUBSTANTIAL COMPLETION**

The date of substantial completion of a project or specified part of a project is the date when the work is sufficiently completed, in accordance with the Contract Documents, so that the project or specified part of the project can be utilized for the purpose for which it was intended.

TO: (Contractor)

DATE OF SUBSTANTIAL COMPLETION: \_\_\_\_\_

The work performed under this contract has been inspected by authorized representatives of the City of Venice and the contractor, and the project or specified part of the project, is hereby declared to be substantially completed on the above date.

A tentative list of items to be completed or corrected is appended hereto. This list may not be exhaustive, and the failure to include an item on it does not alter the responsibility of the contractor to complete all the work in accordance with the contract documents. These items shall be completed by the contractor within \_\_\_\_\_ days of Substantial Completion.

The date of Substantial Completion is the date upon which all guarantees and warranties begin, except as noted below. The responsibilities between the Owner and the Contractor for maintenance shall be as set forth below.

CITY OF VENICE

\_\_\_\_\_  
By:

Date: \_\_\_\_\_

The contractor accepts the foregoing Certification of Substantial Completion and agrees to complete and correct the items on the tentative list within the time indicated.

\_\_\_\_\_  
Contractor Authorized Representative

Date: \_\_\_\_\_

RESPONSIBILITIES:

OWNER:

CONTRACTOR:

EXCEPTIONS AS TO GUARANTEES AND WARRANTIES:

ATTACHMENTS (Identify)



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BIDDER QUALIFICATION STATEMENT

(Completion of this statement is required in advance of  
consideration for award of Contract.)

SUBMITTED TO:

City of Venice  
401 West Venice Avenue  
Venice, FL 34285

SUBMITTED FOR:

Water Main Replacement Program – Phase 4 Re-bid

SUBMITTED BY:

Name of Organization: \_\_\_\_\_  
(Print or Type Name of Bidder)

Name of Individual: \_\_\_\_\_

Title: \_\_\_\_\_

Business Address: \_\_\_\_\_

\_\_\_\_\_

Telephone No.: \_\_\_\_\_

Fax No.: \_\_\_\_\_

E-mail Address: \_\_\_\_\_

Bidder's Website: \_\_\_\_\_

If address and phone number given above is for a branch office, provide address and phone number of principal home office:

Principal Home Office Address: \_\_\_\_\_

\_\_\_\_\_

Principal Home Office Telephone No.: \_\_\_\_\_

Gentlemen:

The undersigned certifies under oath the truth and correctness of all statements and of all answers to questions made hereinafter.

(Note: Attach additional sheets as required.)

1.0 Bidder's General Business Information

1.1 Check if:

- Corporation       Partnership       Joint Venture       Other  
 Limited Liability Company       Sole Proprietorship

If Corporation:

A. Date and State of Incorporation:

\_\_\_\_\_  
\_\_\_\_\_

B. List of Executive Officers:

Name	Title	Address
_____	_____	_____
_____	_____	_____
_____	_____	_____

If Partnership:

A. Date and State of Organization:

\_\_\_\_\_  
\_\_\_\_\_

B. Current General Partners (name and address for each):

\_\_\_\_\_  
\_\_\_\_\_

C. Type of Partnership

- General       Publicly Traded       Limited  
 Limited Liability       Other (describe): \_\_\_\_\_

If Joint Venture:

A. Date and State of Organization:

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B. Name, Address, Form of Organization, and State of Organization of Each Joint Venture Partner: (Indicate with an asterisk (\*) the managing or controlling Joint Venturer if applicable):

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If Limited Liability Company:

A. Date and State of Organization:

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B. Members:

Name	Address
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If Sole Proprietorship:

A. Date and State of Organization:

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B. Name and Address of Owner or Owners:

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If Other Type of Organization:

A. Type of Organization: \_\_\_\_\_

B. Date and State of Organization:

\_\_\_\_\_  
\_\_\_\_\_

C. Name and Address of Each Owner or Principal:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

1.2 Certifications: In addition to the above categories of business entities, indicate whether Bidder's organization is a:

- Disadvantaged Business Enterprise, certified by \_\_\_\_\_
- Minority Business Enterprise, certified by \_\_\_\_\_
- Women's Business Enterprise, certified by \_\_\_\_\_
- Historically Underutilized Business Zone Small Business Concern, certified by \_\_\_\_\_

2.0 How many years has your organization been in business as a general contractor?  
\_\_\_\_\_

3.0 If your organizational structure has changed within the past five years, provide data as listed above in Item 1.0 for your previous organization.

4.0 Do you plan to subcontract any part of this project? \_\_\_\_\_ If so, give details.

- 5.0 Has any construction contract to which you have been a party been terminated by the owner; have you ever terminated work on a project prior to its completion for any reason; has any surety which issued a performance bond on your behalf ever completed the work in its own name or financed such completion on your behalf; has any surety expended any monies in connection with a contract for which they furnished a bond on your behalf? If the answer to any portion of this question is "yes", furnish details of all such occurrences including name of owner, architect or engineer, and surety, and name and date of project.
- 6.0 Has any officer or partner of your organization ever been an officer or partner of another organization that had any construction contract terminated by the owner; terminated work on a project prior to its completion for any reason; had any surety which issued a performance bond complete the work in its own name or financed such completion; or had any surety expend any monies in connection with a contract for which they furnished a bond? If the answer to any portion of this question is "yes", furnish details of all such occurrences including name of owner, architect or engineer, and surety, and name and date of project.
- 7.0 In the last five years, has your organization, or any predecessor organization, failed to substantially complete a project in a timely manner? If the answer to this question is "yes", furnish details of all such occurrences including name of owner, architect or engineer, and surety, and name and date of project.
- 8.0 On Schedule A, attached, list name, location and description of project, owner, architect or engineer, contract price, percent complete and scheduled completion of the major construction projects your organization has in progress on this date. Provide name, address and telephone number of a reference for each project listed.
- 9.0 On Schedule B, attached, list name, location and description of project, owner, architect or engineer, contract price, date of completion and percent of work with your own forces of major projects of the same general nature as this project which your organization has completed in the past five years. Provide name, address and telephone number of a reference for each project listed.

10.0 On Schedule C, attached, list name and construction experience of the principal individuals of your organization directly involved in construction operations.

11.0 Licenses and Registrations:

11.1 Indicate the jurisdictions in which your firm is legally qualified to practice. Indicate license or registration number for each jurisdiction, if applicable, and type of license or registration. Attach separate sheet as required.

Jurisdiction	License/Registration No.	Type
_____	_____	_____
_____	_____	_____
_____	_____	_____

11.2 In the past five years, has Bidder had any business or professional license suspended or revoked?

No       Yes

If yes, describe on a separate attachment the circumstances, including the jurisdiction and bases for suspension or revocation.

12.0 Provide the following information for your surety:

12.1 Surety Company: \_\_\_\_\_

12.2 Agent: \_\_\_\_\_

A. Address: \_\_\_\_\_

B. Telephone No.: \_\_\_\_\_

13.0 Provide the following with respect to an accredited banking institution familiar with your organization.

13.1 Name of Bank: \_\_\_\_\_

13.2 Address: \_\_\_\_\_

13.3 Account Manager: \_\_\_\_\_

13.4 Telephone No.: \_\_\_\_\_

14.0 Provide the name, address and telephone number of an individual who represents a major equipment/material supplier whom the Owner may contact for a financial reference:

15.0 Industry Affiliations, Memberships, Awards, and Honors

15.1 List below the industry organizations with which your organization is affiliated or which your organization is a member:

15.2 List below the industry awards or honors received by your organization and the date for each. Attach supporting documentation as necessary.

16.0 Statement of Potential Conflicts of Interest: List below business associations, financial interests, or other circumstances that may create a conflict of interest with the Owner or other entity involved in the Project. Attach additional documentation as required.

17.0 Dated at \_\_\_\_\_, this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_.

Bidder: \_\_\_\_\_  
(Print or Type Name of Bidder)

By: \_\_\_\_\_

\_\_\_\_\_

Title: \_\_\_\_\_

Attachments A, B and C

(Seal, if corporation)

00451-9

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***THIS PAGE MUST BE COMPLETED & SUBMITTED WITH OFFER***

------(Affidavit for Individual)-----

\_\_\_\_\_ being duly sworn, deposes and says that:

a) the financial statement, taken from his/her books, is a true and accurate statement of his/her financial condition as of the date thereof; and b) all of the foregoing qualification information is true, complete, and accurate.

------(Affidavit for Partnership)-----

\_\_\_\_\_ being duly sworn, deposes and says that:

a) he/she is a member of the partnership of \_\_\_\_\_;  
b) he/she is familiar with the books of said partnership showing its financial condition;  
c) the financial statement, taken from the books of said partnership, is a true and accurate statement of the financial condition of the partnership as of the date thereof; and d) all of the foregoing qualification information is true, complete, and accurate.

------(Affidavit for Corporation)-----

\_\_\_\_\_ being duly sworn, deposes and says that: a) he/she is  
\_\_\_\_\_ of \_\_\_\_\_;  
(Full name of Corporation)

b) he/she is familiar with the books of said corporation showing its financial condition;  
c) the financial statement, taken from the books of said corporation, is a true and accurate statement of the financial condition of said corporation as of the date thereof; and d) that all of the foregoing qualification information is true, complete, and accurate.

------(Affidavit for Limited Liability Company (LLC))-----

\_\_\_\_\_ being duly sworn, deposes and says that: a) he/she is  
\_\_\_\_\_ of \_\_\_\_\_;  
(Full name of LLC)

b) he/she is familiar with the books of said company showing its financial condition; c) the financial statement, taken from the books of said company, is a true and accurate statement of the financial condition of said company as of the date thereof; and d) that all of the foregoing qualification information is true, complete, and accurate.

------(Affidavit for Joint Venture)-----

Each joint venturer shall complete the affidavit appropriate for the joint venturer's type of organization and attach said affidavit to the Bidder Qualifications Statement. Submit separate acknowledgement for each joint venturer's affidavit.

----- (Acknowledgment) -----

\_\_\_\_\_ being duly sworn, deposes and says  
that he/she is \_\_\_\_\_ of \_\_\_\_\_;  
(Name of Bidder)

that he/she is duly authorized to make the foregoing affidavit and that he/she makes it on behalf of

( ) himself/herself; ( ) said partnership; ( ) said corporation;

( ) said joint venture; ( ) said limited liability company

Sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, in the County of \_\_\_\_\_, State of \_\_\_\_\_.

—

\_\_\_\_\_  
(Notary Public)

My commission expires \_\_\_\_\_

(Seal)

++ END OF BIDDER QUALIFICATIONS STATEMENT ++







GENERAL CONDITIONS  
OF THE CONSTRUCTION CONTRACT

Adapted from EJCDC C-700, Standard General Conditions  
of the Construction Contract (2007 Edition)

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## GENERAL CONDITIONS

### ARTICLE 1 – DEFINITIONS AND TERMINOLOGY

#### 1.01 *Defined Terms*

- A. Wherever used in the Bidding Requirements or Contract Documents and printed with initial capital letters, the terms listed below will have the meanings indicated which are applicable to both the singular and plural thereof. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.
1. *Addenda* – Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.
  2. *Agreement* – The written instrument which is evidence of the agreement between Owner and Contractor covering the Work.
  3. *Application for Payment* – The form acceptable to Engineer which is to be used by Contractor during the course of the Work in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Contract Documents.
  4. *Asbestos* – Any material that contains more than one percent asbestos and is friable or is releasing asbestos fibers into the air above current action levels established by the United States Occupational Safety and Health Administration.
  5. *Bid* – The offer or proposal of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.
  6. *Bidder* – The individual or entity who submits a Bid directly to Owner.
  7. *Bidding Documents* – The Bidding Requirements and the proposed Contract Documents (including all Addenda).
  8. *Bidding Requirements* – The Advertisement or Invitation to Bid, Instructions to Bidders, bid security of acceptable form, if any, and the Bid Form with any supplements.
  9. *Change Order* – A document recommended by Engineer which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, issued on or after the Effective Date of the Agreement.

10. *Claim* – A demand or assertion by Owner or Contractor seeking an adjustment of Contract Price or Contract Times, or both, or other relief with respect to the terms of the Contract. A demand for money or services by a third party is not a Claim.
11. *Contract* – The entire and integrated written agreement between the Owner and Contractor concerning the Work. The Contract supersedes prior negotiations, representations, or agreements, whether written or oral.
12. *Contract Documents* – Those items so designated in the Agreement. Only printed or hard copies of the items listed in the Agreement are Contract Documents. Approved Shop Drawings, other Contractor’s submittals, and the reports and drawings of subsurface and physical conditions are not Contract Documents.
13. *Contract Price* – The moneys payable by Owner to Contractor for completion of the Work in accordance with the Contract Documents as stated in the Agreement (subject to the provisions of Paragraph 11.03 in the case of Unit Price Work).
14. *Contract Times* – The number of days or the dates stated in the Agreement to: (i) achieve Milestones, if any, (ii) achieve Substantial Completion; and (iii) complete the Work so that it is ready for final payment as evidenced by Engineer’s written recommendation of final payment.
15. *Contractor* or *CONTRACTOR* – The individual or entity with whom Owner has entered into the Agreement.
16. *Cost of the Work* – See Paragraph 11.01.A for definition.
17. *Drawings* – That part of the Contract Documents prepared or approved by Engineer which graphically shows the scope, extent, and character of the Work to be performed by Contractor. Shop Drawings and other Contractor submittals are not Drawings as so defined.
18. *Effective Date of the Agreement* – The date indicated in the Agreement on which it becomes effective, but if no such date is indicated, it means the date on which the Agreement is signed and delivered by the last of the two parties to sign and deliver.
19. *Engineer* or *ENGINEER* – The individual or entity named as such in the Agreement.
20. *Field Order* – A written order issued by Engineer which requires minor changes in the Work but which does not involve a change in the Contract Price or the Contract Times.
21. *General Requirements* – Sections of Division 01 of the Specifications.

22. *Hazardous Environmental Condition* – The presence at the Site of Asbestos, PCBs, Petroleum, Hazardous Waste, or Radioactive Material in such quantities or circumstances that may present a substantial danger to persons or property exposed thereto.
23. *Hazardous Waste* – The term Hazardous Waste shall have the meaning provided in Section 1004 of the Solid Waste Disposal Act (42 USC Section 6903) as amended from time to time.
24. *Laws and Regulations; Laws or Regulations* – Any and all applicable laws, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.
25. *Liens* – Charges, security interests, or encumbrances upon Project funds, real property, or personal property.
26. *Milestone* – A principal event specified in the Contract Documents relating to an intermediate completion date or time prior to Substantial Completion of all the Work.
27. *Notice of Award* – The written notice by Owner to the Successful Bidder stating that upon timely compliance by the Successful Bidder with the conditions precedent listed therein, Owner will sign and deliver the Agreement.
28. *Notice to Proceed* – A written notice given by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work under the Contract Documents.
29. *Owner or OWNER* – The individual or entity with whom Contractor has entered into the Agreement and for whom the Work is to be performed.
30. *PCBs* – Polychlorinated biphenyls.
31. *Petroleum* – Petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute), such as oil, petroleum, fuel oil, oil sludge, oil refuse, gasoline, kerosene, and oil mixed with other non-Hazardous Waste and crude oils.
32. *Progress Schedule* – A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising the Contractor's plan to accomplish the Work within the Contract Times.
33. *Project* – The total construction of which the Work to be performed under the Contract Documents may be the whole, or a part.

34. *Project Manual* – The bound documentary information prepared for bidding and constructing the Work. A listing of the contents of the Project Manual, which may be bound in one or more volumes, is contained in the table(s) of contents.
35. *Radioactive Material* – Source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954 (42 USC Section 2011 et seq.) as amended from time to time.
36. *Resident Project Representative* – The authorized representative of Engineer who may be assigned to the Site or any part thereof.
37. *Samples* – Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and which establish the standards by which such portion of the Work will be judged.
38. *Schedule of Submittals* – A schedule, prepared and maintained by Contractor, of required submittals and the time requirements to support scheduled performance of related construction activities.
39. *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.
40. *Shop Drawings* – All drawings, diagrams, illustrations, schedules, and other data or information which are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work.
41. *Site* – Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements for access thereto, and such other lands furnished by Owner which are designated for the use of Contractor.
42. *Specifications* – That part of the Contract Documents consisting of written requirements for materials, equipment, systems, standards and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable thereto.
43. *Subcontractor* – An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work at the Site.
44. *Substantial Completion* – The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms “substantially complete” and

“substantially completed” as applied to all or part of the Work refer to Substantial Completion thereof.

45. *Successful Bidder* – The Bidder submitting a responsive Bid to whom Owner makes an award.
46. *Supplementary Conditions* – That part of the Contract Documents which amends or supplements these General Conditions.
47. *Supplier* – A manufacturer, fabricator, supplier, distributor, materialman, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or Subcontractor.
48. *Underground Facilities* – All underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities, including those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.
49. *Unit Price Work* – Work to be paid for on the basis of unit prices.
50. *Work* – The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction, and furnishing, installing, and incorporating all materials and equipment into such construction, all as required by the Contract Documents.
51. *Work Change Directive* – A written statement to Contractor issued on or after the Effective Date of the Agreement and signed by Owner and recommended by Engineer ordering an addition, deletion, or revision in the Work, or responding to differing or unforeseen subsurface or physical conditions under which the Work is to be performed or to emergencies. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the change ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order following negotiations by the parties as to its effect, if any, on the Contract Price or Contract Times.

## 1.02 *Terminology*

- A. The words and terms referenced in this Paragraph 1.02 are not defined but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.
- B. *Intent of Certain Terms or Adjectives*

1. The Contract Documents include the terms “as allowed”, “as approved”, “as ordered”, “as directed” or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives “reasonable,” “suitable,” “acceptable,” “proper,” “satisfactory,” or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action or determination will be solely to evaluate, in general, the Work for compliance with information in the Contract Documents and with the design concept of the Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of Paragraph 9.09 or any other provision of the Contract Documents.

C. *Day*

1. The word “day” means a calendar day of 24 hours measured from midnight to the next midnight.

D. *Defective*

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

E. *Furnish, Install, Perform, Provide*

1. The word “furnish,” when used in connection with services, materials, or equipment, shall mean to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.
2. The word “install,” when used in connection with services, materials, or equipment, shall mean to put into use or place in final position said services, materials, or equipment complete and ready for intended use.

3. The words “perform” or “provide,” when used in connection with services, materials, or equipment, shall mean to furnish and install said services, materials, or equipment complete and ready for intended use.
  4. When “furnish,” “install,” “perform,” or “provide” is not used in connection with services, materials, or equipment in a context clearly requiring an obligation of Contractor, “provide” is implied.
- F. Unless stated otherwise in the Contract Documents, words or phrases that have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

## ARTICLE 2 – PRELIMINARY MATTERS

### 2.01 *Delivery of Bonds and Evidence of Insurance*

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

### 2.02 *Copies of Documents*

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

### 2.03 *Commencement of Contract Times; Notice to Proceed*

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

### 2.04 *Starting the Work*

- A. Contractor shall start to perform the Work on the date when the Contract Times

commence to run. No Work shall be done at the Site prior to the date on which the Contract Times commence to run.

#### 2.05 *Before Starting Construction*

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

#### 2.06 *Preconstruction Conference; Designation of Authorized Representative*

- 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 2.05.A, procedures for handling Shop Drawings and other submittals, processing Applications for Payment, and maintaining required records.
- B. At this conference Owner and Contractor each shall designate in writing, a specific individual to act as its authorized representative with respect to the services and responsibilities under the Contract. Such individuals shall have the authority to transmit instructions, receive information, render decisions relative to the Contract and otherwise act on behalf of each respective party.

#### 2.07 *Initial Acceptance of Schedules*

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

Contractor from Contractor's full responsibility therefor.

2. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.
3. Contractor's Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to component parts of the Work.

### ARTICLE 3 – CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE

#### *3.01 Intent*

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

#### *3.02 Reference Standards*

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

provisions of the Contract Documents.

### 3.03 *Reporting and Resolving Discrepancies*

#### A. Reporting Discrepancies

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

#### B. *Resolving Discrepancies*

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

Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

#### *3.04 Amending and Supplementing Contract Documents*

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

#### *3.05 Reuse of Documents*

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

#### *3.06 Electronic Data*

- A. Unless otherwise stated in the Supplementary Conditions, the data furnished by Owner or Engineer to Contractor or by Contractor to Owner or Engineer that may be relied upon are limited to the printed copies (also known as hard copies). Files in electronic media format of text, data, graphics, or other types are furnished only for the convenience of the receiving party. Any conclusion or information obtained or derived from such electronic files will be at the user's sole risk. If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.

- B. Because data stored in electronic media format can deteriorate or be modified inadvertently or otherwise without authorization of the data's creator, the party receiving electronic files agrees that it will perform acceptance tests or procedures within 60 days, after which the receiving party shall be deemed to have accepted the data thus transferred. Any errors detected within the 60-day acceptance period will be corrected by the transferring party.
- C. When transferring documents in electronic media format, the transferring party makes no representations as to long term compatibility, usability, or readability of documents resulting from the use of software application packages, operating systems, or computer hardware differing from those used by the data's creator.

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

*4.01 Availability of Lands*

- A. Owner shall furnish the Site. Owner shall notify Contractor of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work. Owner will obtain in a timely manner and pay for easements for permanent structures or permanent changes in existing facilities. If Contractor and Owner are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, as a result of any delay in Owner's furnishing the Site or a part thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.
- B. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

*4.02 Subsurface and Physical Conditions*

- A. *Reports and Drawings:* The Supplementary Conditions identify:
  - 1. those reports of explorations and tests of subsurface conditions at or contiguous to the Site; that Engineer has used in preparing the Contract Documents; and
  - 2. those drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) that Engineer has used in preparing the Contract Documents.
- B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely on the general accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical

data,” Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants or subcontractors with respect to:

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

#### 4.03 Differing Subsurface or Physical Conditions

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

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

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

B. *Engineer’s Review:* After receipt of written notice as required by Paragraph 4.03.A, Engineer will promptly review the pertinent condition, determine the necessity of Owner’s obtaining additional exploration or tests with respect thereto, and advise Owner in writing (with a copy to Contractor) of Engineer’s findings and conclusions.

C. *Possible Price and Times Adjustments*

1. The Contract Price or the Contract Times, or both, will be equitably adjusted to the

extent that the existence of such differing subsurface or physical condition causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

- a. such condition must meet any one or more of the categories described in Paragraph 4.03.A; and
  - b. with respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraphs 9.07 and 11.03.
2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times if:
- a. Contractor knew of the existence of such conditions at the time Contractor made a final commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract; or
  - b. the existence of such condition could reasonably have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such final commitment; or
  - c. Contractor failed to give the written notice as required by Paragraph 4.03.A.
3. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, a Claim may be made therefor as provided in Paragraph 10.05. However, neither Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants or subcontractors shall be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.

#### 4.04 *Underground Facilities*

- A. *Shown or Indicated:* The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the Site is based on information and data furnished to Owner or Engineer by the owners of such Underground Facilities, including Owner, or by others. Unless it is otherwise expressly provided in the Supplementary Conditions:
1. Owner and Engineer shall not be responsible for the accuracy or completeness of any such information or data provided by others; and

2. the cost of all of the following will be included in the Contract Price, and Contractor shall have full responsibility for:
  - a. reviewing and checking all such information and data,
  - b. locating all Underground Facilities shown or indicated in the Contract Documents,
  - c. coordination of the Work with the owners of such Underground Facilities, including Owner, during construction, and
  - d. the safety and protection of all such Underground Facilities and repairing any damage thereto resulting from the Work.

**B. *Not Shown or Indicated***

1. If an Underground Facility is uncovered or revealed at or contiguous to the Site which was not shown or indicated, or not shown or indicated with reasonable accuracy in the Contract Documents, Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 6.16.A), identify the owner of such Underground Facility and give written notice to that owner and to Owner and Engineer. Engineer will promptly review the Underground Facility and determine the extent, if any, to which a change is required in the Contract Documents to reflect and document the consequences of the existence or location of the Underground Facility. During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.
2. If Engineer concludes that a change in the Contract Documents is required, a Work Change Directive or a Change Order will be issued to reflect and document such consequences. An equitable adjustment shall be made in the Contract Price or Contract Times, or both, to the extent that they are attributable to the existence or location of any Underground Facility that was not shown or indicated or not shown or indicated with reasonable accuracy in the Contract Documents and that Contractor did not know of and could not reasonably have been expected to be aware of or to have anticipated. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment in Contract Price or Contract Times, Owner or Contractor may make a Claim therefor as provided in Paragraph 10.05.

**4.05 *Reference Points***

- A. Owner shall provide engineering surveys to establish reference points for construction which in Engineer's judgment are necessary to enable Contractor to proceed with the

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

#### 4.06 *Hazardous Environmental Condition at Site*

- A. *Reports and Drawings:* The Supplementary Conditions identify those reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at the Site.,
- B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the “technical data” contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such “technical data” is identified in the Supplementary Conditions. Except for such reliance on such “technical data,” Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants or subcontractors with respect to:
  - 1. the completeness of such reports and drawings for Contractor’s purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by Contractor and safety precautions and programs incident thereto; or
  - 2. other data, interpretations, opinions and information contained in such reports or shown or indicated in such drawings; or
  - 3. any Contractor interpretation of or conclusion drawn from any “technical data” or any such other data, interpretations, opinions or information.
- C. Contractor shall not be responsible for any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work. Contractor shall be responsible for a Hazardous Environmental Condition created with any materials brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible.
- D. If Contractor encounters a Hazardous Environmental Condition or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, Contractor shall immediately: (i) secure or otherwise isolate such condition; (ii) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 6.16.A); and (iii) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall

- promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any. Promptly after consulting with Engineer, Owner shall take such actions as are necessary to permit Owner to timely obtain required permits and provide Contractor the written notice required by Paragraph 4.06.E.
- E. Contractor shall not be required to resume Work in connection with such condition or in any affected area until after Owner has obtained any required permits related thereto and delivered to Contractor written notice:: (i) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work; or (ii) specifying any special conditions under which such Work may be resumed safely. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, or both, as a result of such Work stoppage or such special conditions under which Work is agreed to be resumed by Contractor, either party may make a Claim therefor as provided in Paragraph 10.05.
  - F. If after receipt of such written notice Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of an adjustment in Contract Price or Contract Times as a result of deleting such portion of the Work, then either party may make a Claim therefor as provided in Paragraph 10.05. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 7.
  - G. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06.G shall obligate Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's sole negligence.
  - H. The provisions of Paragraphs 4.02, 4.03, and 4.04 do not apply to a Hazardous Environmental Condition uncovered or revealed at the Site.

## ARTICLE 5 – BONDS AND INSURANCE

### *5.01 Performance, Payment, and Other Bonds*

- A. Contractor shall furnish performance and payment bonds, each in an amount at least equal to the Contract Price as security for the faithful performance and payment of all

of Contractor's obligations under the Contract Documents. These bonds shall remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 13.07, whichever is later, except as provided otherwise by Laws or Regulations or by the Contract Documents. Contractor shall also furnish such other bonds as are required by the Contract Documents.

- B. All bonds shall be in the form prescribed by the Contract Documents except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in the list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. All bonds signed by an agent or attorney-in-fact must be accompanied by a certified copy of that individual's authority to bind the surety. The evidence of authority shall show that it is effective on the date the agent or attorney-in-fact signed each bond.
- C. If the surety on any bond furnished by Contractor is declared bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the Project is located or it ceases to meet the requirements of Paragraph 5.01.B, Contractor shall promptly notify Owner and Engineer and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which shall comply with the requirements of Paragraphs 5.01.B and 5.02.

#### *5.02 Licensed Sureties and Insurers*

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

#### *5.03 Certificates of Insurance*

- A. Contractor shall deliver to Owner, with copies to each additional insured and loss payee identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Owner or any other additional insured) which Contractor is required to purchase and maintain.
- B. Owner shall deliver to Contractor, with copies to each additional insured and loss payee identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Contractor or any other additional insured) which Owner is required to purchase and maintain.
- C. Failure of Owner to demand such certificates or other evidence of Contractor's full

compliance with these insurance requirements or failure of Owner to identify a deficiency in compliance from the evidence provided shall not be construed as a waiver of Contractor's obligation to maintain such insurance.

- D. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor.
- E. The insurance and insurance limits required herein shall not be deemed as a limitation on Contractor's liability under the indemnities granted to Owner in the Contract Documents.

5.04 *Contractor's Liability Insurance*

- A. Contractor shall purchase and maintain such insurance as is appropriate for the Work being performed and as will provide protection from claims set forth below which may arise out of or result from Contractor's performance of the Work and Contractor's other obligations under the Contract Documents, whether it is to be performed by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable:
  - 1. claims under workers' compensation, disability benefits, and other similar employee benefit acts;
  - 2. claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor's employees;
  - 3. claims for damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees;
  - 4. claims for damages insured by reasonably available personal injury liability coverage which are sustained:
    - a. by any person as a result of an offense directly or indirectly related to the employment of such person by Contractor, or
    - b. by any other person for any other reason;
  - 5. claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom; and
  - 6. claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance or use of any motor vehicle.
- B. The policies of insurance required by this Paragraph 5.04 shall:

1. with respect to insurance required by Paragraphs 5.04.A.3 through 5.04.A.6 inclusive, be written on an occurrence basis, include as additional insureds (subject to any customary exclusion regarding professional liability) Owner and Engineer, and any other individuals or entities identified in the Supplementary Conditions, all of whom shall be listed as additional insureds, and include coverage for the respective officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of all such additional insureds, and the insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby;
2. include at least the specific coverages and be written for not less than the limits of liability provided in the Supplementary Conditions or required by Laws or Regulations, whichever is greater;
3. include contractual liability insurance covering Contractor's indemnity obligations under Paragraphs 6.11 and 6.20;
4. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other additional insured identified in the Supplementary Conditions to whom a certificate of insurance has been issued (and the certificates of insurance furnished by the Contractor pursuant to Paragraph 5.03 will so provide);
5. remain in effect at least until final payment and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work in accordance with Paragraph 13.07; and
6. include completed operations insurance;
  - a. such insurance shall remain in effect for at least two years after final payment, and
  - b. Contractor shall furnish Owner and each other additional insured identified in the Supplementary Conditions, to whom a certificate of insurance has been issued, evidence satisfactory to Owner and any such additional insured of continuation of such insurance at final payment and one year thereafter.

#### *5.05 Owner's Liability Insurance*

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

5.06 (Not Used)

5.07 (Not Used)

5.08 (Not Used)

5.09 (Not Used)

*5.10 Acceptance of Bonds and Insurance; Option to Replace*

- A. If either Owner or Contractor has any objection to the coverage afforded by or other provisions of the bonds or insurance required to be purchased and maintained by the other party in accordance with Article 5 on the basis of non-conformance with the Contract Documents, the objecting party shall so notify the other party in writing within 10 days after receipt of the certificates (or other evidence requested) required by Paragraph 2.01.B. Owner and Contractor shall each provide to the other such additional information in respect of insurance provided as the other may reasonably request. If either party does not purchase or maintain all of the bonds and insurance required of such party by the Contract Documents, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage. Without prejudice to any other right or remedy, the other party may elect to obtain equivalent bonds or insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and a Change Order shall be issued to adjust the Contract Price accordingly.

ARTICLE 6 – CONTRACTOR'S RESPONSIBILITIES

*6.01 Supervision and Superintendence*

- A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction. Contractor shall not be responsible for the negligence of Owner or Engineer in the design or specification of a specific means, method, technique, sequence, or procedure of construction which is shown or indicated in and expressly required by the Contract Documents.
- B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who shall not be replaced without written notice to Owner and Engineer except under extraordinary circumstances. Unless the Owner shall otherwise agree in writing, the superintendent will be Contractor's representative at the Site and shall have authority to act on behalf of Contractor. All communications given to or

received from the superintendent shall be binding on Contractor.

#### 6.02 *Labor; Working Hours*

- A. Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall at all times maintain good discipline and order at the Site.
- B. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site shall be performed during regular working hours. Contractor will not permit the performance of Work on a Saturday, Sunday, or any legal holiday without Owner's written consent (which will not be unreasonably withheld) given after prior written notice to Engineer.

#### 6.03 *Services, Materials, and Equipment*

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

#### 6.04 *Progress Schedule*

- A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.07 as it may be adjusted from time to time as provided below.
  - 1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.07) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times. Such adjustments will comply with any provisions of the General Requirements applicable thereto.
  - 2. Proposed adjustments in the Progress Schedule that will change the Contract

Times shall be submitted in accordance with the requirements of Article 12. Adjustments in Contract Times may only be made by a Change Order.

6.05 *Substitutes and "Or-Equals"*

A. Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the specification or description is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or-equal" item or no substitution is permitted, other items of material or equipment or material or equipment of other Suppliers may be submitted to Engineer for review under the circumstances described below.

1. *"Or-Equal" Items:* If in Engineer's sole discretion an item of material or equipment proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, it may be considered by Engineer as an "or-equal" item, in which case review and approval of the proposed item may, in Engineer's sole discretion, be accomplished without compliance with some or all of the requirements for approval of proposed substitute items. For the purposes of this Paragraph 6.05.A.1, a proposed item of material or equipment will be considered functionally equal to an item so named if:

a. in the exercise of reasonable judgment Engineer determines that:

- 1) it is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics; and
- 2) it will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole; and
- 3) it has a proven record of performance and availability of responsive service; and

b. Contractor certifies that, if approved and incorporated into the Work:

- 1) there will be no increase in cost to the Owner or increase in Contract Times; and
- 2) it will conform substantially to the detailed requirements of the item named in the Contract Documents.

2. *Substitute Items*

- a. If in Engineer's sole discretion an item of material or equipment proposed by Contractor does not qualify as an "or-equal" item under Paragraph 6.05.A.1, it will be considered a proposed substitute item.
- b. Contractor shall submit sufficient information as provided below to allow Engineer to determine if the item of material or equipment proposed is essentially equivalent to that named and an acceptable substitute therefor. Requests for review of proposed substitute items of material or equipment will not be accepted by Engineer from anyone other than Contractor.
- c. The requirements for review by Engineer will be as set forth in Paragraph 6.05.A.2.d, as supplemented by the General Requirements and as Engineer may decide is appropriate under the circumstances.
- d. Contractor shall make written application to Engineer for review of a proposed substitute item of material or equipment that Contractor seeks to furnish or use. The application:
  - 1) shall certify that the proposed substitute item will:
    - a) perform adequately the functions and achieve the results called for by the general design,
    - b) be similar in substance to that specified, and
    - c) be suited to the same use as that specified;
  - 2) will state:
    - a) the extent, if any, to which the use of the proposed substitute item will prejudice Contractor's achievement of Substantial Completion on time,
    - b) whether use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item, and
    - c) whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty;
  - 3) will identify:
    - a) all variations of the proposed substitute item from that specified, and

- b) available engineering, sales, maintenance, repair, and replacement services; and
  - 4) shall contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including costs of redesign and claims of other contractors affected by any resulting change.
- B. *Substitute Construction Methods or Procedures:* If a specific means, method, technique, sequence, or procedure of construction is expressly required by the Contract Documents, Contractor may furnish or utilize a substitute means, method, technique, sequence, or procedure of construction approved by Engineer. Contractor shall submit sufficient information to allow Engineer, in Engineer's sole discretion, to determine that the substitute proposed is equivalent to that expressly called for by the Contract Documents. The requirements for review by Engineer will be similar to those provided in Paragraph 6.05.A.2.
- C. *Engineer's Evaluation:* Engineer will be allowed a reasonable time within which to evaluate each proposal or submittal made pursuant to Paragraphs 6.05.A and 6.05.B. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No "or equal" or substitute will be ordered, installed or utilized until Engineer's review is complete, which will be evidenced by a Change Order in the case of a substitute and an approved Shop Drawing for an "or equal." Engineer will advise Contractor in writing of any negative determination.
- D. *Special Guarantee:* Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.
- E. *Engineer's Cost Reimbursement:* Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor pursuant to Paragraphs 6.05.A.2 and 6.05.B. Whether or not Engineer approves a substitute so proposed or submitted by Contractor, Contractor shall reimburse Owner for the reasonable charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the reasonable charges of Engineer for making changes in the Contract Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.
- F. *Contractor's Expense:* Contractor shall provide all data in support of any proposed substitute or "or-equal" at Contractor's expense.

#### 6.06 Concerning Subcontractors, Suppliers, and Others

- A. Contractor shall not employ any Subcontractor, Supplier, or other individual or entity (including those acceptable to Owner as indicated in Paragraph 6.06.B), whether initially or as a replacement, against whom Owner may have reasonable objection. Contractor shall not be required to employ any Subcontractor, Supplier, or other

individual or entity to furnish or perform any of the Work against whom Contractor has reasonable objection.

- B. If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, or other individuals or entities to be submitted to Owner in advance for acceptance by Owner by a specified date prior to the Effective Date of the Agreement, and if Contractor has submitted a list thereof in accordance with the Supplementary Conditions, Owner's acceptance (either in writing or by failing to make written objection thereto by the date indicated for acceptance or objection in the Bidding Documents or the Contract Documents) of any such Subcontractor, Supplier, or other individual or entity so identified may be revoked on the basis of reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor, Supplier, or other individual or entity, and the Contract Price will be adjusted by the difference in the cost occasioned by such replacement, and an appropriate Change Order will be issued. No acceptance by Owner of any such Subcontractor, Supplier, or other individual or entity, whether initially or as a replacement, shall constitute a waiver of any right of Owner or Engineer to reject defective Work.
- C. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of the Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work just as Contractor is responsible for Contractor's own acts and omissions. Nothing in the Contract Documents:
  - 1. shall create for the benefit of any such Subcontractor, Supplier, or other individual or entity any contractual relationship between Owner or Engineer and any such Subcontractor, Supplier or other individual or entity; nor
  - 2. shall anything in the Contract Documents create any obligation on the part of Owner or Engineer to pay or to see to the payment of any moneys due any such Subcontractor, Supplier, or other individual or entity except as may otherwise be required by Laws and Regulations.
- D. Contractor shall be solely responsible for scheduling and coordinating the Work of Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work under a direct or indirect contract with Contractor.
- E. Contractor shall require all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work to communicate with Engineer through Contractor.
- F. The divisions and sections of the Specifications and the identifications of any Drawings shall not control Contractor in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.
- G. All Work performed for Contractor by a Subcontractor or Supplier will be pursuant to

an appropriate agreement between Contractor and the Subcontractor or Supplier which specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of Owner and Engineer. Whenever any such agreement is with a Subcontractor or Supplier who is listed as a loss payee on the property insurance provided in Paragraph 5.06, the agreement between the Contractor and the Subcontractor or Supplier will contain provisions whereby the Subcontractor or Supplier waives all rights against Owner, Contractor, Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or loss payees (and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them) for all losses and damages caused by, arising out of, relating to, or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work. If the insurers on any such policies require separate waiver forms to be signed by any Subcontractor or Supplier, Contractor will obtain the same.

#### 6.07 *Patent Fees and Royalties*

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

#### 6.08 *Permits*

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

### 6.09 *Laws and Regulations*

- A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.
- B. If Contractor performs any Work knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work. However, it shall not be Contractor's primary responsibility to make certain that the Specifications and Drawings are in accordance with Laws and Regulations, but this shall not relieve Contractor of Contractor's obligations under Paragraph 3.03.
- C. Changes in Laws or Regulations not known at the time of opening of Bids (or, on the Effective Date of the Agreement if there were no Bids) having an effect on the cost or time of performance of the Work shall be the subject of an adjustment in Contract Price or Contract Times. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

### 6.10 *Taxes*

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

### 6.11 *Use of Site and Other Areas*

- A. *Limitation on Use of Site and Other Areas*
  - 1. Contractor shall confine construction equipment, the storage of materials and equipment, and the operations of workers to the Site and other areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and other areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof, or of any adjacent land or areas resulting from the performance of the Work.
  - 2. Should any claim be made by any such owner or occupant because of the performance of the Work, Contractor shall promptly settle with such other party by negotiation or otherwise resolve the claim by arbitration or other dispute

resolution proceeding or at law.

3. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused by or based upon Contractor's performance of the Work.
- B. *Removal of Debris During Performance of the Work:* During the progress of the Work Contractor shall keep the Site and other areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris shall conform to applicable Laws and Regulations.
  - C. *Cleaning:* Prior to Substantial Completion of the Work, Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work Contractor shall remove from the Site all tools, appliances, construction equipment and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.
  - D. *Loading Structures:* Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent property to stresses or pressures that will endanger it.

#### 6.12 Record Documents

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

#### 6.13 Safety and Protection

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

1. all persons on the Site or who may be affected by the Work;
  2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and
  3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.
- B. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection. Contractor shall notify owners of adjacent property and of Underground Facilities and other utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property.
- C. Contractor shall comply with the applicable requirements of Owner's safety programs that are applicable to the Work.
- D. Contractor shall inform Owner and Engineer of the specific requirements of Contractor's safety programs with which Owner's and Engineer's employees and representatives must comply while at the Site.
- E. All damage, injury, or loss to any property referred to in Paragraph 6.13.A.2 or 6.13.A.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).
- F. Contractor's duties and responsibilities for safety and for protection of the Work shall continue until such time as all the Work is completed and Engineer has issued a notice to Owner and Contractor in accordance with Paragraph 14.07.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).

#### 6.14 *Safety Representative*

- A. Contractor shall designate a qualified and experienced safety representative at the Site

whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs.

#### 6.15 *Hazard Communication Programs*

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

#### 6.16 *Emergencies*

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

#### 6.17 *Shop Drawings and Samples*

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

##### 1. *Shop Drawings*

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

##### 2. *Samples*

- a. Submit number of Samples specified in the Specifications.
- b. Clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the submittal for the limited purposes required by Paragraph 6.17.D.

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

C. *Submittal Procedures*

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

D. *Engineer's Review*

1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the Schedule of Submittals acceptable to Engineer. Engineer's review and approval will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.
2. Engineer's review and approval will not extend to means, methods, techniques,

sequences, or procedures of construction (except where a particular means, method, technique, sequence, or procedure of construction is specifically and expressly called for by the Contract Documents) or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.

3. Engineer's review and approval shall not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 6.17.C.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer's review and approval shall not relieve Contractor from responsibility for complying with the requirements of Paragraph 6.17.C.1.

E. *Resubmittal Procedures*

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

6.18 *Continuing the Work*

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

6.19 *Contractor's General Warranty and Guarantee*

- A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective for a minimum period of one (1) year. Engineer and its officers, directors, members, partners, employees, agents, consultants and subcontractors shall be entitled to rely on representation of Contractor's warranty and guarantee.
- B. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:
  1. abuse, modification, or improper maintenance or operation by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or
  2. normal wear and tear under normal usage.
- C. Contractor's obligation to perform and complete the Work in accordance with the

Contract Documents shall be absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents or a release of Contractor's obligation to perform the Work in accordance with the Contract Documents:

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

#### 6.20 *Indemnification*

- A. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the performance of the Work, provided that any such claim, cost, loss, or damage:
  1. is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of real or personal property (other than the Work itself), including the loss of use resulting therefrom; and
  2. is caused by any 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, regardless of whether or not caused in part by an individual or entity indemnified hereunder or whether liability is imposed upon such indemnified party by Laws or Regulations.
- B. In any and all claims against Owner or Engineer or any of their , officers, directors, members, partners, employees, agents, consultants, or subcontractors by any employee (or the survivor or personal representative of such employee) of Contractor,

- any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 6.20.A shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.
- C. The indemnification obligations of Contractor under Paragraph 6.20.A shall not be limited in any way by the amount or types of insurance provided by Contractor under Article 5 of the General Conditions.
  - D. The indemnification obligations of Contractor under Paragraph 6.20.A shall not extend to the sole negligence or willful misconduct of Owner or Engineer or of the officers, directors, members, partners, employees, agents, and consultants and subcontractors of each and any of them.

#### *6.21 Delegation of Professional Design Services*

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

- E. Contractor shall not be responsible for the adequacy of the performance or design criteria required by the Contract Documents.

## ARTICLE 7 – OTHER WORK AT THE SITE

### *7.01 Related Work at Site*

- A. Owner may perform other work related to the Project at the Site with Owner's employees, or through other direct contracts therefor, or have other work performed by utility owners. If such other work is not noted in the Contract Documents, then:
  - 1. written notice thereof will be given to Contractor prior to starting any such other work; and
  - 2. if Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times that should be allowed as a result of such other work, a Claim may be made therefor as provided in Paragraph 10.05.
- B. Contractor shall afford each other contractor who is a party to such a direct contract, each utility owner and Owner, if Owner is performing other work with Owner's employees, proper and safe access to the Site, provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work, and shall properly coordinate the Work with theirs. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering such work; provided, however, Contractor may cut or alter the work of others with the written consent of Engineer and the others whose work will be affected. The duties and responsibilities of Contractor under this Paragraph are for the benefit of such utility owners and other contractors to the extent that there are comparable provisions for the benefit of Contractor in said direct contracts between Owner and such utility owners and other contractors.
- C. If the proper execution or results of any part of Contractor's Work depends upon work performed by others under this Article 7, Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.

## *7.02 Legal Relationships*

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

## ARTICLE 8 – OWNER'S RESPONSIBILITIES

### *8.01 Communications to Contractor*

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

### *8.02 Furnish Data*

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

### *8.03 Pay When Due*

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

### *8.04 Lands and Easements; Reports and Tests*

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

### *8.05 Insurance*

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

#### 8.06 *Change Orders*

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

#### 8.07 *Inspections, Tests, and Approvals*

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

#### 8.08 *Limitations on Owner's Responsibilities*

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

#### 8.09 *Undisclosed Hazardous Environmental Condition*

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

#### 8.10 *Evidence of Financial Arrangements*

- A. If and to the extent Owner has agreed to furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract Documents, Owner's responsibility in respect thereof will be as set forth in the Supplementary Conditions.

#### 8.11 *Compliance With Safety Programs*

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

### ARTICLE 9 – ENGINEER'S STATUS DURING CONSTRUCTION

#### 9.01 *Owner's Representative*

- A. Engineer will be Owner's representative during the construction period. The duties and responsibilities and the limitations of authority of Engineer as Owner's representative during construction are set forth in the Contract Documents and will not be changed without written consent of Owner and Engineer.

### 9.02 *Visits to Site*

- A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe as an experienced and qualified design professional the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.
- B. Engineer's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in Paragraph 9.09. Particularly, but without limitation, during or as a result of Engineer's visits or observations of Contractor's Work, Engineer will not supervise, direct, or have control over Contractor's Work, nor shall Engineer have authority over or responsibility for the means, methods, techniques, sequences, or procedures of construction selected by Contractor, for safety precautions and programs incident to Contractor's Work in progress, nor for any failure of Contractor to comply with Laws and Regulations applicable to Contractor's furnishing and performing the Work.

### 9.03 *Project Representative*

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

### 9.04 *Authorized Variations in Work*

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

and the parties are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

#### *9.05 Rejecting Defective Work*

- A. Engineer will have authority to reject Work which Engineer believes to be defective, or that Engineer believes will not produce a completed Project that conforms to the Contract Documents or that will prejudice the integrity of the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Engineer will also have authority to require special inspection or testing of the Work as provided in Paragraph 13.04, whether or not the Work is fabricated, installed, or completed.

#### *9.06 Shop Drawings, Change Orders and Payments*

- A. In connection with Engineer's authority, and limitations thereof, as to Shop Drawings and Samples, see Paragraph 6.17.
- B. In connection with Engineer's authority, and limitations thereof, if any,
  - 1. as to design calculations and design drawings submitted in response to a delegation of professional design services, if any, see Paragraph 6.21;
  - 2. as to Change Orders, see Articles 10, 11, and 12; and
  - 3. as to Applications for Payment, see Article 14.

#### *9.07 Determinations for Unit Price Work*

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

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

- A. Engineer will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the Work thereunder. All matters in question and other matters between Owner and Contractor arising prior to the date final payment is due relating to the acceptability of the Work, and the interpretation of the requirements of the Contract Documents pertaining to the performance of the Work, will be referred initially to Engineer in writing within 30 days of the event giving rise to the question.

- B. Engineer will, with reasonable promptness, render a written decision on the issue referred. If Owner or Contractor believes that any such decision entitles them to an adjustment in the Contract Price or Contract Times or both, a Claim may be made under Paragraph 10.05. The date of Engineer's decision shall be the date of the event giving rise to the issues referenced for the purposes of Paragraph 10.05.B.
- C. Engineer's written decision on the issue referred will be final and binding on Owner and Contractor, subject to the provisions of Paragraph 10.05.
- D. When functioning as interpreter and judge under this Paragraph 9.08, Engineer will not show partiality to Owner or Contractor and will not be liable in connection with any interpretation or decision rendered in good faith in such capacity.

*9.09 Limitations on Engineer's Authority and Responsibilities*

- A. Neither Engineer's authority or responsibility under this Article 9 or under any other provision of the Contract Documents nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer shall create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.
- B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.
- C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.
- D. Engineer's review of the final Application for Payment and accompanying documentation and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Paragraph 14.07.A will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals that the results certified indicate compliance with the Contract Documents.
- E. The limitations upon authority and responsibility set forth in this Paragraph 9.09 shall also apply to the Resident Project Representative, if any, and assistants, if any.

#### 9.10 *Compliance with Safety Programs*

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

### ARTICLE 10 – CHANGES IN THE WORK; CLAIMS

#### 10.01 *Authorized Changes in the Work*

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

#### 10.02 *Unauthorized Changes in the Work*

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

#### 10.03 *Execution of Change Orders*

- A. Owner and Contractor shall execute appropriate Change Orders recommended by Engineer covering:
  - 1. changes in the Work which are:
    - a) ordered by Owner pursuant to Paragraph 10.01.A,
    - b) required because of acceptance of defective Work under Paragraph 13.08.A or Owner's correction of defective Work under Paragraph 13.09, or
    - c) agreed to by the parties;

2. changes in the Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive; and
3. changes in the Contract Price or Contract Times which embody the substance of any written decision rendered by Engineer pursuant to Paragraph 10.05; provided that, in lieu of executing any such Change Order, an appeal may be taken from any such decision in accordance with the provisions of the Contract Documents and applicable Laws and Regulations, but during any such appeal, Contractor shall carry on the Work and adhere to the Progress Schedule as provided in Paragraph 6.18.A.

#### 10.04 *Notification to Surety*

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

#### 10.05 *Claims*

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

take one of the following actions in writing:

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

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

### 11.01 *Cost of the Work*

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

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

2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts shall accrue to Owner. All trade discounts, rebates and refunds and returns from sale of surplus materials and equipment shall accrue to Owner, and Contractor shall make provisions so that they may be obtained.
3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, who will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee shall be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 11.01.
4. Costs of special consultants (including but not limited to Engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed for services specifically related to the Work.
5. Supplemental costs including the following:
  - a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.
  - b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.
  - c. Rentals of all construction equipment and machinery, and the parts thereof whether rented from Contractor or others in accordance with rental agreements approved by Owner with the advice of Engineer, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the Work.
  - d. Sales, consumer, use, and other similar taxes related to the Work, and for which

Contractor is liable, imposed by Laws and Regulations.

- e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.
  - f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of property insurance established in accordance with Paragraph 5.06.D), provided such losses and damages have resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses shall be included in the Cost of the Work for the purpose of determining Contractor's fee.
  - g. The cost of utilities, fuel, and sanitary facilities at the Site.
  - h. Minor expenses such as telegrams, long distance telephone calls, telephone service at the Site, express and courier services, and similar petty cash items in connection with the Work.
  - i. The costs of premiums for all bonds and insurance Contractor is required by the Contract Documents to purchase and maintain.
- B. *Costs Excluded:* The term Cost of the Work shall not include any of the following items:
- 1. Payroll costs and other compensation of Contractor's officers, executives, principals (of partnerships and sole proprietorships), general managers, safety managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 11.01.A.1 or specifically covered by Paragraph 11.01.A.4, all of which are to be considered administrative costs covered by the Contractor's fee.
  - 2. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.
  - 3. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.

4. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.
  5. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraphs 11.01.A.
- C. *Contractor's Fee:* When all the Work is performed on the basis of cost-plus, Contractor's fee shall be determined as set forth in the Agreement. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, Contractor's fee shall be determined as set forth in Paragraph 12.01.C.
- D. *Documentation:* Whenever the Cost of the Work for any purpose is to be determined pursuant to Paragraphs 11.01.A and 11.01.B, Contractor will establish and maintain records thereof in accordance with generally accepted accounting practices and submit in a form acceptable to Engineer an itemized cost breakdown together with supporting data.

#### 11.02 *Allowances*

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

- D. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

#### 11.03 *Unit Price Work*

- A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.
- B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Determinations of the actual quantities and classifications of Unit Price Work performed by Contractor will be made by Engineer subject to the provisions of Paragraph 9.07.
- C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.
- D. Owner or Contractor may make a Claim for an adjustment in the Contract Price in accordance with Paragraph 10.05 if:
  - 1. the quantity of any item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and
  - 2. there is no corresponding adjustment with respect to any other item of Work; and
  - 3. Contractor believes that Contractor is entitled to an increase in Contract Price as a result of having incurred additional expense or Owner believes that Owner is entitled to a decrease in Contract Price and the parties are unable to agree as to the amount of any such increase or decrease.

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

#### 12.01 *Change of Contract Price*

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

in the Contract Price will be determined as follows:

1. where the Work involved is covered by unit prices contained in the Contract Documents, by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 11.03); or
  2. where the Work involved is not covered by unit prices contained in the Contract Documents, by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 12.01.C.2); or
  3. where the Work involved is not covered by unit prices contained in the Contract Documents and agreement to a lump sum is not reached under Paragraph 12.01.B.2, on the basis of the Cost of the Work (determined as provided in Paragraph 11.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 12.01.C).
- C. *Contractor's Fee:* The Contractor's fee for overhead and profit shall be determined as follows:
1. a mutually acceptable fixed fee; or
  2. if a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:
    - a. for costs incurred under Paragraphs 11.01.A.1 and 11.01.A.2, the Contractor's fee shall be 15 percent;
    - b. for costs incurred under Paragraph 11.01.A.3, the Contractor's fee shall be five percent;
    - c. where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraph 12.01.C.2.a and 12.01.C.2.b is that the Subcontractor who actually performs the Work, at whatever tier, will be paid a fee of 15 percent of the costs incurred by such Subcontractor under Paragraphs 11.01.A.1 and 11.01.A.2 and that any higher tier Subcontractor and Contractor will each be paid a fee of five percent of the amount paid to the next lower tier Subcontractor;
    - d. no fee shall be payable on the basis of costs itemized under Paragraphs 11.01.A.4, 11.01.A.5, and 11.01.B;
    - e. the amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in cost will be the amount of the actual net decrease in cost plus a deduction in Contractor's fee by an amount equal to five percent of such net decrease; and

- f. when both additions and credits are involved in any one change, the adjustment in Contractor's fee shall be computed on the basis of the net change in accordance with Paragraphs 12.01.C.2.a through 12.01.C.2.e, inclusive.

#### 12.02 *Change of Contract Times*

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

#### 12.03 *Delays*

- A. Where Contractor is prevented from completing any part of the Work within the Contract Times due to delay beyond the control of Contractor, the Contract Times will be extended in an amount equal to the time lost due to such delay if a Claim is made therefor as provided in Paragraph 12.02.A. Delays beyond the control of Contractor shall include, but not be limited to, acts or neglect by Owner, acts or neglect of utility owners or other contractors performing other work as contemplated by Article 7, fires, floods, epidemics, abnormal weather conditions, or acts of God.
- B. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delays within the control of Contractor. Delays attributable to and within the control of a Subcontractor or Supplier shall be deemed to be delays within the control of Contractor.
- C. If Owner, Engineer, or utility owners performing other work for Owner as contemplated by Article 7, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times, or both. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.
- D. If Contractor is delayed in the performance or progress of the Work by fire, flood, epidemic, abnormal weather conditions, acts of God, acts or failures to act of other contractors or utility owners, or other causes not the fault of and beyond control of Owner and Contractor, then Contractor shall be entitled to an equitable adjustment in Contract Times, if such adjustment is essential to Contractor's ability to complete the Work within the Contract Times. Such an adjustment shall be Contractor's sole and exclusive remedy for the delays described in this Paragraph 12.03.D.

- E. Owner and Engineer and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each of them shall not be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.

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

13.01 *Notice of Defects*

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

13.02 *Access to Work*

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

13.03 *Tests and Inspections*

- A. Contractor shall give Engineer timely notice of readiness of the Work for all required inspections, tests, or approvals and shall cooperate with inspection and testing personnel to facilitate required inspections or tests.
- B. Owner shall employ and pay for the services of an independent testing laboratory to perform all inspections, tests, or approvals required by the Contract Documents except:
  - 1. for inspections, tests, or approvals covered by Paragraphs 13.03.C and 13.03.D below;
  - 2. that costs incurred in connection with tests or inspections conducted pursuant to Paragraph 13.04.B shall be paid as provided in said Paragraph 13.04.C; and
  - 3. as otherwise specifically provided in the Contract Documents.
- C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other

representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.

- D. Contractor shall be responsible for arranging and obtaining and shall pay all costs in connection with any inspections, tests, or approvals required for Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work; or acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work. Such inspections, tests, or approvals shall be performed by organizations acceptable to Owner and Engineer.
- E. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, Contractor shall if requested by Engineer, uncover such Work for observation.
- F. Uncovering Work as provided in Paragraph 13.03.E shall be at Contractor's expense unless Contractor has given Engineer timely notice of Contractor's intention to cover the same and Engineer has not acted with reasonable promptness in response to such notice.

#### 13.04 *Uncovering Work*

- A. If any Work is covered contrary to the written request of Engineer, it must, if requested by Engineer, be uncovered for Engineer's observation and replaced at Contractor's expense.
- B. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, Contractor, at Engineer's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Engineer may require, that portion of the Work in question, furnishing all necessary labor, material, and equipment.
- C. If it is found that the uncovered Work is defective, Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05.
- D. If, the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, or both, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or

extent thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.

13.05 *Owner May Stop the Work*

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

13.06 *Correction or Removal of Defective Work*

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

13.07 *Correction Period*

- A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the terms of any applicable special guarantee required by the Contract Documents) or by any specific provision of the Contract Documents, any Work is found to be defective, or if the repair of any damages to the land or areas made available for Contractor's use by Owner or permitted by Laws and Regulations as contemplated in Paragraph 6.11.A is found to be defective, Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:
  - 1. repair such defective land or areas; or
  - 2. correct such defective Work; or
  - 3. if the defective Work has been rejected by Owner, remove it from the Project and replace it with Work that is not defective, and
  - 4. satisfactorily correct or repair or remove and replace any damage to other Work,

to the work of others or other land or areas resulting therefrom.

- B. If Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others) will be paid by Contractor.
- C. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications.
- D. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this Paragraph 13.07, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.
- E. Contractor's obligations under this Paragraph 13.07 are in addition to any other obligation or warranty. The provisions of this Paragraph 13.07 shall not be construed as a substitute for or a waiver of the provisions of any applicable statute of limitation or repose.

13.08 *Acceptance of Defective Work*

- A. If, instead of requiring correction or removal and replacement of defective Work, Owner (and, prior to Engineer's recommendation of final payment, Engineer) prefers to accept it, Owner may do so. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness) and for the diminished value of the Work to the extent not otherwise paid by Contractor pursuant to this sentence. If any such acceptance occurs prior to Engineer's recommendation of final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work, and Owner shall be entitled to an appropriate decrease in the Contract Price, reflecting the diminished value of Work so accepted. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05. If the acceptance occurs after such recommendation, an appropriate amount will be paid by Contractor to Owner.

### 13.09 *Owner May Correct Defective Work*

- A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work or to remove and replace rejected Work as required by Engineer in accordance with Paragraph 13.06.A, or if Contractor fails to perform the Work in accordance with the Contract Documents, or if Contractor fails to comply with any other provision of the Contract Documents, Owner may, after seven days written notice to Contractor, correct or remedy any such deficiency.
- B. In exercising the rights and remedies under this Paragraph 13.09, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, take possession of Contractor's tools, appliances, construction equipment and machinery at the Site, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this Paragraph.
- C. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 13.09 will be charged against Contractor, and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount of the adjustment, Owner may make a Claim therefor as provided in Paragraph 10.05. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.
- D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 13.09.

## ARTICLE 14 – PAYMENTS TO CONTRACTOR AND COMPLETION

### 14.01 *Schedule of Values*

- A. The Schedule of Values established as provided in Paragraph 2.07.A will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments on account of Unit Price Work will be based on the number of units completed.

## 14.02 *Progress Payments*

### A. Applications for Payments

1. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice, or other documentation warranting that Owner has received the materials and equipment free and clear of all Liens and evidence that the materials and equipment are covered by appropriate property insurance or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.
2. Beginning with the second Application for Payment, each Application shall include an affidavit of Contractor stating that all previous progress payments received on account of the Work have been applied on account to discharge Contractor's legitimate obligations associated with prior Applications for Payment.
3. The amount of retainage with respect to progress payments will be as stipulated in the Contract.

### B. *Review of Applications*

1. Engineer will, within 10 days after receipt of each Application for Payment, either indicate in writing a recommendation of payment and present the Application to Owner or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.
2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations of the executed Work as an experienced and qualified design professional and on Engineer's review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:
  - a. the Work has progressed to the point indicated;
  - b. the quality of the Work is generally in accordance with the Contract Documents

(subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, to the results of any subsequent tests called for in the Contract Documents, to a final determination of quantities and classifications for Unit Price Work under Paragraph 9.07, and to any other qualifications stated in the recommendation); and

- c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.
3. By recommending any such payment Engineer will not thereby be deemed to have represented that:
  - a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract Documents; or
  - b. there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.
4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:
  - a. to supervise, direct, or control the Work, or
  - b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or
  - c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work, or
  - d. to make any examination to ascertain how or for what purposes Contractor has used the moneys paid on account of the Contract Price, or
  - e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.
5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 14.02.B.2. Engineer may also refuse to recommend any such payment or, because of subsequently discovered evidence or the results of subsequent inspections or tests, revise or revoke any such payment recommendation previously made, to such extent as may be necessary in

Engineer's opinion to protect Owner from loss because:

- a. the Work is defective, or completed Work has been damaged, requiring correction or replacement;
- b. the Contract Price has been reduced by Change Orders;
- c. Owner has been required to correct defective Work or complete Work in accordance with Paragraph 13.09; or
- d. Engineer has actual knowledge of the occurrence of any of the events enumerated in Paragraph 15.02.A.

C. *Payment Becomes Due*

1. Ten days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended will (subject to the provisions of Paragraph 14.02.D) become due, and when due will be paid by Owner to Contractor.

D. *Reduction in Payment*

1. Owner may refuse to make payment of the full amount recommended by Engineer because:
  - a. claims have been made against Owner on account of Contractor's performance or furnishing of the Work;
  - b. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens;
  - c. there are other items entitling Owner to a set-off against the amount recommended; or
  - d. Owner has actual knowledge of the occurrence of any of the events enumerated in Paragraphs 14.02.B.5.a through 14.02.B.5.c or Paragraph 15.02.A.
2. If Owner refuses to make payment of the full amount recommended by Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, when Contractor remedies the reasons for such action.
3. Upon a subsequent determination that Owner's refusal of payment was not

justified, the amount wrongfully withheld shall be treated as an amount due as determined by Paragraph 14.02.C.1 and subject to interest as provided in the Agreement.

14.03 *Contractor's Warranty of Title*

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

14.04 *Substantial Completion*

- A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete (except for items specifically listed by Contractor as incomplete) and request that Engineer issue a certificate of Substantial Completion.
- B. Promptly after Contractor's notification, Owner, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.
- C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a tentative certificate of Substantial Completion which shall fix the date of Substantial Completion. There shall be attached to the certificate a tentative list of items to be completed or corrected before final payment. Owner shall have seven days after receipt of the tentative certificate during which to make written objection to Engineer as to any provisions of the certificate or attached list. If, after considering such objections, Engineer concludes that the Work is not substantially complete, Engineer will within 14 days after submission of the tentative certificate to Owner notify Contractor in writing, stating the reasons therefor. If, after consideration of Owner's objections, Engineer considers the Work substantially complete, Engineer will within said 14 days execute and deliver to Owner and Contractor a definitive certificate of Substantial Completion (with a revised tentative list of items to be completed or corrected) reflecting such changes from the tentative certificate as Engineer believes justified after consideration of any objections from Owner.
- D. At the time of delivery of the tentative certificate of Substantial Completion, Engineer will deliver to Owner and Contractor a written recommendation as to division of responsibilities pending final payment between Owner and Contractor with respect to security, operation, safety, and protection of the Work, maintenance, heat, utilities, insurance, and warranties and guarantees. Unless Owner and Contractor agree otherwise in writing and so inform Engineer in writing prior to Engineer's issuing the definitive certificate of Substantial Completion, Engineer's aforesaid recommendation will be binding on Owner and Contractor until final payment.

- E. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to remove its property and complete or correct items on the tentative list.

#### 14.05 *Partial Utilization*

- A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions.
  1. Owner at any time may request Contractor in writing to permit Owner to use or occupy any such part of the Work which Owner believes to be ready for its intended use and substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor, Owner and Engineer will follow the procedures of Paragraph 14.04.A through D for that part of the Work.
  2. Contractor at any time may notify Owner and Engineer in writing that Contractor considers any such part of the Work ready for its intended use and substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.
  3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 14.04 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.
  4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 5.10 regarding property insurance.

#### 14.06 *Final Inspection*

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

#### 14.07 *Final Payment*

##### A. *Application for Payment*

1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance, certificates of inspection, marked-up record documents (as provided in Paragraph 6.12), and other documents, Contractor may make application for final payment following the procedure for progress payments.
2. The final Application for Payment shall be accompanied (except as previously delivered) by:
  - a. all documentation called for in the Contract Documents, including but not limited to the evidence of insurance required by Paragraph 5.04.B.6;
  - b. consent of the surety, if any, to final payment;
  - c. a list of all Claims against Owner that Contractor believes are unsettled; and
  - d. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of or Liens filed in connection with the Work.
3. In lieu of the releases or waivers of Liens specified in Paragraph 14.07.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that:
  - 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.

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

1. If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations

under the Contract Documents have been fulfilled, Engineer will, within ten days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of payment and present the Application for Payment to Owner for payment. At the same time Engineer will also give written notice to Owner and Contractor that the Work is acceptable subject to the provisions of Paragraph 14.09. Otherwise, Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.

C. *Payment Becomes Due*

1. Thirty days after the presentation to Owner of the Application for Payment and accompanying documentation, the amount recommended by Engineer, less any sum Owner is entitled to set off against Engineer's recommendation, including but not limited to liquidated damages, will become due and will be paid by Owner to Contractor.

14.08 *Final Completion Delayed*

- A. If, through no fault of Contractor, final completion of the Work is significantly delayed, and if Engineer so confirms, Owner shall, upon receipt of Contractor's final Application for Payment (for Work fully completed and accepted) and recommendation of Engineer, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance to be held by Owner for Work not fully completed or corrected is less than the retainage stipulated in the Agreement, and if bonds have been furnished as required in Paragraph 5.01, the written consent of the surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by Contractor to Engineer with the Application for such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of Claims.

14.09 *Waiver of Claims*

- A. The making and acceptance of final payment will constitute:
  1. a waiver of all Claims by Owner against Contractor, except Claims arising from unsettled Liens, from defective Work appearing after final inspection pursuant to Paragraph 14.06, from failure to comply with the Contract Documents or the terms of any special guarantees specified therein, or from Contractor's continuing obligations under the Contract Documents; and
  2. a waiver of all Claims by Contractor against Owner other than those previously made in accordance with the requirements herein and expressly acknowledged by Owner in writing as still unsettled.

## ARTICLE 15 – SUSPENSION OF WORK AND TERMINATION

### 15.01 *Owner May Suspend Work*

- A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by notice in writing to Contractor and Engineer which will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be granted an adjustment in the Contract Price or an extension of the Contract Times, or both, directly attributable to any such suspension if Contractor makes a Claim therefor as provided in Paragraph 10.05.

### 15.02 *Owner May Terminate for Cause*

- A. The occurrence of any one or more of the following events will justify termination for cause:
  - 1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the Progress Schedule established under Paragraph 2.07 as adjusted from time to time pursuant to Paragraph 6.04);
  - 2. Contractor's disregard of Laws or Regulations of any public body having jurisdiction;
  - 3. Contractor's disregard of the authority of Engineer; or
  - 4. Contractor's repeated violation in any substantial way of any provisions of the Contract Documents.
- B. If one or more of the events identified in Paragraph 15.02.A occur, Owner may, after giving Contractor (and surety) seven days written notice of its intent to terminate the services of Contractor:
  - 1. exclude Contractor from the Site, and take possession of the Work and of all Contractor's tools, appliances, construction equipment, and machinery at the Site, and use the same to the full extent they could be used by Contractor (without liability to Contractor for trespass or conversion);
  - 2. incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere; and
  - 3. complete the Work as Owner may deem expedient.

- C. If Owner proceeds as provided in Paragraph 15.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Owner arising out of or relating to completing the Work, such excess will be paid to Contractor. If such claims, costs, losses, and damages exceed such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, when so approved by Engineer, incorporated in a Change Order. When exercising any rights or remedies under this Paragraph Owner shall not be required to obtain the lowest price for the Work performed.
- D. Notwithstanding Paragraphs 15.02.B and 15.02.C, Contractor's services will not be terminated if Contractor begins within seven days of receipt of notice of intent to terminate to correct its failure to perform and proceeds diligently to cure such failure within no more than 30 days of receipt of said notice.
- E. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue. Any retention or payment of moneys due Contractor by Owner will not release Contractor from liability.
- F. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 5.01.A, the termination procedures of that bond shall supersede the provisions of Paragraphs 15.02.B, and 15.02.C.

15.03 *Owner May Terminate For Convenience*

- A. Upon seven days written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):
  1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;
  2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses;
  3. all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred in settlement of terminated

contracts with Subcontractors, Suppliers, and others; and

4. reasonable expenses directly attributable to termination.
- B. Contractor shall not be paid on account of loss of anticipated profits or revenue or other economic loss arising out of or resulting from such termination.
- 15.04 *Contractor May Stop Work or Terminate*

- A. If, through no act or fault of Contractor, (i) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (ii) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (iii) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon seven days written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the Contract and recover from Owner payment on the same terms as provided in Paragraph 15.03.
- B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, seven days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The provisions of this Paragraph 15.04 are not intended to preclude Contractor from making a Claim under Paragraph 10.05 for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this Paragraph.

## ARTICLE 16 – DISPUTE RESOLUTION

### 16.01 *Methods and Procedures*

- A. Dispute resolution methods and procedures, if any, shall be as set forth in the Supplementary Conditions. If no method and procedure has been set forth, and subject to the provisions of Paragraph 10.05, Owner and Contractor may exercise such rights or remedies as either may otherwise have under the Contract Documents or by Laws or Regulations in respect of any dispute.

## ARTICLE 17 – MISCELLANEOUS

### 17.01 *Giving Notice*

- A. Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if:

1. delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended, or
2. delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the giver of the notice.

17.02 *Computation of Times*

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

17.03 *Cumulative Remedies*

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

17.04 *Survival of Obligations*

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

17.05 *Controlling Law*

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

17.06 *Headings*

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

+ + END OF GENERAL CONDITIONS + +

## SUPPLEMENTARY CONDITIONS

### SCOPE

These Supplementary Conditions amend or supplement the General Conditions of the Construction Contract. All provisions of the General Conditions that are not so amended or supplemented remain in full force and effect.

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

The address system used in these Supplementary Conditions conforms to the address system used in the General Conditions, with the prefix "SC" added thereto.

SC-1.01.A.36      Change the definition of *Resident Project Representative* to read as follows:

SC-1.01.A.36      *Resident Project Representative*: The Owner's representative who will provide day to day inspection services of construction activities.

SC-1.01.A.51      Change the last sentence in the definition of *Work Change Directive* to read as follows:

“A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the change ordered or documented by a Work Change Directive will be incorporated in a subsequently issued IFCA or Change Order following negotiations by the parties as to its effect, if any, on the Contract Price or Contract Times.”

SC-1.01.A.52      Add the following definition:

1.01.A.52      *Interim Field Change Agreement (IFCA)* - A document signed by the Engineer, Contractor, Owner and Owner's Representative documenting a change to the Work, which does not result in the total contract price exceeding the amount specified in the contract. An IFCA will authorize re-distribution of existing contract amounts or use of Owner's Allowance funds.

SC-4.03, A.      Change the last paragraph to read as follows:

“then Contractor shall, within seven (7) days after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 6.16.A), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in

connection therewith (except as aforesaid) until receipt of written order to do so.

SC-4.06 Delete Paragraphs 4.06.A and 4.06.B in their entirety and insert the following:

SC-4.06.A. In the preparation of the Drawings and Specifications, Engineer has not utilized any report or drawing related to a Hazardous Environmental Condition identified at the Site.

SC-4.06.B (Not Used)

SC- Article 5 Replace the entire article with the following:

Before performing any work, the Contractor shall procure and maintain, during the life of the Contract, insurance listed below. The policies of insurance shall be primary and written on forms acceptable to the Owner and placed with insurance carriers approved and licensed by the Insurance Department in the State of Florida and meet a minimum financial AM Best and Company rating of no less than A:VII. No changes are to be made to these specifications without prior written specific approval by the City.

1. The City of Venice is to be specifically included as an **ADDITIONAL INSURED**.
2. The City of Venice shall be named as Certificate Holder. *Please Note that the Certificate Holder should read as follows:*

The City of Venice 401  
W. Venice Avenue  
Venice, FL 34285

No City Division, Department, or individual name should appear on the certificate.  
**NO OTHER FORMAT WILL BE ACCEPTABLE.**

3. The "Acord" certification of insurance form shall be used.
4. Required Coverage
  - a) **Commercial General Liability**: including but not limited to bodily injury, property damage, contractual liability, products and completed operations, and personal injury with limits of not less than \$ 1,000,000 per occurrence, \$ 1,000,000 aggregate covering all work performed under this Contract. Include broad form property damage (provide insurance for damage to property under the care custody and control of the contractor)
  - b) **Business Auto Policy**: including bodily injury and property damage for all vehicles owned, leased, hired and non-owned vehicles with limits of not less than \$1,000,000 combined single limit covering all work performed under this Contract.

- c) **Workers Compensation:** Contractor will provide Workers Compensation Insurance on behalf of all employees, including sub-contractors, who are to provide a service under this Contract, as required under Florida Law, Chapter 440, and Employers Liability with limits of not less than \$100,000 per employee per accident; \$500,000 disease aggregate; and \$100,000 per employee per disease.
  
- d) **Installation Floater/Installation Builders' Risk-Property Coverage:** Policy to cover direct physical loss or damage to materials, supplies, machinery, and equipment being installed, constructed or rigged by the contractor in conjunction with its installation or construction. All items involved in the project including drainage/water sewer pipes, etc. (as included in description of project) need to be insured for the total completed replacement value. Coverage should include perils of fire, theft, vandalism, windstorm/hail, collapse and transit, sewer backup, testing, equipment breakdown, waterborne property. Coverage shall start when the items to be installed are transported to Owner premises and remain in place until the interest of the contractors ceases or the Owner accepts possession whichever comes first. Coverage should apply to owned property and non-owned property in the contractor's care, custody and control. The installation coverage forms shall provide coverage for building materials and supplies at the construction site, in transit to the site and similar property intended for the construction project at other locations as necessary or because of lack of storage space at the construction site. Coverage should apply on a Primary basis and should include a Waiver of Subrogation. Contractor should be responsible for any deductibles.

5. Policy Form:

- a) All policies required by this Contract, with the exception of Workers Compensation, or unless specific approval is given by the Owner, are to be written on an occurrence basis, shall name the City of Venice, its Elected Officials, Officers, Agents, Employees as additional insured as their interest may appear under this Contract. Insurer(s), with the exception of Workers Compensation, shall agree to waive all rights of subrogation against the City of Venice, its Elected Officials, Officers, Agents, and Employees.
  
- b) Insurance requirements itemized in this Contract, and required of the Contractor, shall be provided on behalf of all subcontractors to cover their operations performed under this Contract. The Contractor shall be held responsible for any modifications, deviations, or omissions in these insurance requirements as they apply to subcontractors.
  
- c) Each insurance policy required by this Contract shall:
  - (1) apply separately to each insured against whom claim is made and suit is brought, except with respect to limits of the insurer's liability;

- (2) be endorsed to state that coverage shall not be suspended, voided or canceled by either party except after thirty (30) calendar days prior written notice by certified mail, return receipt requested, has been given to the City of Venice's Director of Administrative Services.
- d) The Owner shall retain the right to review, at any time, coverage form, and amount of insurance.
  - e) The procuring of required policies of insurance shall not be construed to limit Contractor's liability nor to fulfill the indemnification provisions and requirements of this Contract.
  - f) The Contractor shall be solely responsible for payment of all premiums for insurance contributing to the satisfaction of this Contract and shall be solely responsible for the payment of any deductible and/or retention to which such policies are subject, whether or not the Owner is an insured under the policy. In the event that claims in excess of the insured amounts provided herein are filed by reason of operations under the contract, the amount excess of such claims, or any portion thereof, may be withheld from any payment due or to become due to the Contractor until such time the contractor shall furnish additional security covering such claims as may be determined by the Owner.
  - g) Claims Made Policies will be accepted for professional and hazardous materials and such other risks as are authorized by the Owner. All Claims Made Policies contributing to the satisfaction of the insurance requirements herein shall have an extended reporting period option or automatic coverage of not less than two years. If provided as an option, the Contractor agrees to purchase the extended reporting period on cancellation or termination unless a new policy is affected with a retroactive date, including at least the last policy year.
  - h) Certificates of Insurance evidencing Claims Made or Occurrence form coverage and conditions to this Contract, as well as the Owner's Bid Number and description of work, are to be furnished to the City's Director of Administrative Services, 401 West Venice Avenue, Venice, FL 34285, ten  
(10) business days prior to commencement of work and a minimum of thirty (30) calendar days prior to expiration of the insurance policy.
  - i) Notices of Accidents and Notices of Claims associated with work being performed under this Contract, shall be provided to the Contractor's insurance company and the City's Director of Administrative Services, as soon as practicable after notice to the insured.
  - j) All property losses shall be payable to, and adjusted with, the City.

SC-6.02.B Add new paragraphs immediately after Paragraph 6.02.B that are to read as follows:

SC-6.02.B.1 If it shall become absolutely necessary to perform Work at night or on Saturdays, Sundays, or legal holidays, written notice shall be submitted to Owner and Engineer at least 5 days in advance of the need for such Work. Owner will only consider the performance of such Work as can be performed satisfactorily under the conditions. Good lighting and all other necessary facilities for carrying out and observing the Work shall be provided and maintained where such Work is being performed at night.

SC-6.02.B.2 If Owner authorizes Work during other than regular working hours, Contractor shall reimburse Owner for all Owner's additional costs associated with such Work, including, but not necessarily limited to, the overtime costs for Owner's, Engineer's, and Resident Project Representative's personnel on the Site and other additional costs assessed against or incurred by the Owner. At Owner's option, such additional costs may either be deducted from Contractor's progress payments or deducted from the retained amount prior to release following Substantial Completion.

SC-6.07.B Change the first sentence of Paragraph 6.07.B by replacing the term "Owner and Engineer" with the term "Owner, Engineer, and Resident Project Representative".

SC-6.11.A.3. Change the first sentence of Paragraph 6.11.A.3. by replacing the term "Owner and Engineer" with the term "Owner, Engineer, and Resident Project Representative".

SC-6.12 Add a new paragraph immediately after Paragraph 6.12.A, that is to read as follows:

SC-6.12.B Contractor will be required to review with Engineer the status of record documents in connection with the Engineer's review of an Application for Payment. Failure to maintain record documents current may be just cause for Engineer to recommend withholding of payments for Work performed.

SC-6.15 Add a new paragraph immediately after Paragraph 6.15.A that is to read as follows:

SC-6.15.B Contractor shall be responsible for coordinating exchange of material safety data sheets or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with all Laws and Regulations. Contractor shall provide a centralized location for the maintenance of the material safety data sheets or other hazard communication information required to be made available by any

employer on the Site. Location of the material safety data sheets or other hazard communication information shall be readily accessible to the employees of employers on the Site.

SC-6.17 Add the following new paragraphs immediately after Paragraph 6.17.E that are to read as follows:

SC-6.17.F Contractor shall furnish required submittals with sufficient information and accuracy to obtain required approval or acceptance of submittal with no more than two (2) submittals (initial submittal plus one re-submittal). Engineer will record Engineer's time for reviewing subsequent submittals of Shop Drawings, Samples, or other submittals or items requiring approval or acceptance, and Contractor shall reimburse Owner for Engineer's charges for such time.

SC-6.19.A Supplement Paragraph 6.19.A by adding, after the term, "Engineer" in the second sentence, the term "and Resident Project Representative".

SC-6.19.C.1. Supplement Paragraph 6.19.C.1. by adding, after the term, "Engineer" the term "or Resident Project Representative".

SC-6.20.A. Change the first sentence of Paragraph 6.20.A by replacing the term "Owner and Engineer" in the first sentence, with the term " , Owner, Engineer, and Resident Project Representative".

SC-6.20.B Change the first sentence of Paragraph 6.20.B by replacing the term "Owner or Engineer" with the term "Owner, Engineer or Resident Project Representative".

SC-7.03 Add a new paragraph immediately after Paragraph 7.02 that is to read as follows:

*SC-7.03 Separate Contractor Claims*

A. Should Contractor cause damage to the work or property of another contractor at the Site, or should any claim arising out of Contractor's performance of the Work at the Site be made by any other contractor against Contractor, Owner or Engineer or Resident Project Representative, Contractor, without involving any other party, shall either:

1. remedy the damage,
2. agree to compensate the other contractor for remedy of the damage,  
or
3. remedy the damage and attempt to settle with such other contractor by agreement, or otherwise resolve the dispute by arbitration or at law.

- B. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner, Engineer, Resident Project Representative, 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 directly, indirectly, or consequentially out of or relating to any claim or action, legal or equitable, brought by any other contractor against Owner or Engineer or Resident Project Representative to the extent said claim is based upon Contractor's performance of the Work.
  
- C. Should another contractor cause damage to the Work or property of Contractor at the Site or should the performance of work by any other contractor at the Site give rise to any other claim, Contractor shall not institute any action, legal or equitable, against Owner or Engineer or Resident Project Representative, or permit any action against any of them to be maintained and continued in its name or for its benefit in any court or before any arbiter which seeks to impose liability on or to recover damages from Owner or Engineer or Resident Project Representative on account of any such damage or claim.
  
- D. If Contractor is delayed at any time in performing or furnishing Work by any act or neglect of another contractor and Owner and Contractor are unable to agree as to the extent of any adjustment in Contract Times attributable thereto, Contractor may make a Claim therefore in accordance with Article 12. An extension of the Contract Times shall be Contractor's exclusive remedy with respect to Owner or Engineer or Resident Project Representative for any delay, disruption, interference, or hindrance caused by any other contractor.

SC-8.01.A. Amend paragraph 8.01.A. by adding after the term "Engineer" to words "or Resident Project Representative".

SC-9.03 Add a new paragraph immediately after Paragraph 9.03.A that is to read as follows:

SC-9.03.B Resident Project Representative (RPR) will be Owner's employee or agent at the Site, will act as directed by and under the supervision of the Owner, and will confer with the Owner and Engineer regarding RPR's actions. RPR's dealings in matters pertaining to the Work in general shall be with Engineer and Contractor keeping Owner advised as necessary. RPR's dealings with Subcontractors shall only be through or with the full knowledge and approval of Contractor. RPR shall generally communicate with Owner with the knowledge of the Engineer.

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

- f. Interpretation of Contract Documents: Report to Engineer when clarifications and interpretations of the Contract Documents are needed and transmit to Contractor clarifications and interpretations as issued by Engineer.
- g. Modifications: Consider and evaluate Contractor's suggestions for modifications to Drawings or Specifications and report with RPR's recommendations to Engineer. Transmit to Contractor decisions issued by Engineer.
- h. Records:
  - 1) Maintain at the Site orderly files for correspondence, reports of job conferences, Shop Drawings and Samples, and reproductions of original Contract Documents including all Addenda, Change Orders, Work Change Directives, Field Orders, additional Drawings issued subsequent to the execution of the Agreement, Engineer's clarifications and interpretations of the Contract Documents, progress reports, and other Project-related documents.
  - 2) Keep a record recording Contractor's hours, personnel and equipment on the Site, weather conditions, data relative to questions on Change Orders or changed conditions, list of visitors to the Site, daily activities, decisions, observations in general, and specific observations in more detail as in the case of observing test procedures; and send copies to Engineer.
  - 3) Record names, addresses, and telephone numbers of all Contractors, Subcontractors, and major Suppliers of materials and equipment.
- i. Reports:
  - 1) Furnish Engineer periodic reports as required of progress of the Work and of Contractor's compliance with the Progress Schedule and Schedule of Submittals.
  - 2) Consult with Engineer in advance of scheduled major tests, inspections, or start of important phases of the Work.
  - 3) Report immediately to Engineer and Owner upon the occurrence of any Site accident, any Hazardous Environmental Condition, emergencies or acts of God endangering the Work, or property damage by fire or other cause.
- j. Payment Requests: Review Applications for Payment with Contractor for compliance with the established procedure for their submission, and submit recommendations to Engineer, noting particularly the relationship of the payment requested to the Schedule of Values, Work completed, and materials and equipment delivered at the Site but not incorporated in the Work.
- k. Certificates, Maintenance and Operation Manuals: During the course of the Work, verify that certificates, maintenance and operation manuals, and other data required by the Specifications to be assembled and furnished by Contractor are applicable to the items actually

installed and in accordance with the Contract Documents, and have this material delivered to Engineer for review and forwarding to Owner prior to final payment for the Work.

1. Completion:
  - 1) Before Engineer issues a certificate of Substantial Completion, submit to Contractor a list of observed items requiring completion or correction.
  - 2) Observe whether Contractor has arranged for inspections required by Laws and Regulations, including but not limited to those to be performed by public authorities having jurisdiction over the Work.
  - 3) Conduct final inspection in the company of Engineer, Owner, and Contractor, and prepare a final list of items to be completed or corrected.
  - 4) Observe that all items on final list have been completed or corrected and make recommendations to Engineer concerning acceptance of the Work.
2. The RPR shall not:
  - a. Authorize any deviation from the Contract Documents or substitution of materials or equipment, including “or equal” items.
  - b. Exceed limitations of Engineer’s authority as set forth in the Contract Documents.
  - c. Undertake any of the responsibilities of Contractor, Subcontractors, or Contractor’s superintendent.
  - d. Advise on, issue directions relative to, or assume control over any aspect of the means, methods, techniques, sequences or procedures of construction, unless such advice or directions are specifically required by the Contract Documents.
  - e. Advise on, issue directions regarding, or assume control over safety precautions and programs in connection with the Work.
  - f. Accept Shop Drawing or Sample submittals from anyone other than Contractor.
  - g. Authorize Owner to occupy the Project in whole or in part.
  - h. Participate in specialized field or laboratory tests or inspections conducted by others except as specifically authorized by Engineer.

SC-9.08.A Change “30 days” in the last sentence to read “10 days”.

SC-10.05.B Delete paragraph B in its entirety and replace with the following:

Notice: Written notice stating the general nature of each Claim shall be delivered by the claimant to Engineer and the other party to the Contract promptly (but in no event later than 10 days) after the start of the event giving rise thereto. The responsibility to substantiate a Claim shall rest with the party making the Claim. Notice of the amount or extent of the Claim, with supporting data shall be delivered to the Engineer and the other party to the Contract within 30 days after

the start of such event (unless Engineer allows additional time for claimant to submit additional or more accurate data in support of such Claim). A Claim for an adjustment in Contract Price shall be prepared in accordance with the provisions of Paragraph 12.01.B. A Claim for an adjustment in Contract Times shall be prepared in accordance with the provisions of Paragraph 12.02.B. Each Claim shall be accompanied by claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant believes it is entitled as a result of said event. The opposing party shall submit any response to Engineer and the claimant within 30 days after receipt of the claimant's last submittal (unless Engineer allows additional time).

- SC-12.01.C Delete the semicolon at the end of GC 12.01.C.2.c, and add the following:
- provided, however, that on any subcontracted work the total maximum fee to be paid by Owner to Contractor under this Paragraph shall be no greater than 27 percent of the costs incurred by the Subcontractor who actually performs the work;
- SC-12.03.C. Change the first sentence of Paragraph 12.03.C by replacing the term "Owner and Engineer" in the first sentence, with the term "Owner, Engineer, and Resident Project Representative".
- SC-12.03.E. Change the first sentence of Paragraph 12.03.E by replacing the term "Owner and Engineer" in the first sentence, with the term "Owner, Engineer, and Resident Project Representative".
- SC-13.01.A. Change the first sentence of Paragraph 13.01.A. by replacing the term "Owner or Engineer" with the term "Owner, Engineer, or Resident Project Representative".
- SC-13.03.A. Change the first sentence of Paragraph 13.03.A. by replacing the term "Engineer" with the term "Engineer and Resident Project Representative".
- SC-13.03.B. Delete Paragraph 13.03.B. and subparagraphs in their entirety and replace with the following:
- B. Contractor shall employ and pay for the services of an independent testing laboratory to perform all inspections, tests, or approvals required by the Contract Documents.
- SC-13.04.A. Delete Paragraph 13.04.A. in its entirety and replace with the following:
- A. If any Work is covered contrary to the written request of Engineer or Resident Project Representative, it must, if requested by Engineer or Resident Project Representative, be uncovered for Engineer's or Resident Project Representative's observation and replaced at Contractor's expense.

SC-13.04.D. Change the words “If, the uncovered work is not found to be defective,” to read “Unless the Contractor was provided with prior written request not to cover the work, if the uncovered work is not found to be defective,”.

SC-14.02.A Add new paragraphs immediately after Paragraph 14.02.A.3 that are to read as follows:

SC-14.02.A.4. Owner shall make monthly progress payments on account of the Contract Price on the basis of Contractor's Applications for Payment as recommended by Engineer. Contractor's Applications for Payment will be due within 7 days after the last day of each month during performance of the Work. All progress payments will be on the basis of the progress of the Work measured by the Schedule of Values provided for in Paragraph 2.07.A of the General Conditions (and in the case of Unit Price Work, based on the number of units completed) or, in the event there is no Schedule of Values, as provided in the General Requirements. A progress payment will not be made whenever the value of the Work completed since the last previous progress payment is less than \$5,000.

1. Prior to Substantial Completion

- a. Progress payments will be made in the amount of up to 90 percent of the Work completed, (with the balance being retainage), less the aggregate of payments previously made and less such amounts as Engineer shall determine, or Owner may withhold, in accordance with Paragraph 14.02 of the General Conditions; and
- b. 90 percent of the cost of materials and equipment not incorporated in the Work but suitably stored (with the balance being retainage).

2. Upon Substantial Completion, Owner shall pay an amount sufficient to increase total payments to Contractor to 100 percent of the Work completed, less such amounts as Engineer shall determine in accordance with Paragraph 14.02.B.5 of the General Conditions and less 200 percent of Engineer’s estimate of the value of Work to be completed or corrected as shown on the tentative list of items to be completed or corrected attached to the certificate of Substantial Completion.

SC-14.02.C. Replace the existing paragraph with the following:

All payments to Contractor shall be made in accordance with Florida’s Local Government Prompt Payment Act.

SC-14.04.B. Change the terms “Owner, Contractor and Engineer” to read “Owner, Contractor, Engineer and Resident Project Representative”.

SC-14.07.C. Replace the existing paragraph with the following:

All payments to Contractor shall be made in accordance with Florida's Local Government Prompt Payment Act.

SC-16.01 Add new paragraphs immediately after Paragraph 16.01.A that are to read as follows:

SC-16.01.B Either Owner or Contractor may request mediation of any Claim submitted to Engineer for a decision under Paragraph 10.05 before such decision becomes final and binding. The mediation will be governed by the Construction Industry Mediation Rules of the American Arbitration Association in effect as of the Effective Date of the Agreement. The request for mediation shall be submitted in writing to the American Arbitration Association and the other party to the Contract. Timely submission of the request shall stay the effect of Paragraph 10.05.E.

SC-16.01.C Owner and Contractor shall participate in the mediation process in good faith. The process shall be concluded within 60 days of filing of the request. The date of termination of the mediation shall be determined by application of the mediation rules referenced above.

SC-16.01.D If the Claim is not resolved by mediation, Engineer's action under Paragraph 10.05.C or a denial pursuant to Paragraphs 10.05.C.3 or 10.05.D shall become final and binding 30 days after termination of the mediation unless, within that time period, Owner or Contractor,

1. elects in writing to demand arbitration of the Claim, pursuant to Paragraph SC-16.02, or
2. agrees with the other party to submit the Claim to another dispute resolution process.

SC-16.02 Add a new paragraph immediately after Paragraph 16.01 that is to read as follows:

SC-16.02 *Arbitration*

- A. All Claims or counter claims, disputes, or other matters in question between Owner and Contractor arising out of or relating to the Contract Documents or the breach thereof (except for Claims that have been waived by the making or acceptance of final payment as provided by Paragraph 14.09), including but not limited to those not resolved under the provisions of Paragraph SC-16.01.B and SC-16.01.C will be decided by arbitration in accordance with Construction Industry Arbitration Rules of the American Arbitration Association, subject to the conditions and limitations

of this Paragraph SC-16.02. This agreement to arbitrate and any other agreement or consent to arbitrate entered into will be specifically enforceable under the prevailing law of any court having jurisdiction.

- B. The demand for arbitration will be filed in writing with the other party to the Contract and with the selected arbitrator or arbitration provider, and a copy will be sent to Engineer for information. The demand for arbitration will be made within the 30-day period specified in Paragraph SC-16.01.D. and in all other cases within a reasonable time after the Claim or counter claim, dispute, or other matter in question has arisen, and in no event shall any such demand be made after the date when institution of legal or equitable proceedings based on such Claim or counter claim, dispute, or other matter in question would be barred by the applicable statute of limitations.
- C. No arbitration arising out of or relating to the Contract Documents shall include by consolidation, joinder, or in any other manner any individual or entity (including Engineer, Resident Project Representative, and the officers, directors, partners, employees, agents, or consultants of each and any of them) who is not party to this Contract unless:
  - 1. the inclusion of such other individual or entity is necessary if complete relief is to be afforded among those who are already parties to the arbitration; and
  - 2. such other individual or entity is substantially involved in a question of law or fact which is common to those who are already parties to the arbitration and which will arise in such proceedings, and
- D. The award rendered by the arbitrator(s) shall be:
  - 1. consistent with the agreement between the parties, and
  - 2. in writing, and shall include:
    - a. a concise breakdown of the award, and
    - b. a written explanation of the award specifically citing the Contract Document provisions deemed applicable and relied on in making the award.
- E. Subject to provisions of the Controlling Law relating to vacating or modifying an arbitration award, 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.

- F. The fees and expenses of the arbitrator(s) and any arbitration service shall be shared equally by Owner and Contractor.

SC-17.07 Add a new paragraph immediately after Paragraph 17.06 that is to read as follows:

*SC-17.07 Confidential Information*

- A. All Drawings, Specifications, technical data, and other information furnished to Contractor either by Owner or Engineer or developed by Contractor or others in connection with the Work are, and will remain, the property of Owner or Engineer, and shall not be copied or otherwise reproduced or used in any way except in connection with the Work, or disclosed to third parties or used in any manner detrimental to the interests of Owner or Engineer.
- B. The following information is not subject to the above confidentiality requirements:
  - 1. information in the public domain through no action of Contractor in breach of the Contract Documents; or
  - 2. information lawfully possessed by Contractor before receipt from Owner or Engineer; or
  - 3. information required to be disclosed by Laws or Regulations, or by a court or agency of competent jurisdiction. However, in the event Contractor shall be so required to disclose such information, Contractor shall, prior to disclosure, provide reasonable notice to Owner and Engineer, who shall have the right to interpose all objections Owner may have to the disclosure of such information.

SC-18 Add new Article immediately after Article 17, which is to read as follows:

ARTICLE SC-18 – STATUTORY REQUIREMENTS

SC-18.01 This Article contains portions of certain Laws or Regulations which, by provision of Laws or Regulations, are required to be included in the Contract Documents. The material included in this Article may not be complete or current. Contractor's obligation to comply with all Laws and Regulations applicable to the Work is set forth in Paragraph 6.09 of the General Conditions.

++ END OF SUPPLIMENTARY CONDITIONS ++

**SUPPLEMENTARY CONDITIONS (CONSTRUCTION)**

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Florida Department of Environmental Protection  
State Revolving Fund Program  
Supplementary Conditions  
for

Formally Advertised  
Construction Procurement

Revised July 2015

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ENVIRONMENTAL PROTECTION  
SUPPLEMENTARY CONDITIONS**

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## **FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION SUPPLEMENTARY CONDITIONS**

The intent of the Florida Department of Environmental Protection (FDEP) Supplementary Conditions is to complement and supplement other provisions of the Bidding Documents. However, if there is any conflict between the FDEP Supplementary Conditions and other provisions of the Bidding Documents, the FDEP Supplementary Conditions shall take precedence over the other provisions except when the other provisions are similar to, but more stringent than, the FDEP Supplementary Conditions. When other provisions of the Bidding Documents are similar to, but more stringent than, the FDEP Supplementary Conditions, the more stringent provisions shall apply.

### ARTICLE 1 - DEFINITIONS

Wherever used in these Supplementary Conditions (except in the appendices to these Supplementary Conditions), the following terms have the meanings indicated, which are applicable to both the singular and plural thereof.

- 1.1 Addendum - A written or graphic instrument that is issued prior to the opening of bids and that clarifies, corrects, or changes the Bidding Documents.
- 1.2 Agreement or Contract - The written agreement between the Owner and the Contractor covering the Work to be performed and furnished; these Supplementary Conditions and other Contract Documents are attached to the Agreement/Contract and made a part thereof as provided therein.
- 1.3 Bid - The offer or proposal of a bidder submitted on the prescribed form and setting forth the price(s) for the Work to be performed and furnished.
- 1.4 Bidder - Any person, firm, or corporation that submits a bid directly to the Owner.
- 1.5 Bidding Documents - The Advertisement for Bids or the Invitation to Bid, the Instructions to Bidders or the Information for Bidders, the Bid Form, the proposed Contract Documents, and all addenda.
- 1.6 Bond - An instrument of security.
- 1.7 Change Order - A document that is recommended by the Engineer and signed by the Contractor and the Owner; that authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Time; and that is issued on or after the Effective Date of the Agreement/Contract.
- 1.8 Contract Documents - The Agreement/Contract; the Contractor's Bid when attached as an exhibit to the Agreement/Contract; the Performance and Payment Bond(s); the General Conditions; the Supplementary Conditions (including these Supplementary Conditions); the Specifications (written technical descriptions of material, equipment, construction systems, standards, and workmanship as applied to the Work and certain administrative details applicable thereto); the Drawings (drawings that show the character and scope of the Work to be performed and furnished); all addenda that pertain to the Contract Documents; and all change orders.
- 1.9 Contract Time - The number of days or the date stated in the Contract Documents for completion of the Work.
- 1.10 Contractor - The person, firm, or corporation with whom or which the Owner enters into the Agreement/Contract.
- 1.11 Effective Date of the Agreement/Contract - The date indicated in the Agreement/Contract on which the Agreement/Contract becomes effective, or if no such date is indicated in the Agreement/Contract, the date on which the Agreement/Contract is signed and delivered by the last of the two parties to sign and deliver the Agreement/Contract.
- 1.12 Engineer - The person, firm, or corporation named as such in the Contract Documents.
- 1.13 Minority Business Enterprise (MBE) - A historically Black college or university or a business that is (a) certified as socially and economically disadvantaged by the Small Business Administration, (b) certified as an MBE by a state or federal agency, or (c) an independent business concern which is at least 51-percent owned and controlled by minority group members. (A minority group member is an individual who is a citizen of the United States and one of the following: [i] Black American; [ii] Hispanic American [with origins from Puerto Rico, Mexico, Cuba, or South or Central America]; [iii] Native American [American Indian, Eskimo, Aleut, or native Hawaiian]; or [iv] Asian-Pacific American

[with origins from Japan, China, the Philippines, Vietnam, Korea, Samoa, Guam, the U.S. Trust Territories of the Pacific, Northern Marianas, Laos, Cambodia, Taiwan, or the Indian Subcontinent].)

1.14 Notice to Proceed -The written notice given by the Owner to the Contractor fixing the date on which the Contract Time will commence to run and on which the Contractor shall start to perform its obligations under the Contract Documents.

1.15 Owner - The local government (municipality, county, district, or authority; or any agency thereof; or a combination of two or more of the foregoing acting jointly) with which the Florida Department of Environmental Protection (FDEP) may execute, or has executed, a State Revolving Fund loan agreement and for which the Work is to be provided.

1.16 Project - The total construction or facilities described in a State Revolving Fund loan agreement between the FDEP and the Owner, of which the Work to be provided under the Contract Documents may be the whole or a part.

1.17 Sponsor – The recipient of the State Revolving Fund loan agreement that provides funds for the project.

1.18 Subcontract - A direct contract between a subcontractor and the Contractor, or any other subcontractor at any tier, for the furnishing of goods (material and equipment) or the performance of services (including construction) necessary to complete the Work.

1.19 Subcontractor - A person, firm, or corporation having a direct contract with the Contractor, or any other subcontractor at any tier, for the furnishing of goods (material and equipment) or the performance of services (including construction) necessary to complete the Work.

1.20 Successful Bidder - The lowest responsive, responsible bidder to whom or which the Owner intends to award the Agreement/Contract.

1.21 Women's Business Enterprise (WBE) - A business that is (a) certified as a WBE by a state or federal agency or (b) an independent business concern which is at least 51-percent owned and controlled/operated by women. (Determination of whether a business is at least 51-percent owned by women shall be made without regard to community property laws [e.g., an otherwise qualified WBE that is 51-percent owned by a married woman in a community property state will not be disqualified because the married woman's husband has a 50-percent interest in the married woman's share of the business; similarly, a business that is 51-percent owned by a married man and 49-percent owned by women will not become a qualified WBE by virtue of the married man's wife having a 50-percent interest in the married man's share of the business].)

1.22 Work - The entire completed construction or the various separately identifiable parts thereof required to be performed and furnished under the Contract Documents; Work is the result of performing services, furnishing labor, furnishing material and equipment, and incorporating material and equipment into the construction as required by the Contract Documents.

## ARTICLE 2 - PRIVITY OF AGREEMENT/CONTRACT

2.1. The Owner expects to finance this Agreement/Contract with assistance from the FDEP, which administers a State Revolving Fund loan program supported in part with funds directly made available by grants from the United States Environmental Protection Agency (USEPA). Neither the State of Florida nor the United States (nor any of their departments, agencies, or employees) will be a party to this Agreement/Contract or any lower-tier subcontract.

## ARTICLE 3 - PROCUREMENT REQUIREMENTS

3.1. This Agreement/Contract and the Owner's solicitation and award of this Agreement/Contract are subject to requirements contained in Chapter 62-503 (Revolving Loan Program) and/or Chapter 62-552, Florida Administrative Code as applicable.

## ARTICLE 4 - RESOLUTION OF PROTESTS AND CLAIMS/DISPUTES

**Resolution of Protests Concerning the Owner's Solicitation and/or Award of this Agreement/Contract:**

4.1. Protests concerning the Owner's solicitation and/or award of this Agreement/Contract must be filed in writing with the Owner to be considered.

4.2. All timely written protests concerning the Owner's solicitation and/or award of this Agreement/Contract are to be resolved in accordance with the Owner's dispute resolution process. A copy of the ordinance(s), resolution(s), or written policy (policies) that set forth the Owner's dispute resolution process is included elsewhere in the Bidding Documents or is to be made available by the Owner upon request.

4.3. Neither the (FDEP) nor the USEPA will become a party to, or have any role in resolving, protests concerning the Owner's solicitation and/or award of this Agreement/Contract. Protest decisions made by the Owner cannot be appealed to the FDEP or the USEPA.

**Resolution of Claims and Disputes Between the Owner and the Contractor:**

4.4. Unless otherwise provided in the Contract Documents, all claims and disputes between the Owner and the Contractor arising out of, or relating to, the Contract Documents or the breach thereof are to be decided by arbitration (if the Owner and the Contractor mutually agree) or in a court of competent jurisdiction within the State of Florida.

4.5. Neither the FDEP nor the USEPA will become a party to, or have any role in resolving, claims and disputes between the Owner and the Contractor.

ARTICLE 5 - CHANGES TO THE BIDDING AND CONTRACT DOCUMENTS

5.1. All changes to the Bidding Documents made subsequent to the FDEP's acceptance of the Bidding Documents and prior to the opening of bids are to be documented via addendum (addenda) to the Bidding Documents; all changes to the Contract Documents made after the opening of bids are to be documented by change order(s) to the Contract Documents. The Owner shall submit all addenda and change orders to the FDEP.

ARTICLE 6 - BONDS AND INSURANCE

**Bid Guarantees:**

6.1. Each bidder's bid is to be accompanied by a bid guarantee made payable to the Owner in an amount at least equal to five percent of the bidder's maximum bid price and in the form of a certified check or bid bond.

**Performance and Payment Bond(s):**

6.2. The Contractor shall furnish a combined performance and payment bond in an amount at least equal to 100 percent of the Contract Price (or, if required elsewhere in the Contract Documents, the Contractor shall furnish separate performance and payment bonds, each in an amount at least equal to 100 percent of the Contract Price) as security for the faithful performance and payment of all the Contractor's obligations under the Contract Documents. This(these) bond(s) are to be delivered to the Owner by the Contractor along with the executed Agreement/Contract. The Owner shall forward a copy of this (these) bond(s) to the FDEP.

**Insurance:**

6.3. The Owner and/or the Contractor (as required elsewhere in the Contract Documents) shall purchase and maintain, during the period of construction, such liability insurance as is appropriate for the Work being performed and furnished and as will provide protection from claims that may arise out of, or result from, the Contractor's performance and furnishing of the Work (whether the Work is to be performed or furnished by the Contractor or any subcontractor at the Work site) and the Contractor's other obligations under the Contract Documents. This insurance is to include workers' compensation insurance, comprehensive general liability insurance, comprehensive automobile liability insurance, and contractual liability insurance applicable to the Contractor's indemnification obligations and is to be written for not less than the limits of liability and coverages determined by the Owner or required by law, whichever is greater.

6.4. The Owner and/or the Contractor (as required elsewhere in the Contract Documents) shall purchase and maintain, during the period of construction, property insurance upon the Work at the Work site in an amount equal to the full replacement cost of the Work or the full insurable value of the Work. This insurance is to include the interests of the Owner, the Contractor, and all subcontractors at the Work site (all of whom are to be listed as insured or additional insured parties); is to insure against the perils of fire and extended coverage; and is to include "all-risk" insurance for physical loss or damage due to theft, vandalism and malicious mischief, collapse, water damage, and/or all other risks against which coverage is obtainable.

6.5. Before any Work at the Work site is started, the Contractor shall deliver to the Owner certificates of insurance that the Contractor is required to purchase and maintain in accordance with Paragraphs 6.3 and 6.4 of this Article and other provisions of the Contract Documents, and the Owner shall deliver to the Contractor certificates of insurance that the Owner is required to purchase and maintain in accordance with Paragraphs 6.3 and 6.4 of this Article and other provisions of the Contract Documents.

#### **ARTICLE 7 - AWARD OF AGREEMENT/CONTRACT**

7.1. If this Agreement/Contract is awarded, it is to be awarded to the lowest responsive, responsible bidder. A fixed price (lump sum or unit price or both) agreement/contract is to be used. A clear explanation of the method of evaluating bids and the basis for awarding this Agreement/Contract are included elsewhere in the Bidding Documents. All bids may be rejected when in the best interest of the Owner. After the contract has been awarded, the Owner shall give the Contractor a notice to proceed fixing the date on which the Contract Time will commence to run. The Owner shall forward a copy of this notice to proceed to the FDEP.

#### **ARTICLE 8 - ITEMIZED CONSTRUCTION COST BREAKDOWN; CONSTRUCTION AND PAYMENT SCHEDULES**

8.1. The Contractor shall submit to the Owner, within ten calendar days after the Effective Date of this Agreement/Contract, an itemized construction cost breakdown and construction and payment schedules.

8.1.1. The itemized construction cost breakdown, or schedule of values, is to include quantities and prices of items aggregating the Contract Price and is to subdivide the Work into component parts in sufficient detail to serve as the basis for progress payments during construction. Such prices are to include an appropriate amount of overhead and profit applicable to each item of Work.

8.1.2. The construction, or progress, schedule is to indicate the Contractor's estimated starting and completion dates for the various stages of the Work and is to show both the projected cost of Work completed and the projected percentage of Work completed versus Contract Time.

8.1.3. The payment schedule is to show the Contractor's projected payments cumulatively by month.

#### **ARTICLE 9 – FDEP/USEPA ACCESS TO RECORDS AND PROJECT SITE**

9.1. Authorized representatives of the Owner, the FDEP, and the USEPA shall have access to, for the purpose of inspection, the Work site(s), any books, documents, papers, and records of the Contractor that are pertinent to this Agreement/Contract at any reasonable time. The Contractor shall retain all books, documents, papers, and records pertinent to this Agreement/Contract for a period of five years after receiving and accepting final payment under this Agreement/Contract.

#### **NOTE: ARTICLE 10 ONLY APPLIES TO FEDERAL CAP GRANT PROJECTS**

#### **ARTICLE 10 - DISADVANTAGED BUSINESS ENTERPRISES**

10.1 A goal of five percent of the Contract Price is established for Minority Business Enterprise (MBE) participation in the Work, and a goal of five percent of the Contract Price is established for Women's Business Enterprise (WBE) participation in the Work. If bidders or prospective contractors (including the Contractor) intend to let any lower-tier goods

or services (including construction) subcontracts for any portion of the Work, they shall physically include these percentage goals for MBE and WBE participation in all solicitations for subcontracts and shall take good faith efforts to assure that MBEs and WBEs are utilized, when possible, as sources of goods and services. Good faith efforts are to include the following:

- 10.1.1. Require Disadvantaged Business Enterprises (DBEs) are made aware of contracting opportunities to the fullest extent practicable through outreach and recruitment activities. For Indian Tribal, State and Local and Government recipients, this will include placing DBEs on solicitation lists and soliciting them whenever they are potential sources.
- 10.1.2. Make information on forthcoming opportunities available to DBEs and arrange time frames for contracts and establish delivery schedules, where the requirements permit, in a way that encourages and facilitates participation by DBEs in the competitive process. This includes, whenever possible, posting solicitations for bids or proposals for a minimum of 30 calendar days before the bid or proposal closing date.
- 10.1.3. Consider in the contracting process whether firms competing for large contracts could subcontract with DBEs. For Indian Tribal, State and local Government recipients, this will include dividing total requirements when economically feasible into smaller tasks or quantities to permit maximum participation by DBEs in the competitive process.
- 10.1.4. Encourage contracting with a consortium of DBEs when a contract is too large for one of these firms to handle individually.
- 10.1.5. Use the services and assistance of the Small Business Administration and the Minority Business Development Agency of the Department of Commerce.
- 10.1.6. If the prime contractor awards subcontracts, require the prime contractor to take the steps in paragraphs 10.1.1 through 10.1.5 of this section.

10.2. Within ten calendar days after being notified of being the apparent Successful Bidder, the apparent Successful Bidder shall submit to the Owner documentation of the affirmative steps it has taken to utilize Minority and Women's Business Enterprises (MBEs and WBEs) in the Work and documentation of its intended use of MBEs and WBEs in the Work. The Owner shall keep this documentation on file and shall forward to the FDEP a copy of the apparent Successful Bidder's documentation concerning its intended use of MBEs and WBEs in the Work.

#### ARTICLE 11 - DEBARMENT AND SUSPENSION (EXECUTIVE ORDER 12549)

##### **Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion - Lower Tier Covered Transactions**

11.1. The bidder certifies, by submission of this proposal, 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.

11.2. Where the bidder is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

11.3. The bidder also certifies that it and its principals:

11.3.1. 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 anti-trust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

11.3.2. 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 11.3.1 of this certification; and

11.3.3. Have not within a three-year period preceding this proposal had one or more public transactions (federal, state or local) terminated for cause or default. Where the bidder is unable to certify to any of the above, such owner shall attach an explanation to this proposal.

11.3.4. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the federal government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

11.3.5. The bidder shall incorporate the foregoing requirements 11.1 through 11.3 in all subcontracts.

## ARTICLE 12 - EQUAL EMPLOYMENT OPPORTUNITY (EXECUTIVE ORDER 11246)

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

12.1.1. The Offeror's or Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Specifications" set forth herein.

12.1.2. 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 Florida, are as follows:

Goal for female participation: 6.9 percent statewide

Goal for minority participation: (See Appendix B at FDEP-20 for goals for each county)

These goals are applicable to all the Contractor's construction work (whether or not it is federal or federally assisted) performed in the covered area. If the contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical 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 the 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. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and 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.

12.1.3. 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 of the subcontractor; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the subcontract is to be performed.

12.1.4. As used in this Notice, and in the contract resulting from this solicitation, the "covered area" is the State of Florida.

12.1.5. Contractors shall incorporate the foregoing requirements in all subcontracts.

### **12.2. Equal Opportunity Clause** (Applicable to contracts/subcontracts exceeding \$10,000)

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

12.2.1. The Contractor shall not discriminate against any employee or applicant for employment because of race, color, religion, sex, 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, 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.

12.2.2. The Contractor shall post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause. The notice can be obtained online at [http://www.eeoc.gov/employers/upload/eeoc\\_self\\_print\\_poster.pdf](http://www.eeoc.gov/employers/upload/eeoc_self_print_poster.pdf). The Contractor shall state that all qualified applicants be considered without regard to race, color, religion, sex or national origin.

12.2.3. The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive considerations for employment without regard to race, color, religion, sex, or national origin.

12.2.4. 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 advising the said labor union or workers' representatives of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

12.2.5. The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

12.2.6. The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

12.2.7. In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

12.2.8. The contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs 12.2.1 through 12.2.8 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 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 the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance: Provided, however, that in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

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

12.3.1. 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 Islands); 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).

12.3.2. 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.

12.3.3. 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.

12.3.4. The Contractor shall implement the specific affirmative action standards provided in paragraphs 7a 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 geographical area where the work 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.

12.3.5. 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.

12.3.6. 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.

12.3.7. 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 therefore, 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 area 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 12.3.7b 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 onsite 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 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 Part 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.

12.3.8. Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations (12.3.7a through 12.3.7p). 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 7a 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.

12.3.9. A single goal for minorities and a 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).

12.3.10. 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.

12.3.11. The Contractor shall not enter into any Subcontract with any person or firm debarred from Government contracts pursuant to Executive Order 11246.

12.3.12. The Contractor shall carry out such 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.

12.3.13. The Contractor, in fulfilling its obligation under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph 7 of these specifications, so as to achieve maximum results from its efforts 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.

12.3.14. 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.

12.3.15. Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or 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).

12.4. Pursuant to 41 CFR 60-1.7, if the price of this bid exceeds \$10,000, the bidder, by signing and submitting this proposal, certifies the following:

12.4.1. Affirmative action programs pursuant to 41 CFR 60-2 have been developed and are on file;

12.4.2. Documentation of a previous contract or subcontract subject to the equal opportunity clause is available;

12.4.3. All reports due under the applicable filing requirements have been filed with the Joint Reporting Committee, the Deputy Assistant Secretary or the Equal Employment Opportunity Commission; and

12.4.4. Each prospective construction subcontractor that may be awarded a lower-tier construction subcontract with a price exceeding \$10,000 shall meet the above requirements 12.4.1 through 12.4.3.

12.5. Pursuant to 41 CFR 60-1.8, if the price of this bid exceeds \$10,000, the bidder, by signing and submitting this proposal, certifies the following:

12.5.1. That he/she does not maintain or provide for his/her employees any segregated facility at any of his/her establishments;

12.5.2. That he/she does not permit employees to perform their services at any location, under his/her control, where segregated facilities are maintained;

12.5.3. That he/she will not maintain or provide for employees any segregated facilities at any of his/her establishments;

12.5.4. That he/she will not permit employees to perform their services at any location under his/her control where segregated facilities are maintained;

12.5.5. That a breach of this certification is violation of the Equal Opportunity Clause of this contract; and

12.5.6. That he/she 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, and that he will retain such certifications in his/her files.

As used in this certification, the term "segregated facilities" means any waiting rooms, work eating areas, time clocks, locker rooms, and other storage or dressing areas, transportation and housing facilities provided for employees which are in fact segregated on the basis of race, color, religion, or otherwise.

12.6. If the price of this Agreement/Contract exceeds \$10,000, the Owner shall give written notice to the Director of the Office of Federal Contract Compliance Programs within ten working days of award of this Agreement/Contract. The notice is to include the name, address, and telephone number of the Contractor; the employer identification number of the Contractor; the dollar amount of this Agreement/Contract; the estimated starting and completion dates of this Agreement/Contract; the number of this Agreement/Contract; and the geographical area in which the Work is to be performed.

12.7. If the price of this Agreement/Contract equals or exceeds \$50,000 and if the Contractor has 50 or more employees, the Contractor shall electronically file Standard Form 100 (EEO-1) online at <https://egov.eeoc.gov/eo1/eo1.jsp> within 30 calendar days after the award of this Agreement/Contract, unless the Contractor has submitted such a report within 12 months preceding the date of award of this Agreement/Contract. In addition, the Contractor shall ensure that each construction subcontractor having 50 or more employees and a lower-tier construction subcontract with a price equaling or exceeding \$50,000 also electronically files this form within 30 calendar days after the award to it of the lower-tier construction subcontract, unless the construction subcontractor has submitted such a report within 12 months preceding the date of award of the lower-tier construction subcontract.

ARTICLE 13 - IMMIGRATION REFORM AND CONTROL ACT OF 1986 (STATE OF FLORIDA EXECUTIVE ORDER 11-116)

The Immigration Reform and Control Act of 1986 prohibits employers from knowingly hiring illegal workers. The Contractor shall only employ individuals who may legally work in the United States – either U.S. citizens or foreign citizens who are authorized to work in the U.S. The Contractor shall use the U.S. Department of Homeland Security’s E-Verify Employment Eligibility Verification system (<http://www.uscis.gov/portal/site/uscis>) to verify the employment eligibility of:

- all new employees, during the term of this Agreement, to perform employment duties within Florida; and,
- all new employees (including subcontractors and subrecipients) assigned by the Contractor to perform work pursuant to this Agreement.

The Contractor shall include this provision in all subcontracts/subgrants it enters into for the performance of work under this Agreement.

ARTICLE 14 – ENVIRONMENTAL COMPLIANCE

The Contractor, and all subcontractors at any tier, shall comply with all applicable standards, orders, or requirements issued under Section 306 of the Clean Air Act (42 U.S.C. 1857[h]), Section 508 of the Clean Water Act (33 U.S.C. 1368), Executive Order 11738 (Administration of the Clean Air Act and the Federal Water Pollution Control Act with Respect to Federal Contracts, Grants, or Loans), and 40 CFR Part 15.

ARTICLE 15 – FEDERAL LABOR STANDARDS PROVISION

Contracts being constructed with assistance from the State Revolving Fund Program are currently required to comply with the Federal Labor Standards Provisions as provided in Appendix C. Signing Appendix A certifies compliance with these provisions.

ARTICLE 16 – AMERICAN IRON AND STEEL PROVISION

Contracts being constructed with assistance from the State Revolving Fund Program are currently required to comply with The American Iron and Steel Provision as provided in Appendix D. Signing Appendix A certifies compliance with these provisions.

ARTICLE 17 - PROHIBITED LOCAL GOVERNMENT CONSTRUCTION PREFERENCES

- A. Pursuant to Section 255.0991, F.S., for a competitive solicitation for construction services in which 50 percent or more of the cost will be paid from state-appropriated funds which have been appropriated at the time of the competitive solicitation, a state, college, county, municipality, school district, or other political subdivision of the state may not use a local ordinance or regulation that provides a preference based upon:
1. The contractor’s maintaining an office or place of business within a particular local jurisdiction;
  2. The contractor’s hiring employees or subcontractors from within a particular local jurisdiction; or
  3. The contractor’s prior payment of local taxes, assessments, or duties within a particular local jurisdiction.
- B. For any competitive solicitation that meets the criteria in Paragraph A., a state college, county, municipality, school district, or other political subdivision of the state shall disclose in the solicitation document that any applicable local ordinance or regulation does not include any preference that is prohibited by Paragraph A.

**APPENDIX A TO THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION  
SUPPLEMENTARY CONDITIONS**

**CERTIFICATION OF COMPLIANCE WITH THE FLORIDA DEPARTMENT OF  
ENVIRONMENTAL PROTECTION SUPPLEMENTARY CONDITIONS**

This certification relates to a construction contract proposed by \_\_\_\_\_,  
(insert the name of the Owner)

which expects to finance the proposed construction contract with assistance from the Florida Department of Environmental Protection (which administers a State Revolving Fund loan program supported in part with funds directly made available by grants from the United States Environmental Protection Agency). I am the undersigned prospective construction contractor or subcontractor.

I certify that I have read the Florida Department of Environmental Supplementary Conditions and agree to incorporate the following articles into the bid and/or contract:

- ARTICLE 11 DEBARMENT AND SUSPENSION (EXECUTIVE ORDER 12549)
- ARTICLE 12 EQUAL EMPLOYMENT OPPORTUNITY (EXECUTIVE ORDER 11246)
- ARTICLE 13 IMMIGRATION REFORM AND CONTROL ACT OF (STATE OF FLORIDA EXECUTIVE ORDER 11-116)
- ARTICLE 14 ENVIRONMENTAL COMPLIANCE
- ARTICLE 15 FEDERAL LABOR STANDARDS PROVISION
- ARTICLE 16 AMERICAN IRON AND STEEL PROVISION

I agree that I will obtain identical certifications from prospective lower-tier construction subcontractors prior to the award of any lower-tier construction subcontracts with a price exceeding \$10,000. I also agree that I will retain such certifications in my files.

\_\_\_\_\_  
(Signature of Authorized Official) (Date)

\_\_\_\_\_  
(Name and Title of Authorized Official [Print or Type])

\_\_\_\_\_  
(Name of Prospective Construction Contractor or Subcontractor [Print or Type])

\_\_\_\_\_  
(Address and Telephone Number of Prospective Construction Contractor or Subcontractor [Print or Type])

\_\_\_\_\_  
(Employer Identification Number of Prospective Construction Contractor or Subcontractor)

**APPENDIX B TO THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION  
SUPPLEMENTARY CONDITIONS**

**GOALS AND TIMETABLES FOR MINORITIES AND FEMALES**

[Note: These goals and timetables are the goals and timetables referred to in Paragraph 2 of the "Notice of Requirement for Affirmative Action to Ensure Equal Employment Opportunity (Executive Order 11246)"; these goals and timetables are to be included in all FDEP assisted construction contracts and subcontracts with a price exceeding \$10,000 and in all solicitations for such contracts and subcontracts.]

The following goals and timetables for female utilization shall be included in all federal and federally assisted construction contracts and subcontracts in excess of \$10,000. The goals are applicable to the contractor's aggregate on-site construction workforce whether or not part of that workforce is performing work on a federal or federally assisted construction contract or subcontract.

Area covered: Goals for Women apply nationwide.

Goals and Timetables

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Timetable	Goals (percent)
Indefinite	6.9

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Goals for minority utilization can be found in the Department of Labor's Technical Assistance Guide for Federal Construction Contractors (May 2009), available on the internet at <http://www.dol.gov/ofccp/TAGuides/consttag.pdf>. These goals shall be included for each craft and trade in all federal or federally assisted construction contracts and subcontracts in excess of \$10,000 to be performed in the respective geographical areas. The goals are applicable to each nonexempt contractor's total onsite construction workforce, regardless of whether or not part of that workforce is performing work on a federal, federally assisted or non-federally related project, contract or subcontract.

Construction contractors which are participating in an approved Hometown Plan (see 41 CFR 60-4.5) are required to comply with the goals of the Hometown Plan with regard to construction work they perform in the area covered by the Hometown Plan. With regard to all their other covered construction work, such contractors are required to comply with the applicable SMSA or EA goal contained in this Appendix.

**APPENDIX C**  
**TO THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION**  
**SUPPLEMENTARY CONDITIONS**

**Davis-Bacon Requirements**

**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.

**1 Minimum Wages.**

(i) 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 Part 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 Part 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.

(ii) (a) The sponsor, on behalf of EPA, shall require that any class of laborers or mechanics, including helpers, 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. The FDEP shall approve a request for 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.

(b) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the sponsor(s) 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 the sponsor to the FDEP. The FDEP will transmit the request to the Administrator of the Wage and Hour Division, employment Standards Administration, U. S. Department of Labor. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional

classification action within 30 days of receipt and so advise the FDEP or will notify FEDP within the 30-day period that additional time is necessary. (Approved by the Office of Management and Budget under OMB control number 1215-0140.)

(c) In the event that the Contractor, the laborers or mechanics to be employed in the Classification or their representatives, and the sponsor do not agree on the proposed classification and wage rate (including the amount designed for fringe benefits, where appropriate), the FDEP shall refer the request and the local wage determination, including the views of all interested parties and the recommendation of FDEP, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt of the request and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary. (Approved by the Office of Management and Budget under OMB Control Number 1215-0140.)

(d) The wage rate (including fringe benefits where appropriate) determined pursuant to subparagraphs (1)(b) or (c) 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.

(iii) 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.

(iv) 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.**

The sponsor shall, upon written request of the EPA or 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, EPA 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.

## **3. Payrolls and Basic Records.**

(i) Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and 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).

(ii) (a) The contractor shall submit weekly for each week in which any contract work is performed, a copy of all payrolls to the sponsor. Such documentation shall be available upon request by FDEP. As to each payroll copy received, the sponsor shall provide a certification that the project is in compliance with the requirements of 29 CFR 5.5(a)(1) with each disbursement request. 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), except that full social security numbers and home addresses shall not be included on the weekly payrolls. Instead, the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site <http://www.dol.gov/whd/forms/wh347instr.htm> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current addresses of each covered worker, and shall provide them upon request to the sponsor for transmission to the FDEP or EPA if requested by EPA, the FDEP, the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the sponsor. (Approved by the Office of Management and Budget under OMB Control Number 1215-0149).

(b) 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 provided under 29 CFR Part 5.5(a)(3)(ii), the appropriate information is being 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.

(c) 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(ii)(b) of this section.

(d) 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.

(iii) The contractor or subcontractor shall make the records required under paragraph A.3(I) of this section available for inspection, copying, or transcription by authorized representatives of the FDEP 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, the FDEP may, after written notice to the contractor, or sponsor, 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. 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, the Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, 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 Office of Apprenticeship Training, Employer and Labor Services, 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 Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, 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, the 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 EPA determines may be appropriate, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor 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 Department of Labor 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 the sponsor, FDEP, EPA, the U. S. Department of Labor, or the employees or their representatives.

## **10. Certification of Eligibility.**

(i) 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 EPA contracts or participate in EPA programs pursuant to Executive Order 12549.

(ii) 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 EPA contracts or participate in EPA programs pursuant to Executive Order 12549.

(iii) The penalty for making false statements is prescribed in the U. S. Criminal Code, 18 U. S. C. 1001. Additionally, U. S. Criminal Code, Section 1010, Title 18, U. S. C., 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.**

**A.** 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.** The sponsor shall insert the following clauses set forth in paragraphs B.(1), (2), (3), and (4) of this section in full in any contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by item 3 above or 29 CFR 4.6. 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. The sponsor, upon written request of the FDEP or an authorized representative of the Department of Labor, may 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 contract, 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.

## **12. 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 establishes 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 U.S. Department of Labor (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 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.

## APPENDIX D TO THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION SUPPLEMENTARY CONDITIONS

### American Iron and Steel Requirement

The Contractor acknowledges to and for the benefit of the \_\_\_\_\_ (“Owner”) and the State of Florida (the “State”) that it understands that iron and steel products to be installed as a part of this contract must be in compliance with the requirements in H.R. 3547, “Consolidated Appropriations Act, 2014,” (Appropriations Act). H.R. 3547 includes the following language in Division G, Title IV, Sec. 436, under the heading, “Use of American Iron and Steel,”:

(a) (1) None of the funds made available by a State water pollution control revolving fund as authorized by title VI of the Federal Water Pollution Control Act (33 U.S.C. 1381 et seq.) or made available by a drinking water treatment revolving loan fund as authorized by section 1452 of the Safe Drinking Water Act (42 U.S.C. 300j-12) shall be used for a project for the construction, alteration, maintenance, or repair of a public water system or treatment works unless all of the iron and steel products used in the project are produced in the United States.

(2) In this section, the term “iron and steel products” means the following products made primarily of iron or steel: lined or unlined pipes and fittings, manhole covers and other municipal castings, hydrants, tanks, flanges, pipe clamps and restraints, valves, structural steel, reinforced precast concrete, and construction materials.

(b) Subsection (a) shall not apply in any case or category of cases in which the Administrator of the Environmental Protection Agency (in this section referred to as the “Administrator”) finds that--

- (1) applying subsection (a) would be inconsistent with the public interest;
- (2) iron and steel products are not produced in the United States in sufficient and reasonably available quantities and of a satisfactory quality; or
- (3) inclusion of iron and steel products produced in the United States will increase the cost of the overall project by more than 25 percent.

(c) If the Administrator receives a request for a waiver under this section, the Administrator shall make available to the public on an informal basis a copy of the request and information available to the Administrator concerning the request, and shall allow for informal public input on the request for at least 15 days prior to making a finding based on the request. The Administrator shall make the request and accompanying information available by electronic means, including on the official public Internet Web site of the Environmental Protection Agency.

(d) This section shall be applied in a manner consistent with United States obligations under international agreements.

Notwithstanding any other provision of this Agreement, any failure to comply with this paragraph by the Contractor shall permit the Purchaser or State to recover as damages against the Contractor any loss, expense, or cost (including without limitation attorney’s fees) incurred by the Purchaser or State resulting from any such failure (including without limitation any impairment or loss of funding, whether in whole or in part, from the State or any damages owed to the State by the Purchaser). While the Contractor has no direct contractual privity with the State, as a lender to the Purchaser for the funding of its project, the Purchaser and the Contractor agree that the State is a third-party beneficiary and neither this paragraph (nor any other provision of this Agreement necessary to give this paragraph force or effect) shall be amended or waived without the prior written consent of the State.

For waivers to these requirements based on (2)(b) above, contact Sheryl Parsons at USEPA Region IV. She can be reached by phone at (404) 562-9337.

## Appendix E

General Decision Number: FL160230 01/08/2016 FL230

Superseded General Decision Number: FL20150230

State: Florida

Construction Type: Highway

County: Sarasota County in Florida.

### **HIGHWAY CONSTRUCTION PROJECTS**

Note: Executive Order (EO) 13658 establishes an hourly minimum wage of \$10.15 for 2016 that applies to all contracts subject to the Davis-Bacon Act for which the solicitation is 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 \$10.15 (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract. The EO minimum wage rate will be adjusted annually. Additional information on contractor requirements and worker protections under the EO is available at [www.dol.gov/whd/govcontracts](http://www.dol.gov/whd/govcontracts).

Modification Number  
0

Publication Date  
01/08/2016

#### **\*SULF2013-048 08/19/2013**

	Rates	Fringes
CARPENTER, Includes Form Work.....	\$ 8.00	0.00
CEMENT MASON/CONCRETE FINISHER.....	\$13.37	0.00
ELECTRICIAN.....	\$21.80	0.00
HIGHWAY/PARKING LOT STRIPING: Operator (Striping Machine).....	\$16.79	0.00
HIGHWAY/PARKING LOT STRIPING: Painter.....	\$12.13	0.00
INSTALLER – GUARDRAIL.....	\$11.94	0.28
IRONWORKER, ORNAMENTAL.....	\$13.48	0.00
IRONWORKINR, REINFORCING.....	\$16.39	0.00
IRONWORKER, STRUCTURAL.....	\$16.42	0.00
LABORER (Traffic Control Specialist).....	\$12.77	2.23
LABORER: Asphalt, Includes Raker, Shoveler, Spreader and Distributor.....	\$13.89	0.00
LABORER: Common or General.....	\$11.03	0.29
LABORER: Concrete Saw (Hand Held/Walk Behind).....	\$11.71	0.00
LABORER: Flagger.....	\$11.77	0.00
LABORER: Grade Checker.....	\$14.56	0.00
LABORER: Mason Tender – Cement/Concrete.....	\$12.93	0.00
LABORER: Pipelayer.....	\$13.32	0.29
OPERATOR: Backhoe/Excavator/Trackhoe.....	\$15.89	0.36

	Rates	Fringes
OPERATOR: Bobcat/Skid Steer/Skid Loader.....	\$12.88	0.00
OPERATOR: Broom/Sweeper.....	\$13.69	0.00
OPERATOR: Bulldozer.....	\$16.79	0.00
OPERATOR: Concrete Finishing Machine.....	\$15.44	0.00
OPERATOR: Crane.....	\$21.69	0.00
OPERATOR: Curb Machine.....	\$19.67	0.00
OPERATOR: Drill.....	\$14.78	0.00
OPERATOR: Forklift.....	\$12.58	0.00
OPERATOR: Gradall.....	\$14.71	0.00
OPERATOR: Grader/Blade.....	\$18.28	0.00
OPERATOR: Loader.....	\$14.95	0.00
OPERATOR: Mechanic.....	\$19.49	0.00
OPERATOR: Milling Machine.....	\$16.09	0.00
OPERATOR: Oiler.....	\$17.31	0.00
OPERATOR: Paver (Asphalt, Aggregate, and Concrete).....	\$18.01	0.00
OPERATOR: Piledriver.....	\$17.23	0.00
OPERATOR: Post Driver (Gaurdrail/Fences).....	\$19.35	0.00
OPERATOR: Roller.....	\$14.59	0.00
OPERATOR: Scraper.....	\$11.74	0.00
OPERATOR: Screed.....	\$17.05	0.00
OPERATOR: Tractor.....	\$13.77	0.00
OPERATOR: Trencher.....	\$16.07	0.66
PAINTER: Spray.....	\$16.38	0.00
TRUCK DRIVER: Dump Truck.....	\$12.85	0.00
TRUCK DRIVER: Flatbed Truck.....	\$14.13	0.00
TRUCK DRIVER: Lowboy Truck.....	\$18.29	0.00
TRUCK DRIVER: Slurry Truck.....	\$11.96	0.00
TRUCK DRIVER: Water Truck.....	\$14.88	0.00

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

**Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only a 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.

+ + END OF GENERAL DECISION + +

Appendix F

General Decision Number: FL160176 07/22/2016 FL176

Superseded General Decision Number: FL20150176

State: Florida

Construction Type: Heavy

County: Sarasota County in Florida.

HEAVY CONSTRUCTION PROJECTS (Including Sewer and Water Lines)

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.15 for calendar year 2016 applies to all contracts subject to the Davis-Bacon Act for which the 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 \$10.15 (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 2016. The EO minimum wage rate will be adjusted annually. Additional information on contractor requirements and worker protections under the EO is available at [www.dol.gov/whd/govcontracts](http://www.dol.gov/whd/govcontracts).

Modification Number	Publication Date
0	01/08/2016
1	01/15/2016
2	04/15/2016
3	07/22/2016

ELEC0915-003 12/07/2015

	Rates	Fringes
ELECTRICIAN.....	\$ 26.53	10.07

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ENGI0925-010 06/01/2013

	Rates	Fringes
POWER EQUIPMENT OPERATOR: Crawler Cranes; Truck Cranes; Pile Driver Cranes; Rough Terrain		

FL176 Wage Decision Heavy Inc Water & Sewer 7-22-16

Cranes; and Any Crane not otherwise described below...	\$ 29.61	11.50
Drill.....	\$ 29.61	11.50
Hydraulic Cranes Rated 100 Tons or Above but Less Than 250 Tons; and Lattice Boom Cranes Less Than 150 Tons if not described below.	\$ 30.61	11.50
Lattice Boom Cranes Rated at 150 Tons or Above; Friction Cranes of Any Size; Mobile Tower Cranes or Luffing Boom Cranes of Any Size; Electric Tower Cranes; Hydraulic Cranes Rated at 250 Tons or Above; and Any Crane Equipped with 300 Foot or More of Any Boom Combination.....	\$ 31.61	11.50
Oiler.....	\$ 22.91	11.50

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 \* IRON0397-006 07/01/2016

	Rates	Fringes
IRONWORKER, STRUCTURAL.....	\$ 29.10	15.39

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 LAB00517-002 05/01/2014

	Rates	Fringes
LABORER: Grade Checker.....	\$ 18.35	6.45

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 PAIN0088-008 08/01/2014

	Rates	Fringes
PAINTER: Brush, Roller and Spray.....	\$ 19.50	8.83

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 SUFL2009-172 06/24/2009

	Rates	Fringes
CARPENTER.....	\$ 14.95	2.92
CEMENT MASON/CONCRETE FINISHER...	\$ 14.77	3.50

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LABORER: Common or General.....	\$ 9.50	1.69
LABORER: Landscape.....	\$ 7.25	0.00
LABORER: Pipelayer.....	\$ 13.75	2.06
LABORER: Power Tool Operator (Hand Held Drills/Saws, Jackhammer and Power Saws Only).....	\$ 10.63	2.20
OPERATOR: Asphalt Paver.....	\$ 11.59	0.00
OPERATOR: Backhoe Loader Combo.....	\$ 16.10	2.44
OPERATOR: Backhoe/Excavator.....	\$ 15.00	0.52
OPERATOR: Bulldozer.....	\$ 17.00	0.00
OPERATOR: Grader/Blade.....	\$ 16.00	2.84
OPERATOR: Loader.....	\$ 14.75	0.00
OPERATOR: Mechanic.....	\$ 14.32	0.00
OPERATOR: Roller.....	\$ 10.76	0.00
OPERATOR: Scraper.....	\$ 11.00	1.74
OPERATOR: Trackhoe.....	\$ 20.92	5.50
OPERATOR: Tractor.....	\$ 10.54	0.00
TRUCK DRIVER, Includes Dump Truck.....	\$ 11.00	0.00
TRUCK DRIVER: Lowboy Truck.....	\$ 12.73	0.00
TRUCK DRIVER: Off the Road Truck.....	\$ 12.21	1.97

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

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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)).

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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.

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#### 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

FL176 Wage Decision Heavy Inc Water & Sewer 7-22-16  
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

**SECTION 01001  
INDEX OF PLANS**

**PART 1 – GENERAL**

The Bid Set plans bearing the general title of Water Main Replacement Program – Phase 4 and dated August 2016, are included with, and form a part of, the Contract Documents for this Project.

SHEET NO.	DESCRIPTION
G0.00	COVER SHEET
G1.00	LEGEND, ABBREVIATIONS AND CITY STANDARD NOTES
G1.01	GENERAL NOTES
G1.02	STORMWATER POLLUTION PREVENTION PLAN (SWPPP)
C1.00	KEY PLAN
C1.01	NORTH – EXISTING WATERMAIN ABANDONMENT SITE PLAN
C1.02	SOUTH – EXISTING WATERMAIN ABANDONMENT SITE PLAN
C1.03	VILLAS DRIVE
C1.04	VILLAS DRIVE
C1.05	EVERGLADES DRIVE
C1.06	SAN MARCO DRIVE
C1.07	SAN MARCO DRIVE
C1.08	PIAZZA DI LUNA
C1.09	NOKOMIS AVENUE S & THE RIALTO
C1.10	FIESOLE STREET
C1.11	FIESOLE STREET
C1.12	FIESOLE STREET
C1.13	BAYNARD DRIVE & CORAL STREET
C1.14	CORAL STREET
C1.15	NOKOMIS AVENUE S & THE RIALTO
C1.16	MAHON DRIVE & ROBERT STREET
C1.17	FIRENZE AVENUE
C1.18	FIRENZE AVENUE
C1.19	SHORT ROAD
C1.20	DAWN STREET & RIVIERA STREET
C1.21	THE CORSO
C1.22	MISCELLANEOUS PROFILES
D1.00	EROSION AND SEDIMENTATION CONTROL DETAILS
D1.01	CITY OF VENICE POTABLE WATER DETAILS
D1.02	CITY OF VENICE POTABLE WATER DETAILS
D1.03	CITY OF VENICE POTABLE WATER DETAILS
D1.04	PAVEMENT AND SIDEWALK DETAILS
D1.05	MAINTENANCE OF TRAFFIC PLAN
D1.06	PEDESTRIAN CONTROL FOR CLOSURE OF SIDEWALKS

**PART 2 – PRODUCTS (NOT APPLICABLE)**

**PART 3 – EXECUTION (NOT APPLICABLE)**

**END OF SECTION**

## **SECTION 01010 SUMMARY OF WORK**

### **PART I – GENERAL**

#### **1.01 REQUIREMENTS INCLUDED**

The Work to be performed under this Contract shall consist of furnishing all tools, equipment, materials, supplies, and furnishing all transportation and services, including fuel, power, water, and essential communications, and performance of all labor, work or other operations required for the fulfillment of the Contract in strict accordance with the specifications, schedules, drawings, and other Contract Documents as herein defined, all which are made a part hereof, and including such detail sketches as may be furnished by the ENGINEER from time to time during construction in clarification of said Contract Documents. The Work shall be completed and all work, materials, and services not expressly shown or called for in Contract Documents which may be necessary for the complete and proper construction of the work in good faith shall be performed, furnished, and installed by the CONTRACTOR as though originally so specified or shown, at no increase in cost to the OWNER.

#### **1.02 WORK COVERED BY CONTRACT DOCUMENTS**

The Water Main Replacement Program – Phase 4 project includes the following, with necessary materials, equipment, labor, etc., for construction and abandonment as shown on the drawings.

1. A new water main on Piazza Di Luna with service connections to properties on both sides of the street.
2. A new water main on Dawn Street with service connections to properties on both sides of the street.
3. A new water main on Fiesole Street between Harbor Drive South and Riviera Street, with service connections on both sides of the street.
4. A new water main on Serata Street connecting existing valves on that street.
5. A new water main on Robert Street with service connections to properties on both sides of the street.
6. A new water main from the existing water main on Harbor Drive South to the proposed water main on Robert Street and the existing water main on Cincy Street.
7. New service connections from the existing 6-inch water main on Villas Drive to properties on the north side of the road that are currently connected to the proposed-to-be-abandoned 3-inch water main on Villas Drive.
8. New service connections from the existing 6-inch water main on Villas Drive, Everglades Drive, San Marco Drive, Riviera Street, Fiesole Street, Nokomis Avenue, The Rialto, Cincy Street, Coral Street, Harbor Drive South and Mahon Drive that have service connections in the back lots, which are to be abandoned, as shown on the plans.
9. Flushing of individual service lines prior to making connection at each house/business.
10. Abandonments of existing water mains within the project area as shown on the plans.
11. New hydrants and valves within the project area as shown on the plans.

#### **1.03 CONTRACT METHOD**

The work hereunder will be constructed under a UNIT PRICE contract, itemized as set forth in the Bid Schedule and defined in Section 01025 - Measurement and Payment.

The CONTRACTOR shall include the General Conditions and Supplemental Conditions of the Contract as part of all Subcontract Agreements.

#### 1.04 JURISDICTION

Agencies having jurisdiction over construction of this project include but are not limited to:

- Florida Department of Health
- City of Venice
- Sarasota County

The CONTRACTOR shall secure any permits associated with construction as required by the agency(s) having jurisdiction, shall abide by all rules and regulations of each and shall pay all costs in connection with the permits. The CONTRACTOR shall pay for such permits and inspection fees to ensure compliance with their requirements.

#### 1.05 NOTICES TO PROPERTY OWNERS, AUTHORITIES, AND ENGINEERS

- A. The CONTRACTOR shall, as provided in General Conditions, notify property owners of adjacent properties and utilities when performance of the Work may affect them.
- B. When it is necessary to temporarily deny access to property owners or tenants to their property, or when any utility service connection must be interrupted, the CONTRACTOR shall give notices sufficiently in advance to enable the affected persons to provide for their needs. Notices shall conform to any applicable local ordinance and will be delivered in writing, shall include appropriate information concerning the interruption and instructions on how to limit their inconvenience.
- C. The CONTRACTOR shall contact the property owners, Fire Department, Police Department, Emergency Medical Services, U.S. Postal Department, and ENGINEER, at least 48 hours prior to closing any street.
- D. Utilities and other concerned agencies shall be contacted at least 48 hours prior to cutting or closing streets or other traffic areas or excavating near underground utilities or pole lines.
- E. The CONTRACTOR shall review with the various utility companies the construction methods and work to be done in the vicinity of utilities. When temporary relocation is necessary sufficient advance notice shall be given by the CONTRACTOR to the utility involved.

#### 1.06 COORDINATION

It shall be the responsibility of the CONTRACTOR to coordinate his operations and those of his subcontractors in such a manner so as to avoid interference or delays and ensure the orderly progress of work in the areas of common or interdependent construction activities. The limits of the Contract are indicated on the Plans and specified herein. However, these limits may be altered by mutual agreement of the CONTRACTOR with the OWNER, with the written Agreement of the ENGINEER, in order to facilitate the Work operations.

The Work of this Contract may involve coordination with other utility companies or agencies, either performing connection repair or maintenance service on their own facilities. The CONTRACTOR shall coordinate and cooperate with all utility companies and other contractors working in the same area that this Contract entails. This shall include, but not be limited to, the telephone company; the electric power company; the cable television company; the gas company; the highway contractor; all subcontractors; and any other contractors who are performing work within the area of this Contract.

This effort to coordinate and cooperate with all utility companies and other CONTRACTORS shall be toward, but not be limited to, maintaining public access to the various cross streets, residences,

commercial establishments, and other institutions within the limits of construction and adjoining streets, and maintaining the area's electric, telephone, cable television, gas, water, and sewer services.

1.07 REFERENCE STANDARDS

Reference to the standards of any technical society, organization, or association or to codes of local or state authorities shall mean the latest effective standard, code, specification, or standard adopted and published at the date of receipt of bids, unless specifically stated otherwise.

1.08 AVAILABILITY OF LAND

Work is generally located within the right-of-way of the OWNER, and extends onto private property for service connections. In areas where Work will extend beyond right-of-ways or the property lines, the OWNER will secure a Use Agreement and/or Construction Easement to facilitate the Work.

Nothing in this Contract shall imply that the CONTRACTOR has exclusive use of roadways or public and/or private land employed to perform the Work.

1.09 CONTRACTOR'S USE OF PREMISES

The CONTRACTOR shall maintain his construction operations within the property limits and areas designated by the OWNER. In the event that the CONTRACTOR deems it necessary or advisable to operate beyond the limits as provided by the OWNER, he shall be responsible for coordinating such efforts with the OWNER.

1.10 SALVAGE OF MATERIAL AND EQUIPMENT

No items shall be salvaged and reused without permission from the OWNER or the ENGINEER unless specifically stated otherwise in the bid form.

The OWNER reserves the right of first refusal to salvage any item. If so directed by the ENGINEER, the CONTRACTOR shall deliver to a location any items to be salvaged by the OWNER.

1.11 STORAGE OF MATERIALS

Storage conditions shall be acceptable to the OWNER for all materials and equipment not incorporated into the Work but included in applications for payment. Such storage arrangements and conditions shall be presented in writing and shall afford adequate and satisfactory security and protection. Off-site storage facilities shall be accessible to the ENGINEER. The stored materials shall be insured for full value. Certificates of Insurance coverage must be submitted to the OWNER or ENGINEER with the request for payment by the CONTRACTOR. All arrangements and costs for storage facilities shall be paid by the CONTRACTOR, unless specifically designated in the Contract Documents to be furnished by the OWNER.

**PART 2 – PRODUCTS (NOT APPLICABLE)**

**PART 3 – EXECUTION (NOT APPLICABLE)**

**END OF SECTION**

## SECTION 01025

### MEASUREMENT AND PAYMENT

#### PART I – GENERAL

##### 1.01 GENERAL INFORMATION

The CONTRACTOR shall receive and accept the compensation provided in the Proposal and the Agreement as full payment for furnishing certain materials and all labor, tools and equipment, for performing all operations necessary to complete the Work under the Agreement, and also in full payment for all loss or damages arising from the nature of the Work, or from any discrepancy between the actual quantities of Work and quantities herein estimated by the ENGINEER, or from the action of the elements or from any unforeseen difficulties which may be encountered during the prosecution of the Work until the final acceptance by the OWNER.

It is the intent of these Contract Documents that any cost for which compensation is not directly provided by a bid item shall be prorated and included in the bid item(s) for which they are required. Failure of the CONTRACTOR to follow this procedure shall be basis for rejection of this bid.

The prices stated in the Proposal include all costs and expenses for taxes, labor, equipment, commissions, transportation charges and expenses, patent fees and royalties, together with any and all other costs and expenses for performing and completing the Work as shown on the plans and specified herein. The basis of payment for any item at the unit price shown in the Proposal shall be in accordance with the description of that item in this Section.

All Work shall be in accordance with the Technical Specifications.

Unless specifically listed as a Bid Item, no separate payment will be made for the following items and the cost of such Work shall be included in the applicable contract pay items of Work.

1. Clearing and grubbing;
2. Excavation, including necessary pavement/slab removal;
3. Shoring and sheeting;
4. Dewatering and disposal of surplus water including well point dewatering as directed by ENGINEER;
5. Backfill;
6. Grading;
7. Replacement or restoration of paved or unpaved roadways, grass and shrubbery plots outside of established pay limits;
8. Replacement or restoration of curbing, gutter, sidewalk, and site restoration of any areas damaged during construction activities;
9. Temporary facilities and controls during construction such as water/sanitary facilities, traffic control and environmental protection, unless specifically provided for in a pay item;
10. Removing and disposing of waste material due to construction;
11. Cleanup;
12. Refill materials, except as hereinafter specified;
13. Testing and placing system in operation;
14. Flushing individual service lines prior to making connection at the house/business.
15. Any material or equipment required installed and/or used for the tests;
16. Maintaining the existing quality of service during construction;
17. Repair of sanitary sewer house laterals damaged during construction;
18. Repair and/or cleaning of storm sewers, inlets & catch basins damaged or filled with sediment during construction;

19. Color audio-video construction record;
20. Providing the services of an Independent Testing Laboratory for materials and compaction testing.
21. Providing the services of a professional LAND SURVEYOR, licensed in the State of Florida, to establish horizontal and vertical control, layout the Work, and assist with the preparation of record drawings;
22. Cost to reproduce drawings, specifications, shop drawings, and reports for the CONTRACTOR's use and for submissions to the OWNER;
23. Temporary fencing;
24. Dust Control;
25. Noise suppression measures;
26. Removing, relocating, resetting existing street signage to facilitate construction;
27. Removing, relocating, resetting mailboxes to facilitate construction;
28. Utility notification and location and exploratory pits; and
29. All other appurtenant Work as required for a complete and operable system.
30. Damage to owner's property will be repaired within three days.

The CONTRACTOR's attention is again called to the fact that the quotations for the various items of Work are intended to establish a total price for completing the Work in its entirety. Should the CONTRACTOR feel that the cost for any item of Work has not been established by the Proposal or Contract Pay Items, he shall include the cost for that Work in some other applicable bid item, so that his proposal for the project reflects his total price for completing the Work in its entirety.

Following final payment by the OWNER, the CONTRACTOR shall maintain the surface of the unpaved trenches, shrubbery, trees, fences, sod, and other surfaces disturbed for a period of six (6) months thereafter. The cost of maintaining the restored areas is considered incidental to the cost of restoring the areas disturbed by the CONTRACTOR. These costs shall be prorated and included in the cost for the bid item which it is required.

#### 1.02 MEASUREMENT

The quantities for payment under this Agreement shall be determined by actual measurement of the completed items, in place, ready for service and accepted by the OWNER, in accordance with the applicable method of measurement therefore contained herein. A representative of the OWNER shall witness all field measurement. Payment shall be made and shall be based on percent complete of the Lump Sum price according to the schedule of values.

#### 1.03 PAYMENT

The CONTRACTOR will be paid monthly, by the OWNER, for Work performed the previous month. Each application for payment shall be submitted with a copy of record drawings, to date, as well as an updated schedule for the project. Payment shall be for the approved and accepted amount of Work that the CONTRACTOR has accomplished in the previous month.

Payment shall be made and shall be based on percent complete for Lump Sum pay items and on a measured quantity, unit price basis for unit price pay items.

### **PART 2 – PRODUCTS (Not Used)**

### **PART 3 - EXECUTION**

#### 3.01 Bid Items: Water Main Replacement Program – Phase 4

- A. 6" WATER MAIN INSTALLED BY HORIZONTAL DIRECTIONAL DRILL METHOD (Bid Item #1)

The CONTRACTOR shall provide all labor, equipment and materials to furnish and install 6" pipe by horizontal directional drill (HDD) method. The HDD installation of pipe shall include, but may not be limited to:

1. Performing all evaluations and calculations necessary for the proper implementation of the HDD.
2. Preparing and implementing the HDD Work plan, bentonite management and emergency spill plan;
3. Excavating the launch, recovery, intermediate mud and exploratory pits;
4. Furnishing, installing and maintaining all necessary erosion control measures including but not limited to artificial coverings, mowing, sandbagging, slope drains, sediment basins, hay bales, straw, floating silt barrier, staked silt barrier and seeding; containment, berming and disposal of drill fluid as required or as directed by the ENGINEERS;
5. Maintaining the pits, which shall include dewatering, barricading, sheeting, shoring, containment, berming and disposal of drill fluid as required or as directed by the ENGINEER;
6. Furnishing and installing the pipe;
7. Horizontal directional drilling or pipe;
8. Furnishing and installing the locator wires on the pipe;
9. Joining the pipe as required;
10. Furnishing and installing MJ adapters as necessary;
11. Backfilling and compaction of pits;
12. Hydrostatic pressure testing and cleaning the pipe;
13. Cleaning up and restoring the job site which shall include removing excess materials and debris and re-grading the terrain;
14. Providing an environmental scientist for monitoring HDD activities per the Contract Documents and applicable permits;
15. Driveway, sidewalk, asphalt, and other restoration;
16. Disinfecting the potable or raw water main pipe;
17. Furnishing fittings, including polyethylene encasement for ductile iron fittings, and connecting piping to existing piping and/or structures; and
18. All other ancillary materials, equipment labor, water, and power required for the complete installation of the piping by HDD method.

All Work shall be in accordance with the Technical Specifications.

Payment for installing pipe by the HDD method shall be based on the size and horizontal distance in linear feet of pipe measured along the top centerline of the installed and connected pipe, in place, complete and acceptable to the ENGINEER.

**B. 6" WATER MAIN INSTALLED BY OPEN CUT METHOD (Bid Item #2)**

The CONTRACTOR shall provide all labor, equipment, and materials for installing 6" pipe by the open cut method. The open cut installation of pipe shall include, but may not be limited to:

1. Exploratory pits;
2. Excavating and maintaining the trench, which shall include dewatering, sheeting, shoring and/or bracing where required or as directed by the ENGINEER;
3. Furnishing, installing and maintaining all necessary erosion control measures including but not limited to artificial coverings, mowing, sandbagging, slope drains, sediment basins, hay bales, straw, floating silt barrier, staked silt barrier and seeding;
4. Cleaning dirt and foreign material from within the pipe and bell;

5. Beveling field-cut joints and pipe shorts;
6. Installing OWNER approved pipe and any pipe shorts as part of the pipeline;
7. Furnishing and installing locator wires on PVC pipe;
8. Furnishing and installing leak detector assemblies where called for on the drawings;
9. Furnish and install joint restrains complete with all tie rods and hardware;
10. Furnish and installing pipe;
11. Finishing and installing polyethylene encasement on ductile iron pipe;
12. Backfilling and compacting the trench including regarding the terrain;
13. Hydrostatic pressure testing, pigging, and cleaning the pipe;
14. Cleaning up and restoring the job site which shall include removing excess materials and debris and re-grading the terrain;
15. Driveway, sidewalk, asphalt and other restoration;
16. Disinfecting the potable or raw water main pipe;
17. Furnishing fittings, including polyethylene encasement for ductile iron fittings, and connecting piping to existing piping and/or structures;
18. Furnishing and installing any lateral pipe and making any connection needed; and
19. All other ancillary materials, equipment, labor, water and power required for the complete installation of the piping by open cut method.

All Work shall be in accordance with the Technical Specifications.

Payment for installing pipe by the open cut method shall be based on the horizontal distance in linear feet of pipe measured along the top centerline of the pipe in place complete and acceptable to the ENGINEER.

#### C. 6" RESILIENT WEDGE GATE VALVES WITH BOX (Bid Items #3)

The CONTRACTOR shall provide all labor, equipment and certain materials to completely furnish and install all 6" resilient wedge gate valves. The resilient wedge gate valve installation shall include, but may not be limited to:

1. Excavating the trench/pit;
2. Maintaining the trench/pit which shall include dewatering and bracing and sheeting where required or as directed by the ENGINEER;
3. Furnishing, installing and maintaining all necessary erosion control measures including but not limited to artificial coverings, mowing, sandbagging, slope drains, sediment basins, hay bales, straw, floating silt barrier, staked silt barrier and seeding;
4. Furnishing and installing valves, valve boxes, and tapping sleeves;
5. Furnishing and installing mechanical joint restraints;
6. Furnishing and installing valve extension rods where necessary;
7. Furnishing and installing brass valve identification tag;
8. Backfilling and compacting the trench/pit;
9. Furnishing paint and painting valve cover; and
10. All other ancillary materials, equipment, labor, and power required for the complete installation of resilient wedge gate valves.

All Work shall be in accordance with the Technical Specifications and Plans.

Payment shall be made based on the size and for each resilient wedge gate valve installation complete, Working, and operating to the satisfaction of the ENGINEER. Operating satisfactorily includes but is not limited to:

1. The valve box and valve is plumb and the valve box is centered on the valve.

2. OWNER personnel can insert a valve key through the valve box and completely open and close the valve.

D. 6" TAPPING SLEEVES AND VALVES (Bid Items #4)

The CONTRACTOR shall provide all labor, equipment and certain materials to completely install and test all 6" tapping sleeves and valves. The tapping sleeve and valve installation shall include, but may not be limited to:

1. Excavating the trench/pit;
2. Maintaining the trench/pit which shall include dewatering and bracing and sheeting where required or as directed by the ENGINEER;
3. Furnishing, installing and maintaining all necessary erosion control measures including but not limited to artificial coverings, mowing, sandbagging, slope drains, sediment basins, hay bales, straw, floating silt barrier, staked silt barrier and seeding;
4. Furnishing and installing valves, valve boxes, adapter fittings and tapping sleeves;
5. Pressure testing the tapping sleeve;
6. Furnishing and installing mechanical joint restraints;
7. Furnishing and installing valve extension rods where necessary;
8. Furnishing and installing brass valve identification tag;
9. Backfilling and compacting the trench/pit;
10. Furnishing paint and painting valve cover; and
11. All other ancillary materials, equipment, labor, and power required for the complete installation of valves and appurtenances.

All Work shall be in accordance with the Technical Specifications and Plans.

Payment shall be made based on the size and for each tapping sleeve and valve complete, working, and operating to the satisfaction of the ENGINEER. Operating satisfactorily includes but is not limited to:

1. The valve box and valve is plumb and the valve box is centered on the valve.
2. OWNER personnel can insert a valve key through the valve box and completely open and close the valve.

E. FIRE HYDRANT ASSEMBLIES (Bid Item #5)

The CONTRACTOR shall provide all labor, equipment and certain materials to completely install fire hydrant assemblies. The fire hydrant assembly installation shall include, but may not be limited to:

1. Excavating the trench/pit;
2. Maintaining the trench/pit, which shall include dewatering and bracing and sheeting where required or as directed by the ENGINEER;
3. Furnishing, installing and maintaining all necessary erosion control measures including but not limited to artificial coverings, mowing, sandbagging, slope drains, sediment basins, hay bales, straw, floating silt barrier, staked silt barrier and seeding;
4. Furnishing and installing fire hydrant assemblies as shown on the detail drawings including the hydrant valve and tee from the water main;
5. Backfilling and compacting the trench/pit; and
6. All other ancillary materials, equipment, labor, and power required for the complete installation of fire hydrant assemblies.

7. The main line tee shall not be included in this bid item.

All Work shall be in accordance with the Technical Specifications and Plans.

Payment shall be made for the number of each fire hydrant assembly installed and incorporated into the piping system complete, Working, and operating to the satisfaction of the ENGINEER.

F. WATER SERVICES WITH NEW METER BOX (Bid Items #6, #7, #8, #9)

The CONTRACTOR shall provide all labor, equipment and materials to completely install water services and meter assemblies for each lot as shown on the plans. The water service and meter assembly installation shall include, but may not be limited to:

1. Excavating the trench/pit;
2. Maintaining the trench/pit, which shall include dewatering and bracing and sheeting where required or as directed by the ENGINEER;
3. Furnishing, installing and maintaining all necessary erosion control measures including but not limited to artificial coverings, mowing, sandbagging, slope drains, sediment basins, hay bales, straw, floating silt barrier, staked silt barrier and seeding;
4. Furnishing and installing the far-side PVC or HDPE casings;
5. Furnishing and installing carrier piping and service lateral;
6. Furnishing and installing new meter box(es) and accessories;
7. Installing the OWNER-supplied water meter per manufacturer's recommended guidelines;
8. Connections to new or existing piping systems, including small diameter piping and fittings not included in other bid items;
9. Backfilling and compacting the trench/pit; and
10. All other ancillary materials, equipment, labor, and power required for the complete installation of water services and meter assemblies.

All Work shall be in accordance with the Technical Specifications and Plans.

Payment shall be made for the number of each water service installed and incorporated into the piping system complete, working, and operating to the satisfaction of the ENGINEER.

G. WATER SERVICES WITHOUT NEW METER BOX (Bid Items #10, #11)

The CONTRACTOR shall provide all labor, equipment and materials to completely install water services to existing meter assemblies for each lot as shown on the plans. The water service installation shall include, but may not be limited to:

1. Excavating the trench/pit;
2. Maintaining the trench/pit, which shall include dewatering and bracing and sheeting where required or as directed by the ENGINEER;
3. Furnishing, installing and maintaining all necessary erosion control measures including but not limited to artificial coverings, mowing, sandbagging, slope drains, sediment basins, hay bales, straw, floating silt barrier, staked silt barrier and seeding;
4. Furnishing and installing the far-side PVC casings;
5. Furnishing and installing carrier piping and service lateral;
6. Furnishing and installing the corporation stop;
7. Connecting to the existing water meter assemblies;

8. Backfilling and compacting the trench/pit; and
9. All other ancillary materials, equipment, labor, and power required for the complete installation of water services.

All Work shall be in accordance with the Technical Specifications and Plans.

Payment shall be made for the number of each water service installed and incorporated into the piping system complete, working, and operating to the satisfaction of the ENGINEER.

H. RELOCATED REDUCED PRESSURE PRINCIPAL ASSEMBLIES (Bid Item #12)

The CONTRACTOR shall provide all labor, equipment and materials to remove existing reduced pressure principal (RP) assemblies on water services to be relocated. Relocated RP assemblies shall meet all applicable codes. RP assemblies are required for all non-residential (i.e., commercial/industrial) customers and residential customers that use surface water or potable water for irrigation. The RP assembly installation shall include, but may not be limited to:

1. Removing the RP assembly from the existing service;
2. Miscellaneous fittings, piping and accessories necessary for a complete installation; and,
3. Repairs if there are leaks present after installation.

Note: Every RPZ is required to have some type of thermal expansion, either a Thermal Expansion Tank or a Relief Valve. If a residential or commercial service has an existing RPZ above grade, it must be relocated by the licensed plumber contracted to perform this work by the homeowner/business owner. The CONTRACTOR's licensed plumber should install a relief valve on the downstream side (customer side) of the above ground RPZ backflow prevention assembly if one did not exist previously. CONTRACTOR shall coordinate timing of the installation of the appropriate BFD and thermal expansion with the licensed plumber contracted to perform this work by the homeowner/business owner.

I. RELOCATED DUAL CHECK VALVE ASSEMBLIES (Bid Item #13)

The CONTRACTOR shall provide all labor, equipment and materials to remove existing dual check valve (DuC) assemblies on water services to be relocated. Relocated DuC assemblies shall meet all applicable codes. DuC assemblies are required for residential customers that use well water or reclaimed water for irrigation. The DuC assembly installation shall include, but may not be limited to:

1. Removing the BFD from the existing service;
2. Miscellaneous fittings, piping and accessories necessary for a complete installation; and,
3. Repairs if there are leaks present after installation.

Note: Residential customers that do not have a well or irrigation system are not required to have a BFD installed and will have any existing BFD removed. If a residential service has an existing DuC above grade and this device was relocated below grade by the licensed plumber contracted to perform this work by the homeowner, the existing thermal expansion must be relocated to the water service connection at the house by the CONTRACTOR's plumber. If thermal expansion did not exist on an existing DuC, it must be provided on any relocated DuC and installed by the CONTRACTOR's plumber. The relief valve can be installed conveniently at the riser piping entering the home near the service valve or behind a hose bib. Pressure Reducing Valves are not required or desired. CONTRACTOR shall

coordinate timing of the installation of the appropriate BFD and thermal expansion with the licensed plumber contracted to perform this work by the homeowner.

J. WATER SERVICE PIPE FROM METER ASSEMBLIES TO WATER SERVICE AND/OR IRRIGATION SYSTEM CONNECTION (Bid Item #14)

The CONTRACTOR's licensed plumber shall provide all labor, equipment and certain materials to completely install new water services from the new meter assemblies to each water service and/or irrigation system connection. Work for this bid item shall include, but may not be limited to:

1. Excavation;
2. Maintaining the trench/pit, which shall include dewatering and bracing and sheeting where required or as directed by the ENGINEER;
3. Furnishing, installing and maintaining all necessary erosion control measures including but not limited to artificial coverings, mowing, sandbagging, slope drains, sediment basins, hay bales, straw, floating silt barrier, staked silt barrier and seeding;
4. Furnishing, installing, testing and connecting the new service line by either open cut or by horizontal directional drill;
5. Flushing individual service lines prior to connecting the new service line to the house or business;
6. Backfilling and compacting the trench/pit; and,
7. All other ancillary materials, equipment, labor, and power required for the complete installation of water services and meter assemblies.

Payment shall be made for the number of lineal feet of service pipe installed complete, working/operating, and accepted by the OWNER and/or ENGINEER. Private property restoration is not included in this bid item and is covered under Bid Items 15 to 20. Work shall meet all applicable codes.

K. PRIVATE PROPERTY RESTORATION – SOD (Bid Item #15)

The CONTRACTOR shall provide all labor, equipment and certain materials to restore sod that have been damaged due to the installation of the water service pipe (Bid Item #14). Work for this bid item shall include, but may not be limited to:

1. Earth bed preparation;
2. Providing, placing, compacting, and finishing topsoil;
3. Furnishing and placing sod;
4. Furnishing and placing stakes;
5. Rolling and tamping sod;
6. Mowing sod;
7. Replacing defective or deteriorated sod; and
8. Maintenance and care of sod in place.

Payment shall be made for the number of square feet of sod installed and accepted by the OWNER and/or ENGINEER. Private property restoration shall be in as good or better condition as prior to construction. Unless approved by the OWNER and/or ENGINEER, limits of sod restoration shall be 18 inches over the water service pipe route.

L. PRIVATE PROPERTY RESTORATION – BRICK PAVERS (Bid Item #16)

The CONTRACTOR shall provide all labor, equipment and certain materials to restore

brick pavers that have been damaged due to the installation of the water service pipe (Bid Item #14). Work for this bid item shall include, but may not be limited to:

1. Excavation;
2. Placing, grading, and compacting sub-base and/or base;
3. Furnishing and placing or replacing the damaged brick pavers;
4. Grading, levelling, compacting and/or smoothing, so as to provide a uniform longitudinal profile and cross-section with existing brick pavers; and,
5. Disposal of all surplus existing materials.

Payment shall be made for the number of square feet of brick pavers installed and accepted by the OWNER and/or ENGINEER. Private property restoration shall be in as good or better condition as prior to construction. Unless approved by the OWNER and/or ENGINEER, limits of brick paver restoration shall be 36 inches over the water service pipe route.

**M. PRIVATE PROPERTY RESTORATION – ASPHALT/CONCRETE DRIVEWAY (Bid Item #17)**

The CONTRACTOR shall provide all labor, equipment and certain materials to restore asphalt/concrete driveways that have been damaged due to the installation of the water service pipe (Bid Item #14). Work for this bid item shall include, but may not be limited to:

1. Excavation;
2. Placing, grading, and compacting sub-base and/or base;
3. Furnishing and placing or replacing the damaged driveway;
4. Milling, grading, levelling, compacting and/or smoothing, so as to provide a uniform longitudinal profile and cross-section with existing driveway; and,
5. Disposal of all surplus existing materials.

Payment shall be made for the number of square feet of asphalt/concrete driveways installed and accepted by the OWNER and/or ENGINEER. Private property restoration shall be in as good or better condition as prior to construction. Unless approved by the OWNER and/or ENGINEER, limits of asphalt/concrete driveway restoration shall be 24 inches over the water service pipe route.

**N. PRIVATE PROPERTY RESTORATION – ASPHALT/CONCRETE WALKWAY (Bid Item #18)**

The CONTRACTOR shall provide all labor, equipment and certain materials to restore asphalt/concrete walkways that have been damaged due to the installation of the water service pipe (Bid Item #14). Work for this bid item shall include, but may not be limited to:

1. Excavation;
2. Placing, grading, and compacting sub-base and/or base;
3. Furnishing and placing or replacing the damaged walkway;
4. Milling, grading, levelling, compacting and/or smoothing, so as to provide a uniform longitudinal profile and cross-section with existing walkway; and,
5. Disposal of all surplus existing materials.

Payment shall be made for the number of square feet of asphalt/concrete walkways installed and accepted by the OWNER and/or ENGINEER. Private property restoration shall be in as good or better condition as prior to construction. Unless approved by the OWNER and/or ENGINEER, limits of asphalt/concrete walkway restoration shall be 24 inches over the water service pipe route.

O. PRIVATE PROPERTY RESTORATION – LOOSE STONE/GRAVEL (Bid Item #19)

The CONTRACTOR shall provide all labor, equipment and certain materials to restore loose stone/gravel that have been displaced due to the installation of the water service pipe (Bid Item #14). Work for this bid item shall include, but may not be limited to:

1. Removal of loose stone/gravel;
2. Furnishing and placing or replacing the loose stone/gravel;
3. Grading and levelling, so as to provide a uniform longitudinal profile and cross-section with existing loose stone/gravel; and,
4. Disposal of all surplus existing materials.

Payment shall be made for the number of square feet of loose stone/gravel placed and accepted by the OWNER and/or ENGINEER. Private property restoration shall be in as good or better condition as prior to construction. Unless approved by the OWNER and/or ENGINEER, limits of loose stone/gravel replacement shall be 18 inches over the water service pipe route

P. PRIVATE PROPERTY RESTORATION – LANDSCAPING (Bid Item #20)

The CONTRACTOR shall provide all labor, equipment and certain materials to replace landscaping that have been damaged due to the installation of the water service pipe (Bid Item #14). Work for this bid item shall include, but may not be limited to:

1. Earth bed preparation;
2. Providing and placing landscaping; and,
3. Maintenance and care of landscaping in place.

Payment shall be made for the number of square feet of landscaping placed and accepted by the OWNER and/or ENGINEER. Private property restoration shall be in as good or better condition as prior to construction. Unless approved by the OWNER and/or ENGINEER, limits of landscaping restoration shall be 18 inches over the water service pipe route.

Q. PRIVATE PROPERTY RESTORATION – UNAVOIDABLE OBSTRUCTIONS (Bid Item #21)

The CONTRACTOR shall provide all labor, equipment and certain materials to work around unavoidable obstructions encountered during the installation of the water service pipe (Bid Item #14). Examples of these unavoidable obstructions include walls and above-ground wood decks and patios.

Payment shall be made for the number of unavoidable obstructions encountered during the installation of the water service pipe. Private property restoration shall be in as good or better condition as prior to construction.

R. CONTRACTOR/PROPERTY OWNER COORDINATION (Bid Item #22)

The CONTRACTOR shall provide the following coordination services:

1. Contacting the property owner to schedule an installation date;
2. Meeting with the property owner prior to installation to go over the designed service route;

3. Discussions with the property owner regarding any changes to the property since the issuance of bid documents, obstructions in the designed service route not shown on the plans, and other items relevant to the installation; and,
4. Meeting with the property owner after construction to ensure that there are no pending issues or concerns.

Payment shall be made for the number of property owners that the CONTRACTOR has provided coordination services. CONTRACTOR shall maintain a log book that will record the coordination hours. Log book shall include the date, address, time/duration, description of coordination efforts for each event. CONTRACTOR shall spend an average of thirty (30) minutes of coordination per affected property.

S. ABANDONMENT OF EXISTING WATER MAINS (Bid Item #23)

The CONTRACTOR shall provide all labor, equipment and materials to abandon the existing water mains as shown on the drawings. The water main abandonment shall include, but may not be limited to:

1. Cutting the abandoned line and capping/plugging its connection to the remaining, in service water main;
2. Removal and disposal of all potable water in the abandoned line;
3. Furnishing, installing and maintaining all necessary erosion control measures including but not limited to artificial coverings, mowing, sandbagging, slope drains, sediment basins, hay bales, straw, floating silt barrier, staked silt barrier and seeding;
4. Materials, equipment, labor, and power required to furnish and install flowable fill on mains 3" or greater;
5. Capping/plugging the main;
6. Closing valves to be abandoned and removing the valve box;
7. Pipe clamps, rebar, concrete, equipment, labor, and power required to furnish and install the reverse dead man or thrust block;
8. Resisting the stub on the water main remaining in service;
9. Restoration; and
10. All other ancillary materials, equipment, labor, water, and power required for the complete abandonment of the line.

All Work shall be in accordance with the Technical Specifications and Plans.

Payment shall be made and shall be based on percent complete of the Lump Sum price according to the schedule of values.

T. 6" LINE STOP (BID ITEM #24)

The CONTRACTOR shall provide all labor, equipment and materials to install and remove a 6" line. This bid item shall include, but may not be limited to:

1. Excavation;
2. Installation of line stop fitting;
3. Tapping the water main;
4. Inserting line stopping plug in housing;
5. Mount and activate line stopping equipment;
6. Perform required service and installation;
7. Removing line stopping equipment and installing blind flange;
8. Restoration; and

9. All other ancillary materials, equipment, labor, water, and power required for the complete installation and removal of the line stop.

All Work shall be in accordance with the Technical Specifications and Plans.

Payment shall be made and shall be based on the unit price for each line stop installed and removed.

U. ASPHALT RESTORATION (Bid Item #25)

The CONTRACTOR shall provide all labor, equipment, and materials to restore asphalt roadway that was cut, removed or damaged during the course of the pipeline construction and milling and paving of full lane widths as shown on the drawings. The asphalt restoration shall include saw-cutting, removing and replacing the entire asphalt layer to the milling limits shown on the drawings or:

1. Placing, grading, and compacting sub-base, base, and approved asphaltic pavement over excavated area as specified in the Contract Documents;
2. Milling the full lane width of all damaged lanes and designated intersection areas indicated in the Approved Construction Plans so as to provide a uniform longitudinal profile and cross-section;
3. Sweeping of the milled surface;
4. Disposal of all surplus existing materials resulting from milling operations;
5. Restoring, placing, grading, and compacting approved asphaltic pavement at the thickness specified in the Contract Documents.

Payment shall be made on a square yard basis, in place complete and acceptable to the ENGINEER.

V. MAINTENANCE OF TRAFFIC AND TRAFFIC CONTROL (Bid Item #26)

The bid price for Traffic Control shall be a lump sum amount. This bid item shall include preparation of a Maintenance of Traffic plan consistent with the CONTRACTOR'S Work schedule/plan and coordination with through the Project Representative with the OWNER, County or State traffic control authority. It shall include the construction and maintenance of any necessary detour facilities, traffic control barriers; providing of necessary facilities for access to residences and businesses, etc. along the project; furnishing, installing and maintaining of traffic control and safety devices during construction, including placement and removal of temporary pavement markings, and signs; temporary wheelchair ramps, temporary lighting for night Work, and any other special requirements for safe and expeditious movement of both vehicular and pedestrian traffic.

Payment for Maintenance of Traffic and Traffic Control will be on an incremental basis in accordance with the following:

Percent of Original Contract Amount Earned	Allowable Percent of the Lump Sum Price for the Item
20	20
40	40
60	60
80	80
100	100

W. MOBILIZATION AND DEMOBILIZATION (Bid Item #28)

The bid price for mobilization and demobilization shall be a lump sum amount and shall include securing a staging area in proximity to the Work if public lands are insufficient; moving onto the site all materials and equipment; furnishing and erecting temporary buildings, access roads and other items as necessary to complete the Work; providing a color audio-videotape of existing conditions of the construction site or route; providing field trailers, sanitary facilities and potable water facilities as required for the proper performance and completion of the Work.

Payment for General Conditions each month shall be an equal percentage of the General Conditions bid item, spread equally over the Contract time.

Payment for mobilization will be on an incremental basis in accordance with the following:

Percent of Original Contract Amount <u>Earned</u>	Allowable Percent of the Lump Sum <u>Price for the Item</u>
5	15
10	25
25	50
50	75
75	85
100	100

X. GENERAL CONDITIONS (Bid Item #28)

The bid price for General Conditions shall be a lump sum amount and shall include obtaining all permits, insurance, and bonds.

The bid price for General Conditions shall not exceed 5% of the Base Bid Subtotal.

Y. OWNER'S ALLOWANCE (Bid Item #29)

The bid price for Owner's Allowance shall be a lump sum amount for the project. Payment shall be made to the CONTRACTOR, at the sole discretion of the OWNER for additional Work requested by the OWNER that is not covered by the scope of Work identified in this Contract. The Owner's Allowance will be used only with the prior written approval of the OWNER. A scope description and fee breakdown shall be provided to the OWNER for any proposed use of the Owner's Allowance.

Z. PERMIT FEE ALLOWANCE (Bid Item #30)

Payment will be made to the CONTRACTOR based on actual invoiced amounts paid by the CONTRACTOR to obtain required Building Permits and inspections.

Payment will not be made for:

1. CONTRACTOR premiums or markups.
2. Fees incurred due to CONTRACTOR's negligence.
3. Permits required for items for the CONTRACTOR's convenience but not required by the Contract Documents or the ENGINEER.
4. Fees and costs associated with utility services to temporary construction trailers and electricity required by the CONTRACTOR during construction.

**END OF SECTION**

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**SECTION 01030  
SPECIAL PROJECT PROCEDURES**

**PART 1 - GENERAL**

1.01 WORKMANSHIP, MATERIAL AND EQUIPMENT

- A. When a particular product is specified or called for, it is intended and shall be understood that the proposal tendered by the CONTRACTOR included those products in his bid. Should the CONTRACTOR desire products equal to those specified, the CONTRACTOR shall furnish information as described in the Standard General Conditions. The alternate product or products submitted by the CONTRACTOR shall meet the requirements of the Specifications and shall, in all respects, be equal to the products specified by name herein.
- B. All apparatus, mechanism, equipment, machinery and manufactured articles for incorporation into the Work shall be the new and unused standard products of recognized reputable Manufacturers.
- C. The CONTRACTOR shall maintain the staging area in a tidy manner and shall execute cleaning activities per Section 01710, Cleaning.
- D. CONTRACTOR must provide his own disposal of excavation that he removes from the site.

1.02 CONTRACTOR PROVIDED STAGING AREA

- A. The Work of this project is to be performed in a congested area that affords minimal and limited space that the CONTRACTOR may use to stage construction activities such as material storage, parking, or tool & supply storage. The CONTRACTOR shall secure staging area(s) as he may require and the cost shall be included as part of the price bid for the work.
- B. Appropriate temporary security fencing and effective erosion control measures shall be provided for the staging area(s). In particular, effective measures shall be employed to prevent soil, mud, or dust from being tracked onto roadway surfaces between the site of the work and the staging area. The cost to provide and maintain temporary security fencing and erosion control measures shall be considered an incidental project cost shall not be separately measured for payment.
- C. The CONTRACTOR shall maintain the staging area in a tidy manner and shall execute cleaning activities per Section 01710, Cleaning.
- D. When the Work of this project is completed, and before final payment is made to the CONTRACTOR, the staging area shall be restored according to the agreement between the CONTRACTOR and the staging area OWNER including removal of temporary fencing and erosion control measures. Roadway damage that may have occurred between the project site and staging area because of construction equipment operation between the two sites shall be repaired to the satisfaction of the ENGINEER. The

OWNER may withhold payment retainage to the CONTRACTOR until the requirements of this paragraph are satisfied.

#### 1.03 CONNECTIONS TO EXISTING SYSTEMS

- A. The CONTRACTOR shall perform all work necessary to locate, excavate, restrain or confirm restraint, and prepare for connections to the existing systems, as shown on the Construction Drawings. The cost for this work and for the actual connection to the existing systems shall be included in the various prices bid for the Work, except where specifically indicated as a separate item, and shall not result in any additional cost to the OWNER.
- B. The CONTRACTOR shall install, pressure test, disinfect, and wait for clearance from the Health Department or FDEP for the new water main prior to transferring services over to the new main and taking the existing water main out of service. The maximum duration that the water main can be temporarily taken out-of-service shall be as specified herein. The CONTRACTOR shall plan his work accordingly so as to comply with these requirements.
- C. The CONTRACTOR shall provide, install and test any required piping and valves, including tapping sleeves and valves. The CONTRACTOR shall make the tap in the presence of an OWNER Utilities Representative, and only in the presence of an OWNER Utilities Representative.
- D. The CONTRACTOR shall provide the OWNER's PROJECT MANAGER with written notice of any requirement to shut down the system at least 72 hours in advance.
- E. It shall be noted that existing water mains can be shut down for a maximum of 3 hours.

#### 1.04 PROVISIONS FOR CONTROL OF EROSION

- A. Sufficient precautions shall be taken during construction to minimize the run-off of polluting substances such as silt, clay, fuels, oils, bitumens, calcium chloride, or other polluting materials harmful to humans, fish, or other life, into the supplies and surface waters of the state. Control measures must be adequate to assure that turbidity in the receiving water will not be increased more than 10 nephelometric turbidity units (NTU), or as otherwise required by the state or other controlling body, in water used for public water supply or fish unless limits have been established for the particular water. In surface water used for other purposes, the turbidity must not exceed 25 NTU unless otherwise permitted. Special precautions shall be taken in the use of construction equipment to prevent operations which promote erosion.
- B. Comply with the requirements of the EPA-NPDES general permit for stormwater discharges and the stormwater pollution prevention plan developed for the project.

#### 1.05 WARRANTIES

- A. The CONTRACTOR and the materials manufactures shall warranty all workmanship and materials for a minimum period of twelve (12) months. Warranty period shall commence on the date of Final Acceptance by the OWNER.

- B. If, within the warranty period, repairs or changes are required in connection with guaranteed work which, in the opinion of the ENGINEER, is rendered necessary as the result of the use of materials, equipment or workmanship which are inferior, defective, or not in accordance with the terms of the Contract, the CONTRACTOR shall, promptly upon receipt of notice from the OWNER and without expense to the OWNER, do the following:
  - 1. Place in satisfactory condition in every particular all of such warranted work and correct all defects herein.
  - 2. Make good all damage which, in the opinion of the ENGINEER, is the result of the use of materials, equipment or workmanship which are inferior, defective, or not in accordance with the terms of the Contract.
  - 3. Make good any work or material or site disturbed in fulfilling any such guarantee.
- C. If the Contract, after notice, fails within (10) days to proceed to comply with the terms of this warranty, the OWNER may have the defects corrected, and the CONTRACTOR and his surety shall be liable for all expense incurred, provided, however, that in case of an emergency where, in the opinion of the OWNER, delay would cause loss or damage, repairs may be started without notice being given to the CONTRACTOR and the CONTRACTOR shall pay the cost thereof.
- D. All special guarantees or warranties applicable to specific parts of the work, as may be stipulated in the Contract Specifications or other papers forming a part of this Contract, shall be subject to the terms of this paragraph during the first year of life of each such guarantee. All special guarantees and manufacturers' warranties shall be assembled by the CONTRACTOR and delivered to the ENGINEER, along with a summary list thereof, before the acceptance of the Work.
- E. The CONTRACTOR's twelve (12) month warranty or guarantee period shall be part of the project performance bond.

#### 1.06 CONSTRUCTION CONDITIONS

- A. The CONTRACTOR shall strictly adhere to the specific Florida Plumbing Code (latest edition) requirements of the governmental unit(s) or agency(ies) having jurisdiction over the work. Whatever there is a difference in the requirements of the Florida Plumbing Code (latest edition) and these Specifications, the more stringent shall apply.

#### 1.07 PUBLIC NUISANCE

- A. The CONTRACTOR shall not create a public nuisance including, but not limited to, encroachment on adjacent lands, flooding of adjacent lands, or excessive noise.
- B. Trash accumulation, including accumulation of the lunch-break refuse, shall be avoided. The CONTRACTOR shall provide appropriate containers for collecting rubbish and the CONTRACTOR's superintendent shall enforce their use. The containers shall also be regularly emptied.

- C. No extra charge may be made for time lost due to work stoppage resulting from the creation of a public nuisance.

#### 1.08 HAZARDOUS LOCATIONS

- A. CONTRACTOR shall perform work in accordance with OSHA, state and local safety requirements.

#### 1.09 RELOCATIONS

- A. The CONTRACTOR shall be responsible for the relocation of structures, including but not limited to: utility poles, signs, sign poles, fences, piping, conduits and drains that interfere with the positioning of the work as set out on the Drawings. The cost of all such relocations shall be included in the bid.

#### 1.10 SUSPENSION OF WORK DUE TO WEATHER

- A. During inclement weather, all work that could be damaged or rendered inferior by such weather conditions shall be suspended. The orders and decisions of the ENGINEER as to suspensions shall be final and binding. The ability to issue such an order shall not be interpreted as a requirement to do so. During suspension of the Work for any cause, the Work shall be suitably covered and protected so as to preserve it from injury by the weather or otherwise; and, if the ENGINEER shall so direct, rubbish and surplus materials shall be removed. Throughout the duration of the Work, the CONTRACTOR shall provide temporary connections between new portions of the storm drainage system and existing portions of the storm drainage system in order to drain storm water runoff from the Work Area consistent with the requirements for providing effective erosion control.

#### 1.11 HURRICANE PREPAREDNESS PLAN

- A. Within 30 days of the date of Notice to Proceed, the CONTRACTOR shall submit to the ENGINEER and OWNER a Hurricane Preparedness Plan. The Plan should outline the necessary measures that the CONTRACTOR proposes to perform at no additional cost to the OWNER in case of a hurricane warning.
- B. In the event of inclement weather, or whenever ENGINEER shall direct; the CONTRACTOR shall carefully protect the Work and materials against damage or injury from the weather. If, in the opinion of ENGINEER, any portion of Work materials has been damaged or injured by reason of failure on the part of the CONTRACTOR or subcontractors to protect the Work, such Work and materials shall be removed and replaced at the expense of the CONTRACTOR.

#### 1.12 SALVAGE

- A. Any existing equipment or material, including but not limited to, valves, pipes, fittings, couplings, etc., which is removed or replaced as a result of construction under this project may be designated as necessary and delivered, to the OWNER at a location directed by the OWNER, at the CONTRACTOR's expense. Removed material not designated as salvage, or that the ENGINEER decides is not to salvage, shall become the property of

the CONTRACTOR, removed from the site, and properly disposed at the CONTRACTOR's expense.

#### 1.13 PERMITS

- A. Upon notice of award, the CONTRACTOR shall immediately apply for all applicable permits not previously obtained by the OWNER to do the work from the appropriate governmental agency or agencies. This includes a OWNER Building Permit for all work to be performed on private property. No Work shall commence until all applicable permits have been obtained and copies delivered to the ENGINEER. The cost for obtaining all permits shall be borne by the CONTRACTOR.
- B. The CONTRACTOR shall be responsible for complying with all permits conditions for any permits that the OWNER has already obtained and are attached to these specifications.
- C. The OWNER has obtained, or is actively in the process of obtaining, the following permits for the Work:
  - 1. Florida Department of Environmental Protection/Sarasota County Health Department Public Water System Construction Permit.

#### 1.14 PUMPING

- A. The CONTRACTOR shall, for the duration of the contract, and with his own equipment, pump out stormwater runoff or groundwater which may flow, seep or leak into excavations.
- B. CONTRACTOR shall provide labor, material, and equipment necessary to provide a pump discharge that is located and made in a manner acceptable to the ENGINEER; that meets all permits and environmental protection requirements; and meets all federal, state, and local laws. At no time will the CONTRACTOR be allowed to pump sewage or polluted water into storm drains, streams, open channels, or onto streets during the course of the work. The CONTRACTOR shall also provide all necessary noise suppression devices to minimize pump noise and comply with the noise requirements of the Contract Documents.

#### 1.15 NOTIFICATION OF WORK ON EXISTING FACILITIES

- A. Before commencing Work on any of the existing structures or equipment, the CONTRACTOR shall notify the OWNER/ENGINEER, in writing, at least 10 calendar days in advance of the date he proposes to commence such Work.
- B. CONTRACTOR shall notify the various permitting and regulatory agencies prior to commencing the Work permitted and regulated by the affected permits in accordance with the conditions of the permit.

#### 1.16 EXISTING UNDERGROUND PIPING, STRUCTURES AND UTILITIES

- A. The attention of the CONTRACTOR is drawn to the fact that during excavation, the possibility exists that the CONTRACTOR will encounter various water, gas, telephone, electrical, service laterals or other utility lines not shown on the Drawings. The

CONTRACTOR shall exercise extreme care before and during excavation to locate and flag these lines so as to avoid damage thereto. Should damage occur to an existing line, the CONTRACTOR shall immediately contact the utility and the OWNER. If the repair is to be completed by the CONTRACTOR it shall be carried out in a timely and quality manner. Cost associated with such damage shall be borne by the CONTRACTOR at no additional cost to the OWNER.

- B. It is the responsibility of the CONTRACTOR to ensure that all utility or other poles, the stability of which may be endangered by the close proximity of excavation, are temporarily supported in position while work proceeds in the vicinity of the pole and that utility or other companies concerned be given reasonable advance notice of any such excavation by the CONTRACTOR. All costs are the responsibility of the CONTRACTOR.
- C. The locations of existing utilities are shown without express or implied representation, assurance, or guarantee that they are complete or correct or that they represent a true picture of underground piping to be encountered. Encountering existing utilities at different depth or locations than shown on the drawings shall not be cause for additional cost to the OWNER.
- D. The existing piping and utilities that interfere with new construction shall be rerouted as shown, specified or required. The CONTRACTOR shall excavate sufficiently ahead of the proposed work to predict potential conflicts. Before any piping and utilities not shown on the Drawings are disturbed, the CONTRACTOR shall immediately notify the ENGINEER of the location of the pipeline or utility and shall reroute or relocate the pipeline or utility as directed.
- E. The CONTRACTOR shall exercise care in any excavation to locate all existing piping and utilities. All utilities that do not interfere with completed work shall be carefully protected against damage. Any existing utilities damage in any way by the CONTRACTOR shall be restored or replaced by the CONTRACTOR at his expense, as directed by the ENGINEER.
- F. It is intended that wherever existing utilities such as water, gas, telephone, electrical, or other service lines must be crossed, deflection of the pipe within recommended limits and cover shall be used to satisfactorily clear the obstruction unless otherwise indicated on the Drawings. However, when in the opinion of the OWNER or ENGINEER this procedure is not feasible, the ENGINEER may direct the use of fittings for the utility crossing. The CONTRACTOR shall verify utility crossing with test pits prior to construction as required by the ENGINEER.
- G. The CONTRACTOR shall preserve existing sanitary sewers without interruption while performing the work of the project. When the drawings indicate that all or a portion of a service lateral is to be replaced, the CONTRACTOR shall accomplish the work without disruption of service, backup in the structure served, or leakage of sewage into the excavation.

#### 1.17 JOB SITE SECURITY

- A. The CONTRACTOR shall properly protect the work area to prevent the public from entering the work area. The CONTRACTOR shall furnish and erect such barricades, fences, light, and danger signals and shall provide such other precautionary measures for

the protection of persons or property and of the work as necessary. Barricades/fencing shall be painted or have a reflective color that will be visible at night. From sunset to sunrise, the CONTRACTOR shall furnish and maintain at least one light at each barricade/fence and sufficient numbers of barricades/fencing shall be erected to keep vehicles or pedestrians from entering on or into any work under construction.

- B. The CONTRACTOR will be held responsible for all damage to the work due to failure of barricades, fencing signs, and lights to protect it and whenever evidence is found of such damage, the CONTRACTOR shall immediately remove the damaged portion and replace it at his cost and expense. The CONTRACTOR's responsibility for the maintenance of barricades, signs, and lights shall not cease until the project has been accepted by the OWNER.

#### 1.18 NEW SERVICE CONNECTIONS

- A. The Work requires that new services be installed to the lots shown on the drawings. In most cases, this shall include a new service from the new water main to the new meter box, installing a new, OWNER-supplied meter in the new meter box and a new service line from the meter box to the building on the lot.
- B. In some cases, as shown on the Drawings, the existing meter box and meter, and the line from the meter box to the building will remain. In such cases, the Work involves only running a new service line from the new water main or replacement water main to the existing meter box and connecting into the existing meter with a new curb stop. No new backflow prevention device is required.
- C. The CONTRACTOR's pricing for installing the new service lines on private property shall allow for installation by either open cut or by horizontal directional drill based on direction from the OWNER and feedback from the property OWNER.
- D. After the new water main and street services are tested, disinfected and cleared by the Health Department/FDEP, the CONTRACTOR shall transfer each affected lot's service to the new water main. This shall include:
  - 1. Unless the Drawings call for connecting to an existing meter:
    - a. Furnishing and installing a new meter box and a new service from the meter box to the existing water service connection on the building being served. New service laterals shall be Schedule 40 PVC or SDR-9 HDPE and shall match the size of the new street lateral. All above ground pipe shall be copper or brass.
    - b. Installing an OWNER supplied meter in the new meter box. Piping in the meter box shall include all accessories necessary to connect the meter.
  - 2. Some of the existing services have dual or double check valve assemblies or RPZs. Unless connecting to an existing meter, all existing dual or double check valve assemblies and RPZs on residential services shall be removed and turned over to the property OWNER and a new dual check valve assembly shall be installed on the new service. Dual check valve (DuC) assemblies shall be one of the following models:

- a. Watts LF7 series including the LF7RU2-2 and LF07SLF (for Fire Protection)
- b. Zurn-Wilkins Model 700 or 700 FP (for Fire protection)
- c. Conbraco DUCLF-4N Series
- d. Conbraco DUC 40 Series

Residential customers that do not have a well or irrigation system are not required to have a BFD installed and will have any existing BFD removed. If a residential service has an existing DuC above grade and this device was relocated below grade by the licensed plumber contracted to perform this work by the homeowner, the existing thermal expansion must be relocated to the water service connection at the house by the CONTRACTOR's plumber. If thermal expansion did not exist on an existing DuC, it must be provided on any relocated DuC and installed by the CONTRACTOR's plumber. The relief valve can be installed conveniently at the riser piping entering the home near the service valve or behind a hose bib. Pressure Reducing Valves are not required or desired. CONTRACTOR shall coordinate timing of the installation of the appropriate BFD and thermal expansion with the licensed plumber contracted to perform this work by the homeowner. DuC assemblies must be installed underground in a separate box and meet all applicable codes.

- 3. Temporarily discontinuing water service to the affected lot and concurrently relocating the existing RPZ (where applicable), connecting the new service laterals to the meter and, if included, to the building. Existing thermal expansion protection shall be relocated to the water service connection.

Every RPZ is required to have some type of thermal expansion, either a Thermal Expansion Tank or a Relief Valve. If a residential or commercial service has an existing RPZ above grade, it must be relocated by the licensed plumber contracted to perform this work by the homeowner/business owner. The CONTRACTOR's licensed plumber should install a relief valve on the downstream side (customer side) of the above ground RPZ backflow prevention assembly if one did not exist previously. CONTRACTOR shall coordinate timing of the installation of the appropriate BFD and thermal expansion with the licensed plumber contracted to perform this work by the homeowner/business owner.

- 4. Restoring water service to the affected building by placing the new service line in to service. The trench for the new service from the meter to the building shall not be backfilled until the OWNER's Plumbing Inspector inspects the line visually for leaks and passes the line.
- 5. If not connecting to an existing meter, removing the existing meter box and backfilling and restoring the remaining hole.
- 6. If not connecting to an existing meter, cutting and capping the existing service line to be abandoned.

- E. All work conducted downstream of the meter and on private property shall be completed by a licensed plumber hired by the CONTRACTOR and properly registered to do work in the OWNER.

- F. Irrigation meters and services may not be shown on the drawings. If there is an existing irrigation meter, a new irrigation water service will be required and the CONTRACTOR's plumber will be responsible for connecting the new irrigation water service to the existing irrigation system. Payment for the new irrigation service and meter will be made at the contract unit price for the same size service.
- G. The OWNER has obtained written permission from property owners for the work to be completed on private property. Copies will be provided to the CONTRACTOR.
- H. Property OWNERS and/or residents shall be notified at least 72 hours in advance of work being conducted on their property and turning off water service. Once the work begins on a private lot, work shall continue and be completed within 5 working days. Trenches or holes shall not remain open overnight or over the weekend. If necessary to allow for Building Department inspection, the trench for the new water service may remain open overnight for one night but shall be covered with plywood. The CONTRACTOR shall restore or repair property per OWNER standard details and to equal or better than original condition.
- I. The CONTRACTOR will be responsible for testing and certification by a qualified backflow technician on all RPZ relocations. The CONTRACTOR will be responsible for any repairs on all relocated RPZ's if there are leaks present after relocation. The individual performing these certifications, along with their qualifications as a backflow technician must be identified to the OWNER.

#### 1.19 DOOR HANGERS

- A. The CONTRACTOR shall develop and distribute door hangers to notify residents and businesses of the impending work on their street. The language to be used in the door hanger shall be submitted to the OWNER of approval prior to their production.
- B. Door hangers shall be placed on the front door of each affected property on a given street one week prior to commencing work.
- C. When necessary, Boil/Rescind notices will be provided by the OWNER for distribution by the CONTRACTOR. Notices shall be distributed a minimum of 24 hours before shutdowns.

#### 1.20 RESTORATION

- A. The CONTRACTOR shall restore disturbed areas progressively as the work continues. No more than a total of 1,200 linear feet of disturbed work area along the streets shall remain unrestored at any given time.
- B. No open trenches shall be allowed during non-working hours for all work in this project.

- C. Good housekeeping on this project is extremely important and the CONTRACTOR will be responsible for keeping the construction site neat and clean, with debris being removed daily as the work progresses or as otherwise directed by the ENGINEER. Good housekeeping at the job site shall include: Removing all tools and temporary structures, dirt, rubbish, etc.; hauling all excess dirt, rock, etc., from excavations to a dump provided by the CONTRACTOR; and all clean up shall be accomplished to the satisfaction of the ENGINEER. Dust shall be controlled daily as may be required. Immediately after construction completion in an area or party thereof (including restoration), barricades, construction equipment and surplus and discarded materials shall be removed by the CONTRACTOR.
- D. In the event that the timely clean up restoration of the job side is not accomplished to the satisfaction of the OWNER, the OWNER shall make arrangements to affect the necessary clean up by others. The CONTRACTOR shall be charged for these costs through deductions in payment due the CONTRACTOR. If such action becomes necessary on the part of an in the opinion of the OWNER, the OWNER shall not be responsible for the inadvertent removal from the work site of materials which the CONTRACTOR would not normally have disposed of had he affected the required clean up.
- E. The OWNER reserves the right to stop new construction until the provisions of this Article are satisfied with no award of additional contract time or cost.

#### 1.21 GEOTECHNICAL INVESTIGATION

- A. CONTRACTORS may perform geotechnical investigations at the site if they deem necessary for preparing their bids.

#### 1.22 SHUTDOWN OF EXISTING WATER MAINS

- A. In the event that the CONTRACTOR shuts down and depressurizes an existing water main with live service connections as part of his construction efforts, he shall be responsible for notifying residents a minimum of 72 hours in advance of the shutdown. Prior to placing the water main back into service, the CONTRACTOR is responsible for pulling bacteriological (Bac-T) testing. In addition, the OWNER shall develop Boil Water Notices and the notices will be distributed by the CONTRACTOR to the affected properties. The OWNER shall provide the CONTRACTOR a copy of the required boil water notice form. See Section 02660 3.05.D for requirements of Bacteriological Analysis.
- B. CONTRACTOR shall provide OWNER an abandonment schedule at least 72 hours prior to the shutdown. The abandonment schedule shall illustrate how the shutdowns will be phased and the date of each shutdown. A sample abandonment schedule is shown below. ENGINEER shall provide CONTRACTOR with a full-size sample abandonment schedule upon request.



1. The CONTRACTOR will fill in the required Minor Work Plumbing Permit application and pay the \$80 fee for each property. The Building Department will help the CONTRACTOR in doing duplicate permit applications.
2. After installing the new service lines between the meter and the building, call in for an inspection prior to backfilling the trench. The plumber shall provide the Building Department a minimum of 24-hour notice for inspections. If the service is found to be acceptable by the Building Department inspector, the trench may be backfilled and the new service line may be activated. If the inspector finds deficiencies in the service line, the plumber shall correct the deficiencies and then call for a re-inspection.
3. The plumber shall notify the Building Department once the work on each private property is completed for plumbing inspection. This inspection will include observing the new service line visually for leaks. The service line trench shall therefore not be backfilled until the inspection is completed.
4. When Work on all lots is completed, the plumber shall file the appropriate closeout paperwork with the Building Department.

#### 1.26 COOPERATION WITH OTHER CONTRACTORS

- A. The CONTRACTOR is not entitled to exclusive use of the site. The OWNER may perform additional work with its own forces or through another CONTRACTOR within the project area. The CONTRACTOR shall provide the other OWNER contractors, including but not limited to the other CONTRACTOR's employees, agents, subcontractors, and suppliers (or the OWNER's forces performing the additional work), access to the site and shall cooperate with said CONTRACTORS and the OWNER.

#### 1.27 PITS FOR HORIZONTAL DIRECTIONAL DRILLING

- A. The CONTRACTOR shall provide proposed pit locations as part of his Horizontal Directional Drilling shop drawing submittal.

#### 1.28 SUSPENSION OF WORK

- A. The ENGINEER and/or ENGINEER can shutdown work if deviation from the Contract Documents is observed without prior written approval. Questions, interpretations, or clarifications about the Work must be submitted by the CONTRACTOR through a Request for Information (RFI) document.

**PART 2 - PRODUCTS (NOT USED)**

**PART 3 - EXECUTION (NOT USED)**

**END OF SECTION**

## **SECTION 01050 FIELD ENGINEERING**

### **PART 1 - GENERAL**

#### **1.01 DESCRIPTION**

- A. Scope of Work: Provide and pay for field engineering service for Project.
  - 1. Survey work required in execution of Work.
  - 2. Civil, structural, or other professional engineering services specified or required to execute CONTRACTOR's construction methods.
  - 3. The method of field staking for the construction of the Work shall be at the option of the CONTRACTOR. The OWNER has provided the engineering survey necessary to establish reference points which in his judgment are necessary to enable the CONTRACTOR to proceed with his Work.
  - 4. The accuracy of any method of staking shall be the responsibility of the CONTRACTOR. All engineering for vertical and horizontal control shall be the responsibility of the CONTRACTOR.
  - 5. The CONTRACTOR shall be held responsible for the preservation of all stakes and marks. If any stakes or marks are carelessly or willfully disturbed by the CONTRACTOR, the CONTRACTOR shall not proceed with any Work until he has established such points, marks, lines, and elevations as may be necessary for the prosecution of the Work.
  - 6. The CONTRACTOR shall retain the services of a registered LAND SURVEYOR licensed in the State of Florida to identify existing control points and maintain a survey during construction.
- B. Related Requirements Described Elsewhere:
  - 1. Conditions of the Contract.
  - 2. Summary of Work: Section 01010.

#### **1.02 QUALIFICATIONS OF SURVEYOR OR ENGINEER**

- A. Qualified ENGINEER or registered LAND SURVEYOR, acceptable to the OWNER and the ENGINEER.
- B. Registered PROFESSIONAL ENGINEER of the discipline required for the specific service on the Project, currently licensed in the State of Florida.

### 1.03 SURVEY REFERENCE POINTS

- A. Locate and protect control points prior to starting Site Work, and preserve all permanent reference points during construction.
  - 1. Make no changes or relocations without prior written notice to the ENGINEER.
  - 2. Report to the ENGINEER when any reference point is lost or destroyed, or requires relocation because of necessary changes in grades or locations.
  - 3. Require surveyor to replace Project control points which may be lost or destroyed at no additional cost to the OWNER. Establish replacement based on original survey control.

### 1.04 PROJECT SURVEY REQUIREMENTS

- A. Establish a minimum of two (2) permanent bench marks on site, referenced to data established by survey control points.

Record locations, with horizontal and vertical data, on Project Record Documents.
- B. Establish lines and levels, locate and lay out, by instrumentation and similar appropriate means:

Site improvements:

  - a. Stakes for grading, fill, and topsoil replacement.
  - b. Utility slopes and invert elevations.
- C. From time to time, verify layouts by same methods.

### 1.05 GIS DATA

- A. All valves, hydrants, fittings, blowoffs, air release valves, service connections, meter boxes, along with the top of the new water mains at 100 foot intervals, will be GPS located to sub-foot (survey) accuracy by the Contractor. Coordinate data will be field collected by the CONTRACTOR with autonomous GPS readings and subsequently differentially corrected via real time corrections. The CONTRACTOR will provide all GPS locations as x, y data in the projection State Plane Florida West HARN, NAD1983 datum, linear units in feet, and in a database format (.csv, .dbf, or .xls).
- B. In addition to the location coordinate data parameters noted in 1.05.A of this Section, additional documentation data collected and provided by the CONTRACTOR to the ENGINEER in the database shall include:
  - 1. Pipe: Facility ID number, diameter, material, manufacturer;
  - 2. Fittings: Facility ID number, type (i.e. tee, 90° bend, etc.) diameter, material, manufacturer;

3. Valves: Facility ID number, diameter, type, manufacturer, function, swing tie A, swing tie B, turns to close;
  4. Hydrants: Facility ID number, manufacturer;
  5. Services Saddles: Facility ID number; size, manufacturer
- C. The Contractor shall provide the location coordinate data and corresponding documentation data in a database format to the ENGINEER for mapping in both ESRI shapefile and ESRI geodatabase formats compatible with ArcGIS version 10.x or higher. All GIS deliverables will be projected in State Plane Florida West HARN, NAD1983 datum, and linear units in feet.

#### 1.06 RECORDS

- A. Maintain a complete, accurate log of all control and survey work as it progresses.
- B. At the end of the project, submit a certified site survey at 1 inch equals 20 feet scale on reproducible tracing sheets 24 inches by 36 inches, indicating the new building corners and location of all new structures.
- C. At the end of the project, submit a certified survey at the same scale as the ENGINEER's line drawings indicating elevations and stationing at 100-foot pipe increments and at all valve and fitting locations.

#### 1.07 SUBMITTALS

- A. Submit name and address of SURVEYOR to the ENGINEER.
- B. On request of the ENGINEER, submit documentation to verify accuracy of field engineering work.
- C. Submit (3) full-size 22"x34" drawings of the as-built survey, signed and sealed by a Registered Land Surveyor.
- D. Submit (2) CD-ROMs of the as-built survey in AutoCAD 2013 or newer format.
- E. Submit (2) CD-ROMs of the GIS data.

#### **PART 2 - PRODUCTS (NOT USED)**

#### **PART 3 - EXECUTION (NOT USED)**

**END OF SECTION**

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**SECTION 01060  
REGULATORY REQUIREMENTS & PERMITS**

**PART I – GENERAL**

1.01 REQUIREMENTS

- A. The CONTRACTOR shall comply with all Federal, State, and local building codes, laws and/or ordinances appropriate to the project, including those of the:
  - 1. National Electric Code
  - 2. Florida Building Code
  - 3. Chapter 556, Florida Statutes, Underground Facility Damage Prevention and Safety Act
  - 4. Others as noted Section 01010, Summary of Work
- B. The CONTRACTOR shall comply with these codes, laws, regulations, rules, and directives of all agencies, boards, districts, and governmental bodies having jurisdiction.
- C. The CONTRACTOR shall obtain and pay the cost of all permits, fees, tie-in or connection charges associated with the project.

1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. All applicable sections of the Specifications
- B. General Conditions

1.03 PERMITS BY OWNER

- A. The OWNER prior to the advertisement of the project has applied for or has obtained permits from the following agencies:
  - 1. Florida Department of Health: General Permit for Construction of Water Main Extensions for PWSs.
  - 2. Sarasota County Right-Of-Way Use Permit
  - 3. City of Venice Right-Of-Way Use Permit

**PART 2 – PRODUCTS (NOT APPLICABLE)**

**PART 3 – EXECUTION**

3.01 MEASUREMENT AND PAYMENT

- A. There shall be no special measurement or payment for the work under this section; it shall be included in the lump sum price bid for Mobilization (Bid Item 20).

**END OF SECTION**

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**SECTION 01061**  
**STORMWATER POLLUTION PREVENTION / NPDES REQUIREMENTS**

**PART I – GENERAL**

1.01 SECTION INCLUDES

- A. Stormwater Pollution Prevention Plan requirements and recommendations under the NPDES program

1.02 PURPOSE

- A. The purpose of this section is to outline minimum requirements for stormwater pollution prevention as required under the NPDES program. There may be more stringent local government or OWNER requirements for Erosion and Sediment Control, which would be located in the Specifications or on the Drawings. The more stringent requirement governs.

1.03 RELATED SECTIONS

- A. Section 01060: Regulatory Requirements
- B. Section 01568: Temporary Erosion and Sedimentation Control
- B. Section 02270: Erosion and Sediment Control

1.04 ABBREVIATIONS

- A. NPDES - National Pollution Discharge Elimination System
- B. SWPPP - Stormwater Pollution Prevention Plan
- C. NOI - Notice of Intent
- D. NOT - Notice of Termination

1.05 CONSTRUCTION PROJECTS REQUIRING COMPLIANCE WITH NPDES GENERAL PERMIT

- A. All projects 1 or more acres in size that discharge to offsite areas.

1.06 GENERAL REQUIREMENTS

- A. The CONTRACTOR and all subcontractors involved with a construction activity that disturbs site soil or who implement a pollutant control measure identified herein must comply with the following requirements of the NPDES General Permit and any local governing agency having jurisdiction concerning erosion and sedimentation control.
- B. The CONTRACTOR is responsible for preparing a SWPPP and for completing and submitting the required NOI and NOT forms, and paying all associated fees. NOI and NOT forms, and permit application fee information are available for download at:
  - 1. Projects located in Florida: [www.dep.state.fl.us/water/stormwater/npdes/](http://www.dep.state.fl.us/water/stormwater/npdes/)
- C. The SWPPP shall include the elements necessary to comply with the national baseline general permit for construction activities administered by the U.S. Environmental Protection Agency (EPA) or states designated to administer the EPA NPDES program, and shall also include all local governing agency and OWNER requirements. There may be more stringent local government or OWNER requirements for Erosion and Sediment Control, which would be located in the Specifications or on the Drawings.

- D. A copy of the NOI and a description of the project must be posted in a prominent place for public viewing at the construction site.
- E. The SWPPP must be implemented at the start of construction. A complete copy of the SWPPP, including copies of all inspection reports, plan revisions, etc., must be retained at the project site at all times during working hours and kept in the permanent project records for at least three years following submission of the NOT.
- F. The CONTRACTOR must provide names and addresses of all subcontractors working on this project who will be involved with the major construction activities that disturb site soil. That information must be part of the SWPPP.
- G. The CONTRACTOR and all subcontractors involved with the major construction activities that disturb site soil must sign a copy of the appropriate certification statement included herein.
- H. Regular inspections by the CONTRACTOR must be made to determine effectiveness of the SWPPP. The inspector must be a person familiar with the site, the nature of the major construction activities, and qualified to evaluate both overall system performance and individual component performance.
- I. The SWPPP must be updated each time there are significant modifications to the pollutant prevention system or a change of contractors working on the project who disturb site soil. The CONTRACTOR must notify EPA or the local state agency administering the NPDES program as soon as these modifications are implemented.
- J. Discharge of oil or other hazardous substances into the storm water is subject to reporting and cleanup requirements. Refer to Part III.B of the NPDES General Permit for additional information. Copies of the NPDES General Permit are available for download at the sites listed in item B.
- K. Once the site reaches final stabilization, the general contractor must complete and submit the NOT to the required NPDES agency and the OWNER.
- L. The SWPPP must be amended as necessary during the course of construction in order to keep it current with the pollutant control measures utilized at the site.
- M. A record of the dates when major grading activities occur, when construction activities temporarily or permanently cease on a portion of the site, and when stabilization measures are initiated must be maintained until the NOT is filed. Copies of these records shall be provided to the OWNER.
- N. The SWPPP must be implemented before construction begins on the site. The primary purpose of the SWPPP is to address the impact of storm rainfall and runoff on areas of the ground surface disturbed during the construction process. In addition, it shall include recommendations for controlling other sources of pollution that could accompany the major construction activities. The SWPPP will terminate when disturbed areas are stabilized, construction activities are completed, and the NOT has been filed.

#### 1.07 ALLOWABLE NON STORMWATER DISCHARGES DURING CONSTRUCTION

- A. The national baseline General Permit for Storm Water Discharges from Construction Activities prohibits most non-storm water discharges during the construction phase. Allowable non-storm water discharges that could occur during construction on this project, which would therefore be covered by the General Permit, include:

1. Discharges from fire fighting activities
2. Fire hydrant flushing
3. Water used to wash vehicles or control dust
4. Water flowing from potable sources and water line flushing
5. Irrigation drainage
6. Runoff from pavement wash-down where spills or leaks of toxic or hazardous materials have not occurred (unless all spilled material has been removed) and where detergents have not been used
7. Springs and uncontaminated groundwater

#### 1.08 MINIMUM SWPPP CONSTRUCTION GUIDELINES

- A. Construct rock pads for construction entrance/exit.
- B. Install sediment barriers down slope from construction activities that disturb site soil.
- C. Construct rock surface for temporary parking.
- D. Install sediment barriers on the down slope prior to clearing and grubbing.
- E. Install sediment barriers on the down slope side of utility construction and soil stockpiles.
- F. Install sediment barriers on the down slope from disturbed soil during grading activities.

#### 1.10 MINIMUM EROSION AND SEDIMENT CONTROL

- A. The primary technique to be used at this project for stabilizing site soil will be to provide a protective cover of turf grass or pavement.
- B. Within 14 days after construction activity ceases on any particular area, all disturbed ground where there will not be construction for longer than 21 days must be seeded with fast-germinating temporary seed and protected with mulch.
- C. All areas at final grade must be sodded or permanently seeded and mulched (as required by the Drawings) within 14 days after completion of the major construction activity. Final site stabilization is achieved when turf grass cover provides permanent stabilization for at least 70 percent of the disturbed soil surface, exclusive of areas that have been paved.
- D. Construction traffic must enter and exit the site at the stabilized construction entrance. The purpose is to trap dust and mud that would otherwise be carried off-site by construction traffic.
- E. Water trucks will be used as needed during construction to reduce dust generated on the site. Dust control must be provided by the CONTRACTOR and shall be in compliance with applicable local and state dust control regulations.
- F. No solid materials, including building materials, are allowed to be discharged from the site with storm water. All solid waste, including disposable materials incidental to the major

construction activities, must be collected and placed in containers. The containers shall be emptied periodically by a contract trash disposal service and hauled away from the site.

- G. Substances that have the potential for polluting surface and/or groundwater must be controlled by whatever means necessary in order to ensure that they do not discharge from the site. As an example, special care must be exercised during equipment fueling and servicing operations. If a spill occurs, it must be contained and disposed of so that it will not flow from the site or enter groundwater, even if this requires removal, treatment, and disposal of soil. In this regard, potentially polluting substances should be handled in a manner consistent with the impact they represent.
- H. All personnel involved with construction activities must comply with state and local sanitary or septic system regulations. Temporary sanitary facilities will be provided at the site throughout the construction phase. They must be utilized by all construction personnel and shall be serviced by a commercial operator.
- I. Non-storm water components of site discharge must be clean water. Water used for construction, which discharges from the site, must originate from a public water supply or private well approved by the State Health Department. Water used for construction that does not originate from an approved public supply must not discharge from the site.
- J. Chemicals, paints, solvents, fertilizers, and other toxic material must be stored in waterproof containers. Except during application, the contents must be kept in trucks or within storage facilities. Runoff containing such material must be collected, removed from the site, treated, and disposed at an approved solid waste or chemical disposal facility.
- K. Between the time the SWPPP is implemented and final site stabilization is achieved, all disturbed areas and pollutant controls must be inspected at least once every seven calendar days and within 24 hours following a rainfall of 0.5 inches or greater. The inspections are to be conducted by the CONTRACTOR'S designated representative.
- L. Sediment barriers must be inspected and, if necessary, they must be enlarged or cleaned in order to provide additional capAOWNER. All material excavated from behind sediment barriers shall be stockpiled on the up slope side. Additional sediment barriers shall be constructed as needed.
- M. All discharge points must be inspected to determine whether erosion control measures are effective in preventing significant impacts to receiving waters.
- N. Based on inspection results, any modification necessary to increase effectiveness of this SWPPP to an acceptable level must be made within seven calendar days of the inspection. The inspection reports must be completed entirely and additional remarks should be included if needed to fully describe a situation. An important aspect of the inspection report is the description of additional measures that need to be taken to enhance plan effectiveness. The inspection report must identify whether the site was in compliance with the SWPPP at the time of inspection and specifically identify all incidents of non-compliance.
- O. Inspection reports must be kept on file by the CONTRACTOR as an integral part of this SWPPP for at least three years from the date of completion of the project.
- P. It is the responsibility of the CONTRACTOR to assure the adequacy of site pollutant discharge controls.

**PART 2 – PRODUCTS (NOT APPLICABLE)**

**PART 3 – EXECUTION (NOT APPLICABLE)**

3.01 MEASUREMENT AND PAYMENT

- A. The CONTRACTOR shall be reimbursed for permit fees as described in Section 01025, Measurement and Payment.
- B. There shall be no special measurement or payment for the work under this section, it shall be included in the lump sum price bid for Mobilization (Bid Item 21).

**END OF SECTION**

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**CONTRACTOR  
CERTIFICATION**

The contractor and/or subcontractor(s) that will implement the pollutant control measures described in the SWPPP must be identified below. Each must sign a statement certifying that they understand the NPDES general permit authorizing storm water discharges during construction. These statements must be maintained in the SWPPP file on site.

Contractor implementing the SWPPP:

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Business Name

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Business Address

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Business Telephone Number

CERTIFICATION: (Note signature requirements in Part VI.G. of the NPDES General Permit.)

***"I certify under penalty of law that I understand the terms and conditions of the general National Pollutant Discharge Elimination System (NPDES) permit that authorizes the storm water discharges associated with industrial activity from the construction site identified as part of this certification."***

---

Signature

Date

---

Printed Name

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## **SECTION 01090 DEFINITIONS AND STANDARDS**

### **PART I – GENERAL**

#### **1.01 RELATED DOCUMENTS**

- A. Drawing and general provisions of contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this section.

#### **1.02 DEFINITIONS**

- A. General: Basic Contract definitions are included in the General Conditions.
- B. Indicated: The term "Indicated" refers to graphic representations, notes or schedules on the Drawings, or other Paragraphs or Schedules in Specifications, and similar requirements in Contract Documents. Where terms such as "shown", "noted", "scheduled", and "specified" are used, it is to help locate the reference; no limitation on location is intended except as specifically noted.
- C. Directed: Terms such as "directed", "requested", "authorized", "selected", "approved", "required", and "permitted" mean "directed by the ENGINEER", "requested by the ENGINEER", and similar phrases. However, no implied meaning shall be interpreted to extend the Architect's or OWNER'S responsibility into the CONTRACTOR'S area of construction supervision.
- D. Approve: The term "approved", where used in conjunction with the ENGINEER's or OWNER'S action on the CONTRACTOR'S submittals, applications, and requests, is limited to the duties and responsibilities of the ENGINEER or OWNER as stated in General and Supplementary Conditions or the Construction Agreement. Such approval shall not release the CONTRACTOR from responsibility to fulfill Contract requirements unless otherwise provided in the Contract Documents.
- E. Regulation: The term "Regulations" includes laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, as well as rules, conventions, and agreements within the construction industry that control performance of the Work, whether lawfully imposed by authorities having jurisdiction or not.
- F. Furnish: The term "furnish" is used to mean "supply and deliver to the Project site, ready for unloading, unpacking, assembly, installation, and similar operations".
- G. Install: The term "install" is used to describe operations at project site including the actual "unloading, unpacking, assembly, erection, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations".
- H. Provide: The term "provide" means "to furnish and install, complete and ready for the intended use".
- I. Installer: An "Installer" is the CONTRACTOR or an entity engaged by the CONTRACTOR, either as an employee, subcontractor, or sub-subcontractor for performance of a particular construction activity, including installation, erection, application, and similar operations. Installers are required to be experienced in the operations they are engaged to perform.
  - 1. The term "experienced," when used with the term "Installer" means having a

minimum of five (5) previous Projects similar in size and scope to this Project, being familiar with the precautions required, and having complied with requirements of the authority having jurisdiction.

- J. Project Site: The space available to the CONTRACTOR for performance of construction activities, either exclusively or in conjunction with others performing other construction activities as part of the Project. The extent of the Project Site is shown in the Contract Documents and may or may not be identical with the description of the land upon which the Project is to be built.
- K. Testing Laboratories: A "testing laboratory" is an independent entity engaged by the CONTRACTOR to perform specific inspections or tests, either at the Project Site or elsewhere, and to report on and, if required, to interpret results of those inspections or tests.

### 1.03 SPECIFICATION FORMAT AND CONTENT EXPLANATION

- A. Specification Format: These Specifications are organized into Divisions and Sections based on the Construction Specifications Institute's 16-Division format and MASTERFORMAT numbering system.
- B. Specification Content: This Specification uses certain conventions in the use of language and the intended meaning of certain terms, words, and phrases when used in particular situations or circumstances. These conventions are explained as follows:
  - 1. Abbreviated Language: Language used in the Specifications and other Contract Documents is the abbreviated type. Implied words and meanings will be appropriately interpreted. Singular words will be interpreted as plural and plural words interpreted as singular where applicable and where the full context of the Contract Documents so indicates.
  - 2. Imperative and streamlined language is used generally in the Specifications. Requirements expressed in the imperative mood are to be performed by the CONTRACTOR. At certain locations in the text, for clarity, subjective language is used to describe responsibilities that must be fulfilled indirectly by the CONTRACTOR, or by others when so noted.
    - a. The words "shall be" shall be included by inference wherever a colon (:) is used within a sentence or phrase.
- C. Assignment of Specialists: The Specification requires that certain specific construction activities shall be performed by specialists who are recognized experts in the operations to be performed. The specialists must be engaged for those activities, and assignments are requirements over which the CONTRACTOR has no choice or option. Nevertheless, the ultimate responsibility for fulfilling Contract requirements remains with the CONTRACTOR.
  - 1. This requirement shall not be interpreted to conflict with enforcement of building codes and similar regulations governing the Work. It is also not intended to interfere with local trade union jurisdictional settlements and similar conventions.
  - 2. Trades: Use of titles such as "carpentry" is not intended to imply that certain construction activities must be performed by accredited or unionized individuals of a corresponding generic name, such as "carpenter". It also does not imply that requirements specified apply exclusively to tradespersons of the corresponding generic name.

## 1.04 INDUSTRY STANDARDS

- A. **Applicability of Standards:** Except where the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents. Such standards are made a part of the Contract Documents by reference. Individual Sections indicate which codes and standards the CONTRACTOR must keep available at the Project Site for reference.
- B. **Publication Dates:** Where the date of issue of a referenced standard is not specified, comply with the standard in effect as of date of Contract Documents.
1. **Updated Standards:** At the request of the Architect, CONTRACTOR, or authority having jurisdiction, submit a Change Order proposal/request where an applicable code or standard has been revised and reissued after the date of the Contract Documents and before performance of Work affected. The Architect and OWNER will decide whether to issue a Change Order to proceed with the updated standard.
- C. **Conflicting Requirements:** Where compliance with two or more standards is specified, and they establish different or conflicting requirements for minimum quantities or quality levels, the most stringent requirement will be enforced, unless the Contract Documents indicate otherwise. Refer requirements that are different, but apparently equal, and uncertainties as to which quality level is more stringent to the Architect for a decision before proceeding.
1. **Minimum Quantity or Quality Levels:** In every instance the quantity or quality level shown or specified shall be the minimum to be provided or performed. The actual installation may comply exactly, within specified tolerances, with the minimum quantity or quality specified, or it may exceed that minimum within reasonable limits. In complying with these requirements, indicated numeric values are minimum or maximum values, as noted, or appropriate for the context of the requirements. Refer instances or uncertainty to the Architect for a decision before proceeding.
- D. **Copies of Standards:** Each entity engaged in construction on the Project is required to be familiar with industry standards applicable to that entity's construction activity. Copies of applicable standards are not bound with the Contract Documents.
1. Where copies of standards are needed for performance of a required construction activity, the CONTRACTOR shall obtain copies directly from the publication source.
- E. **Abbreviations and Names:** Trade association names and titles of general standards are frequently abbreviated. The following acronyms or abbreviations as referenced in Contract Documents are defined to mean the associated names. Names and addresses are subject to change and are believed to be, but are not assured to be, accurate and up to date as of date of the Contract Documents.

AAMA	American Architectural Manufacturer's Association 1827 Walden Office Square Suite 104 Schaumburg, IL 60173	(847) 303-5664
ACI	American Concrete Institute P.O. Box 9094 Farmington Hills, MI 48333	(248) 848-3700

AIA	American Institute of Architects 1735 New York Ave., N.W. Washington, DC 20006	(202) 626-7300
ANSI	American National Standards Institute 11 East 42 <sup>nd</sup> Street New York, NY 10036	(212) 642-4900
APA	American Plywood Association P.O. Box 11700 Tacoma, WA 98411	(206) 505-8605
ARMA	Asphalt Roofing Manufacturers Association 4041 Powder Mill Road Suite 404 Calverton, MD 20705	(301) 231-9050
ASTM	American Society for Testing and Materials 100 Barrharbor Drive West Conshohoken, PA 19428	(610) 832-9500
AWPA	American Wood Preserver's Association P.O. Box 5690 Grandbury, TX 76049	(817) 326-6300
AWPB	American Wood Preserver's Bureau 2750 Prosperity Avenue Suite 550 Fairfax, VA 22031	(703) 204-0500
AWS	American Welding Society 550 NW 42 <sup>nd</sup> Avenue Miami, FL 33126	(305) 443-9353
FM	Factory Mutual Engineering and Research 1151 Boston-Providence Turnpike Norwood, MA 02062	(617) 364-2458
FS	Federal Specifications Specifications Unit (WFSIS) 999 "E" Street NW Washington, DC 20463	(202) 694-1000
GA	Gypsum Association 810 1st Street N.E. Suite 510 Washington, DC 20002	(202) 289-5440
ML/SFA	Metal Lath/Steel Framing Association 8 S. Michigan Avenue Suite 1000 Chicago, IL 60603	(312) 456-5590

NAAMM	National Association of Architectural Metal Manufacturers 8 S. Michigan Avenue Suite 1000 Chicago, IL 60603	(312) 332-0405
NCMA	National Concrete Masonry Association 2302 Horse Pen Road Herndon, VA 20171	(703) 713-1900
NFPA	National Fire Protection Association 1 Batterymarch Park Quincy, MA 02269	(617) 770-3000
NRCA	National Roofing Contractors Association 10255 West Higgins Road Suite 600 Rosemont, IL 60018	(847) 299-9070
NIST	National Institute of Standards of Technology 100 Bureau Drive Gaithersberg, MD 20899	(301) 975-6478
PCA	Portland Cement Association 5420 Old Orchard Road Skokie, IL 60077	(847) 966-6200
PDI	Plumbing and Drainage Institute 45 Bristol Drive Suite 101 S. Easton, MA 02375	(800) 589-8956
SMACNA	Sheet Metal & Air Conditioning Contractors National Association 4201 Lafayette Center Drive Chantilly, VA 20151	(703) 803-2980
SPIB	Southern Pine Inspection Bureau 4709 Scenic Highway Pensacola, FL 32504	(850) 434-2611
SPRI	Single Ply Roofing Institute 200 Reservoir Street Suite 309A Needham, MA 02494	(781) 444-0242
SSPC	Steel Structures Painting Council 2100 Wharton Street Suite 310 Pittsburgh, PA 15203	(800) 837-8303

1.05 CODES/MANUFACTURER'S RECOMMENDATIONS

- A. Applicable code requirements are included herein by this reference. However, such are minimum criteria and no reduction from Drawings or Specifications will be permitted, even if allowed by applicable code.
- B. Electrical and mechanical apparatus, fixtures and equipment shall bear approved device label of Underwriter's Laboratories.
- C. The local building code and the Standard Building Code (latest adopted edition) apply to all work. In event a conflict occurs between the local vs. Standard Code, the greater requirements shall govern.
- D. Specifically, comply with the following codes:
  - 1. Local Public Utility regulations.
  - 2. Sanitary Code of the Florida State Board of Health, and pertinent County Board of Health regulations.
  - 3. Municipal and/or County Electrical Code.
  - 4. National Electric Code.
  - 5. Standards of National Board of Fire Underwriters.
  - 6. National Fire Codes.
  - 7. National Fire Protection Association.
  - 8. Florida Energy Efficiency Code for Building Construction.
- E. Comply with recommendations of pertinent manufacturer to achieve first quality work.

1.06 SUBMITTALS:

- A. Permits, Licenses, and Certificates: For the OWNER'S records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, and similar Documents, correspondence, and records established in conjunction with compliance with standards and regulations bearing upon performance of the Work.

**PART 2 – PRODUCTS – (NOT USED)**

**PART 3 – EXECUTION – (NOT USED)**

**END OF SECTION**

## **SECTION 01120 DEMOLITION AND ALTERATION PROJECT PROCEDURES**

### **PART I – GENERAL**

#### **1.01 RELATED DOCUMENTS**

- A. Drawing and general provisions of Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this section.

#### **1.02 DESCRIPTION OF REQUIREMENTS**

- A. Coordinate work of trades and schedule elements of demolition and alteration work by procedures and methods to expedite completion of the Work.
- B. In addition to demolition work specifically shown, cut, move or remove items as required to provide access or to allow alterations and new work to proceed.
- C. Patch, repair and refinish existing items to remain, to the specified condition for each material, with a workmanlike transition to adjacent new items of construction.

#### **1.03 QUALITY ASSURANCE**

- A. Requirements of Regulatory Agencies: Conform to the applicable Federal, State and local requirements of the following with the modifications and additional requirements specified in this Section, except as superseded and added to by authorities having jurisdiction:
  - 1. ANSI A10.6, "Safety Requirements for Demolition".
- B. Operation of Existing Facilities: Existing areas and facilities to remain are in normal use or operation, which shall remain in operation, unless otherwise indicated or specified, and shall be protected from cessation of operation and damage. Avoid interference with the use of adjacent areas and facilities, and interruption of free passage to and from such areas, unless otherwise approved by the OWNER.
- C. Structural Integrity: Maintain the structural integrity of the existing building or parts thereof at all times.

#### **1.04 SEQUENCE AND SCHEDULES**

- A. Schedule Work in the sequences and within times approved by the OWNER, and as indicated by the Contract Documents.
- B. Submit two (2) copies of proposed methods and operations of demolition to the ENGINEER for review prior to the start of work. Provide a detailed sequence of demolition and removal work to ensure the uninterrupted progress of the OWNER'S operations. No demolition shall commence until after schedule of demolition has been approved by the OWNER. Perform demolition work in an orderly sequence in accordance with approved schedule.

#### **1.05 ALTERATIONS, CUTTING, AND PROTECTIONS**

- A. Assign the work of moving, removal, cutting and patching, to trades qualified to perform the Work in a manner to cause the least damage to each type of work, and provide means of

returning surfaces to appearance of new work.

- B. Perform cutting and removal work to remove minimum necessary, and in a manner to avoid damage to adjacent work.
- C. Protect existing finishes, equipment, and adjacent work, which are scheduled to remain, from damage.
- D. Provide temporary plywood barricades or fencing as required to protect the public from construction and demolition operations. Where temporary barricades are required to provide a thermal barrier, provide insulated walls and seal ends and tops of walls to existing structure remaining.

#### 1.06 EXISTING CONSTRUCTION

Accuracy of Existing Details: Details showing existing construction that is to be demolished or altered are furnished for CONTRACTOR'S convenience and are representative of what the ENGINEER believes to be the existing conditions. It is the responsibility of the CONTRACTOR to fully verify all existing conditions and related details.

### **PART 2 – PRODUCTS**

#### 2.01 PRODUCTS FOR PATCHING, EXTENDING AND MATCHING

- A. General Requirements that Work be Complete:
  - 1. Provide same products or types of construction as that in existing structure, as needed to patch, extend or match existing work.
    - a. Generally, Contract Documents will not define products or standards of workmanship present in existing construction. CONTRACTOR shall determine products by inspection and any necessary testing, and workmanship by use of the existing as a sample of comparison.
  - 2. Presence of a product, finish, or type of construction, requires that patching, extending or matching shall be performed as necessary to make Work complete and consistent to identical standards of quality.

### **PART 3 – EXECUTION**

#### 3.01 PERFORMANCE

- A. Patch and extend existing Work using skilled mechanics who are capable of matching existing quality of workmanship. Quality of patched or extended work shall be not less than that specified for new work.

#### 3.02 DAMAGED SURFACES

- A. Patch and replace any portion of an existing finished surface which is found to be damaged, lifted, discolored, or shows other imperfections, with matching material.
  - 1. Provide adequate support of substrate prior to patching the finish.
  - 2. Refinish patched portions of painted or coated surfaces in a manner to produce

uniform color and texture over entire surface.

3. When existing surface finish cannot be matched, refinish entire surface to nearest intersections.
- B. Within four (4) hours of notification, CONTRACTOR shall make repairs required to stop leaks resulting from CONTRACTOR'S operations. If leaks are not stopped within this time period, OWNER may take steps as required to have leaks repaired and shall subsequently bill CONTRACTOR for cost of repairs.
- C. Within 72 hours of notification, CONTRACTOR shall make repairs or cause to be repaired any damage (either interior or exterior) to the building resulting from CONTRACTOR'S operations. If repairs are not made within this time period, OWNER may take steps as required to have damage repaired and shall subsequently bill CONTRACTOR for cost of repairs. Repairs shall be made to match original condition or better.

### 3.03 TRANSITION FROM EXISTING TO NEW WORK

- A. When new work abuts or finishes flush with existing work, make a smooth and workmanlike transition. Patched work shall match existing adjacent work in texture and appearance so that the patch or transition is invisible at a distance of five feet.
  1. When finished surfaces are cut in such a way that a smooth transition with new work is not possible, terminate existing surface in a neat manner along a straight line at a natural line of division, and provide trim appropriate to finished surface.
  2. Match existing finishes and align new work with existing structure where new work abuts existing structure or where indicated by the Contract Documents.

### 3.04 CLEANING

- A. Perform periodic and final cleaning as directed by OWNER and in Section 01710.
  1. Clean Owner-occupied areas daily where debris and dust occur resultant from Construction Activities.
  2. Clean spillage, overspray, and collection of dust in Patron-occupied areas immediately.
- B. At completion of Work of each trade, clean area and make surfaces ready for Work of successive trades.
- C. As completion of alterations work in each area, provide final cleaning and return area to a condition suitable for use by OWNER.

**END OF SECTION**

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## **SECTION 01200 PROJECT MEETINGS**

### **PART I – GENERAL**

#### **1.01 PRECONSTRUCTION MEETING**

Prior to the delivery of materials or the start of any construction, the CONTRACTOR shall request a Preconstruction Meeting from the ENGINEER. A minimum two (2) working days notice shall be required.

##### **A. Schedule**

The ENGINEER will establish the meeting place, time and date, distribute agenda, notify participants, and administer the meeting. The CONTRACTOR shall notify major Subcontractors.

##### **B. Attendance**

1. OWNER
2. ENGINEER
3. CONTRACTOR
4. GOVERNMENTAL AGENCIES
  - a. Major Subcontractors
  - b. Utility Companies
  - c. Safety Representatives
5. AS APPLICABLE

##### **C. Agenda**

1. The items below are to be distributed by the CONTRACTOR and discussed.
  - a. List of names and telephone numbers for superintendent, foreman and other key personnel.
  - b. List of major subcontractors and suppliers.
  - c. Projected Construction Schedules.
2. Critical Work sequencing.
3. Major equipment deliveries and priorities.
4. Project coordination.
5. Responsibilities of OWNER, ENGINEER, CONTRACTOR and other agencies.
6. Procedures and processing of:
  - a. Field decisions.
  - b. Proposal requests.
  - c. Submittals.

- d. Field Directives.
- e. Change Orders.
- f. Applications for Payment.

- 7. Adequacy of distribution of Contract Documents.
- 8. Procedures for maintaining Record Documents.
- 9. Use of premises.
- 10. Construction Facilities, Controls and Construction bids.
- 11. Temporary utilities.
- 12. Safety and first aid procedures.
- 13. Security procedures.
- 14. Housekeeping procedures.
- 15. Testing

D. Minutes

The ENGINEER will prepare and distribute copies to participants within seven (7) days of meeting. Participants shall report corrections and comments within seven (7) days of receipt of minutes.

1.02 PROGRESS MEETINGS

Progress Meetings will be held once a month or as required by the progress of the Work.

A. Schedule

The ENGINEER will establish the meeting place, time and date, distribute agenda, notify participants and administer the meeting. The CONTRACTOR shall notify major Subcontractors.

B. Attendance

- 1. ENGINEER
- 2. CONTRACTOR
- 3. Subcontractor as appropriate to the agenda.
- 4. Suppliers as appropriate to the agenda.
- 5. Others

C. Agenda

- 1. Distribute finalized minutes from previous meeting.
- 2. Review of work progress since previous meeting.

3. Review construction schedule.
4. Review shop drawings.
5. Review previous and upcoming RFIs.
6. Review pay requests and change orders.
7. Review field observations, problems, and conflicts.
8. Review project look ahead for next month.
9. Review permit status.
10. Review safety concerns.
11. Review customer concerns.
12. Review new business.
13. Review other issues.

D. Minutes

The ENGINEER will prepare and distribute copies to participants within seven (7) days of meeting. Participants shall report corrections and comments within seven (7) days of receipt of minutes.

**PART 2 – PRODUCTS (NOT APPLICABLE)**

**PART 3 – EXECUTION (NOT APPLICABLE)**

**END OF SECTION**

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## **SECTION 01300 SUBMITTALS**

### **PART I – GENERAL**

#### **1.01 CONSTRUCTION SCHEDULES**

**A. Progress Schedules**

The CONTRACTOR shall submit Progress Schedules in accordance with the General Conditions and Section 01311 of the Specifications.

**B. Submittals Schedule**

The CONTRACTOR shall submit two (2) copies of the Submittals Schedule indicating the individual items and submission dates to the ENGINEER within ten (10) working days after the Effective Date of the Agreement. Copies of this Schedule shall be made available by the CONTRACTOR for discussion during the preconstruction meeting.

**C. Schedule of Values**

The CONTRACTOR shall submit two (2) copies of Schedule of Values for the Work to the ENGINEER within ten (10) calendar days after the Effective Date of the Agreement. The Schedule of Values shall be submitted by the CONTRACTOR for discussion during the preconstruction meeting. The Schedule of Values shall be in accordance with the General Conditions and presented in sufficient detail to serve as the basis for payments during construction.

**D. Staking Schedule**

The CONTRACTOR shall submit two (2) copies of the Staking Schedule, in accordance with Section 01330 to the ENGINEER prior to mobilization. This Staking Schedule should be updated by the CONTRACTOR and submitted to the ENGINEER on a periodic basis.

#### **1.02 APPLICATIONS FOR PAYMENT**

The CONTRACTOR shall submit Applications for Payment to the ENGINEER in accordance with the provisions of the General Conditions. The CONTRACTOR shall submit a completed Application for Payment and Progress Schedule to the ENGINEER not more often than once per month. The ENGINEER will certify payments with the use of ENGINEER'S Certificate for Payment.

#### **1.03 SHOP DRAWINGS, PRODUCT DATA AND SAMPLES**

**A. General**

When used in the Contract Documents, the term "shop drawings" shall be considered to mean Contractor's Drawings for material and equipment which become an integral part of the Project. These drawings shall be complete and detailed. Shop drawings shall consist of fabrication, erection and setting drawings and schedule drawings, manufacturer's scale drawings, bills of material, wiring and control diagrams, and inspection and test reports including performance curves and certifications as applicable to the Work.

**B. Shop Drawings**

The shop drawings shall be presented in a clear and thorough manner. Details shall be identified by reference to Contract Drawing Number and Detail, and Contract Specification Section and Page Number.

Shop drawings shall consist of fabrication, erection and setting drawings and schedule drawings, manufacturer's scale drawings, bills of material, wiring and control diagrams, and inspection and test reports including performance curves and certifications as applicable to the Work.

All details on shop drawings submitted for review shall show clearly the elevations of the various parts to the main members and lines of the structure and/or equipment, and where correct fabrication of the work depends upon field measurements; such measurements shall be made and noted on the shop drawings before being submitted for review.

C. Product Data

The product data shall be presented in a clear and thorough manner identified the same as the shop drawings. Included with the information shall be performance characteristics and capacities depicting dimensions and clearances required. The manufacturers' standard schematic drawings and diagrams shall be modified to delete information which is not applicable to the Work. Manufacturers' standard information shall be supplemented to provide information specifically applicable to the Work.

D. Samples

The samples shall be of sufficient size and quantity to clearly illustrate functional characteristics of the product with integrally related parts and attachment devices depicting full range of color, texture and pattern. Mark all samples with labels that include project name, date and description.

E. Submission Requirements

The CONTRACTOR shall make submittals in accordance with the approved schedule, and in such sequence as to cause no delay in the Work or in the Work of any other CONTRACTOR. No damages will be awarded or extension of time granted due to the shop drawing and product data review process. After two revisions the CONTRACTOR will be responsible for paying a review fee to the OWNER.

The CONTRACTOR shall submit an entire package of shop drawings and product data information for major items of Work so that the ENGINEER can review the package as a unit.

The number of submittals required shall be one (1) digital copy in pdf format, delivered by email or FTP as directed by the OWNER or ENGINEER, including a stamped CONTRACTOR review cover, and (4) paper copies of all submittal materials, each accompanied by a stamped CONTRACTOR review cover sheet. All four paper copies will be retained by the OWNER and ENGINEER. Submittals shall contain the following information:

- Shop Drawing Number, Title, Submittal Dates, CONTRACTOR'S signature and review stamp.
- Field dimensions, clearly identified as such.
- Relation to adjacent or critical features of the Work or materials.
- Applicable standards, such as ASTM or Federal Specification Numbers.

- Identification of deviations from Contract Documents.
- Identification of revisions on resubmittals.

The CONTRACTOR'S stamp indicating as a minimum the Project Title, Date of Submission, Date of Previous Submission, and Contract Specification Section Reference shall be initialed or signed, certifying the review and approval of submittal per General Conditions, verification of products, field measurements and field construction criteria, and coordination of the information within the submittal with requirements of the Work and of Contract Documents.

The ENGINEER shall affix a stamp and initials or signature and indicate confirmation or requirements for resubmittal. The ENGINEER shall return to the CONTRACTOR one (1) electronic copy of review comments and/or approvals for distribution or for resubmission.

F. Resubmission Requirements

The CONTRACTOR shall make all corrections or changes in the submittals required by the ENGINEER and resubmit. The CONTRACTOR shall indicate any changes which have been made other than those requested by the ENGINEER.

G. Variations

All items specified are not necessarily intended to be a manufacturer's standard product. Variations from specified items will be considered on an "or equal" basis. If submittals show variations from Contract requirements because of standard shop practice or for other reasons, the CONTRACTOR shall describe such variations in his letter of transmittal and on the shop drawings along with notification of his intent to seek contract adjustment. If acceptable, proper adjustment in the Contract shall be implemented where appropriate. If the CONTRACTOR fails to describe such variations he shall not be relieved of the responsibility for executing the Work in accordance with the Contract, even though such drawings have been reviewed. Variations submitted but not described may be cause for rejection. Any variations initiated by the CONTRACTOR will not be considered as an addition to the scope of Work unless specifically noted and then approved as such in writing by the ENGINEER.

1.04 SPECIFICATION SECTION REQUIREMENTS

Miscellaneous schedules, field reports, test reports, affidavits, certificates, permits, agreements and other items identified in the Technical Specification Sections, or as requested by the ENGINEER shall be submitted to the ENGINEER in duplicate. As a minimum, these submittals should be identified with the Project Title, Date of Submission, and Contract Specification Section Reference.

1.05 MANUFACTURERS OPERATION AND MAINTENANCE DATA

The CONTRACTOR shall furnish one (1) electronic and four (4) paper copies of all operation and maintenance data required per the various Technical Specification Sections and as according to the requirements of the General Conditions. Prior to 80% completion of the Project, the CONTRACTOR shall have submitted one (1) acceptable copy to the ENGINEER for review.

The operation and maintenance data shall be bound in a suitable number of 3-inch or 4-inch, 3-ring hard cover binders. Permanently imprinted on the cover and side shall be the words *Manufacturers Operation and Maintenance Data*, with the Project Title, Location of the Project, and the Date. A Table of Contents shall be provided in the front of each binder to list the various sections of the Manual.

The information to be provided in each section for each piece of equipment and project component shall include, but not be limited to, detailed equipment drawings; sections cut through all of the major equipment and subassemblies; installation and operational procedures; complete wiring and piping schematics; lubrication materials and procedures; maintenance procedures; and parts lists complete enough to permit identification of parts by nomenclature, number and use.

At the front of each section a maintenance schedule shall be provided for each piece of equipment or system in the section. The schedule shall display the daily, weekly, monthly, semi-annual, annual or fraction thereof, lubrication and preventative maintenance required in order to meet warranty conditions and the manufacturer's recommendations for optimum performance and life of the unit or system. A common schedule format is to be developed and used for all of the sections. Photocopies or reproductions of the manufacturer's literature will not be accepted.

#### 1.06 AUDIO-VIDEO ROUTE SURVEY

A Video Route survey is required for this project.

Audio-video survey to be on DVD suitable for recording and play-back on video color equipment.

All recording shall be done during times of good visibility. No recording shall be done during periods of visible precipitation, or when more than ten (10) percent of the ground area is covered with standing water, unless otherwise authorized by the OWNER.

All video shall be properly identified as to location, time, and date in a manner acceptable to the OWNER and the ENGINEER. A copy of the video recording shall be provided to the ENGINEER as a shop drawing submittal for approval prior to construction. Video recordings will be returned to the CONTRACTOR at the end of the warranty period, or following the resolution of any claims, whichever is longer.

To preclude the possibility of tampering or editing in any manner, all video recordings must, by electronic means, display continuously and simultaneously generated transparent digital information to include the date and time of recording, as well as the corresponding engineering stationing numbers. The date information will contain the month, day, and year. For example, 10/5/12, and be placed directly below the time information. The time information shall consist of hours, minutes, and seconds, separated by colons. For example 10:20:30. This transparent information will appear on the extreme upper left hand third of the screen.

The engineering stationing numbers, when applicable, must be continuous, accurate and correspond to the Project stationing and must include the Standard engineering symbols. For example, 14 + 84. This transparent information must appear in the lower half of the viewing screen.

In lieu of electronic stationing numbers, the CONTRACTOR may provide visual station identification markers in the video at a minimum of 50' intervals. In addition, the name of the street being recorded and addresses must be accurately referenced verbally throughout the entire duration of the recording.

#### **PART 2 – PRODUCTS (NOT APPLICABLE)**

#### **PART 3 – EXECUTION (NOT APPLICABLE)**

**END OF SECTION**

## **SECTION 01311 CONSTRUCTION SCHEDULE AND REPORTS**

### **PART I – GENERAL**

#### **1.01 GENERAL REQUIREMENTS AND SCOPE**

- A. Pursuant to the General Conditions of this contract, the following additional scheduling requirements are a part of this Contract.
- B. Work under this Section shall consist of furnishing a Construction Schedule showing in detail how the CONTRACTOR plans to execute and coordinate the Work. The Contract Schedule shall be based on and incorporate the Contract Milestone and Completion Dates specified in the Owner-Contractor Agreement and shall show the order in which the CONTRACTOR shall perform the Work, projected dates for the start and completion of separable portions of the Work, and any other information concerning the CONTRACTOR'S Work scheduling as the OWNER may request. The proposed Construction Schedule and related Schedule of Values must be submitted to the ENGINEER and the OWNER prior to mobilization of the site.
- C. The Construction Schedule shall be in the form of a bar chart and shall consist of horizontal lines, or bars, plotted along a daily time scale. Each pay item designed in the CONTRACTOR'S Schedule of Values shall be denominated as a separate activity and represented by a horizontal bar or bars on the chart. The time-scale shall indicate all required Milestone and Completion Dates as set forth in the Owner-Contractor Agreement. The horizontal bar(s) shall indicate the start and finish dates as well as the total time period of performance for each pay item activity. The CONTRACTOR shall arrange the chart so as to show the pay item activities, the allotted timeline to fulfill each and every Milestone and Completion Date requirement. This Schedule must be submitted by the CONTRACTOR prior to commencement of Work and award of Contract.
- D. Each Work item on the bar chart, as well as being correlated to the payment document, shall be broken into reasonable work segments/activities (where practicable) with individual starting and stopping dates. As a minimum, Work shall be segmented to demonstrate its relationship to the various Milestone Dates, if any. The segmented Work activities shall be cost loaded to show their dollar value as part of the entire pay item. Activity titles shall be self-explanatory; abbreviations shall be shown in the legend.
- E. If the CONTRACTOR should desire or intend to complete the Work earlier than any required Milestone or Completion date, the OWNER or the ENGINEER shall not be liable to the CONTRACTOR for any costs or other damages should the CONTRACTOR be unable to complete the Work before such Milestone or Completion date. The duties, obligations and warranties of the OWNER to the CONTRACTOR shall be consistent with and applicable only to the completion of the Work on the Milestone and completion dates required in the Owner-Contractor Agreement, unless the OWNER, ENGINEER and CONTRACTOR otherwise agree in a written Change Order.

#### **1.02 UPDATES AND REVISIONS**

- A. The chart shall be updated to show actual progress and the effect of modifications, delays and other events. A second bar for each Work item, in a contrasting color or pattern, shall be drawn parallel to the proposed schedule to show actual progress and to forecast future progress. The actual start and stop dates shall be entered, as well as the actual dates of the Milestone events. Updates are to be submitted monthly to the ENGINEER with, and as part of, each payment request.

- B. The updated Construction Schedule submitted by the CONTRACTOR shall not show a completion date later than the Contract Time, subject to any time extensions approved by the OWNER; provided, however, that if the CONTRACTOR believes he is entitled to an extension of the Contract under the Contract Documents, the CONTRACTOR shall submit to the ENGINEER, the appropriate requests pursuant to General Conditions, including with each update, a separate schedule analysis (entitled "Requested Time Adjustment Schedule") indicating suggested adjustments in the Contract Time which should, in the opinion of the CONTRACTOR, be made by time extension, due to changes, delays or conditions occurring during the past month or previously, or which are expected or contemplated by the CONTRACTOR (whether such conditions are excusable under the Contract or are allegedly due to CONTRACTOR or OWNER fault); this separate schedule, if submitted, shall be accompanied or preceded by a formal time extension request as required by the Contract Documents and a detailed narrative justifying the time extension requested. To the extent any time extension requests are pending at the time of any update in the Construction Schedule, the "Requested Time Adjustment Schedule" shall be updated also each month, to reflect any adjustments made by the CONTRACTOR in the Construction Schedule, or any time extensions previously granted by the OWNER, and to reflect actual or expected progress. Neither the ENGINEER nor the OWNER shall have any obligation to consider any time extension request unless the requirements of the Contract Documents, and specifically, but not limited to, the requirements set forth in this paragraph, are complied with; and neither the ENGINEER nor the OWNER shall be responsible to the CONTRACTOR for any constructive acceleration due to failure of OWNER to grant time extensions under the Contract Documents should the CONTRACTOR fail to substantially comply with the submission requirements and the justification requirements of this CONTRACTOR for time extension requests. CONTRACTOR'S failure to perform in accordance with the Construction Schedule shall not be excused, nor be chargeable to the OWNER, nor the ENGINEER, because the CONTRACTOR has submitted time extension requests or the "Requested Time Adjustment Schedule."
- C. Neither the updating of the CONTRACTOR'S work schedule nor the submission, updating, change or revision of any other report or schedule submitted to the OWNER by the CONTRACTOR nor review or non-objection of the OWNER or ENGINEER of any such report or schedule shall have the effect of amending or modifying, in any way, the Contract Completion Date, Milestone Dates or of modifying or limiting, in any way, the CONTRACTOR'S obligations under this Contract.
- D. All of the CONTRACTOR'S detailed calculations and documents supporting all schedules, reports, and forecasts shall be available to the OWNER and ENGINEER on request.
- E. Each updated Construction Schedule submitted by the CONTRACTOR to the ENGINEER shall be accompanied by a narrative report which reflects the following:
1. Description of Work accomplished since submission of previous progress schedule;
  2. Comparison of the actual status of the Work with the CONTRACTOR'S project schedule;
  3. Status of equipment and material deliveries;
  4. Personnel staffing schedule;
  5. Causes of any delays;
  6. Revision of schedules; and
  7. Action proposed to restore schedule.
- F. Pursuant to the General Conditions, should any of the conditions exist such that certain activities shown on the CONTRACTOR'S Construction Schedule fall behind schedule to the extent that any of the mandatory specific or milestone dates or completion dates are in

jeopardy, the CONTRACTOR shall be required to, at no extra cost to the OWNER, prepare and submit to the ENGINEER a supplementary Recovery Schedule, in a form and detail appropriate to the need, to explain and display how he intends to reschedule those activities to regain compliance with the Construction Schedule during the immediate subsequent pay period.

### 1.03 SCHEDULE OF OFF-SITE ACTIVITIES

- A. The CONTRACTOR shall include in his Construction Schedule all procurements related activities which lead to the delivery of materials to the site in a timely manner. Upon written approval by the OWNER, these activities may be submitted as a separate Off-Site Activities Schedule, properly correlated to the Construction Schedule. The schedule of off-site activities shall include, but is not limited to, the following:
  - 1. Dates for submittals, ordering, manufacturing, or fabricating and delivery of equipment and materials. Long lead items requiring more than one month between ordering and delivery to site shall be clearly noted;
  - 2. All significant activities to be performed by the CONTRACTOR during the fabrication and erection/installation in a CONTRACTOR'S plant or on a job site, including materials/equipment purchasing, delivery; and
  - 3. CONTRACTOR'S drawings and submittals to be prepared and submitted through the ENGINEER to the OWNER for approval.
- B. The CONTRACTOR shall be solely responsible for expediting the delivery of all materials to be furnished by him so that the construction progress shall be maintained according to the current schedule for the Work as approved by the ENGINEER.
- C. The ENGINEER shall be advised in writing by the CONTRACTOR wherever it is anticipated or determined by the CONTRACTOR that the delivery date of any material and/or equipment furnished by the CONTRACTOR for installation will be later than the delivery dates shown on the schedule, subject to schedule updates.
- D. Submittals, equipment orders and similar items are to be treated as schedule activities.

### 1.04 FLOAT TIME

- A. Float or slack time is defined as the amount of time between the earliest start date and the latest start date or between the earliest finish date and the latest finish date of an activity on the Construction. Float or slack time is for the exclusive use and benefit of the OWNER. The CONTRACTOR acknowledges and agrees that actual delays, affecting activities containing float time, will not have any effect upon contract completion times, providing that the actual delay does not exceed the float time associated with those activities.
- B. Extensions of time for performance as described in the Contract Documents will be granted only to the extent that time adjustment for the activity or activities affected by any condition or event which entitles the CONTRACTOR to a time extension exceed the total float or slack of the affected activity at the time of issuance of a Change Order or the commencement of any delay or condition for which an adjustment is warranted under the Contract Documents.

## 1.05 COORDINATION

- A. The CONTRACTOR shall coordinate his work with that of other contractors and shall cooperate fully with the ENGINEER in maintaining orderly progress toward completion of the work as scheduled. The ENGINEER'S decisions regarding priority between the CONTRACTOR'S work and the work of other contractors at the site shall be final and shall not be cause for extra compensation or extension of time, except where extension of time is granted because of a delay for which CONTRACTOR is otherwise entitled to an extension of time under the Contract Documents.
- B. The milestone dates referred to in the Contract Documents for delivery of OWNER direct-purchased equipment and materials and interface activities of other contractors on the site are based on dates set forth in separate contracts with the OWNER and represent the information available at this time.
- C. Failure of OWNER direct-purchased equipment and materials to arrive as scheduled, or failure of other construction contractors to meet their schedule, shall not be justification for an extension of time, except where such failure causes, in the opinion of the ENGINEER, an unreasonable delay in the CONTRACTOR'S work, in which case the provisions of the General Conditions regarding extensions of time and extra work shall apply.
- D. The CONTRACTOR shall keep himself, and his subcontractors, advised at all times during the course of the Work regarding delivery status of OWNER direct purchased equipment and materials and of the progress of construction work being performed under separate contracts.

### **PART 2 – PRODUCTS (NOT APPLICABLE)**

### **PART 3 – EXECUTION (NOT APPLICABLE)**

**END OF SECTION**

**SECTION 01330  
CONSTRUCTION STAKING**

**PART I – GENERAL**

1.01 GENERAL REQUIREMENTS

A. Responsibility for Staking

The CONTRACTOR will set stakes and markers showing the locations of various parts of the Work as outlined herein. It shall be the responsibility of the CONTRACTOR to transfer surface line and grade for any other than normal surface open cut operations which the CONTRACTOR may conduct, and also for any operations where ordinary surface line and grade is not feasible.

1.02 RELOCATION AND RE-ESTABLISHMENT

A. Survey Control Points

The CONTRACTOR shall bear all expense involved in re-establishing and/or resetting any survey control point, land survey point or monument lost or disturbed during his construction operation. Such Work shall be done under the direct supervision of a State of Florida licensed land surveyor.

**PART 2 – PRODUCTS (NOT APPLICABLE)**

**PART 3 – EXECUTION (NOT APPLICABLE)**

**END OF SECTION**

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## **SECTION 01380 CONSTRUCTION PHOTOGRAPHS**

### **PART I – GENERAL**

#### 1.01 SCOPE OF WORK

- A. The CONTRACTOR shall employ a competent photographer to take construction record photographs prior to start of work and periodically during the course of the Work.
- B. Related Requirements Described Elsewhere:
  - 1. Section 01010: Summary of Work
  - 2. Section 01300: Submittals

#### 1.02 PHOTOGRAPHY REQUIRED

- A. Photographs shall be taken at each of the major stages of construction and as directed by the ENGINEER.
- B. Photographs may be taken by the CONTRACTOR'S personnel but must be of professional quality as herein specified. Photographs which are deemed unsatisfactory will be rejected and retakes will be required.
- C. Views Required
  - 1. One (1) view of each activity as directed by the ENGINEER, up to a limit of thirty (30) activities photographed per month.
  - 2. Five (5) views of overall Project site monthly, as directed by the ENGINEER.
  - 3. Each side of each structure on site, if applicable, where construction activities are present monthly.
- D. Reproduction
  - 1. All photographs shall be provided in digital format on CD or DVD.
  - 2. The photographer shall agree to furnish hard-copy prints to OWNER and the ENGINEER at commercial rates applicable at time of purchase.

#### 1.03 COST OF PHOTOGRAPHY

- A. The CONTRACTOR shall pay costs for specified photography and storage media. Parties requiring additional photography or prints will pay the photographer directly.

### **PART 2 – PRODUCTS**

#### 2.01 DIGITAL PRINTS

- A. Photographs taken in accordance with this Section shall be furnished to the ENGINEER on two (2) sets of CDs or DVDs, cumulative of all photos to date, and attached with each pay request.

- B. Each photograph shall be 1200x800 pixels, 360 DPI true color minimum resolution in JPEG file format.
- C. Each photograph shall bear a date and time stamp.
- D. A log, prepared in Microsoft Excel, shall be included on the CD or DVD. The log shall state the digital file name, date of photograph and orientation of view. Additional, pertinent comments may be placed on the log at the discretion of the CONTRACTOR.

## 2.02 HARD-COPY PRINTS

- A. General
  - 1. Hard-copy prints will not be provided unless specifically requested by the OWNER. The print requests shall be made as outlined in Article 1.02.D.2 of this Section.
- B. Type of Print
  - 1. Paper: Single weight, color print paper.
  - 2. Finish: Smooth surface, glossy.
  - 3. Size: 8 inch x 10 inch
- C. Identify each print on back, listing
  - 1. Name of project
  - 2. Orientation of view
  - 3. Date and time of exposure
  - 4. Name and address of photographer
  - 5. Photographer's numbered identification of exposure

## PART 3 – EXECUTION

### 3.01 TECHNIQUE

- A. Factual Presentation.
- B. Correct exposure and focus.
  - 1. High resolution and sharpness
  - 2. Maximum depth-of-field
  - 3. Minimum distortion

### 3.02 VIEWS REQUIRED

- A. Photograph from locations to adequately illustrate condition of construction and state of progress.
  - 1. At successive periods of photography, take at least one photograph from the same overall view as previously photographed.
- B. The photographer shall comply with all directions given by the ENGINEER.

### 3.03 DELIVERY OF PRINTS

- A. Deliver digital photographs on two (2) sets of CDs or DVDs to the ENGINEER to accompany

each Application for Payment.

- B. The CONTRACTOR shall store all photographs electronically for the project record file until the end of the project. A final, comprehensive CD or DVD of all photographs shall be delivered with Project Record Documents as specified in Section 01700.

**END OF SECTION**

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## **SECTION 01400 QUALITY CONTROL SERVICES**

### **PART I – GENERAL**

#### **1.01 RELATED DOCUMENTS**

- A. Drawing and general provisions of contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this section.

#### **1.02 SUMMARY**

- A. This Section specifies administrative and procedural requirements for quality control services.
- B. Quality control services include inspections, tests and related actions including reports, performed by independent agencies, governing authorities, and the CONTRACTOR. They do not include Contract enforcement activities performed by the ENGINEER or the OWNER.
- C. Inspection and testing services are required to verify compliance with requirements specified or indicated. These services do not relieve the CONTRACTOR of responsibility for compliance with Contract Document requirements.

#### **1.03 RESPONSIBILITIES**

- A. **CONTRACTOR Responsibilities:** The CONTRACTOR shall provide inspections, tests and similar quality control services as summarized below or specified in individual Specification Sections and required by governing authorities, or are provided by another identified entity; these services include those specified to be performed by an independent agency and not by the CONTRACTOR. Costs for these services shall be included in the Contract Sum. The testing agency shall be subject to the approval of the OWNER.
  - 1. The OWNER may elect to engage and pay for the services of an independent agency to perform inspections and tests specified as the OWNER'S responsibility, or at the discretion of the OWNER.
  - 2. Where the OWNER has engaged a testing agency or other entity for testing and inspection of a part of the Work, and the CONTRACTOR is also required to engage an entity for the same or related element, the CONTRACTOR shall not employ the entity engaged by the OWNER, unless otherwise agreed in writing with the OWNER.
- B. **Retesting:** The CONTRACTOR is responsible for retesting where results of required inspections, tests or similar services prove unsatisfactory and do not indicate compliance with Contract Document requirements, regardless of whether the original test was the CONTRACTOR'S responsibility.
  - 1. Cost of retesting construction revised or replaced by the CONTRACTOR is the CONTRACTOR'S responsibility, where required tests were performed on original construction.
- C. **Associated Services:** The CONTRACTOR shall cooperate with agencies performing required inspections, tests and similar services and provide reasonable auxiliary services as requested. Notify the agency sufficiently in advance of operations to permit assignment of personnel. Auxiliary services required include but are not limited to:

1. Providing access to the Work and furnishing incidental labor and facilities necessary to facilitate inspections and tests.
  2. Taking adequate quantities of representative samples of materials that require testing or assisting the agency in taking samples.
  3. Providing facilities for storage and curing of test samples, and delivery of samples to testing laboratories.
  4. Providing the agency with a preliminary design mix proposed for use for materials mixes that require control by the testing agency.
  5. Security and protection of samples and test equipment at the Project Site.
- D. Duties of the Testing Agency: The independent testing agency engaged to perform inspections, samplings and testing of materials and construction specified in individual Specification Sections shall cooperate with the ENGINEER and CONTRACTOR in performance of its duties, and shall provide qualified personnel to perform required inspections and tests.
1. The Agency shall notify the ENGINEER and CONTRACTOR promptly if irregularities or deficiencies observed in the Work during performance of its activities. The Agency may not approve or accept any portion of the Work.
  2. The Agency is not authorized to release, alter or enlarge requirements of the Contract Documents.
  3. The Agency shall not perform any duties of the CONTRACTOR.
- E. Coordination: The CONTRACTOR and each agency engaged to perform inspections, tests and similar services shall coordinate the sequence of activities to accommodate required services with a minimum of delay. In addition, the CONTRACTOR and each agency shall coordinate activities to avoid the necessity of removing and replacing construction to accommodate inspections and tests.
1. The CONTRACTOR is responsible for scheduling times for inspections, tests, taking samples and similar activities.

#### 1.04 SUBMITTALS

- A. The independent testing Agency shall submit a certified written report of each inspection, test or similar service, to the ENGINEER, in triplicate, and a copy of each inspection shall be sent to the OWNER.
1. Submit additional copies of each written report directly to the governing authority, when the authority so directs.
  2. Report Data: Written reports of each inspection, test, or similar service shall include, but is not be limited to:
    - a. Date of issue.
    - b. Project title and number.
    - c. Name, address and telephone number of testing agency.
    - d. Dates and locations of samples and tests or inspections.
    - e. Names of individuals making the inspection or test.

- f. Designation of the Work and test method.
- g. Identification of product and Specification Section.
- h. Complete inspection or test data.
- i. Test results and an interpretation of test results.
- j. Ambient conditions at the time of sample-taking and testing.
- k. Comments or professional opinion as to whether inspection or testing Work complies with Contract Document requirements.
- l. Name and signature of laboratory inspector.
- m. Recommendations on retesting.

#### 1.05 QUALITY ASSURANCE

- A. Qualifications for Service Agencies: Engage inspection and testing service agencies, including independent testing laboratories, which are prequalified as complying with "Recommended Requirements for Independent Laboratory Qualification" by the American Council of Independent Laboratories, and which specialize in the types of inspections and tests to be performed.
  - 1. Each independent inspection and testing agency engaged on the Project shall be authorized by authorities having jurisdiction to operate in the State in which the Project is located.

### **PART 2 – PRODUCTS (NOT APPLICABLE)**

### **PART 3 – EXECUTION**

#### 3.01 INSPECTION OF CONDITIONS

- A. Installer's Inspection of Conditions: Require the installer of each major unit of Work to inspect the substrate to receive Work and conditions under which the Work is to be performed. The installer shall report all unsatisfactory conditions in writing to the CONTRACTOR. Do not proceed with the Work until unsatisfactory conditions have been corrected in a manner acceptable to the installer.
- B. Manufacturer's Instructions: Where installations include manufactured products, comply with the manufacturer's applicable instructions and recommendations for installation, to the extent that these instructions and recommendations are more explicit or more stringent than requirements indicated in the Contract Documents.
- C. Inspect each item of materials or equipment immediately prior to installation. Reject damaged and defective items.
- D. Provide attachment and connection devices and methods for securing Work. Secure Work true to line and level, and within recognized industry tolerances. Allow for expansion and building movement. Provide uniform joint width in exposed Work. Arrange joints in exposed Work to obtain the best visual effect to the satisfaction and approval of the ENGINEER and the OWNER. Refer questionable visual-effect choices to the ENGINEER and the OWNER for final decision.
- E. Recheck measurements and dimensions of the Work, as an integral step of starting each installation.
- F. Install each unit of Work during weather conditions and project status that will insure the best possible results in coordination with the entire Work. Isolate each unit of Work from

incompatible Work as necessary to prevent deterioration.

- G. Coordinate enclosure of the Work with required inspections and tests, so as to minimize the necessity of uncovering Work for that purpose.
- H. Mounting Heights: Where mounting heights are not indicated, mount individual units of Work at industry recognized standard mounting heights for the particular application indicated. Refer questionable mounting height choices to the Architect for final decision.

### 3.02 REPAIR AND PROTECTION

- A. General: Upon completion of inspection, testing, sample-taking and similar services, repair damaged construction and restore substrates and finishes to eliminate deficiencies, including deficiencies in visual qualities of exposed finishes.
- B. Protect construction exposed by or for quality control service activities, and protect repaired construction.
- C. Repair and protection is the CONTRACTOR'S responsibility, regardless of the assignment of responsibility for inspection, testing or similar services.

**END OF SECTION**

**SECTION 01500  
CONSTRUCTION FACILITIES AND TEMPORARY CONTROL**

**PART I – GENERAL**

1.01 LAND FOR CONTRACTOR'S USE

A. Site Access and Parking

The CONTRACTOR shall locate roads, drives, walks and parking facilities to provide uninterrupted access to construction offices, mobilization, work, storage areas, and other areas required for execution of the Contract.

The CONTRACTOR shall maintain driveways a minimum of 15 feet wide between and around combustible materials in storage and mobilization areas.

The CONTRACTOR shall maintain traffic areas as free as possible of excavated materials, construction equipment, products, and debris.

The CONTRACTOR shall not utilize existing parking facilities for construction personnel or for the CONTRACTOR'S vehicles or equipment, unless written permission from the owner of the parking facility is obtained.

B. Trucking Route and Public Road Maintenance

Prior to the start of construction, the CONTRACTOR shall submit for review a schedule and list indicating the streets and roads within the municipality that his equipment will use off the Project site.

The CONTRACTOR shall comply with all safety requirements, weight restrictions and speed limits.

All gravel and dirt roads or streets used shall be maintained by grading, placing dust palliatives and maintenance gravel in sufficient quantities to eliminate dust and maintain traffic.

Paved streets shall be maintained in a reasonable state of cleanliness and the CONTRACTOR shall remove accumulations of debris, dirt or mud caused by his operations. This shall be done at the close of each days operation or when requested by the ENGINEER.

In order to insure adequate street maintenance as outlined above, the CONTRACTOR may be required to deposit a cash Road Protection Bond with the Agency having jurisdiction. This Bond, if required, will be held in escrow until final release is given by the Agency having jurisdiction. In the event the CONTRACTOR fails or neglects to maintain the streets to the satisfaction of the Agency having jurisdiction, the Agency having jurisdiction shall have the required maintenance work done and the cost incurred shall be deducted from the Road Protection Bond. At the completion of the Project, the Agency having jurisdiction shall return the Road Protection Bond less any monies expended by the Agency having jurisdiction and shall render to the CONTRACTOR an accounting of all monies so expended.

C. Private or Public Roads, Sidewalks and Parking Areas

The CONTRACTOR shall at all times provide emergency access to property in the vicinity of the construction for police and fire equipment, ambulances or other emergency vehicles to protect life, health and property.

Where public roads, driveways, parking areas and sidewalks are encountered throughout the community, the CONTRACTOR shall maintain those portions affected by the construction operations in a passable condition until such time as final restoration of these improvements can be made as herein specified. If, in the opinion of the ENGINEER, the public safety is in danger or the necessity exists for maintaining traffic, he may direct that backfilling be completed immediately. In the event that the necessary backfill material and equipment are not available when direction is given for immediate backfill, the trench shall be backfilled with native material to provide for the necessary maintenance of traffic and safety; however, the native material shall be removed within 48 hours and the trench properly backfilled as herein specified.

Where private roads are encountered throughout the community, the CONTRACTOR shall maintain those portions affected by its construction operations in a passable condition. These roads shall be maintained by the use of crushed shell, crushed stone, slag or compacted earth as required. Upon completion of the construction activities, the CONTRACTOR shall shape and regrade these roads leaving them in a condition adequate for normal travel.

1.02 TRAFFIC MAINTENANCE AND CONTROL

A. Road Closing

No street, road or section thereof shall be closed to through traffic unless otherwise provided for on the Plans, Specifications, or authorized by the Agency with jurisdiction over the roads. Prior to closing a street, road, or section thereof, the CONTRACTOR shall provide the ENGINEER with a copy of a detour Plan approved by the Agency having jurisdiction over the roads.

In the event roads or streets are to be closed, the CONTRACTOR shall notify the local fire department, police department, local road authority, ambulance and emergency services, Department of Public Works, U.S. Postal Department, public transit authority and public school system daily as to what streets will be partly blocked or closed, the length of time the streets will be blocked or closed and estimated when the streets will be reopened to traffic. The CONTRACTOR shall designate one responsible employee to carry out the requirements of this condition.

B. Maintaining Traffic

The CONTRACTOR shall provide access for local traffic to property along the Project by means of temporary roads, drives, culverts or other means approved by the ENGINEER. The CONTRACTOR shall grade, add surfacing materials, and dust palliatives to such temporary roads and drives as necessary for the proper maintenance of traffic.

Where the shoulder is used to maintain traffic, the shoulder shall be graded, surfaced, treated for dust, constructed, or reconstructed, as specified herein or as shown on the Plans. If the construction Work is suspended due to weather conditions or for any other reason, sufficient labor, materials and equipment shall be ready for immediate use at all times for the proper maintenance of traffic. Surfacing materials and dust palliatives shall be applied at such times and locations and in such amounts as directed by the ENGINEER.

Where shoulders are low, high, soft or rough, adequate provisions shall be taken to inform and protect the traveling public by means such as construction warning signs, barricades, lighted devices, etc. Such shoulder hazards shall be eliminated as soon as practicable.

The CONTRACTOR shall furnish, erect and maintain all signs, barricades, lights, traffic regulators, in accordance with the requirements of the current Manual of Uniform Traffic Control Devices, and all flagmen and watchmen or uniformed officers as are necessary to maintain and safeguard traffic along the entire Project. Failure to comply with these requirements may be cause to issue a stop Work Order, which shall remain in effect until all necessary devices are in place and operational. The issuance of a stop Work Order shall not be reason for granting additional compensation or an extension to the Contract time.

C. Existing Signs

No stop sign, traffic control or warning device shall be taken down until the agency having jurisdiction over the roads has been notified and arrangements for the immediate reinstallation has been made. The CONTRACTOR shall provide temporary signs, traffic control devices, warning devices, or watchmen continuously from the time the item is removed until it is reinstalled. All signs removed shall be replaced with signs meeting requirements of the agency having jurisdiction over the roads.

1.03 TEMPORARY UTILITY SERVICES

A. Electrician and Lighting

The CONTRACTOR shall be responsible for and pay all costs for the installation and removal of circuit and branch wiring, with area distribution boxes located so that power and lighting is available throughout the construction by the use of construction-type power cords and shall pay all costs of electrical power used.

Electrical wiring and distribution shall conform to the National Electrical Code as adopted by the State of Florida.

B. Telephone

The CONTRACTOR shall pay all costs for installation, maintenance and removal, and service charges for local calls to provide service for his construction site office as well as for the ENGINEERS field office. Toll charges for calls relating to Project business shall be at the CONTRACTOR'S expense.

C. Use of Water

The CONTRACTOR shall acquire any and all permits, post any bonds and pay all fees required by the local Agency having jurisdiction prior to using any hydrant as the source of water. The OWNER will furnish potable water for pressure testing and disinfection.

D. Sanitary Provisions

The CONTRACTOR shall be responsible for installation, maintenance and removal of temporary sanitary facilities for use of construction personnel and ENGINEER. All rules and regulations of the State and local health officials shall be observed, with precautions taken to avoid creating unsanitary conditions.

1.04 FIELD OFFICE

A field office will not be required for this project.

**PART 2 – PRODUCTS (NOT APPLICABLE)**

**PART 3 – EXECUTION (NOT APPLICABLE)**

**END OF SECTION**

**SECTION 01540  
HURRICANE PREPAREDNESS**

**PART I – GENERAL**

1.01 REQUIREMENTS

- A. The CONTRACTOR is responsible for having plans for protection of the Work Site during hurricanes and shall prepare and submit a Hurricane Preparedness Plan prior to any construction activity and mobilization.
- B. The Hurricane Preparedness Plan shall be submitted at the Preconstruction Meeting for approval and shall include the following:
  - 1. Items and equipment that must be removed from the Work Site.
  - 2. Methods and materials that will be utilized to secure the materials and Work Site.
  - 3. Methods and materials that will be utilized to protect uncompleted Work items.
  - 4. Plans for evacuation of staff from the Work Site.
  - 5. Plans for monitoring local weather conditions, National Weather Service weather reports, and local emergency management instructions.
  - 6. Items that must commence at the time of a hurricane watch in order to be completed and their anticipated duration.
- C. The CONTRACTOR shall immediately mobilize his Work forces when a Hurricane Watch is issued and they shall commence with those items in the Hurricane Preparedness Plan required to provide hurricane evacuation before a Hurricane Warning is issued.
- D. When the National Weather Service issues a Hurricane Watch for Sarasota County or adjoining counties, the Contractor shall immediately implement the Hurricane Preparedness plan.
- E. The Cost of preparing and implementing the Hurricane Preparedness Plan shall be the responsibility of the CONTRACTOR.
- F. The CONTRACTOR shall follow all instructions from local emergency management officials regarding evacuation of the Work Site.

1.02 SUBMITTALS

- A. Submittal of the Hurricane Preparedness Plan shall be in accordance with Section 01300.

**PART 2 – PRODUCTS (NOT APPLICABLE)**

**PART 3 – EXECUTION (NOT APPLICABLE)**

**END OF SECTION**

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**SECTION 01568**  
**TEMPORARY EROSION AND SEDIMENTATION CONTROL**

**PART I – GENERAL**

1.01 DESCRIPTION

- A. At the Preconstruction Meeting, provide the OWNER with the CONTRACTOR'S plan to prevent, control, and reduce erosion and water pollution, meeting the requirements and special conditions or any required permits authorizing project construction.
- B. If a National Pollutant Discharge Elimination System (NPDES) permit is issued or approved by the Florida Department of Environmental Protection, the CONTRACTOR'S plan shall be prepared as a part of the Approved Stormwater Pollution Prevention plan (SWPPP) as described in Section 01061.

1.02 SCOPE OF WORK

- A. The Work specified in this Section consists of planning, designing, providing, maintaining and removing temporary erosion and sedimentation controls as required by Rules and Regulations and permit conditions.
- B. Temporary erosion controls include, but are not limited to, grassing, mulching, setting, watering and reseeding on-site surfaces and soil and borrow area surfaces and providing interceptor ditches at ends of berms and at those locations which will ensure that erosion during construction will be either eliminated or maintained within acceptable limits as established by the OWNER.
- C. Temporary sedimentation controls include, but are not limited to, silt dams, traps, barriers, and appurtenances at the foot of sloped surfaces which will ensure that sedimentation pollution will be either eliminated or maintained within acceptable limits as established by the OWNER.
- D. The CONTRACTOR is responsible for providing effective temporary erosion and sediment control measures during construction or until final controls become effective.

1.03 RELATED WORK DESCRIBED ELSEWHERE

- A. Section 01060: Regulatory Requirements and Permits
- B. Section 01061: SWPPP and NPDES Requirements
- C. Section 02200: General Earthwork

1.04 QUALITY ASSURANCE

- A. Erosion and sedimentation control measures shall be in compliance with the best management practices as outlined in the Florida Stormwater, Erosion, and Sedimentation Control Inspectors Manual, 2008. Florida Department of Environmental Protection and Florida Department of Transportation, as may be amended and as required by Chapter 62-25, Florida Administrative Code, as may be amended.
- B. Florida Department of Transportation (FDOT) Standard Specifications for Road and Bridge Construction and Roadway and Traffic Design Standards, latest editions:

1. Index No. 102 - Temporary Erosion and Sediment Control
2. Index No. 103 - Turbidity Barriers
3. Specification Section 300 - Prime and Tack Coats for Base Courses

## **PART 2 – PRODUCTS**

### **2.01 SEDIMENTATION CONTROL**

- A. Bales shall be clean, seed-free cereal hay type.
- B. Netting shall be fabricated of material acceptable to the OWNER.
- C. Filter stone shall be crushed stone which conforms to Florida Department of Transportation (FDOT) specifications.
- D. Concrete block shall be hollow, non-load bearing type.
- E. Concrete shall be exterior grade not less than 1-inch thick.

## **PART 3 – EXECUTION**

### **3.01 POLLUTION PREVENTION PLAN**

- A. The SWPPP will include this erosion control plan and all additional measure that will be employed to dispose of, control, or prevent the discharge of solid, hazardous, and sanitary wastes to waters of the U.S.
- B. The OWNER and ENGINEER will review and approve the CONTRACTOR'S part of the SWPPP, including required signed certification statements, before construction activities begin.
- C. Failure of the CONTRACTOR to sign any required documents or certification statements will be considered a default of the Contract.
- D. Any earth disturbing activities performed without the required signed documents or certification statements may be considered a violation of the Clean Water Act by the EPA.
- E. When a SWPPP is required, prepare the erosion control plan in accordance with the sequence of operations and present in the NPDES Stormwater Pollution Prevention Plan required format provided by the FDEP. The erosion control plan shall describe, but not be limited to the following items or activities:
  1. For each phase of construction operations or activities, supply the following information:
    - a. Locations of all erosion control devices
    - b. Types of all erosion control devices
    - c. Estimated time erosion control devices will be in operation
    - d. Monitoring schedules for maintenance of erosion control devices
    - e. Methods of maintaining erosion control devices
    - f. Containment or removal methods for pollutants or hazardous wastes
  2. The name and telephone number of the person responsible for monitoring and maintaining the erosion control devices.

### 3.02 SEDIMENTATION CONTROL

Install and maintain silt dams, traps, barriers, and appurtenances as shown on the approved descriptions and working drawings. Hay bales which deteriorate and filter stone which is dislodged shall be replaced.

### 3.03 PERFORMANCE

- A. Should any of the temporary erosion and sediment control measures employed by the CONTRACTOR fail to produce results which comply with the requirements of the State of Florida, the OWNER or ENGINEER, the CONTRACTOR shall immediately take whatever steps are necessary to correct the deficiency at his own expense.
- B. The CONTRACTOR shall comply with the Stormwater Pollution Prevention Plan provided in this section and all NPDES records shall be kept on-site and available for inspection if required.

**END OF SECTION**

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## **SECTION 01600 MATERIAL AND EQUIPMENT**

### **PART I – GENERAL**

#### **1.01 TRANSPORTATION AND HANDLING**

##### **A. Transportation**

The CONTRACTOR shall provide for expeditious transportation and delivery of materials and equipment to the Project site in an undamaged condition and on a schedule to avoid delay of the Work. Materials and equipment shall be delivered in original containers or packaging with identifying labels intact and legible.

##### **B. Handling**

The CONTRACTOR shall provide equipment and personnel at the site to unload and handle materials and equipment in a manner to avoid damage. Materials and equipment shall be handled only at designated lifting points by methods to prevent bending or over stressing.

#### **1.02 STORAGE AND PROTECTION**

##### **A. Storage**

The CONTRACTOR shall store materials and equipment immediately on delivery, and protect it until installed in the Work.

Materials shall not be stored in preserve areas of existing vegetation that is to remain.

Products subject to damage by elements shall be stored in weather tight enclosures with temperature and humidity ranges as required by manufacturers instructions.

Loose granular materials shall be stored on solid surfaces to prevent mixing with foreign matter.

The place of storage shall be located so as to minimize interference with traffic and to provide easy access for inspection. No material shall be stored closer than five (5) feet to the edge of a pavement or traveled way open to the public.

Materials that have been stored shall be subject to retest and shall meet the requirements of their respective specifications at the time they are to be used in the Work.

#### **1.03 MANUFACTURERS INSTRUCTIONS**

When Contract Documents require that installation of Work shall comply with manufacturer's instructions, the CONTRACTOR shall obtain and distribute copies of such instructions to parties involved in the installation including two copies to the ENGINEER. The CONTRACTOR shall handle, install, connect, clean, condition and adjust products in strict accord with such instructions and in conformity with specified requirements. Should job conditions or specified requirements conflict with manufacturer's instructions, consult with ENGINEER for further instructions.

#### **1.04 SUBSTITUTIONS AND PRODUCT OPTIONS**

A. Products List

Within four (4) days of request, the CONTRACTOR shall submit a complete list of major products proposed to be used, with the name of the manufacturer and the installing subcontractor, if applicable, to the ENGINEER.

B. CONTRACTOR'S Product Options

1. For products specified only by reference standard, the CONTRACTOR may, with OWNER approval, select any product meeting that standard. An item may be considered equal to the item so named or described if, in the opinion of the OWNER and ENGINEER:

- a. It is at least equal in quality, durability, appearance, strength, and design;
- b. It will perform at least equally the specific function imposed by the general design for the work being contracted for or the material being purchased; and
- c. It conforms substantially, even with deviations, to the referenced standards.

Approval by the OWNER and the ENGINEER will be granted based upon considerations of quality, workmanship, economy of operation, suitability for the purpose intended, and acceptability for use on the Project.

2. For products specified by naming several products or manufacturers the CONTRACTOR shall select any one (1) of the products or manufacturers named, which complies with the specifications.

3. For products specified by naming one (1) or more products or manufacturers and or equal, the CONTRACTOR must submit a Substitution Request Form for any product or manufacturer not specifically named, in accordance with the General Conditions.

4. For products specified by naming only one (1) product and manufacturer, there is no option.

**PART 2 – PRODUCTS (NOT APPLICABLE)**

**PART 3 – EXECUTION (NOT APPLICABLE)**

**END OF SECTION**

## **SECTION 01700 PROJECT CLOSEOUT**

### **PART I – GENERAL**

#### **1.01 CLEANING**

The CONTRACTOR shall perform periodic cleaning to keep the Work, the site and adjacent properties free from accumulations of waste materials, rubbish and wind-blown debris, resulting from construction operations. Waste material, debris and rubbish shall be periodically removed from the Work Site and disposed of at legal disposal areas away from the site. Prior to OWNER acceptance the CONTRACTOR shall conduct an inspection of sight-exposed interior and exterior surfaces, and all Work areas, to verify that the entire Work is clean. The CONTRACTOR shall broom clean exterior paved surfaces and rake clean other exterior surfaces of the site.

#### **1.02 PROJECT RECORD DOCUMENTS**

The CONTRACTOR shall deliver one (1) copy of all Specifications, Addenda, Shop Drawings and Samples, annotated to show all changes made during the construction process, to the ENGINEER upon completion of the Work. Submittal of the Record Documents shall be made with a transmittal letter containing:

- Date
- Project Title and Number
- CONTRACTOR'S Name and Address
- Title and Number of each Record Document
- Certification that each Document as submitted is complete and accurate
- Documents shall be submitted in good order and in a legible condition.

#### **1.03 RECORD DRAWINGS**

Upon completion of the project, the CONTRACTOR shall provide the ENGINEER with a complete set of record drawings. Any changes shall be clearly marked in ink on reproduces provided by the ENGINEER. This is the responsibility of the CONTRACTOR and shall not be construed to be the responsibility of any other party.

#### **1.04 OPERATION AND MAINTENANCE DATA**

Prior to final inspection or acceptance, the CONTRACTOR shall fully instruct the OWNER'S designated operating and maintenance personnel in the operation, adjustment and maintenance of all products, equipment and systems specified. Operation and maintenance data required by the individual Specification sections and the manufacturers operation and maintenance data required in Section 01300, Submittals, shall constitute the basis of such instruction.

#### **1.05 SCHEDULING**

The CONTRACTOR shall coordinate efforts between the ENGINEER, any equipment manufacturers, subcontractors and governing agencies in the scheduling of required close-out procedures

#### **1.06 START UP**

The CONTRACTOR shall coordinate efforts between the OWNER, ENGINEER, ENGINEER, any equipment manufacturers, subcontractors and governing agencies in the start up of applicable

portions of the Work.

1.07 SUBSTANTIAL COMPLETION

Certification that the Work is substantially complete shall be in accordance with the General Conditions. The date for Substantial Completion shall be 330 days from the Notice-to-Proceed date.

1.08 FINAL PAYMENT AND ACCEPTANCE

The final inspection, final application for payment and acceptance shall be in accordance with the General Conditions. The date for Final Completion shall be 360 days from the Notice-to-Proceed date.

**PART 2 – PRODUCTS (NOT APPLICABLE)**

**PART 3 – EXECUTION (NOT APPLICABLE)**

**END OF SECTION**

## **SECTION 01710 CLEANING**

### **PART I – GENERAL**

#### 1.01 REQUIREMENTS

- A. The CONTRACTOR shall execute cleaning during progress of the Work and at completion of the Work, as required by the General Conditions and these specifications.

#### 1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. All applicable sections of the Specifications
- B. General Conditions

#### 1.03 DISPOSAL REQUIREMENTS

- A. The CONTRACTOR shall conduct its cleaning and disposal operations to comply with all applicable codes, ordinances, regulations, and anti-pollution laws.

### **PART 2 – PRODUCTS**

#### 2.01 MATERIALS

- A. The CONTRACTOR shall use only those cleaning materials which will not create hazards to health or property and which will not damage surfaces.

### **PART 3 – EXECUTION**

#### 3.01 DURING CONSTRUCTION

- A. The CONTRACTOR shall execute cleaning as determined necessary by the ENGINEER or OWNER to keep the Work, the site and adjacent properties free from accumulation of waste material, rubbish and windblown debris, resulting from Construction Work. Site cleaning shall be performed not less than weekly.
- B. The CONTRACTOR shall provide on-site containers for the collection of waste materials, debris and rubbish.
- C. The CONTRACTOR shall remove waste materials, debris and rubbish from the site periodically and dispose of at legal disposal areas away from the site.

#### 3.02 DUST CONTROL

- A. Perform operations so that dust and other contaminants resulting from Construction Work operations will not cause any damages or maintenance problems to adjacent properties.
- B. Schedule operations so that dust and other contaminants resulting from cleaning process will not fall on wet or newly coated surfaces.

3.03 FINAL CLEANING

- A. Employ skilled workmen for final cleaning.
- B. Power brush clean paved roadways.
- C. Remove all trash and debris in roadways, sidewalk, and landscape areas
- D. Broom clean sidewalk surfaces, power clean if determined necessary by ENGINEER; rake clean other surfaces of the project area.
- E. Prior to final completion or OWNER occupancy, CONTRACTOR shall conduct an inspection of sight-exposed interior and exterior surfaces, and all work areas, to verify the entire work is clean.
- F. All storage and staging areas shall be cleaned and returned to prior conditions or better as per requirements of this Section.

3.04 MEASUREMENT AND PAYMENT

- A. There shall be no special measurement or payment for the work under this section. It shall be included in the lump sum price bid for Mobilization (Bid Item 20).

**END OF SECTION**

## **SECTION 02100 CLEARING AND GRUBBING**

### **PART I – GENERAL**

#### 1.01 DESCRIPTION

##### A. Scope

This Section includes all clearing and grubbing Work indicated on the Plans and as required, complete with cutting and removal of trees, shrubs, vegetation, stumps, logs, brush, roots and undergrowth, and disposal of materials.

##### B. Related Work Specified Elsewhere

1. Measurement and Payment: Section 01025
2. General Earthwork: Section 02200
3. Site Grading: Section 02215

### **PART 2 – PRODUCTS (NOT APPLICABLE)**

### **PART 3 – EXECUTION**

#### 3.01 EXECUTION OF WORK

##### A. General

1. Areas designated for improvements on the Plans shall be cleared of all trees, shrubs, vegetation, stumps, logs, brush, roots, buildings, pavement other than concrete, and debris.

2. Clearing and Removal

Within areas for roadways, sidewalks, and parking areas where the finished grade is five (5) feet or less in height above the existing ground, trees, stumps, and roots shall be removed to a depth of not less than 12 inches below the existing ground. Within areas for roadways sidewalks, and parking areas, where the finished grade is more than five (5) feet in height above existing ground, trees and stumps shall be cut off flush with the existing ground surface. For embankment areas outside of the roadways, sidewalks, and parking areas, trees and stumps shall be cut off flush with the existing ground surface, or as indicated on the Plans or as directed by the OWNER.

Within areas designated for a building pad the trees, stumps, roots, vegetation and other debris shall be removed completely.

3. Removal of Trees, Stumps, and Other Vegetation

Where trees cannot be felled without danger to traffic or injury to other trees, structures or property, they shall be cut down in sections. The removal of stumps and roots may be accomplished by the use of a shredding machine meeting the approval of the OWNER.

All logs, stumps, poles, brush, and other unsatisfactory material occurring in the

Contract Limits shall be removed and shall be disposed of by the CONTRACTOR. When material is disposed of outside of the Contract Limits, disposal shall be as specified in Section 02200, General Earthwork.

Burial of materials is generally not permitted. The burial of trees, stumps and other vegetation will be permitted only if disposal areas are indicated on the Plans or directed by the OWNER. If trees and stumps are buried in these areas, they shall have a minimum cover of two (2) feet.

4. Holes and Trenches

All holes and trenches remaining after the grubbing operation in embankment areas shall have the sides broken down or leveled, and shall be refilled with acceptable material. The material shall be moistened and properly compacted in layers by tampers or rollers to the density required under roadways, parking areas, and other special areas, as directed by the ENGINEER. The same construction procedure shall be applied to all holes and trenches remaining in excavation areas where the depth of holes exceeds the depth of proposed excavation.

**END OF SECTION**

**SECTION 02140  
DEWATERING DURING CONSTRUCTION**

**PART I – GENERAL**

1.01 DESCRIPTION

A. Scope of Work:

The work to be performed under this section shall include the design and installation of a temporary well point system until completion of construction to dewater subsurface waters from structures and piping as required. The CONTRACTOR shall be responsible for all permitting activities, including permit fees, associated with obtaining applicable permits from the State Water Management District having jurisdiction over the installation and operation of the dewatering systems.

B. Related Work Described Elsewhere:

1. Trenching, Backfilling and Compacting: Section 02226.

C. General Design

1. Storm structures, water pipes, sanitary pipes, sanitary structures, and building foundations may require dewatering. It is the CONTRACTOR'S responsibility to determine extent of dewatering area and requirements for construction.

1.02 QUALITY ASSURANCE

A. Qualifications: The temporary dewatering system shall be designed by a firm who regularly engages in the design of dewatering systems and who is fully experienced, reputable, and qualified in the design of such dewatering systems. The firm shall have a successful record of operation for a minimum of five (5) years prior to bid date. The design firm shall supply the ENGINEER with previous installation details of at least three (3) successful dewatering operations of a similar nature in the State of Florida.

B. In lieu of experience, the dewatering firm shall provide a performance and warranty bond for 1.5 times the total installed cost of the temporary dewatering system. This bond shall be executed prior to award and/or contract execution.

C. Standards: The dewatering of any excavation areas and the disposal of water during construction shall be in strict accordance with all local and state government rules and regulations. If a consumptive use permit is required by local water management district, the CONTRACTOR shall be responsible for obtaining said permit.

1.03 SUBMITTALS

A. Materials and Shop Drawings: Shop drawings required to establish compliance with the Specifications shall be submitted in accordance with the provisions of Section 01300: Shop Drawings, Working Drawings and Samples. Submittals shall include at a minimum the following:

1. Design Notes and Drawings.
2. Descriptive literature of temporary dewatering system.
3. Layout of all piping involved.

4. Observation well locations.
5. Bill of materials.

#### 1.04 CRITERIA

- A. The wellpoint system shall be developed to the point that is capable of dewatering such that pipe can be laid and compacted satisfactorily as shown on the Drawings. Each wellpoint system shall be capable of dewatering and maintaining groundwater levels at the respective structures or pipelines. Observation wells shall be constructed for the purpose of testing each system. Observation wells shall be required for the construction of structures, or as determined by the CONTRACTOR'S Geotechnical Engineer.
- B. Observation Wells:
  1. Prior to excavation, the CONTRACTOR shall install groundwater observation wells at locations as directed by the CONTRACTOR'S Geotechnical Engineer, who is registered in the State of Florida and as approved by the ENGINEER adjacent to structures under construction for the purpose of measuring water levels during excavations. The observation well shall consist of screen, casing and cap of approved size and material of construction. The observation well shall be placed in a 2 1/2-inch bore hole which shall be carried to an elevation at least to final bottom grade of structure. The annular space surrounding the intake point and the riser pipe shall be sealed in such a way as to prevent infiltration from surface water. The observation well shall be developed in such a manner as to ensure proper indication of subsurface water levels adjacent to the well.
  2. The CONTRACTOR shall be responsible for maintaining the observation wells and for observing and recording the elevation of groundwater in them until adjacent structure of utilities are completed and backfilled. Each observation well shall be observed and recorded daily. Measurements shall be supplied daily to the ENGINEER. The ENGINEER may require that the observation wells reflect true groundwater levels by adding water to the well, recording the drop in the level from the time the water was added. Any plugged observation well shall be redeveloped if necessary to indicate true groundwater levels.
  3. Observation wells shall be abandoned when directed by the ENGINEER, and in a manner acceptable to the ENGINEER, and applicable regulatory agencies.

#### 1.05 PUMPING AND DRAINAGE

- A. The CONTRACTOR shall at all times during construction provide and maintain proper equipment and facilities to remove all water entering excavations, and shall keep such excavations dry so as to obtain a satisfactory undisturbed subgrade foundation condition until the fills, structures or pipes to be built thereon have been completed to such extent that they will not be floated or otherwise damaged by allowing water levels to return to natural levels. The CONTRACTOR shall submit a plan for dewatering systems to the ENGINEER for review prior to commencing Work. The dewatering system installed shall be in conformity with overall construction plan, and certification of this shall be provided by a Geotechnical Engineer. The Geotechnical Engineer shall be required to monitor the performance of the dewatering systems during the progress of the Work and require such modifications as may be required to assure that the systems are performing satisfactorily.
- B. Dewatering shall at all times be conducted in such a manner as to preserve the undisturbed bearing capacity of the subgrade soils at proposed bottom of excavation and to preserve the integrity of adjacent structures. As a minimum, the water level shall be two (2)

feet below the trench or structures bottom. Well or sump installations shall be constructed with proper sand filters to prevent drawing of finer grained soil from the surrounding ground. To minimize consolidation settlement of soils below surrounding existing structures, a recharge system may be required to maintain ground water levels to prevent any consolidation of soils under surrounding structures.

- C. Water entering the excavation from surface runoff shall be collected in shallow ditches around the perimeter of the excavation, drained to sumps, and pumped from the excavation to maintain a bottom free from standing water.
- D. The CONTRACTOR shall take all additional precautions or prevent uplift of any structure during construction.
- E. The conveying of water in open ditches or trenches will not be allowed. Permission to use any storm sewers, or drains, for water disposal purposes shall be obtained from the controlling authority. Any requirements and costs for such use shall be the responsibility of the CONTRACTOR. However, the CONTRACTOR shall not cause flooding by overloading or blocking up the flow in the drainage facilities, and the CONTRACTOR shall leave the facilities unrestricted and as clean as originally found. Any damage to facilities shall be repaired or restored at no cost to the OWNER.
- F. Flotation shall be prevented by the CONTRACTOR by maintaining a positive and continuous operation of the dewatering system. The CONTRACTOR shall be fully responsible and liable for all damages which may result from failure of this system.
- G. Removal of dewatering equipment shall be accomplished after the CONTRACTOR and the ENGINEER agree that the system is no longer required; the material and equipment constituting the system shall be removed by the CONTRACTOR.
- H. Special consideration should be made to insure that all necessary precautions to preclude the accidental discharge of fuel, oil, etc. in order to prevent adverse effects on groundwater or receiving water quality.

## **PART 2 – PRODUCTS**

### **2.01 GENERAL**

- A. The equipment specified herein shall be standard dewatering equipment of proven ability as designed, manufactured and installed by firms having experience in the design and production of such equipment. The equipment furnished shall be designed, constructed and installed in accordance with the best practices and methods.
- B. The CONTRACTOR shall be required to monitor the performance of the dewatering system during the progress of the Work and require such modifications as may be required to assure that the systems will perform satisfactorily. The dewatering system shall be designed in such a manner as to preserve the undisturbed bearing capacity of the subgrade soils and to preserve the integrity of adjacent structures.
- C. The CONTRACTOR shall engage a Geotechnical Engineer registered in the State of Florida, to design the temporary dewatering system for all structures. The CONTRACTOR shall submit a conceptual plan for the dewatering system prior to commencing Work. The dewatering system installed shall be in conformity with the overall construction plan and certification of this shall be provided by the Geotechnical Engineer. The Geotechnical Engineer shall be required to monitor the performance of the dewatering system at the CONTRACTOR'S expense during the progress of the Work and require such modifications

as may be required to assure that the systems will perform satisfactorily. Dewatering system shall be designed in such a manner as to preserve the undisturbed bearing capacity of the subgrade soils at the proposed structures or utilities and to preserve the integrity of any adjacent structures.

### **PART 3 – EXECUTION**

#### **3.01 PREPARATION**

The CONTRACTOR shall understand where existing utilities exist prior to constructing dewatering system. All necessary precautions should be taken to preserve existing utilities to remain in service during construction.

#### **3.02 INSTALLATION**

- A. Dewatering: The CONTRACTOR shall install a temporary wellpoint dewatering system for the removal of subsurface water encountered during construction of the proposed structures.
- B. Consumptive Use Permit (CUP) or Water Use Permit (WUP): If pumping requirements exceed certain limits, the CONTRACTOR shall pay for and obtain a CUP or WUP from the local water management district for such pumped volumes.

#### **3.03 INSPECTION AND TESTING**

- A. The CONTRACTOR'S Geotechnical Engineer shall be required to assure that the dewatering system is operating properly.
- B. The CONTRACTOR'S Geotechnical Engineer shall monitor the performance and instruct any adjustment to the CONTRACTOR during construction.

#### **3.04 PROTECTION AND SITE CLEAN-UP**

- A. At all times during the progress of the Work, the CONTRACTOR shall use all reasonable precautions to prevent either tampering with the wellpoints or the entrance of foreign material.
- B. Immediately upon completion of the wellpoint system, the CONTRACTOR shall remove all of their equipment, materials, and supplies from the site of the work, remove all surplus materials and debris, fill in all holes or excavations, and grade the site to elevations of the surface levels which existed before work started. The site shall be thoroughly cleaned and approved by the ENGINEER.

**END OF SECTION**

## **SECTION 02200 GENERAL EARTHWORK**

### **PART I – GENERAL**

#### **1.01 DESCRIPTION**

##### **A. Scope**

This Section includes general earthwork complete with: preserving topsoil; reimbursement for crop damage; removal and disposal of structures and obstructions; protection of existing sewers; tiles and mains; protection of existing building and improvements; protection of trees and other types of vegetation; protection of utility lines; requirements for pavement replacement; restoration of driveways and parking areas; restoration of sidewalks; restoration of lawns and disturbed areas; soil erosion and sedimentation control; and removal, transportation, and disposal of excess excavation.

##### **B. Related Work Specified Elsewhere**

1. Dewatering During Construction: Section 02140

#### **1.02 QUALITY ASSURANCE**

##### **A. Reference Standards**

Unless otherwise specified, the Work for this Section shall conform to the applicable portions of the following Standard Specifications:

- FDOT- Florida Department of Transportation
- Local/Regional Water Management Districts

##### **B. Requirements of Regulatory Agencies**

The CONTRACTOR, at his expense, shall prepare all plans, obtain all approvals, secure all permits, and post all bonds or deposits required to comply with 2.01 Florida Environmental Land and Water Management Act of 1972 (380.012 F.S. et seq.) and related statutes.

#### **1.03 SUBMITTALS**

##### **A. Reports**

1. Written permission for the use of all disposal and borrow sites shall be obtained and copies shall be furnished to the ENGINEER.

#### **1.04 JOB CONDITIONS**

##### **A. Protection**

1. Protection of Plant Life

All trees, shrubs, and other types of vegetation not within the limits of the Work or not designated on the Plans or by the ENGINEER to be removed, shall be carefully protected from damage or injury during the various construction operations. Any tree, shrub or other type of vegetation not designated to be removed but which is

damaged by the CONTRACTOR'S operation shall be repaired or replaced by the CONTRACTOR, at his expense, as directed by the ENGINEER.

2. Protection of Existing Structures and Improvements

All existing culverts, sewers, drainage structures, manholes, water gate wells, hydrants, water mains, utility poles, overhead lines, underground conduits, underground cables, pavement, or other types of improvements within the construction limits, not designated on the Plans or directed by the ENGINEER to be removed, shall be carefully protected from damage during the construction operations. Any type of existing structure or improvement not designated to be removed, but which is damaged by the CONTRACTOR'S operations shall be repaired or replaced by the CONTRACTOR, at his expense.

B. Maintaining Drainage

All existing open drains, field and roadway ditches, drainage tile, sewers, enclosed drains, natural and artificial watercourses, surface drainage or any other types of drainage within the limits of the Work shall be maintained and free to discharge during the excavating, backfilling and compacting operations.

Any drainage facility not designated to be abandoned, but which is damaged, and/or any drainage interrupted by the CONTRACTOR'S operation shall be immediately repaired, replaced, or cleared by the CONTRACTOR, as directed by the ENGINEER. All costs incurred shall be incidental to the excavating, backfilling and compacting or grading operations.

1.05 GUARANTEE

Existing trees destroyed by neglect of the CONTRACTOR or his subcontractors, will be replaced by the CONTRACTOR. The tree value shall be an average assessed value between the OWNER and the CONTRACTOR. The assessors shall possess a Master's Degree in horticulture or have a minimum of ten (10) years horticulture experience. Replacement of tree species and location shall be determined by the ENGINEER.

**PART 2 – PRODUCTS**

2.01 MATERIALS

Granular material shall be material passing a 1-inch sieve and at least 35% retained on a No. 200 sieve and meeting the approval of the ENGINEER.

**PART 3 – EXECUTION**

3.01 PREPARATION

A. General

The CONTRACTOR and the ENGINEER shall meet before commencement of site clearing to discuss locations of top soil spoils, construction circulation and materials storage in relation to the preservation of existing plant materials. This meeting shall be requested by the CONTRACTOR two (2) weeks prior to site clearing operations commence.

B. Dewatering

The area within the vicinity of the new Work shall be dewatered prior to commencing any construction activities. The depth of the dewatering shall be sufficient to allow the Work area to remain in a dry condition during the various construction operations. The costs incurred for furnishing, installing, maintaining and removing the dewatering equipment shall be at the CONTRACTOR'S expense.

### 3.02 PERFORMANCE

#### A. General

The various construction operations shall be restricted to the existing right-of-way or as indicated on the Plans. If additional area is required, the CONTRACTOR shall furnish the ENGINEER with written permission obtained from the property owner for any part of the operations he conducts outside of the right-of-way or limits indicated. Barriers shall be installed in locations as directed by the ENGINEER.

#### B. Existing Topsoil On-Site

Topsoil encountered along the route of the construction shall be pushed back and preserved for use in restoration following completion of the construction. The topsoil must remain on each given parcel and lot throughout the Project including the existing road right-of-way adjoining the parcel or lot where it existed.

#### C. Existing Utilities

When existing utilities are shown on the Plans, their locations are approximate only, as secured in the field investigation and from available public records. The CONTRACTOR, prior to the start of construction, shall contact Sunshine One Facilities Locating Service and/or the public Agency or utility having jurisdiction to request the verification of all utilities within the construction area.

When existing utility lines, structures or utility poles are encountered during the performance of the Work, the CONTRACTOR, at his expense, shall perform his operations in such a manner that the service will be uninterrupted.

The CONTRACTOR shall expose all existing utility lines prior to any excavation operation, to determine any conflict with the proposed improvement. The CONTRACTOR shall be responsible for any relocation required as a result of any conflict of existing utilities with the proposed improvement.

Should it become necessary to move any utility structure, line or pole, whether called for on the Plans or otherwise found necessary to be moved, the CONTRACTOR shall make all arrangements with the Owner of the utility for the moving. All costs incurred for such moving shall be at the CONTRACTOR'S expense unless indicated otherwise. However, before disturbing a utility line, structure or pole, the CONTRACTOR shall furnish the ENGINEER with satisfactory evidence, in writing, that proper arrangements have been made with the Owner of the utility.

#### D. Existing Buildings

Existing buildings may be encountered throughout the Project within limits of the presently established right-of-way or easement. Good construction methods and procedures shall be employed by the CONTRACTOR, at his expense, to protect the structures.

When it becomes necessary for the CONTRACTOR to move one of these buildings in order

to proceed with construction, the CONTRACTOR, at his expense, shall exercise all due care in moving the building to prevent undue damage to the structure. Prior to moving an existing building, the CONTRACTOR shall furnish the ENGINEER with satisfactory evidence, in writing, that proper arrangements have been made with the Owner of the building.

Unless otherwise specified on the Plans or directed by the ENGINEER, the length of the move shall be maintained to a minimum which will allow for construction of the improvement.

E. Existing Sewers, Tile and Mains

Existing sanitary sewers, storm sewers, drain tile, septic tank bed tiles, water mains or building services or leads, that are encountered during the performance of the Work that require relocation or are damaged, shall be restored with new materials equal in quality and type to the materials encountered.

The new material shall be installed as specified on the Plans or as directed by the ENGINEER. The bedding and backfill material, unless otherwise specified, shall be an approved granular material, compacted to 95% of its maximum unit weight.

Seepage bed tile and water mains shall be replaced in accordance with the requirement of the appropriate local Department of Health.

The relocation or protection of existing sewers, tiles, tile field, water mains or building services and leads shall be at the CONTRACTOR'S expense, unless otherwise indicated in the Contract Documents.

F. Existing Structures

Existing surface and subsurface structures may be shown on the Plans, in locations considered most probable from information secured in the field investigation and from available public records. Neither the correctness nor completeness of such information is guaranteed or implied. All structures shall be protected, preserved or restored by the CONTRACTOR, at his expense.

Unless otherwise specified on the Plans, the CONTRACTOR, at his expense, shall remove any abandoned culvert, pipe, sewer, structure or part of a structure which is to be replaced or rendered useless by the new construction.

The structure shall be broken down to at least 12 inches below the subgrade. All pipes connected to the structure shall be plugged with a brick, masonry or concrete bulkhead approved by the ENGINEER. The remainder of the excavation shall be backfilled with a granular material, compacted in place, and shall meet with the approval of the ENGINEER.

If a structure is to be removed from a system that is to remain in service, a bypass system, approved by the ENGINEER, shall be installed and maintained by the CONTRACTOR, during the rebuilding period.

Salvaged materials derived therefrom shall become the property of the CONTRACTOR and unless otherwise specified on the Plans or in the Summary of Work, shall be disposed of by the CONTRACTOR, at his expense.

G. Trees

All trees except those specified on the Plans to be removed, shall be effectively protected by the CONTRACTOR during his construction operations. Individual trees to be preserved shall

have tree protection barriers installed at the drip line of each tree.

#### H. Fences

Fences shall be removed and replaced or shall be removed as indicated on the Plans or as directed by the ENGINEER. If any of the existing material is damaged or destroyed, the CONTRACTOR shall replace the material at his expense.

Where fencing is encountered during construction, and its removal was not called for on the Plans or was not directed by the ENGINEER, it shall be replaced or restored, at the CONTRACTOR'S expense, to a condition comparable to that prior to construction.

After the fence removal or relocation operations are complete, all surplus material shall be removed and disposed of by the CONTRACTOR, at his expense, unless otherwise called for on the Plans or as directed by the ENGINEER.

Any holes or voids resulting from the fence removal operation shall be backfilled with a suitable material, approved by the ENGINEER.

Where fences are encountered that are being used to confine livestock or to provide security, the same shall be immediately replaced following the disturbance. During the disturbance, the CONTRACTOR, at his expense, shall provide, install and maintain a temporary fence, meeting the approval of the ENGINEER.

#### I. Removing Pavement

The removal of concrete and bituminous pavement as called for on the Plans or as directed by the ENGINEER, shall consist of removing and disposing of pavement and shall include base courses, surface courses, integral and separate curbs, integral and separate curb and gutters, sidewalks and end headers.

The pavement shall be removed to an existing joint or cut to a true line, either perpendicular or parallel to the direction of travel, with the vertical face resting a minimum of 18 inches onto undisturbed ground, as indicated on the Plans or as directed by the ENGINEER. The cutting shall be accomplished by using a power driven concrete saw approved by the ENGINEER. The depth of the saw cut shall be a minimum of six (6) inches, or as directed by the ENGINEER, to insure that the removal of the old pavement will not disturb or damage the section of pavement remaining in place.

Residual concrete pavement shall not be less than five (5) feet measured transversely, nor less than six (6) feet longitudinally measured from a joint.

In removing a concrete base course, where part of the existing bituminous surface is to remain in place, the bituminous surface shall be cut the full depth by the use of a power-driven saw, approved by the ENGINEER along a line parallel to and at least one (1) foot from either side of the base course removal.

Old pavement with a concrete cap shall be considered as only one pavement, whether or not there is a separation layer of earth, aggregate, or bituminous material between the old material and the concrete cap.

Where integral curb is to be removed flush with the existing concrete pavement, the operation shall be performed by saw cutting or by a mechanical means, approved by the ENGINEER, so as to leave a neat and flush cleavage plane, without damage to the underlying pavement.

Where integral curb and gutter are to be removed, the operation shall be performed by saw cutting. The limits of the removal shall be as called for on the Plans, or as directed by the ENGINEER. However, in no case shall the width of removal be less than 18 inches for sections with rolled or straight curb or less than 24 inches for mountable curbs.

If during the pavement removal operation any concrete or bituminous pavement or surfacing is damaged beyond the removal limits designated on the Plans or directed by the ENGINEER, the damaged pavement or surfacing shall be removed and replaced at the CONTRACTOR'S expense.

Any earth which may be removed during the pavement removal operation shall be replaced by backfilling to the proposed subgrade with a suitable material, approved by the ENGINEER, at the CONTRACTOR'S expense.

J. Guardrail

Beam guardrail and cable guardrail shall be relocated or shall be removed as specified on the Plans or as directed by the ENGINEER. If any of the existing material is damaged or destroyed, the CONTRACTOR shall replace the material at his expense.

Where guardrail is encountered during construction, and its removal was not called for on the Plans or was not directed by the ENGINEER, it shall be replaced or restored, at the CONTRACTOR'S expense, to a condition comparable to that prior to construction.

After the guardrail removal or relocation operations are complete, all surplus material shall be removed and disposed of by the CONTRACTOR, at his expense, unless otherwise called for on the Plans or as directed by the ENGINEER.

Any holes or voids resulting from the guardrail removal operation shall be backfilled with a suitable material, approved by the ENGINEER.

K. Adjust Structures

Structures to be adjusted shall be as called for on the Plans or as directed by the ENGINEER. Adjustment or structures shall apply where the elevation of the casting is either raised 12 inches or less, or lowered six (6) inches or less.

The existing frame and cover shall be carefully removed and stored, and shall be reinstalled on the same structure, unless a new frame and cover are called for on the Plans or as directed by the ENGINEER.

The brick or concrete adjustment rings shall be set in mortar or installed as recommended by the manufacturer and as approved by the ENGINEER.

The outside surface of the new brick or block structures shall receive a masonry plaster coat, a minimum of 2 inch thick.

The structure shall be properly backfilled with a granular material, compacted in place, and meeting the approval of the ENGINEER.

The flow in the entire system shall be maintained, at the CONTRACTOR'S expense, while performing any part of the Work. Also, the structure shall be cleaned and all unsuitable material shall be disposed of at the CONTRACTOR'S expense.

L. Reconstruct Structures

Structures to be reconstructed shall be as called for on the Plans or as directed by the ENGINEER. Reconstruction of structures shall apply where the elevation of the casting must be raised in excess of 12 inches or lowered in excess of six (6) inches.

The existing frame and cover shall be carefully removed and stored, and shall be reinstalled on the same structure unless a new frame and cover are called for on the Plans or as directed by the ENGINEER.

The existing corbel entrance sections or precast concrete chimney type entrance shall be removed along with any additional brick courses or precast concrete sections necessary to achieve the amount of reconstruction called for on the Plans or as directed by the ENGINEER.

The necessary brick Work and precast concrete sections shall be installed to meet the design grade.

The outside surface of the new brick or block structures shall receive a masonry plaster coat, a minimum of 2 inch thick. The structure shall be properly backfilled with a granular material, compacted in place, and meeting the approval of the ENGINEER.

The flow in the entire system shall be maintained, at the CONTRACTOR's expense, while performing any part of the Work. Also, the structure shall be cleaned and all unsuitable material shall be disposed of at the CONTRACTOR's expense.

M. Holes

Earth removed during any phase of the excavation or removal operations, resulting in a hole or void, shall be replaced by backfilling to the proposed subgrade with a suitable granular material approved by the ENGINEER. The material shall be placed by the controlled density method or other effective means having the approval of the ENGINEER and shall be compacted to 95% of maximum unit weight.

The furnishing, placing and compacting of the backfill material shall be at the CONTRACTOR'S expense.

N. Restoration

Areas not paved shall be restored in accordance with the type and location specified herein unless indicated otherwise on the Plans. The disturbed areas may be shaped by Machine Grading or another method approved by the ENGINEER to achieve the cross section, line and grade shown on the Plans. Areas where slopes are 1 on 4 or flatter shall be restored with topsoil, seed and mulch. Areas with slopes steeper than 1 on 4 shall be restored with sod.

Any excess material from the restoration operation shall be disposed of by the CONTRACTOR at his expense.

The disturbed areas shall be graded to receive either topsoil and seed or topsoil and sod. The topsoil, seed, sod, fertilizer and mulch shall conform to the requirements specified on the Plans and Specifications

The CONTRACTOR, at his expense, shall furnish, place, and compact any additional fill, meeting the approval of the ENGINEER, needed to restore the disturbed areas to the cross sections called for on the Plans or as determined by the ENGINEER.

The CONTRACTOR, at his expense, shall restore all disturbed areas to their original condition, including storage areas, laydown areas, and parking areas to the satisfaction of the OWNER.

O. Soil Erosion and Sedimentation Control

If the permit is required, the CONTRACTOR, at his expense, shall prepare all plans, obtain all approvals, secure all permits and post all bonds and deposits required to comply with 2.01 Florida Environmental Land and Water Act of 1972 (380.012 F.S. et seq.) and related statutes.

The CONTRACTOR shall provide the ENGINEER with a copy of the soil erosion permit issued by the local enforcing agency for the Project, prior to commencing any type of earthwork on the Project.

P. Excess Excavation

Any excess excavation, brush, roots, stumps, broken concrete, pipe, debris, and other extraneous material from the construction shall become the property of the CONTRACTOR, and shall be disposed of at proper repository. Removal and disposal of this material shall be considered as part of final cleanup. No additional payment will be made for this item.

OWNER approval of the final site(s) condition in writing will be required prior to final payment authorization.

3.03 MAINTENANCE

Maintain tree protection barriers during the entire course of construction. Any position of a barrier which has been destroyed will be replaced at the start of the next working day.

Do not allow vehicular or pedestrian violation of the tree protection barrier. Do not store materials within tree protection barrier limits.

**END OF SECTION**

## **SECTION 02215 SITE GRADING**

### **PART I – GENERAL**

#### 1.01 DESCRIPTION

##### A. Scope

This Section includes site grading as indicated on the Plans, complete with removing and salvaging topsoil, rough grading and finish grading.

##### B. Related Work Specified Elsewhere

1. Measurement and Payment: Section 01025
2. Clearing and Grubbing: Section 02100
3. General Earthwork: Section 02200

### **PART 2 – PRODUCTS (NOT APPLICABLE)**

### **PART 3 – EXECUTION**

#### 3.01 PERFORMANCE

##### A. Site Grading

Sites shall be graded as specified on the Plans or as directed by the ENGINEER. The CONTRACTOR shall carry out the grading operation to prevent standing water and soil saturation detrimental to structures and improvements. Provisions shall be made to preserve and protect trees and other vegetation specified on the Plans or directed by the ENGINEER not to be removed.

##### B. Removing and Salvaging Topsoil

Topsoil shall be salvaged in an amount equivalent to the quantity required by the Plans. Topsoil salvaged in excess of that required by the Plans or as required by the ENGINEER will be disposed of by the CONTRACTOR at their expense.

Before removing topsoil, all vegetation shall be reduced to a height of approximately four (4) inches and all such vegetation and all brush, stones, rocks, and any other objectionable litter or foreign material shall be removed and disposed of before the ground is broken for topsoil removal.

Equipment and methods of operations shall be such as to avoid the lifting of the subsoil. If soil or weather conditions are unsuitable, the CONTRACTOR shall cease stripping until directed by the ENGINEER that stripping can resume.

Topsoil shall be removed within the grading limits for cuts and shall be removed to a width and depth specified on the Plans or as directed by the ENGINEER.

The topsoil shall be stockpiled within the limits of construction in areas designated on the Plans, or used on the slopes as shown on the Plans or as directed by the ENGINEER. Stockpiles shall be located and shaped so as to avoid diversion of storm water runoff, either in or out of the limits of construction, towards buildings, creation of standing water or

interference of controlled irrigation. The stockpile shall avoid placing topsoil around trunks and root areas of trees to be preserved.

Topsoil shall be kept separate from other excavated materials which are to be used for embankment and shall be completely removed from any designated area prior to the beginning of regular excavation or embankment in the area.

The topsoil stockpiles shall be located as near the original locations as possible and no payment will be made for overhaul.

C. Rough Grading

The site shall be graded as necessary to comply with the Plans or as directed by the ENGINEER. The subgrade shall be roughly established by cut or fill, approximately parallel to proposed finished grades and to elevations which allow for thickness of topsoil and installation of site or roadway improvements.

In fill areas all debris shall be removed from the area to be filled. All material detrimental to site improvement shall be removed from the site and acceptably disposed of as specified in General Earthwork, of the Specifications.

Original ground on sloping sites shall be scarified and benched or otherwise treated to provide adequate bond and to prevent slippage of fill.

Fill material shall be free of debris or other detrimental material and shall have a reasonable moisture content when placed. All fill shall be compacted to a density not less than 100% of the maximum unit weight and placed in layers no less than nine (9) inches and no greater than 15 inches.

D. Finish Grading

The subgrade shall be smoothed parallel to proposed finished grades and elevations specified on the Plans. The subgrade shall be scarified to assure bond with the topsoil prior to spreading of the topsoil.

The topsoil shall be spread uniformly to provide a smooth, even surface at a finish grade specified on the Plans or acceptable to the ENGINEER. Topsoil shall be spread only after the ENGINEER has approved the subgrade. After spreading, the topsoil shall be compacted lightly as necessary to minimize settlement. Final grades shall not vary more than 1/10 of a foot from the elevations indicated on the Plans.

**END OF SECTION**

**SECTION 02223  
STRUCTURE EXCAVATION AND BACKFILL**

**PART I – GENERAL**

1.01 DESCRIPTION

A. Scope

This Section includes excavation for structures, removal and disposal of excavated materials, backfilling, backfill materials and compaction.

B. Related Work Specified Elsewhere

1. Clearing and Grubbing: Section 02110
2. Dewatering During Construction: Section 02140
3. General Earthwork: Section 02200
4. Site Grading: Section 02215

1.02 QUALITY ASSURANCE

A. Reference Standards

Unless otherwise specified, the Work for this Section shall conform to the applicable portions of the following Standard Specifications:

ASTM- American Society of Testing and Materials

AASHTO- American Association of State Highway Transportation Officials

FDOT- Florida Department of Transportation

1.03 SUBMITTALS

A. Test Reports

1. Compaction

The testing laboratory shall provide the ENGINEER with two (2) copies of the test results of the compaction of the backfill. The testing for compaction shall be performed by a testing laboratory approved by the ENGINEER. The test results shall be signed and sealed by a Professional Engineer.

**PART 2 – PRODUCTS**

2.01 MATERIALS

A. Granular Materials

Granular material shall be material passing a 1-inch sieve and at least 12% retained on a No. 200 sieve and meeting the approval of the ENGINEER.

## **PART 3 – EXECUTION**

### **3.01 PREPARATION**

#### **A. Dewatering**

The area within the vicinity of the new Work shall be dewatered in accordance with Section 02140 prior to the excavation operation. The depth of the dewatering shall be sufficient to allow the excavation to remain in a dry condition during the construction of the structure, including the excavating, backfilling and compacting operations.

### **3.02 PERFORMANCE**

#### **A. Excavation**

Excavation shall include the site clearing and grubbing, the excavating and disposing of all materials encountered, the supporting and protecting of all structures and/or utilities encountered above and below the ground surface, and the removal of water from the construction site. Excavation shall also include the removal of existing structures, as shown on the Plans or as directed by the ENGINEER. Rock excavation, if applicable, shall be performed as a part of the excavation in accordance with specifications contained elsewhere.

The CONTRACTOR shall keep the limits of their excavation operations within a reasonable close conformity with the location and grade, of each structure.

The excavated materials shall be temporarily stored in a manner that will not cause damage to trees, shrubs, fences, improvements, utilities, private property or traffic. The excavated materials shall not be placed at such locations that will endanger the banks of the excavation by imposing loads thereon.

The excavation shall be of sufficient size to allow for the construction of the new Work, the placing and compacting of the backfill and for the dewatering operation.

When concrete is to bear on or against an excavated surface other than rock, special care shall be taken not to disturb the surface. The final removal of the foundation material to grade shall not be made until just prior to the placing of the concrete.

Concrete shall not be placed until the depth of the excavation has been checked and the suitability of foundation material has been reviewed by the ENGINEER.

Excavated material, determined by the ENGINEER as suitable for backfill may be used. All excess materials shall be disposed by the CONTRACTOR, at his expense, as specified in General Earthwork, of the Specifications.

The elevations for the bottom of footings shall be subject to such changes as are necessary to insure a satisfactory foundation. Any changes required shall be reviewed by the ENGINEER prior to making the change.

The surface of all rock or other hard material upon which concrete is to be placed shall be freed from all loose fragments, cleaned and cut to a firm surface. The surface shall be level, stepped or serrated, as shown on the Plans.

All unsound material underlying proposed structures shall be removed and replaced with material approved by the ENGINEER, in layers not exceeding six (6) inches in depth. Each

layer shall be compacted to 100% of maximum unit weight unless indicated otherwise on the Plans, or within these specifications.

**B. Sheeting, Shoring, and Bracing**

The CONTRACTOR shall furnish, place and maintain at all times such sheeting, shoring, and bracing of the excavated area as may be required for safety of the workmen and for protection of the new Work or adjacent structures, including pavement, curbs, sidewalks, pipelines and conduits next to, or crossing the excavated area, and for the protection and safety of pedestrian and vehicular traffic.

The CONTRACTOR shall be responsible for the complete design of all the sheeting, shoring, and bracing Work. Prior to installing the sheeting, shoring or bracing, the CONTRACTOR shall submit Plans for this Work to the ENGINEER for his information.

Sheeting, shoring and bracing shall conform to current federal or state regulations for safety.

Where indicated on the Plans and where necessary in the Work, install and leave sheeting, shoring and bracing in place. No extra compensation shall be paid to the CONTRACTOR for sheeting, shoring or bracing left in place.

Supports for pipes, conduits, etc., crossing the excavated area shall conform to the requirements of the owners of such facilities and if necessary, shall be left in place.

The furnishing, placing, maintaining and removing of sheeting, shoring and bracing materials shall be at the CONTRACTOR'S expense.

The CONTRACTOR shall not remove the sheeting, shoring or bracing until the structure has obtained sufficient strength to support the external loads. The sheeting, shoring and bracing material shall not come in contact with the structure, but shall be installed so that no concentrated loads or horizontal thrusts are transmitted to the structure.

**C. Cofferdams**

A cofferdam shall consist of the maintenance, installation and removal of a substantially watertight enclosure or a well-point system or similar system, which will permit construction of the substructure, above seal or subfooting, in the dry and without damage to the Work. Alternate methods, where used in lieu of cofferdams, will be permitted by appropriate authorization only. Such authorization will be considered only after receipt of an applicable permit for the alternate method.

Stream diversion and earth dikes, where used in lieu of cofferdams or a well-point system will be permitted by authorization only. Such authorization will be considered only after receipt of the appropriate permits for such construction.

The interior dimensions of cofferdams shall be such as to give sufficient clearance for the construction of forms and the inspection of their exteriors, and to permit dewatering outside of the forms.

Cofferdams or cribs which are tilted or moved laterally during the process of sinking shall be righted or enlarged so as to provide the necessary clearance.

Cofferdams shall not be braced to substructure forms. They shall be constructed so as to protect the Work in place against damage from high water and to prevent injury to the foundation by erosion. No timber bracing shall extend into or remain in the finished concrete.

Cofferdams shall be removed in such a manner as not to disturb or mar the finished concrete. When called for on the Plans or where necessary in the Work, cofferdam sheeting shall be left in place.

The furnishing, construction, maintenance and removal of the cofferdams including pumping shall be at the CONTRACTOR'S expense.

If the CONTRACTOR elects to use a well-point system or similar system, he shall be responsible for any claims for damages resulting therefrom.

D. Backfill

Backfill material shall be placed only after the new Work and backfill material have been inspected by the ENGINEER.

Backfill shall not be placed against any portion of the new Work until the required curing, surface finishing and waterproofing of such portions have been completed. Backfill which will place an unequal horizontal loading on the new Work shall not be placed until the concrete has attained at least 70% of its design strength. To equalize horizontal loadings, the required backfill around the new Work shall be placed on opposite sides at the same time.

Granular material acceptable to the ENGINEER shall be used for backfilling the new Work unless otherwise indicated on the Plans or within these specifications.

All spaces excavated and not occupied by the new Work or by the specified backfill material, shall be backfilled with suitable material from the excavation.

After the backfill has been placed and compacted to the flow line elevation of any weepholes indicated on the Plans, the back end of each weep hole shall be covered with not less than two (2) cubic feet of No. 6 or 7 coarse aggregate.

Large stones, boulders, broken rocks, concrete, and masonry shall not be used in the backfill.

The backfill shall be carried up to the surface of the adjacent ground or to the elevation of the proposed earth grade, and its top surface shall be neatly graded. Fills around all new Work shall be trimmed to the lines shown on the Plans or as directed by the ENGINEER.

E. Compacting Backfill

Backfill material shall be placed in accordance with the methods specified in FDOT Section 125.

The backfill material shall be compacted to 100% of its maximum unit weight.

The maximum unit weight, when used as a measure of compaction or density of soils, shall be understood to mean the maximum unit weight per cubic foot as determined by AASHTO T99, Method C.

Compaction of the backfill will not be paid for separately, but shall be considered incidental to the Work of backfilling and shall include all the Work of manipulating the soil to obtain the specified densities. No additional compensation will be allowed for any delay required to obtain the specified moisture content or the specified density.

F. Cleanup

Immediately following the placing and compacting of the backfill, the excess material shall be removed and disposed of by the CONTRACTOR, at his expense, as specified in General Earthwork, of the Specifications.

The construction area shall be graded and left in a neat, workmanlike condition.

3.03 FIELD QUALITY CONTROL

A. Testing

During the course of the Work, the ENGINEER may require testing for compaction or density of the backfill. The taking of samples and the testing required shall be performed by a testing laboratory approved by the ENGINEER. The cost for testing and sampling shall be at the expense of the CONTRACTOR.

The testing laboratory shall furnish the ENGINEER with two (2) copies of the results of all tests. Test results shall be signed and sealed by a PROFESSIONAL ENGINEER. Testing procedures shall conform to current FDOT, Standards for Construction.

B. Defective Work

Any portion of the backfill which is deficient in the specified density shall be corrected by the methods meeting the approval of the ENGINEER. Any extra testing or sampling required because of apparent deficiencies shall be at the CONTRACTOR'S expense.

**END OF SECTION**

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## **SECTION 02226 TRENCHING, BACKFILLING AND COMPACTION**

### **PART I – GENERAL**

#### 1.01 DESCRIPTION

##### A. Scope

This Section includes open trench construction, complete with trenching, sheeting, shoring, bracing, backfilling, backfill materials and compaction.

##### B. Related Work Specified Elsewhere

1. Clearing and Grubbing: Section 02100
2. Dewatering During Construction: Section 02140
3. General Earthwork: Section 02200

#### 1.02 QUALITY ASSURANCE

##### A. Reference Standards

Unless otherwise specified, the Work for this Section shall conform to the applicable portions of the following Standard Specifications:

ASTM- American Society of Testing and Materials  
AASHTO - American Association of State Highway Transportation Officials  
FDOT- Florida Department of Transportation  
OSHA - Occupational Safety and Hazard Administration

#### 1.03 SUBMITTALS

##### A. Compaction Test Reports

The testing laboratory shall provide the ENGINEER with two (2) copies of the test results of the compaction of the backfill. The testing for compaction shall be performed by a testing laboratory approved by the ENGINEER. The test results shall be signed and sealed by a PROFESSIONAL ENGINEER. The CONTRACTOR shall employ and pay for the services of the testing laboratory.

### **PART 2 – PRODUCTS**

#### 2.01 MATERIALS

##### A. Granular Materials

Granular material shall be material passing a 1-inch sieve and at least 12% retained on a No. 200 sieve and meeting the approval of the ENGINEER.

##### B. Concrete

The concrete shall conform to FDOT, Section 345, use Class I; 2,500-psi strength; Type I cement; 5.5 sacks cement per cubic yard; 5 coarse aggregate; silica sand fine aggregate; three (3) percent to six (6) percent air content; 3-inch maximum slump; no admixtures without

the ENGINEER's review.

## **PART 3 – EXECUTION**

### **3.01 PREPARATION**

#### **A. Dewatering**

The area within the vicinity of the trenching operation shall be dewatered in accordance with Section 02140 prior to the trenching operation. The depth of the dewatering shall be sufficient to allow the trench excavation operation including backfilling and compacting to proceed in a dry condition.

### **3.02 PERFORMANCE**

#### **A. Trench Excavation**

Open cut trench excavation shall include the site clearing and grubbing, the excavating and disposing of materials encountered, the supporting and protecting of all structures and/or utilities encountered above and below the ground surface, and the removal of water from the construction site.

The trench shall be excavated in reasonable close conformity with the lines and grades on the Plans or as established by the ENGINEER.

The excavated materials shall be temporarily stored along the trench in a manner that will not cause damage to trees, shrubs, fences, improvements, utilities, private property or traffic. The excavated materials shall not be placed at such locations that will endanger the trench banks by imposing loads thereon.

The trench shall be of sufficient width to provide adequate working space to permit the installation of the pipe and the compaction of the bedding material under and around the pipe. However, the width of the trench from below the pipe bedding to 12 inches above the top of the pipe shall not exceed the dimensions shown on the plans.

To support the additional load of the backfill when the maximum trench width as specified for rigid pipe is exceeded, the CONTRACTOR shall install, at their expense, concrete encasement which shall completely surround the pipe and shall have a minimum thickness at any point of 1/4 of the outside diameter of the pipe or four (4) inches, whichever is greater, or at their expense, install another type bedding, approved by the ENGINEER. The concrete encasement shall consist of 3,000 psi strength concrete.

To support the additional load of the backfill when the maximum trench width as specified for flexible or semi-rigid pipe is exceeded, the CONTRACTOR shall install, at their expense, standard pipe bedding to the full width between undisturbed trench walls or at least 2.5 pipe diameters on each side of the pipe.

When, through the CONTRACTOR's construction procedure or because of unsuitable existing ground conditions, it becomes impossible to maintain alignment and grade properly, the CONTRACTOR, at their expense, shall excavate below the normal trench bottom grade and shall fill the void with a large size aggregate or 2,500 psi concrete as approved by the ENGINEER to insure that the pipe when laid in the proper bedding will maintain correct alignment and proper grade.

All trench excavations, including those for shafts and structures, shall be adequately braced

and/or sheeted where necessary to prevent caving or squeezing of the soil.

**B. Sheeting, Shoring, and Bracing**

The CONTRACTOR shall furnish, place and maintain at all times such sheeting, shoring, and bracing of the trench and/or shaft as may be required for safety of the workmen and for protection of the new Work or adjacent structures, including pavement, curbs, sidewalks, pipelines and conduits next to, or crossing the trench area, and for the protection and safety of pedestrian and vehicular traffic.

The CONTRACTOR shall be responsible for the complete design of all the sheeting, shoring, and bracing Work. Prior to installing the sheeting, shoring or bracing, the CONTRACTOR shall submit Plans for this Work to the ENGINEER for their information.

Sheeting, shoring and bracing shall conform to current federal or state regulations for safety.

Where indicated on the Plans and where necessary in the Work, install and leave sheeting, shoring and bracing in place. No extra compensation shall be paid to the CONTRACTOR for sheeting, shoring or bracing left in place.

Supports for pipes, conduits, etc., crossing the trench shall conform to the requirements of the Owners of such facilities and if necessary, shall be left in place.

The furnishing, placing, maintaining and removing of sheeting, shoring and bracing materials shall be at the CONTRACTOR'S expense.

The CONTRACTOR shall not remove the trench sheeting, shoring or bracing unless the pipe has been properly bedded and the trench backfilled to sufficiently support the external loads. The sheeting, shoring and bracing material shall not come in contact with the pipe, but shall be installed so that no concentrated loads or horizontal thrusts are transmitted to the pipe.

**C. Backfilling Trenches**

Backfill material shall be placed on sections of bedded pipes only after such pipe bedding and backfill materials have been approved by the ENGINEER.

The trench backfilling shall follow the pipe laying as closely as possible. However, at no time shall the pipe laying in any trench precede backfilling of that trench by more than 100 feet, unless otherwise directed by the ENGINEER.

The backfill material shall be compacted to 100% of its maximum unit weight unless otherwise shown on the plans.

The maximum unit weight, when used as a measure of compaction or density of soils, shall be understood to mean the maximum unit weight per cubic foot as determined by AASHTO T99, Method C.

Compaction of the backfill will not be paid for separately, but shall be considered incidental to the Work of backfilling and shall include all the Work of manipulating the soil, to obtain the specified densities. No additional compensation will be allowed for any delay required to obtain the specified moisture content or the specified density.

**D. Cleanup**

Immediately following the placing and compacting of the backfill, the excess material shall be

removed and disposed of by the CONTRACTOR, at their expense, as specified in General Earthwork, of the Specifications.

The construction area shall be graded and left in a neat, workmanlike condition.

### 3.03 FIELD QUALITY CONTROL

#### A. Testing

During the course of the Work, the ENGINEER may require testing for compaction or density of the backfill. The taking of samples and the testing required shall be performed by a testing laboratory approved by the ENGINEER. The cost for testing and sampling shall be at the expense of the OWNER.

The testing laboratory shall furnish the ENGINEER with two (2) copies of the results of all tests. Test results shall be signed and sealed by a PROFESSIONAL ENGINEER. Testing procedures shall conform to AASHTO T99, Method C, and to current FDOT Standards for Construction.

#### B. Defective Work

Any portion of the backfill which is deficient in the specified density shall be corrected by the methods meeting the approval of the ENGINEER. Any extra testing or sampling required because of apparent deficiencies shall be at the CONTRACTOR'S expense.

**END OF SECTION**

## **SECTION 02240 SODDING**

### **PART I – GENERAL**

#### **1.01 DESCRIPTION**

##### **A. Scope**

This Section includes sodding complete with earth bed preparation, providing and placing topsoil, compacting and finishing topsoil, furnishing and placing sod, furnishing and placing stakes, watering sod, rolling and tamping sod, mowing sod, replacing defective or deteriorated sod and maintenance and care of sod in place.

##### **B. Related Work Specified Elsewhere**

1. Measurement and Payment: Section 01025
2. General Earthwork: Section 02200
3. Site Grading: Section 02215

#### **1.02 QUALITY ASSURANCE**

##### **A. Requirements of Regulatory Agencies**

###### **1. State Department of Agriculture**

Comply with the applicable requirements of the Florida Pesticide Application Act of 1974 with Federal Environmental Pesticides Control Act of 1972 and Florida Department of Agriculture nursery grown sod.

#### **1.03 SUBMITTALS**

##### **A. Growers Certificate**

Where applicable, submit copies of Sod Growers Certificate to the ENGINEER indicating nursery from which sod was taken, grass species and percentage in accordance with the Florida Pesticide Application Act of 1974 with Federal Environmental Pesticides Control Act of 1972 and Florida Department of Agriculture Regulations referenced above in Article 1.02.A.

##### **B. Topsoil Borrow Pit Agreements**

When requested by the ENGINEER, submit evidence of topsoil borrow pit agreement for pits used by the CONTRACTOR.

#### **1.04 PRODUCT DELIVERY, STORAGE, AND HANDLING**

##### **A. Delivery of Materials**

Sod shall be delivered to the project site on suitably approved wooden pallets. Sod shall be delivered in manageable squares and the amount of sod delivered shall not exceed that which can be installed in one (1) 24-hour period. Sod that has been damaged during delivery will be rejected.

B. Storage

Store sod in such a manner as to protect roots and grass material from exposure to wind and sunlight, freezing or other injury. Sod shall be kept moist during storage, under shade or covered with moistened burlap. Sod that has been damaged or has deteriorated because of storage will be rejected.

C. Handling

Sod shall be handled in a manner to prevent breaking or other damage. Sod shall not be handled by pitch forks or by dumping from trucks or other vehicles. Care shall be taken at all times to retain the native soil on the roots of each sod roll during stripping and handling. Sod that has been damaged by handling will be rejected.

1.05 JOB CONDITIONS

A. Environmental Requirements

1. Soil Moisture Conditions for Sod Cutting

Perform sod cutting and removal during soil moisture conditions as specified under paragraph 3.02.B below.

2. Seasonal Limitations

Sod shall not be placed during drought, unless directed by the ENGINEER.

3. Temperature Limitations

Sod shall not be placed when the ambient air temperature is below 32 degrees F.

B. Protection

1. Signs and Barricades

Provide suitably approved warning signs and barricades for protection of new sodding from pedestrian or vehicular traffic. Protect all newly sodded areas during the progress of the Work and until the completion of the turf establishment period.

2. Adjacent Construction

Protect all adjacent construction from topsoil spills and perform such cleanup of affected surfaces before it becomes compacted by traffic.

C. Planting Schedule

The CONTRACTOR will be required to have a minimum of 90% of the sod placed at least one (1) month prior to final acceptance of the complete Project to insure adequate rooting of the sod.

## **PART 2 – PRODUCTS**

### **2.01 MATERIALS**

#### **A. Sod**

##### **1. General**

Dense, well-rooted growths of the species and type indicated on the plans indigenous to the general locality where it is proposed for use, free of noxious weed, relatively free of weeds and undesirable plants, in general, large stones, roots and other material which might be detrimental to the growth, development or future maintenance of the sod.

##### **2. Nursery Sod**

Nursery sod, where used, shall have been grown in a prepared seed bed and regularly fertilized and maintained according to established practices for at least two (2) years before cutting.

##### **3. Field or Salvage Sod**

Salvage sod existing on areas to be disturbed in construction or field grown sod meeting the requirements of paragraph 2.01.A.1 of this Section shall be used as indicated on the Plans or as directed by the ENGINEER.

##### **4. Harvest Heights**

Sod shall be of uniform height when harvested. Vegetation more than five (5) inches in height shall be mowed to a height of three (3) inches or less. When the sod is harvested (cut), the height of the grasses shall be as follows:

Field Grown Sod - 2 to 3 inches

Nursery Grown Sod - 1 to 2 inches

##### **5. Harvest Thickness**

Sod when harvested shall have the following average thickness:

Field Grown Sod - 2 inches

Nursery Grown Sod - 1 inch

#### **B. Topsoil**

Topsoil shall be the top 12 inches or less of soil taken from the top of the natural and undisturbed ground level and shall be a loam containing a sufficient amount of organic matter to attain proper texture. Topsoil shall be free of undesirable grasses, weed roots or other unsuitable material. All topsoil shall be subject to acceptance by the ENGINEER. The CONTRACTOR shall obtain his own topsoil borrow pit source and shall obtain all necessary permits and agreements for the use of such borrow pits at his own expense.

## **PART 3 – EXECUTION**

### **3.01 CONTRACTORS VERIFICATION**

#### **A. Earth Bed**

Prior to placing any topsoil, verify that earth bed in areas to receive sod have been completely stabilized to prevent settling and that grades have been made smooth, uniform and parallel to the finished grades and cross sections shown on the Plans. Ascertain that the tops and bottoms of all slopes are rounded off to form vertical curves and have been found acceptable to the ENGINEER. Do not place topsoil until all earth bed conditions are accepted.

#### **B. Topsoil**

Prior to placing sod, verify that topsoil has been placed on the prepared earth bed to the proper depths shown on the Plans and as specified herein. Do not place any sod until topsoil conditions are satisfactory.

### **3.02 PREPARATION**

#### **A. Off-Site Source Inspection**

Prior to commencement of sodding operations, notify the ENGINEER of the off-site sources from which sod is to be furnished. The ENGINEER, at his discretion, will inspect the sod at the off-site source.

#### **B. Sod Harvesting**

Sod shall be harvested by cutting into squares or into rectangular sections. The rectangular sections may vary in length, but shall be of equal width and of a size that will permit them to be lifted and rolled without breaking. During the stripping process and all other handling of the sod, care shall be taken to retain the native soil on the roots. Where off-site source inspection of sod is required by the ENGINEER, no sod shall be harvested until such inspection is complete and sod is accepted. Sod shall be cut and moved only when the soil moisture conditions are such that favorable results can be expected. When the soil is too dry, permission to cut sod may be granted by the ENGINEER only after it has been sufficiently watered to moisten the soil to the depth at which the sod is to be cut.

#### **C. Preparation of Subgrade**

Complete all fine grading within the areas to be covered with topsoil as necessary to bring the surface of the proposed subgrade to the elevations indicated on the Plans and parallel to the proposed finished grade. The surface of the subgrade, immediately prior to being covered with topsoil, shall be raked or otherwise loosened to a minimum depth of two (2) inches to facilitate making a bond between the subsoil and the topsoil.

### **3.03 INSTALLATION**

#### **A. Topsoil**

##### **1. Placing and Spreading Topsoil**

Topsoil shall be placed and spread over the area indicated on the Plans or as directed by the ENGINEER. Topsoil shall be placed to a depth of three (3) inches, plus or minus 1-inch, unless otherwise indicated on the Plans. At a minimum, topsoil placed shall be sufficiently greater than that shown on the Plans so that, after natural settlement or

rolling, the completed Work will conform to the lines, grades and elevations indicated on the Plans.

2. Finishing Topsoil

After spreading topsoil, all large lumps, rocks, roots, debris or other foreign matter shall be removed from the topsoil by raking and disposed of off the site of the Work. Spreading shall be completed in such a manner that sodding operations can proceed without additional moving of topsoil. Topsoil furnished and placed shall be incidental to the sodding operations.

B. Sodding

1. Placing

Sod shall be laid within 24 hours after cutting and shall be properly protected during handling and placing. Sod shall be lifted from trucks or storage piles and placed on a moist earth bed by hand, making close joints without overlapping. All gaps between sections of sod and openings at angles shall be plugged with sod. When placing sod on slopes, the Work shall begin at the base of the slope and progress upward by carefully placing the sod on the smooth slope, in rows, with the lengths running at right angles to the slope. The transverse joints of sod strips shall be staggered and the sod carefully laid to produce tight joints. When the top of slopes are reached, the sod shall be carried back at least two (2) feet over the crest and trimmed to a line which is parallel to the top of the bank. The areas back of the crest shall have been previously graded and the surface of the sod, when placed, shall be two (2) inches below the level of this area and covered with a layer of topsoil at least two (2) inches in depth and thoroughly compacted in a manner that will conduct the surface water from runoff over the edge of the sod. No frozen sod shall be laid nor shall sod be laid on frozen soil.

2. Rolling

Rolling of the sod shall be done after initial watering and after the water has sufficiently soaked into the ground so that distortion of the sod surface and excessive compaction of the sod and the soil will not occur. The roller used shall be a water filled type at least three (3) feet wide and 30 inches in diameter and shall weigh approximately 300 pounds. Roller shall be adequate to cause sod to make firm contact with the soil. A tamper, acceptable to the ENGINEER, shall be used to press the sod firmly in place in areas not accessible to a roller. After tamping or rolling, the sod shall present a smooth, even surface, free from bumps or depressions.

3. Defective Materials

Damaged, deteriorated or otherwise defective sod will be rejected by the ENGINEER. Sod which has been permitted to dry out or become otherwise injured during transportation handling, storage or placing will be rejected. Where permitted by the ENGINEER, rejected sod, if suitable, may be pulverized and used for filling, where necessary.

C. Turf Establishment

1. Watering

After laying, the sod shall be watered until saturated. Sod shall be watered whenever excessive drying is evident during the period set for establishment. Sufficient water shall be applied to wet the sod through completely and to wet at least two (2) inches of the sod bed each time watering is required. Watering shall be done in a manner that will prevent erosion due to the application quantities of water. The watering equipment shall be of a type that will prevent damage to the finished surfaces of topsoil and sod. The sod shall be watered as required until firmly knit in place and in a vigorous growing condition.

2. Mowing

The sodded areas shall be mowed a minimum of three (3) times with mowing equipment acceptable to the ENGINEER. Sod shall be mowed to a height of two (2) inches whenever the average height of the grass becomes four (4) inches. When the amount of cut grass is heavy, the cuttings shall be removed from the sodded areas to prevent destruction of the underlying turf. Where weeds or other undesirable vegetation threaten to smother the planted species, such vegetation shall be mowed or, in the case of rank growths, uprooted, raked and removed from the area. All mowed cuttings, uprooted or raked vegetation, shall be legally disposed of away from the Project Site.

3. Establishment Period

The establishment period shall extend for a period from the time of sodding until the sodded area have received final acceptance of the entire Work covered by the Contract. The minimum period shall be 30 days.

**END OF SECTION**

**SECTION 02270  
EROSION AND SEDIMENTATION CONTROL**

**PART 1 – GENERAL**

1.01 SECTION INCLUDES

Designing, providing, maintaining, and removing temporary erosion and sedimentation controls.

1.02 REFERENCES

Florida Department of Transportation (FDOT) Standard Specifications for Road and Bridge Construction and Roadway and Traffic Design Standards, latest editions:

- A. Index No. 102 - Baled Hay or Straw Barriers and Silt Fences
- B. Index No. 103 - Turbidity Barriers
- C. Specification 300 - Prime and Tack Coats for Base Courses

1.03 OWNER'S INSTRUCTIONS/SEQUENCING

- A. The OWNER has authority to limit surface area of erodible earth material exposed by clearing and grubbing, excavation, trenching, borrow and embankment operations. The OWNER also has authority to direct the CONTRACTOR to provide immediate permanent or temporary erosion and sediment control measures.
- B. The CONTRACTOR shall respond to erosion and sediment control maintenance requirements or implement additional measures to control erosion ordered by the OWNER or governing authorities within 48 hours or sooner if required at no additional cost to the OWNER.
- C. The CONTRACTOR will be required to incorporate permanent erosion control features into the Project at the earliest practical time to minimize need for temporary controls.

**PART 2 – PRODUCTS**

2.01 EROSION CONTROL

- A. Seeding and Mulching
- B. Sodding
- C. Hydro-seeding
- D. Coarse Aggregate
- E. Prime Coat - Per FDOT Specification 300

2.02 SEDIMENTATION CONTROL

- A. Silt Fence - Per FDOT Index No. 102
- B. Floating Turbidity Barriers - Per FDOT Index No. 103
- C. Hay Bales - Per FDOT Index No. 102

## **PART 3 – EXECUTION**

### **3.01 EROSION CONTROL**

- A. Maintain temporary erosion control systems as directed by the OWNER or governing authorities to control erosion and siltation during life of contract.
- B. Permanently grass cut slopes as excavation proceeds to extent considered desirable and practical.
- C. Grass all disturbed areas within 7 days of initial disturbance. Type of grassing shall be as follows: temporary grassing to be sodding at all drainage structures, retention areas, swales and ditches, and where slopes are steeper than 5:1. Temporary grassing can be seed and mulch at all other locations unless otherwise indicated in the drawings or specifications.
- D. Erosion control of areas to be paved shall meet the following:
  - 1. Install subgrade and base course materials within 48 hours of the removal/open cutting of existing pavement consisting of streets, driveways, or sidewalk. Install final surface courses within 14 days after removal of existing pavement.
  - 2. Areas to receive asphalt shall receive erosion control measures no later than 48 hours after installation of base course. Temporary erosion control consists of placement of a bituminous prime coat and sanding the surface. Permanent erosion control consists of placement of the structural course.
  - 3. Areas to receive concrete paving shall be either protected with a layer of FDOT coarse aggregate material or shall be paved within 48 hours of installation of the subgrade.
- E. Dirt roads are to be stabilized and compacted within 7 days of the completion of trenching and grading activities.

### **3.02 SEDIMENTATION CONTROL**

- A. Install prior to construction.
- B. Inspect every two weeks during construction.
- C. Remove any sediment build-up.
- D. Repair and reinstall any damaged or missing sediment control measures. Install additional measures if inspection reveals additional sedimentation control is necessary.
- E. Rough excavate and grade any proposed stormwater ponds at the start of site grading activities. Direct site runoff to the ponds to minimize runoff to offsite areas.

**END OF SECTION**

**SECTION 02280  
CURBS, SIDEWALKS AND DRIVEWAYS**

**PART I – GENERAL**

1.01 DESCRIPTION

A. Scope

This Section includes curb, curb and gutter, valley gutter, special gutter, sidewalks, sidewalk ramps, driveways, and drive approaches complete with concrete materials, concrete curing compounds, joint materials, field quality control and appurtenances.

B. Related Work Specified Elsewhere

1. Measurement and Payment: Section 01025

1.02 QUALITY ASSURANCE

A. Reference Standards

1. Unless otherwise specified, the Work for this Section shall conform to the applicable portions of the following Standard Specifications:
  - a. ASTM- American Society of Testing and Materials
  - b. AASHTO- American Association of State Highway and Transportation Officials
  - c. FDOT- Florida Department of Transportation
  - d. City of Venice Standard Details Sheet 3, Details 1 and 5

1.03 SUBMITTALS

A. Reports

1. Written permission for the use of all local disposal sites shall be obtained and copies shall be furnished to the ENGINEER.
2. At the request of the ENGINEER, the CONTRACTOR shall provide the ENGINEER with certification that the various materials to be used conform to the ASTM Standards referred in the Specification.

B. Test Reports

1. Thickness and Compressive Strength

The ENGINEER shall be provided with two (2) certified copies of the test results of the thickness and compressive strength of the concrete. The core drilling, testing for thickness and compressive strength and the certification of the test results shall be performed by a testing laboratory approved by the ENGINEER.

#### 1.04 JOB CONDITIONS

##### A. Environmental Requirements

###### 1. Temperature

Comply with the requirements for concrete installation due to outside ambient air temperatures specified under Article 3.03.J. of this Section.

##### B. Protection

###### 1. Protection Against Rain

Comply with the requirements for protecting new Work against damage from rain, as specified under Article 3.03.J. of this Section.

###### 2. Protection Against Cold Weather

Comply with the requirements for protecting new Work against damage from cold weather, as specified under Article 3.03.J. of this Section.

### **PART 2 – PRODUCTS**

#### 2.01 MATERIALS

##### A. Concrete

Concrete shall be in accordance with FDOT, Section 346, Class II, 3,400 psi strength; Type I cement; 6.0 sacks cement per cubic yard; FDOT #57 coarse aggregate; silica sand fine aggregate; 1.0% – 6.0% air content; and 3.5-inch maximum slump. Type III cement may be used for high early strength concrete.

##### B. Ready-Mixed Concrete

Ready-mixed concrete shall conform to ASTM C94, Alternate 2.

##### C. Water

Water to be used for mixing and curing concrete shall be reasonably clean and free from oil, salt, acid, alkali, chlorides, sugar, vegetable, or other substances injurious to the finished product. Waters from sources approved by the Local Health Department as potable may be used without test. Water requiring testing shall be tested in accordance with the current Method of Test for Quality of Water to be used in Concrete, AASHTO T26.

##### D. Concrete Curing Compounds

White membrane curing compound for curing concrete shall conform to AASHTO M148, Type 1 clear, or Type 2 white per FDOT Section 925.

##### E. Premolded Joint Filler

Fiber joint filler shall conform to ASTM D1751. Filler shall be of the thickness, as specified herein, or on the Plans, or as directed by the ENGINEER.

##### F. Steel Hook Bolts

Hook bolts shall conform to ASTM A706, or for Grade 60 of ASTM A615, A616, or A617. Hook bolts shall be 5/8-inch diameter, self-tapping.

G. Joint Sealant

Hot-poured type joint sealant shall conform to ASTM D1190.

2.02 MIXES

A. Concrete Mix

1. Concrete shall contain a minimum of six (6) sacks, 94 pounds per sack, of cement per cubic yard and shall yield a minimum compressive strength of 3,400 psi at 28 days.
2. Cement shall be air-entraining Portland cement ASTM C150, Type I. If high-early strength concrete is desired, Type III is required.
3. High-early concrete can be obtained for small areas by the addition of one sack of cement, Type I, per cubic yard of concrete.
4. The air content of the concrete shall be 1.0% - 6.0% by volume.
5. Maximum slump of the concrete shall be three and a half (3.5) inches.
6. Ready-mixed concrete in accordance with ASTM C94, Alternate 2, shall be used, unless a written request for other than ready-mixed concrete has been submitted, reviewed and approved by the ENGINEER.

**PART 3 – EXECUTION**

3.01 CONTRACTORS VERIFICATION

A. Excavation and Forming

1. Prior to the installation of any concrete, examine the excavation and forms for the proper grades, lines, and levels required to receive the new Work. Ascertain that all excavation and compacted subgrades are adequate to receive the concrete to be installed.
2. Correct all defects and deficiencies before proceeding with the Work.

B. Existing Improvements

1. Investigate and verify location of existing improvements to which the new Work is to be connected.
2. Making necessary adjustment in line and grade to align the new Work with the existing improvements must be approved by the ENGINEER, prior to any change.

### 3.02 PREPARATION

#### A. Forms

1. The forms shall be of wood or metal, straight and free from warp, clean, and of sufficient strength to resist springing during the process of depositing concrete against them. For all items constructed on a radius, the contractor will be required to use flexible forms, unless otherwise permitted by the ENGINEER.
2. The forms shall be the full depth of the concrete.
3. Placing of these items by machine methods may be allowed with the approval of the ENGINEER provided that an acceptable finished product, true to line, grade and cross section, is consistently produced.

### 3.03 INSTALLATION

#### A. Sidewalks, Sidewalk Ramps, Driveways, and Driveway Approaches

All sidewalks and sidewalk ramps shall be four (4) inches thick except at driveways, where the thickness of the sidewalks shall be six (6) inches. Sidewalks shall be five (5) feet wide unless otherwise noted on Plans, and shall slope 1/4 inch per foot towards the surface drainage side which in general will be towards the center of the road. Normally sidewalks will be located within the right-of-way, parallel the property lines, at a distance of 1-foot from the property line unless otherwise noted on Plans.

Driveways and approaches shall be six (6) inches thick. The width of driveways and driveway approaches shall be as specified on the Plans or as directed by the ENGINEER.

#### B. Removal of Existing Curb for Sidewalk Ramps and Driveway Approaches

Construction of sidewalk ramps within street intersections where curbed pavement exists shall conform to the current FDOT Roadway and Traffic Design Standards.

Where there is no proper curb drop for the sidewalk ramp or driveway approach, the CONTRACTOR shall saw cut, to full depth of pavement, and remove a minimum of an 18-inch wide curb and gutter section. When mountable curbs are present, the CONTRACTOR shall remove a 24-inch wide curb and gutter section for the construction of sidewalk ramp, as specified above.

The length of curb and gutter removal shall be determined by the ENGINEER in the field but shall be at least as wide as the proposed sidewalk ramp plus 1-foot on each side.

The removed curb and gutter section shall be replaced with material, equal to what was removed and seal joint with hot poured rubber asphalt.

The CONTRACTOR shall install 5/8 inch diameter self tapping hook bolts, in the existing concrete pavement as indicated on the Plans prior to placing concrete for the removed curb and gutter section.

C. Placement of Forms

Wood forms, straight and free from warp, of nominal depth may be used for sidewalk sections less than 25 feet in length.

Forms shall be staked to line and grade in a manner that will prevent deflection and settlement.

When unit slab areas are to be poured, slab division forms shall be so placed that the slab division joints will be straight and continuous.

Forms shall be set for sidewalk ramps to provide a grade toward the centerline of the right-of-way in accordance with current standards. The grade shall be uniform, except as may be necessary to eliminate short grade changes.

Forms shall be oiled before placing concrete. Forms shall remain in place at least 12 hours after the concrete is placed. There shall be sufficient forms placed ahead of the pouring operations to maintain uninterrupted placement of concrete.

The use of slip form pavers can be allowed when approved by the ENGINEER in lieu of the construction system described above.

D. Joints ( Curb)

Except for machine placed items, at the option of the contractor, joints may be formed by the use of dummy joints (either formed or sawed) or by the use of sheet metal templates. If sheet metal templates are used they shall be of the dimensions, and shall be set to the lines, shown in the plans. The template shall be held firmly during the placing of the concrete and shall be left in place until the concrete has set sufficiently to hold its shape but shall be removed while the forms are still in place.

For machine placed items, unless an alternate method is approved by the ENGINEER, contraction joints shall be sawed. The joints shall be sawed as soon as the concrete has hardened to the degree that extensive raveling will not occur and before uncontrolled shrinkage cracking begins.

Contraction joints shall be spaced at intervals of ten (10) feet except where a lesser interval is required for closure, but no section shall be less than four (4) feet.

E. Joints (Sidewalk and driveway)

Transverse and longitudinal expansion and plane-of-weakness joints shall be constructed at the locations specified herein, or as indicated on the Plans or as directed by the ENGINEER.

The transverse expansion joints shall be placed for the full width and depth of the new Work. The transverse expansion joints placed against any existing pavement shall be a minimum of six (6) inches deep but no less than the thickness of the concrete being placed.

Longitudinal expansion joints shall conform to the same requirements as transverse expansion joints.

Joints shall be constructed true to line with their faces perpendicular to the surface of the sidewalk. The top shall be slightly below the finished surface of the sidewalk. Transverse joints shall be constructed at right angles to the centerline of the sidewalk and longitudinal joints shall be constructed parallel to the centerline or as directed by the ENGINEER.

Unless otherwise specified in the Plans or unless directed by the ENGINEER, when the sidewalk is constructed in partial width slabs, transverse joints in the succeeding slab shall be placed in line with like joints in the adjacent slab. Also in the case of widening existing sidewalks, transverse joints shall be placed in line with like joint in the existing sidewalk.

Transverse expansion joints, 1/2 inch thick, shall be placed through the sidewalk at uniform intervals of not more than 50 feet and elsewhere as shown on the Plans, or as directed by the ENGINEER.

Expansion joints, 1/2 inch thick, shall also be placed between the sidewalk and back of abutting parallel curb, buildings or other rigid structures, concrete driveways and driveway approaches. When directed by the ENGINEER, the expansion joint between sidewalks and buildings shall be placed 1-foot from the property line and parallel to it.

Expansion joints, 1-inch thick, shall be placed between sidewalk ramps or driveway approaches and the back of curbs.

Plane-of-weakness joints shall be formed every five (5) feet and shall be produced by use of slab divisions forms extending to the full depth of the concrete or by cutting joints in the concrete, after floating, to a depth equal to 1/4 the thickness of the sidewalk. The cut joints shall not be less than 1/8 inch nor more than 1/4 inch in width and shall be finished smooth and shall be at right angles to the centerline of the sidewalk.

#### F. Placing and Finishing Concrete

All concrete shall be placed on a prepared, smooth, leveled, rolled and properly compacted base as indicated on the Plans. The surface of the subbase shall be moist with no visible water present prior to placement of the concrete.

The concrete shall be deposited, in a single layer, therein to the depth specified in the Plans or in the Proposal. The concrete shall be thoroughly spaded or vibrated and compacted to fill in all the voids along the forms and joints. The concrete shall be struck off with a strike board until all voids are removed and the surface has the required grade and cross section as indicated on the Plans, or as directed by the ENGINEER. The surface of the concrete shall be floated just enough to produce a smooth surface free from irregularities. All edges and joints shall be rounded with an edger having a 1/4 inch radius.

The repair of minor defects, the forms for curbs shall be removed within 24 hours after the concrete has been placed, and the minor defect then filled with mortar compound of one part portland cement and two parts fine aggregate. Plastering will not be permitted on the face of the curb, and any rejected curb, curb and gutter, or valley curb shall be removed and replaced without additional compensation.

The final finish for all exposed surfaces of curbs shall be given a finish while the concrete is still green. In general only a brush finish will be required. For any surface areas, however which are still too rough or where other surface defects make additional finishing necessary. The ENGINEER may require that the curb be rubbed to a smooth surface with a soft brick or wood block, with water used liberally. Also, if necessary further to provide a suitable surface, the ENGINEER may require additional rubbing, using a thin grout or mortar.

The surface of sidewalks, driveways and approaches shall be broomed to slightly roughen the surface.

The surface of sidewalk ramps shall be textured with a coarse broom transversely to the

ramp slope, and shall be coarser roughened than the remainder of the sidewalk.

G. Curing

After finishing operations have been completed and immediately after the free water has left the surface, the surface of the concrete (and sides if slip-forming is used) shall be completely coated and sealed with a uniform layer of white membrane curing compound. The curing compound shall not be thinned. The curing compound shall be applied at the rate of one gallon per 200 square feet of surface.

The concrete shall be continuously cured for period of at least 72 hours. Curing shall be commenced after finishing has been completed and as soon as the concrete has hardened sufficiently to permit application of the curing material without marring the surface. Any curing material removed or damaged during the 72 hour period shall be replaced immediately.

After forms are removed, the surfaces exposed shall be cured by placing a berm of moist earth against them or by any of the methods described below, for the remainder of the 72 hour curing period.

1. Burlap shall be placed over the entire exposed surface of the concrete, with sufficient extension beyond each side to insure complete coverage. Adjacent strips shall be overlapped a minimum of six inches. The burlap shall be held securely in place such that it will be in continuous contact with the concrete at all times and no earth shall be permitted between the burlap surfaces at laps or between the burlap and the concrete. The burlap shall be saturated with water before being placed and shall be kept thoroughly wet throughout the curing period.
2. Clear membrane curing compound or white-pigmented curing compound shall be applied by hand sprayer in a single film at a uniform coverage of at least one gallon to each 200 square feet. Any cracks, checks or other defects appearing in the coating shall be recoated immediately. The curing compound shall be thoroughly agitated in the drum prior to application as necessary to prevent settlement of the pigment.
3. Polyethylene sheeting shall be placed over the entire exposed surface of the concrete, with sufficient extension beyond each side to insure complete coverage. Adjacent strips shall be overlapped a minimum of six inches. The sheeting shall be held securely in place such that it will be in continuous contact with the concrete at all times.

H. Backfilling and Compaction

After the concrete has set sufficiently, but not later than three days after pouring, the spaces adjacent to exposed surfaces shall be refilled to the required elevation, with suitable material, which shall be placed and thoroughly compacted in layers not thicker than six inches.

I. Barricades

Suitable barricades and lights shall be placed around all newly poured sidewalks, sidewalk ramps, driveways, driveway approaches and curb and gutter section in order to protect the new Work from damage from pedestrians, vehicles and others until the concrete has hardened.

Barricades shall be left in place for a minimum of two (2) days, except for driveway approaches and curb and gutter section; barricades shall remain in place for a minimum of three (3) days.

Any concrete that suffers surface or structural damage shall be removed and replaced by the CONTRACTOR at his expense.

J. Protection

1. Against Rain

The CONTRACTOR shall adequately protect the new concrete from the effects of rain before the concrete has sufficiently hardened. For this Work the CONTRACTOR shall have available on the job site at all times enough burlap or 6-mil thick polyurethane film to cover and protect one day's Work. When rain appears eminent, all operations shall stop and personnel shall begin covering. As soon as the rain ceases, the concrete shall be uncovered and the surface burlap dragged where necessary. Curing compound shall be applied to any areas where the compound has been disturbed or washed away.

2. Against Cold Weather

If concrete is placed between December 15 and February 15, the CONTRACTOR shall have available on the site sufficient amount of clean, dry straw or hay to cover one (1) days production. If the temperature reaches 40 degrees F and is falling, the hay or straw shall be placed 12 inches thick, immediately after the curing compound is applied.

3. Concrete Temperature Limitations

Concrete shall not be placed when the temperature of the concrete at the point of placement is above 95 degrees F.

K. Cleanup

After the concrete has gained sufficient strength, but no sooner than within 12 hours, the fixed forms shall be removed and the spaces on both sides shall be immediately backfilled with sound earth of topsoil quality. The backfill shall be compacted, leveled and left in a neat, workmanlike condition.

3.04 FIELD QUALITY CONTROL

A. Testing

1. Cores

The ENGINEER may require that a minimum of two (2) cores be drilled from the sidewalk for each 500 (or fraction thereof) linear foot section placed. At least one (1)

core out of two (2) required will be taken from the sidewalk at the driveway. One (1) core may be required from every 20 (or fraction thereof) driveway approaches or sidewalk ramps installed.

The cores shall be checked for depth and compressive strength. The core drilling and tests shall be done by a testing laboratory designated by the OWNER and at the expense of the OWNER. The testing laboratory shall furnish the ENGINEER with two (2) certified copies of the test results.

2. Defective Work

In the event the test results on a core indicates a deficiency in either thickness or compressive strength the following adjustments in the unit price for concrete shall be made:

a. Thickness

<u>Under Required Thickness</u>	<u>Percent of Reduction in Unit Price</u>
0" to 1/4"	None
by more than 1/4" but not exceeding 1/2"	20
by more than 1/2" but not exceeding 1"	50
by more than 1"	Remove and Replace

b. Compressive Strength

<u>Under Required Thickness</u>	<u>Percent of Reduction in Unit Price</u>
0 to 150 psi	None
by more than 150 psi but not exceeding 300 psi	20
by more than 300 psi but not exceeding 500 psi	50
by more than 500 psi	Remove and Replace

The area of the deficient core shall be determined by the drilling and testing of two (2) additional cores, one (1) on each side of the deficient core and 20 feet from it when possible. The extra core drilling and testing shall be at the expense of the CONTRACTOR. Reductions due to deficiencies in thickness or compressive strength are additive, that is if an area is deficient by 3/8 inch and under strength by 200 psi, the total reduction is 20% plus 20% or 40% reduction.

**END OF SECTION**

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## SECTION 02600

### FUSIBLE POLYVINYLCHLORIDE PIPE FOR INSTALLATION BY HORIZONTAL DIRECTIONAL DRILL (HDD)

#### PART I –GENERAL

##### 1.01 DESCRIPTION

###### A. SCOPE

1. This Section specifies fusible polyvinylchloride pipe, including standards for dimensionality, testing, quality, acceptable fusion practice, safe handling, storage and installation of the pipe by horizontal directional drilling, directional boring, or guided boring.

###### B. REQUIREMENTS:

1. CONTRACTOR shall provide fusible polyvinylchloride pipe conforming to all standards and procedures, and meeting all testing and material properties as described in this Specification for installation by horizontal directional drilling.
2. CONTRACTOR shall be responsible for all installation processes and procedures associated with the installation by horizontal directional drilling in accordance with this Specification.

###### C. PIPE DESCRIPTION

1. Pipe Supplier shall furnish fusible polyvinylchloride pipe conforming to all standards and procedures, and meeting all testing and material properties as described in this Specification.

##### 1.02 QUALITY ASSURANCE

###### A. REFERENCES:

1. This Section contains references to the following documents. They are a part of this Section as specified and modified. Where a referenced document contains references to other standards, those other standards are included as references under this section as if referenced directly. In the event of a conflict between the requirements of this section and those of the listed documents, the requirements of this section shall prevail.
2. Unless otherwise specified, references to Documents shall mean the documents in effect at the time of design, bid, or construction, whichever is earliest. If referenced documents have been discontinued by the issuing organization, references to those documents shall mean the replacement documents issued or otherwise identified by that organization or, if there are no replacement documents, the last version of the document before it was discontinued.
3. Where Document dates are given in the following listing, references to those documents shall mean the specific document version associated with that date, regardless of whether the document has been superseded by a version with a later date, discontinued or replaced.

Reference	Title
ANSI/AWWA C110/A21.10	American National Standard for Ductile-Iron and Gray-Iron Fittings, 3-inch through 48-inch, for Water and Other Liquids
ANSI/AWWA C111/A21.11	American National Standard for Rubber-Gasket Joints for Ductile-Iron Pressure Pipe and Fittings
ANSI/AWWA C153/A21.53	AWWA Standard for Ductile-Iron Compact Fittings for Water Service
AWWA C605	Standard for Underground Installation of Polyvinyl Chloride (PVC) Pressure Pipe and Fittings for Water
AWWA C651	Standard for Disinfecting Water Mains
AWWA C900	Standard for Polyvinyl Chloride (PVC) Pressure Pipe and Fabricated Fittings, 4 in. through 12 in. (100mm Through 300mm), for Water Distribution
AWWA C905	Standard for Polyvinyl Chloride (PVC) Pressure Pipe and Fabricated Fittings, 14 in. through 48 in. (350mm Through 1200mm), for Water Distribution and Transmission
AWWA M23	AWWA Manual of Supply Practices PVC Pipe—Design and Installation, Second Edition
ASTM C923	Standard Specification for Resilient Connectors Between Reinforced Concrete Manhole Structures, Pipes and Laterals
ASTM D1784	Rigid Poly (Vinyl Chloride) (PVC) Compounds and Chlorinated Poly (Vinyl Chloride) (CPVC) Compounds
ASTM D1785	Poly (Vinyl Chloride) (PVC) Plastic Pipe, Schedules 40, 80, and 120
ASTM D2152	Test Method for Degree of Fusion of Extruded Poly(Vinyl Chloride) (PVC) Pipe and Molded Fittings by Acetone Immersion
ASTM D2241	Poly (Vinyl Chloride) (PVC) Plastic Pipe (SDR-PR)
ASTM D2665	Poly (Vinyl Chloride) (PVC) Plastic Drain, Waste, and Vent Pipe and Fittings
ASTM D3034	Standard Specification for Type PSM Poly(Vinyl Chloride) (PVC) Sewer Pipe and Fittings
ASTM F477	Elastomeric Seals (Gaskets) for Joining Plastic Pipe
ASTM F679	Standard Specification for Poly(Vinyl Chloride) (PVC) Large Diameter Plastic Gravity Sewer Pipe and Fittings
ASTM F1057	Standard Practice for Estimating the Quality of Extruded Poly (Vinyl Chloride) (PVC) Pipe by the Heat Reversion Technique
ASTM F1417	Standard Test Method for Installation Acceptance of Plastic Gravity Sewer Lines Using Low-Pressure Air
UNI-B-6	Recommended Practice for Low-Pressure Air Testing of Installed Sewer Pipe
UNI-PUB-08	Tapping Guide for PVC Pressure Pipe
NSF-14	Plastics Piping System Components and Related Materials
NSF-61	Drinking Water System Components--Health Effects
PPI TR-2	PVC Range Composition Listing of Qualified Ingredients

- B. MANUFACTURER REQUIREMENTS
1. All piping shall be made from PVC compound conforming to cell classification 12454 per ASTM D1784.
- C. FUSION TECHNICIAN REQUIREMENTS
1. Fusion Technician shall be fully qualified by the pipe supplier to install fusible polyvinylchloride pipe of the type(s) and size(s) being used. Qualification shall be current as of the actual date of fusion performance on the project.
- D. SPECIFIED PIPE SUPPLIERS
1. Fusible polyvinylchloride pipe shall be used as manufactured under the trade names Fusible C-900®, Fusible C-905®, and FPVC®, for Underground Solutions, Inc., Poway, CA, (858) 679-9551. Fusion process shall be as patented by Underground Solutions, Inc., Poway, CA, Patent No. 6,982,051. OWNER and ENGINEER are aware of no other supplier of fusible polyvinylchloride pipe that is an equal to this specified pipe supplier and products.
- E. WARRANTY
1. The pipe shall be warranted for one year per the pipe supplier's standard terms.
  2. In addition to the standard pipe warranty, the fusion services shall be warranted for one year per the fusion service provider's standard terms.
- F. PRE-CONSTRUCTION SUBMITTALS
1. The following Product Data is required from the pipe supplier and/or fusion provider:
    - a. Pipe Size
    - b. Dimensionality
    - c. Pressure Class per applicable standard
    - d. Color
    - e. Recommended Minimum Bending Radius
    - f. Recommended Maximum Safe Pull Force
    - g. Fusion technician qualification indicating conformance with this specification
  2. The following WORK PLAN AND INFORMATION is required from the CONTRACTOR and/or horizontal directional drilling CONTRACTOR. This Work Plan and Information shall also be supplied to the pipe supplier, should it be requested:
    - a. Work Plan shall include for each HDD installation any excavation locations and dimensions, interfering utilities, bore dimensions and locations including bend radii used, and traffic control schematics.
    - b. A project safety and contingency plan which shall include but shall not be limited to drilling fluid containment and cleanup procedures, equipment and plan for compromised utility installations including electrical and power lines, water, wastewater and any other subsurface utility in the area.
    - c. An HDD schedule identifying daily work hours and working dates for each installation.
- G. POST-CONSTRUCTION SUBMITTALS
1. The following AS-RECORDED DATA is required from the CONTRACTOR and/or fusion provider to the OWNER or pipe supplier upon request:

- a. Approved datalogger device reports
- b. Fusion joint documentation containing the following information:
  - i. Pipe Size and Thickness
  - ii. Machine Size
  - iii. Fusion Technician Identification
  - iv. Job Identification
  - v. Fusion Joint Number
  - vi. Fusion, Heating, and Drag Pressure Settings
  - vii. Heat Plate Temperature
  - viii. Time Stamp
  - ix. Heating and Cool Down Time of Fusion
  - x. Ambient Temperature
- c. As-recorded Information
  - i. The as-recorded Plan and profile will reflect the actual installed alignment, and reflect the horizontal offset from the baseline and depth of cover.
  - ii. All fittings, valves, or other appurtenances will also be referenced and shown.
  - iii. A daily project log, along with tracking log sheets, should they be used, shall be provided. Tracking log sheet data, should it be employed, shall include any and all that apply, including inclination, depth, azimuth, and hydraulic pull-back and rotational force measured.

## **PART 2 - PRODUCTS**

### **2.01 FUSIBLE POLYVINYLCHLORIDE PRESSURE PIPE FOR POTABLE WATER**

- A. Fusible polyvinylchloride pipe shall conform to AWWA C900, AWWA C905, ASTM D2241 or ASTM D1785 for standard dimensions, as applicable. Testing shall be in accordance with the referenced AWWA standards for all pipe types.
- B. Pipe shall be Class 235, meeting the requirements of Dimension Ratio (DR) 18 with ductile iron outside diameters.
- C. Fusible polyvinylchloride pipe shall be extruded with plain ends. The ends shall be square to the pipe and free of any bevel or chamfer. There shall be no bell or gasket of any kind incorporated into the pipe.
- D. Fusible polyvinylchloride pipe shall be manufactured in a standard 40' nominal length, or custom lengths as specified.
- E. Fusible polyvinylchloride pipe shall be blue in color for potable water use.
- F. Pipe shall be marked as follows:
  - 1. Nominal pipe size
  - 2. PVC
  - 3. Dimension Ratio, Standard Dimension Ratio, or Schedule
  - 4. AWWA pressure class, or standard pressure rating for non-AWWA pipe, as applicable

5. AWWA standard designation number, or pipe type for non-AWWA pipe, as applicable
  6. NSF-61 mark verifying suitability for potable water service
  7. Extrusion production-record code
  8. Trademark or trade name
  9. Cell Classification 12454 and/or PVC material code 1120 may also be included
- G. Pipe shall be homogeneous throughout and be free of visible cracks, holes, foreign material, blisters, or other visible deleterious faults.

## 2.02 FUSION JOINTS

- A. Unless otherwise specified, fusible polyvinylchloride pipe lengths shall be assembled in the field with butt-fused joints. The CONTRACTOR shall follow the pipe supplier's written guidelines for this procedure. All fusion joints shall be completed as described in this specification.

## 2.03 CONNECTIONS AND FITTINGS FOR PRESSURE APPLICATIONS

- A. Connections shall be defined in conjunction with the coupling of project piping, DUCTILE IRON MECHANICAL AND FLANGED FITTINGS

Acceptable fittings for use with fusible polyvinylchloride pipe shall include standard ductile iron fittings conforming to AWWA/ANSI C110/A21.10, or AWWA/ANSI C153/A21.53 and AWWA/ANSI C111/A21.11.

1. Connections to fusible polyvinylchloride pipe may be made using a restrained or non-restrained retainer gland product for PVC pipe, as well as for MJ or flanged fittings.
2. Bends, tees and other ductile iron fittings shall be restrained with the use of thrust blocking or other means as indicated in the construction Documents.
3. Ductile iron fittings and glands must be installed per the manufacturer's guidelines.
4. If required, linings for Ductile Iron fittings shall meet the following requirements for the following service environments:

Potable Water:

- a. Liquid Epoxy shall be 100% solids liquid epoxy, Tnemec Epoxyline Series FC22.
  - b. Polyurethane shall be DuraShield 210-61 or 310-61.
5. If required, coatings for Ductile Iron fittings shall meet the following requirements for buried and/or immersion service duty:
    - a. Polyurethane shall be DuraShield 210 or 310.
    - b. Liquid Epoxy shall be 100% solids liquid epoxy, Tnemec Epoxyline Series FC22.
    - c. Coal tar epoxy shall be Sherwin Williams Targuard.

- B. PVC GASKETED, PUSH-ON FITTINGS

Acceptable fittings for use with fusible polyvinylchloride pipe shall include standard PVC pressure fittings conforming to AWWA C900 or AWWA C905.

1. Acceptable fittings for use joining fusible polyvinylchloride pipe other sections of fusible polyvinylchloride pipe or other sections of PVC pipe shall include gasketed PVC, push-on type couplings and fittings, including bends, tees, and couplings as shown in the drawings.
2. Bends, tees and other PVC fittings shall be restrained with the use of thrust blocking

or other restraint products as indicated in the construction Documents.

3. PVC gasketed, push-on fittings and mechanical restraints, if used, must be installed per the manufacturer's guidelines.

C. FUSIBLE POLYVINYL CHLORIDE SWEEPS OR BENDS

1. Fusible polyvinyl chloride sweeps or bends shall conform to the same sizing convention, diameter, dimensional tolerances and pressure class of the pipe being joined using the sweep or bend.
2. Fusible polyvinyl chloride sweeps or bends shall be manufactured from the same fusible polyvinyl chloride pipe being used for the installation, and shall have at least 2 feet of straight section on either end of the sweep or bend to allow for fusion of the sweep to the pipe installation. There shall be no gasketed connections utilized with a fusible polyvinyl chloride sweep.
3. Standard fusible polyvinyl chloride sweep or bend angles shall not be greater than 22.5 degrees, and shall be used in nominal diameters ranging from 4 inch through 16 inch.

D. SLEEVE-TYPE COUPLINGS

1. Sleeve-type mechanical couplings shall be manufactured for use with PVC pressure pipe, and may be restrained or unrestrained as indicated in the construction documents.
2. Sleeve-type couplings shall be rated at the same or greater pressure carrying capacity as the pipe itself.

E. EXPANSION AND FLEXIBLE COUPLINGS

1. Expansion-type mechanical couplings shall be manufactured for use with PVC pipe, and may be restrained or unrestrained as indicated in the construction documents.
2. Expansion-type mechanical couplings shall be rated at the same or greater pressure carrying capacity as the pipe itself.

F. CONNECTION HARDWARE

Bolts and nuts for buried service shall be made of non-corrosive, high-strength, low-alloy steel having the characteristics specified in ANSI/AWWA C111/A21.11, regardless of any other protective coating.

2.04 DRILLING SYSTEM EQUIPMENT

A. GENERAL

1. The directional drilling equipment, as a minimum, shall consist of a directional drilling rig of sufficient capacity to perform the bore(s) and pull-back of the pipe(s), a drilling fluid mixing & delivery system of sufficient capacity to successfully complete the crossing, a guidance system to accurately guide boring operations, and trained and competent personnel to operate the system. All equipment shall be in good, safe operating condition with sufficient supplies, materials and spare parts on hand to maintain the system in good working order for the duration of this project. All required equipment shall be included in the emergency and contingency plan as submitted per these specifications.

B. DRILLING RIG

1. The directional drilling machine shall consist of a hydraulically powered system to rotate, push and pull drill pipe while delivering a pressurized fluid mixture to a drill head. The machine shall be anchored to withstand the pulling, pushing and rotating forces required to complete the Project.

2. The drilling rig hydraulic system shall be of sufficient pressure and volume to power drilling operations. The hydraulic system shall be free from leaks.
3. The drilling rig shall have a system to monitor pull-back hydraulic pressure during pull-back operations.

C. DRILL HEAD

1. The horizontal directional drilling equipment shall produce a stable fluid lined tunnel with the use of a steer-able drill head and any subsequent pre-reaming heads.
2. The system must be able to control the depth and direction of the drilling operation.
3. Drill head shall contain all necessary cutters and fluid jets for the operation, and shall be of the appropriate design for the ground medium being drilled.

D. DRILLING FLUID SYSTEM

1. DRILLING FLUID (DRILLING MUD)

- a. Drilling fluid shall be composed of clean water and the appropriate additive(s) for the fluid to be used. Water shall be from a clean source and shall meet the mixing requirements of the mixture manufacturer(s).
- b. The water and additives shall be mixed thoroughly to assure the absence of any clumps or clods. No hazardous additives may be used.
- c. Drilling fluid shall be maintained at a viscosity sufficient to suspend cuttings and maintain the integrity of bore wall(s).
- d. Drilling fluid shall be disposed of off-site in accordance with local, state and federal requirements and/or permit conditions.
- e. No additional chemicals or polymer surfactants shall be allowed to be added to the drilling fluid unless they have been submitted per this specification.

2. MIXING SYSTEM

- a. A drilling fluid mixing system shall be of sufficient size to mix and deliver drilling fluid for the project.
- b. The mixing system shall be able to ensure thorough mixing of the drilling fluid. The drilling fluid reservoir tank shall be sized for adequate storage of the fluid.
- c. The mixing system shall continually agitate the drilling fluid during drilling operations.

3. DRILLING FLUID DELIVERY AND RECOVERY SYSTEM

- a. The drilling fluid pumping system shall have a minimum capacity to supply drilling fluid in accordance with the drilling equipment pull-back rating at a constant required pressure.
- b. The delivery system shall have filters or other appropriate in-line equipment to prevent solids from being pumped into the drill pipe.
- c. Used drilling fluid and drilling fluid spilled during drilling operations shall be contained and properly disposed of. The use of spill containment measures shall be maintained around drill rigs, drilling fluid mixing system, entry and exit pits and drilling fluid recycling system (if used) to prevent spills into the surrounding environment. Pumps, vacuum truck(s), and/or storage of sufficient size shall be in place to contain excess drilling fluid.
- d. A closed-loop drilling fluid system and a drilling fluid cleaning system should be used to whatever extent practical, depending upon project size and conditions. Under no circumstances shall drilling fluid that has escaped containment be

reused in the drilling system.

E. DRILLING CONTROL SYSTEM

1. Calibration of the electronic detection and control system shall be verified prior to the start of the bore.
2. The drilling head shall be remotely steer-able by means of an electronic or magnetic detection system. The drilling head location shall be monitored in three dimensions:
  - a. Offset from the baseline,
  - b. Distance along the baseline, and
  - c. Depth of cover.
3. Point of rotation of the head shall also be monitored.
4. For gravity application and on-grade drilling, sonde/beacon or approved equipment applicable for grade increments of 1/10<sup>th</sup> of one percent shall be used.

2.05 PIPE PULL HEADS

- A. Pipe pull heads shall be utilized that employ a positive through-bolt design assuring a smooth wall against the pipe cross-section at all times.
- B. Pipe pull heads shall be specifically designed for use with fusible polyvinylchloride pipe, and shall be as recommended by the pipe supplier.

2.06 PIPE ROLLERS

- A. Pipe rollers, if required, shall be of sufficient size to fully support the weight of the pipe during handling and pullback operations.
- B. A sufficient quantity of rollers and spacing, per the pipe supplier's guidelines shall be used to assure adequate support and excessive sagging of the product pipe.

**PART 3 – EXECUTION**

3.01 DELIVERY AND OFF-LOADING

- A. All pipe shall be bundled or packaged in such a manner as to provide adequate protection of the ends during transportation to the site. Any pipe damaged in shipment shall be replaced as directed by the OWNER or ENGINEER.
- B. Each pipe shipment should be inspected prior to unloading to see if the load has shifted or otherwise been damaged. Notify OWNER or ENGINEER immediately if more than immaterial damage is found. Each pipe shipment should be checked for quantity and proper pipe size, color, and type.
- C. Pipe should be loaded, off-loaded, and otherwise handled in accordance with AWWA M23, and all of the pipe supplier's guidelines shall be followed.
- D. Off-loading devices such as chains, wire rope, chokers, or other pipe handling implements that may scratch, nick, cut, or gouge the pipe are strictly prohibited.
- E. During removal and handling, be sure that the pipe does not strike anything. Significant impact could cause damage, particularly during cold weather.
- F. If appropriate unloading equipment is not available, pipe may be unloaded by removing individual pieces. Care should be taken to insure that pipe is not dropped or damaged. Pipe should be carefully lowered, not dropped, from trucks.

### 3.02 HANDLING AND STORAGE

- A. Any length of pipe showing a crack or which has received a blow that may have caused an incident fracture, even though no such fracture can be seen, shall be marked as rejected and removed at once from the Work. Damaged areas, or possible areas of damage may be removed by cutting out and removing the suspected incident fracture area. Limits of the acceptable length of pipe shall be determined by the OWNER or ENGINEER.
- B. Any scratch or gouge greater than 10% of the wall thickness will be considered significant and can be rejected unless determined acceptable by the OWNER or ENGINEER.
- C. Pipe lengths should be stored and placed on level ground. Pipe should be stored at the job site in the unit packaging provided by the manufacturer. Caution should be exercised to avoid compression, damage, or deformation to the ends of the pipe. The interior of the pipe, as well as all end surfaces, should be kept free from dirt and foreign matter.
- D. Pipe shall be handled and supported with the use of woven fiber pipe slings or approved equal. Care shall be exercised when handling the pipe to not cut, gouge, scratch or otherwise abrade the piping in any way.
- E. If pipe is to be stored for periods of 1 year or longer, the pipe should be shaded or otherwise shielded from direct sunlight. Covering of the pipe which allows for temperature build-up is strictly prohibited. Pipe should be covered with an opaque material while permitting adequate air circulation above and around the pipe as required to prevent excess heat accumulation.
- F. Pipe shall be stored and stacked per the pipe supplier's guidelines.

### 3.03 FUSION PROCESS

#### A. GENERAL

- 1. Fusible polyvinylchloride pipe will be handled in a safe and non-destructive manner before, during, and after the fusion process and in accordance with this specification and pipe supplier's guidelines.
- 2. Fusible polyvinylchloride pipe will be fused by qualified fusion technicians, as documented by the pipe supplier.
- 3. Each fusion joint shall be recorded and logged by an electronic monitoring device (data logger) connected to the fusion machine.
- 4. Only appropriately sized and outfitted fusion machines that have been approved by the pipe supplier shall be used for the fusion process. Fusion machines must incorporate the following elements:
  - a. Heat Plate - Heat plates shall be in good condition with no deep gouges or scratches. Plates shall be clean and free of any debris or contamination. Heater controls shall function properly; cord and plug shall be in good condition. The appropriately sized heat plate shall be capable of maintaining a uniform and consistent heat profile and temperature for the size of pipe being fused, per the pipe supplier's guidelines.
  - b. Carriage – Carriage shall travel smoothly with no binding at less than 50 psi. Jaws shall be in good condition with proper inserts for the pipe size being fused. Insert pins shall be installed with no interference to carriage travel.
  - c. General Machine - Overview of machine body shall yield no obvious defects, missing parts, or potential safety issues during fusion.
  - d. Data Logging Device – An approved datalogging device with the current version of the pipe supplier's recommended and compatible software shall be used.

Datalogging device operations and maintenance manual shall be with the unit at all times. If fusing for extended periods of time, an independent 110V power source shall be available to extend battery life.

5. Other equipment specifically required for the fusion process shall include the following:
  - a. Pipe rollers shall be used for support of pipe to either side of the machine
  - b. A weather protection canopy that allows full machine motion of the heat plate, fusion assembly and carriage shall be provided for fusion in inclement, extreme temperatures, and/or windy weather, per the pipe supplier's recommendations.
  - c. An infrared (IR) pyrometer for checking pipe and heat plate temperatures.
  - d. Fusion machine operations and maintenance manual shall be kept with the fusion machine at all times.
  - e. Facing blades specifically designed for cutting fusible polyvinylchloride pipe shall be used.

**B. JOINT RECORDING**

Each fusion joint shall be recorded and logged by an electronic monitoring device (data logger) connected to the fusion machine. The fusion data logging and joint report shall be generated by software developed specifically for the butt-fusion of fusible polyvinyl chloride pipe. The software shall register and/or record the parameters required by the pipe supplier and these specifications. Data not logged by the data logger shall be logged manually and be included in the Fusion Technician's joint report.

**3.04 DRILLING OPERATIONS**

**A. GENERAL**

1. Bore path and alignment are as indicated in the Contract Documents. The path of the bore may be modified based on field and equipment conditions. Entry and exit locations and control-point elevations shall be maintained as indicated in the Contract Documents.
2. Bend radii shown in the contract documents are minimum allowable radii and shall not be reduced.

**B. LOCATION AND PROTECTION OF UNDERGROUND UTILITIES**

1. Correct location of all underground utilities that may impact the HDD installation is the responsibility of the CONTACTOR, regardless of any locations shown on the drawings or previous surveys completed.
2. Utility location and notification services shall be contacted by the CONTRACTOR prior to the start of construction.
3. All existing lines and underground utilities shall be positively identified, including exposing those facilities that are located within an envelope of possible impact of HDD installation as determined for the project specific site conditions. It is the CONTRACTOR and HDD system operator's responsibility to determine this envelope of safe offset from existing utilities. This will include, but is not limited to, soil conditions and layering, utility proximity and material, HDD system and equipment, and foreign subsurface material.

C. SITE LOCATION PREPARATION

1. Work Site as indicated on Drawings shall be graded or filled to provide a level working area. No alterations beyond what is required for operations are to be made.
2. CONTRACTOR shall confine all activities to designated Work Areas.

D. DRILLING LAYOUT AND TOLERANCES

1. The drill path shall be accurately surveyed with entry and exit areas placed in the appropriate locations within the areas indicated on drawings. If using a magnetic guidance system, drill path will be surveyed for any surface geomagnetic variations or anomalies.
2. Instrumentation shall be provided and maintained at all times that accurately locates the pilot hole, measures drill-string axial and torsional loads and measures drilling fluid discharge rate and pressure.
3. Entry and exit areas shall be drilled so as not to exceed the bending limitations of the pipe as recommended by the pipe supplier.

E. PILOT HOLE BORE

1. Pilot hole shall be drilled along bore path. In the event that the pilot bore does deviate from the bore path, it may require CONTRACTOR to pull-back and re-drill from the location along bore path before the deviation.
2. The CONTRACTOR shall limit curvature in any direction to reduce force on the pipe during pull-back. The minimum radius of curvature shall be no less than that specified by the pipe supplier and as indicated on the Drawings.

F. REAMING

1. After successfully completing the pilot hole, the bore hole shall be reamed to a diameter which meets the requirements of the pipe being installed. The following table is offered as an estimated guide:

Nominal Pipe Diameter	Bore Hole Diameter
< 8 inches	Pipe Dia. + 4 inches
8 inches to 24 inches	Pipe Dia. X 1.5
> 24 inches	Pipe Dia. + 12 inches

2. Multiple reaming passes shall be used at the discretion of the CONTRACTOR and shall conform to this specification.
3. In the event of a drilling fluid fracture, returns loss or other loss of drilling fluid, the CONTRACTOR shall be responsible for restoring any damaged property to original condition and cleaning up the area in the vicinity of the damage or loss.

3.05 PIPE PULL-BACK AND INSERTION

- A. Pipe shall be fused prior to insertion, if the site and conditions allow, into one continuous length.
- B. CONTRACTOR shall handle the pipe in a manner that will not over-stress the pipe prior to insertion. Vertical and horizontal curves shall be limited so that the pipe does not bend past the pipe supplier's minimum allowable bend radius, buckle, or otherwise become damaged. Damaged portions of the pipe shall be removed and replaced.
- C. The pipe entry area shall be graded as needed to provide support for the pipe and to allow free movement into the bore hole.

1. The pipe shall be guided into the bore hole to avoid deformation of, or damage to, the pipe.
  2. The fusible polyvinylchloride pipe may be continuously or partially supported on rollers or other OWNER and ENGINEER approved friction decreasing implement during joining and insertion, as long as the pipe is not over-stressed or critically abraded prior to, or during installation.
  3. A swivel shall be used between the reaming head and the fusible polyvinylchloride pipe to minimize torsion stress on the pipe assembly.
- D. Buoyancy modification shall be at the sole discretion of the CONTRACTOR, and shall not exceed the pipe supplier's guidelines in regards to maximum pull force or minimum bend radius of the pipe. Damage caused by buoyancy modifications shall be the responsibility of the CONTRACTOR.
- E. Once pull-back operations have commenced, the operation shall continue without interruption until the pipe is completely pulled through the bore hole.
- F. The pipe shall be installed in a manner that does not cause upheaval, settlement, cracking, or movement and distortion of surface features. Any damages caused by the CONTRACTOR'S operations shall be corrected by the CONTRACTOR.

### 3.06 INSTALLATION CLEANUP

- A. Following the installation, the project site shall be returned to a condition equal to or better than the pre-construction condition of the site. All excavations will be backfilled and compacted per the Construction Documents and jurisdictional standards. All pavement and hardscape shall be repaired per applicable jurisdictional standards, excess materials shall be removed from the site, and disturbed areas shall be re-landscaped. All drilling fluid shall be properly disposed of per these specifications and all applicable jurisdictional laws.
- B. CONTRACTOR shall verify that all utilities, structures, and surface features in the Project area are sound.

### 3.07 PREPARATION PRIOR TO MAKING CONNECTIONS INTO EXISTING PIPING SYSTEMS

- A. Approximate locations for existing piping systems are shown in the Construction Documents. Prior to making connections into existing piping systems, the CONTRACTOR shall:
1. Field verify location, size, piping material, and piping system of the existing pipe.
  2. Obtain all required fittings, which may include saddles, sleeve type couplings, flanges, tees, or others as shown in the Construction Documents.
  3. Have installed all temporary pumps and/or pipes in accordance with established connection plans.
- B. Unless otherwise approved, new piping systems shall be completely assembled and successfully tested prior to making connections into existing pipe systems.

### 3.08 PIPE SYSTEM CONNECTIONS

- A. Pipe connections shall be installed per applicable standards and regulations, as well as per the connection manufacturer's guidelines and as indicated in the Construction Documents. Pipe connections to structures shall be installed per applicable standards and regulations, as well as per the connection manufacturer's guidelines.
- B. If possible, pipe installed via HDD shall be filled with water prior to making any connections to the existing system or other portions of the project.

### 3.09 TAPPING FOR POTABLE AND NON-POTABLE WATER APPLICATIONS

- A. Tapping shall be performed using standard tapping saddles designed for use on PVC piping in accordance with AWWA C605. Tapping shall be performed only with use of tap saddles or sleeves. NO DIRECT TAPPING WILL BE PERMITTED. Tapping shall be performed in accordance with the applicable sections for Saddle Tapping per Uni-Pub-8.
- B. All connections requiring a larger diameter than that recommended by the pipe supplier, shall be made with a pipe connection as specified and indicated on the drawings.
- C. Equipment used for tapping shall be made specifically for tapping PVC pipe:
  - 1. Tapping bits shall be slotted "shell" style cutters, specifically made for PVC pipe. 'Hole saws' made for cutting wood, steel, ductile iron, or other materials are strictly prohibited.
  - 2. Manually operated or power operated drilling machines may be used.
- D. Taps may be performed while the pipeline is filled with water and under pressure ('wet' tap,) or when the pipeline is not filled with water and not under pressure ('dry' tap).

### 3.10 TESTING

- A. Testing shall comply with all applicable jurisdictional building codes, statutes, standards, regulations, and laws. CONTRACTOR is responsible for all required testing.
- B. HYDROSTATIC TESTING AND LEAKAGE TESTING FOR PRESSURE PIPING
  - 1. Hydrostatic and leakage testing for piping systems that contain mechanical jointing as well as fused PVC jointing shall comply with AWWA C605.
  - 2. Unless agreed to or otherwise designated by the owner or engineer, for a simultaneous hydrostatic and leakage test following installation, a pressure equal to 150% of working pressure at point of test, but not less than 125% of normal working pressure at highest elevation shall be applied. The duration of the pressure test shall be for two (2) hours.
  - 3. If hydrostatic testing and leakage testing are performed at separate times, follow procedures as outlined in AWWA C605.
  - 4. In preparation for pressure testing the following parameters must be followed:
    - a. All air must be vented from the pipeline prior to pressurization. This may be accomplished with the use of the air relief valves or corporation stop valves, vent piping in the testing hardware or end caps, or any other method which adequately allows air to escape the pipeline at all high points. Venting may also be accomplished by 'flushing' the pipeline in accordance with the parameters and procedures as described in AWWA C605.
    - b. The pipeline must be fully restrained prior to pressurization. This includes complete installation of all mechanical restraints per the restraint manufacturer's guidelines, whether permanent or temporary to the final installation. This also includes the installation and curing of any and all required thrust blocking. All appurtenances included in the pressure test, including valves, blow-offs, and air-relief valves shall be checked for proper installation and restraint prior to beginning the test.
    - c. Temporary pipeline alignments that are being tested, such as those that are partially installed in their permanent location shall be configured to minimize the amount of potentially trapped air in the pipeline.
- C. DISINFECTION OF THE PIPELINE FOR POTABLE WATER PIPING
  - 1. After installation, the pipeline, having passed all required testing, shall be disinfected

prior to being put into service. Unless otherwise directed by the OWNER or ENGINEER, the pipeline will be disinfected per AWWA C651.

D. PARTIAL TESTING

1. Segments of the pipe may be tested separately in accordance with standard testing procedure, as approved by the OWNER and ENGINEER. Testing of each HDD installation prior to connection to the system or other piping is preferred.

**END OF SECTION**

**SECTION 02610**  
**RESTRAINED JOINT POLYVINYL CHLORIDE FOR INSTALLATION BY**  
**HORIZONTAL DIRECTIONAL DRILL**

**PART 1 – GENERAL**

1.01 SECTION INCLUDES

- A. Restrained joint Polyvinyl Chloride (PVC) Pipe, 4" – 24" with cast-iron pipe (CI) outside diameters as well as related couplings that are intended for use in pressure-rated potable water delivery utilized with Horizontal Direction Drilling applications.

1.02 REFERENCES

- A. UL 1285-2008 – Pipe and Couplings, Polyvinyl Chloride (PVC), and Oriented Polyvinyl Chloride (PVCO) for Underground Fire Service.
- B. AWWA C900-07 – Polyvinyl Chloride (PVC) Pressure Pipe and Fabricated Fittings, 4" Through 12", for Water Transmission and Distribution
- C. AWWA C905-10 – Polyvinyl Chloride (PVC) Pressure Pipe and Fabricated Fittings, 14" Through 48", for Water Transmission and Distribution
- D. AWWA C605 – Standard for Underground Installation of PVC Pressure Pipe and Fittings.
- E. AWWA M51 – Air Release, Air/Vacuum Valves & Combination Air Valves
- F. AWWA C651 – 05 Disinfecting Water Mains
- G. NSF 14 – Plastic Piping System Components and Related Materials
- H. NSF 61 – Drinking Water System Components – Health Effects
- I. ASTM D1784 – 08 Standard Specification for Rigid Poly (Vinyl Chloride) Compounds and Chlorinated Poly (Vinyl Chloride) (CPVC) compounds
- J. ASTM D2837 – 11 Standard Test Method for Obtaining Hydrostatic Design Basis for Thermoplastic Pipe Materials
- K. ASTM D3139 – 98 (2011) Standard Specification for Joints for Plastic Pressure Pipes Using Flexible Elastomeric Seals
- L. ASTM F477 – 10 Standard Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe

1.03 SUBMITTALS

- A. Submit under provisions of Section 01300
- B. Certificates: Certify that submitted piping, accessories, and equipment either meet the specification as stated or meets specification through an alternate means and indicate the specific methodology used.
  - 1. Meets specification as stated.
  - 2. Meets specification through an alternate means and indicate the specific methodology used.
- C. Product Data: Provide data on manufactured piping system components including, material properties, dimensions, fittings, and configurations.
- D. Certifications: Provide UL Environmental certified environmental product declaration (EPD) for installed piping.

- E. Manufacturer's Instructions: Indicate application conditions and limitations of use. Include instructions for storage, handling, protection, examination, preparation, and installation of product.
- F. Affidavit of Compliance: The manufacturer shall, if requested by the OWNER, OWNER'S REPRESENTATIVE OR ENGINEER, provide an affidavit that delivered materials comply with the requirements of the standards listed in Section 1.02 References.

#### 1.04 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Minimum five (5) years' experience manufacturing polyvinyl chloride (PVC) piping.
- B. Installer Qualifications: Certified, trained, and approved by the piping manufacturer.

#### 1.05 WARRANTY

- A. Provide full one (1) year warranty covering 100% parts and 100% labor from the date of system startup completion and written OWNER acceptance.

## **PART 2 - PRODUCTS**

#### 2.01 MANUFACTURERS

- A. Acceptable Manufacturer: North American Specialty Products, North American Pipe Corporation
- B. Basis of design, and with prior approval including the specified requirements of this section, one of the following:
  - 1. North American Specialty Products C900/RJ™ Certa-Lok® Restrained Joint Piping System

#### 2.02 GENERAL

- A. The restrained joint pipe system to meet all performance, dimensional and quality requirements of AWWA C900-07 and UL 1285.
- B. The restrained joint piping system to meet all local and state code requirements.

#### 2.03 ENVIRONMENTAL PRODUCT DECLARATION (EPD)

- A. Pipe manufacturer to provide EPD that conforms to Underwriters Laboratories (UL) Environment product category rule (PCR), The Norwegian EPD Foundation NPCR 019 with UL Addendum 12/18/2012, and ISO 14025 Environmental Labels and Declarations – Type III Environmental Declarations – Principles and Procedures.

2.04 PIPING MATERIALS

- A. All materials to comply with the minimum requirements of the Safe Drinking Water Act.
- B. Products represented by this specification made from un-plasticized PVC compounds having a minimum cell classification of 12454 as defined in ASTM D 1784.
- C. Hydrostatic Design Basis (HDB) of 4000 psi for water at 73.4°F in accordance with the requirements of ASTM D2837. Thermoplastic materials to have minimum 2:1 safety factor to calculate HDB.
- E. Gaskets and lubricants to be compatible with the PVC pipe and fittings.
- F. Couplings designed for use at or above the pressure class of the pipe with which they are utilized and incorporate twin elastomeric sealing gaskets meeting the requirements of ASTM F 477.
- G. Integral bell designed for use at or above the pressure class of the integral pipe with which they are utilized and associated gaskets meeting the requirements of ASTM F 477.
- H. Joints designed to meet the zero leakage test requirements of ASTM D3139.
- I. Piping to resist oxidation when exposed to chlorine based chemical disinfectants used in potable water distribution systems.
- J. Piping material to have a minimum Hazen-Williams “C” value of 150.

2.05 PIPING STANDARD DIMENSIONS AND CHARACTERISTICS

- A. Nominal outside diameters and wall thicknesses of this restrained joint pipe conform to the requirements of ANSI/AWWA C900-07 with a minimum operating pressure rating of 235 psi.
- B. Cartridge Style Certa-Lok® Restrained joint pipe furnished in cast iron CI pipe sizes in Class 235 (DR18).
- C. Restrained joint pipe system materials selected to meet 100 year system design life.
- D. Restrained pipe Tensile Strength properties to meet the maximum straight pull force requirements of Horizontal Directional Drilling with minimum safety factor of 2:1:

Coupled Pipe					
Nominal Size	Pipe O.D.	Minimum Bend Radius (Ft.)	Maximum Straight Pull Force (LB)		
			DR25	DR18	DR14
4"	4.80"	100 FT	–	7,800	9,800
6"	6.90"	144 FT	–	16,000	18,900
8"	9.05"	188 FT	–	23,100	24,300
10"	11.10"	232 FT	–	40,500	48,700
12"	13.20"	275 FT	–	50,500	53,800
14"	15.30"	319 FT	52,500	61,500	–
16"	17.40"	363 FT	68,500	68,500	–
18"	19.50"	406 FT	97,000	113,000	–
24"	25.80"	538 FT	120,000	145,000	–

Integral Bell Pipe				
Nominal Size	Pipe O.D.	Minimum Bend Radius (Ft.)	Maximum Straight Pull Force (LB)	
			DR18	DR14
4"	4.80"	120 FT	10,300	11,900
6"	6.90"	173 FT	20,100	22,300
8"	9.05"	226 FT	27,500	31,000
10"	11.10"	278 FT	49,500	52,600
12"	13.20"	330 FT	60,000	60,000

- E. Pipe color to follow requirements of American Public Works Color Code: Blue
- F. Pipe and couplings permanently marked and legibly printed with the following information nominal size, material type, dimension ratio, pressure class, certifications, standards, manufacturer's name, manufacturer's trademark, and production date code.
- G. Pipe to be provided in nominal laying lengths of 20 feet unless otherwise shown on drawings.
- H. C900/RJ Pipe and couplings to have the NSF 61 seal certifying the application meets the specification standards in Part 1, section 1.02 Reference.

2.06 FITTINGS AND ACCESSORIES FOR CHANGES IN PIPE DIRECTION

- A. Restrained joint pipe fittings to conform to the requirements of ANSI/AWWA C900-07 with a minimum operating pressure rating of 235 psi.
- B. Fittings to meet requirements of NSF/ANSI.
- C. All fittings to be restrained to meet thrust load requirements.

2.07 PIPE LOCATION DEVICES

- A. All buried PVC piping to have an electrically conductive 14 gauge tracer wire with HDPE jacket to locate the pipe from grade level. All grade level connection points for the purpose of locating buried pipe to be identified and submitted to the municipality.
- B. Tracer wire to be secured to the PVC pipe at 10 ft. maximum intervals.
- C. Solder tracer wire intersections to provide continuity and be electrically isolated from ground.
- D. Subsurface waterproof connectors specifically designed for buried service to be used.

2.08 PIPE ACCESSORIES

- A. Petroleum free pipe joint lubricant compatible with pipe manufacture's recommendations and meets requirements of ANSI/NSF Standard 61.
- B. Provide permanent external over insertion prevention device if pipe system does not have an internally designed integral over insertion / over-belling safe guard. Ensure that the spigot end of the pipe does not EXCEED the pipe manufacturer's recommended mark in the throat of the adjoining bell.

## **PART 3 - EXECUTION**

### **3.01 INSTALLATION**

- A. Store and handle pipe in accordance with manufacturer's recommendations. Keep pipes clean of soil, debris, and animals.
- B. Install piping system in accordance with AWWA C605 – 11 and manufacturer's installation instructions.
- C. Follow all procedural requirements of AWWA Standard for Underground Installation of PVC Pressure Pipe and Fittings.
- D. Follow installation requirements of Uni-Bell UNI-PUB-9 Installation Guide for Gasketed Joint PVC Pressure Pipe and Uni-Bell UNI-PUB-8 Tapping Guide for PVC Pressure Pipe.
- E. Provide complete installation of system in accordance with contract documents.
- F. Provide piping, fittings, and system components at locations and in quantities indicated on drawings.
- G. Provide any additional accessories and components required to provide system intent.
- H. Ensure that piping is buried per OWNER requirements and as shown on drawings.
- I. Ensure that pipe and couplings are homogeneous and free from voids, cracks, inclusions, and other defects.

### **3.02 FIELD QUALITY CONTROL**

- A. Perform field inspection, testing, and adjusting per manufacturer's recommendation.
- B. Verify that each restrained pipe joint is installed per manufacturer's recommendation.
- C. Provide visual inspection during restrained joint installation to verify that over insertion / over-belling has not occurred.
- D. Verify that each restrained joint has permanent over-insertion / over-belling safeguards installed prior to pipe being pulled or pushed into the bore hole.
- E. Open ends of pipe to be sealed or otherwise closed with a restrained watertight plug during periods of work interruption including end of day work stoppage.
- F. Tracer wire to be installed per manufacturer's recommendations and verified for continuity with OWNER'S REPRESENTATIVE.

### **3.03 PRESSURE TESTING**

- A. Air pressure testing of installed PVC pressure pipe is strictly prohibited.
- B. After completion of the piping system, piping system to maintain a minimum hydrostatic pressure of 150 psi for a period of not less than 2 hours under the direct supervision and observation of the ENGINEER and/or OWNER REPRESENTATIVE.

### **3.04 DISINFECTION AND FLUSHING**

- A. After pressure testing has been completed, piping system to be disinfected in accordance with AWWA C-651.
- B. Continuous feed method with chlorinated water to circulate throughout the entire piping system until a confirmed bacteriological test proves water meets NSF drinking water requirements.
- C. OWNER reserves the right to re-test the water at any time prior to final acceptance of the work. If found to be out of compliance with NSF and bacteriologically unsafe, contractor to repeat disinfection process at no additional cost to the OWNER.

**END OF SECTION**

## **SECTION 02660 WATER MAIN**

### **PART I – GENERAL**

#### **1.01 DESCRIPTION**

##### **A. Scope**

This Section includes all water main Work complete with water main piping, valves, hydrants, thrust blocks, valve wells, structures, fittings, joints, joint materials, nuts, bolts, glands, gaskets, plugs and accessories as shown and required. This Section also includes bedding and laying of water main piping, hydrostatic testing of new water main piping systems, and flushing and chlorination of water main piping systems.

##### **B. Related Work Specified Elsewhere**

1. Measurement and Payment: Section 01025
2. Dewatering During Construction: Section 02140
3. Trenching, Backfilling and Compacting: Section 02226
4. Mortar and Grout: Section 03600

##### **C. City of Venice Standard Details**

Many water main components are specified on the plans in the City of Venice standard Potable Water Details. In the event of a discrepancy between this Specification and the standard details, the standard details shall prevail.

#### **1.02 QUALITY ASSURANCE**

##### **A. Requirements of Regulatory Agencies**

###### **1. Cleaning and Disinfection**

Conform to the applicable requirements of state and local health authorities having jurisdiction for disinfection and testing.

##### **B. Reference Standards**

Unless otherwise specified, the Work of this Section shall conform to the applicable portions of the following Standard Specifications:

ANSI- American National Standards Institute

ASTM- American Society for Testing and Materials

AWWA- American Water Works Association

FDOT- Florida Department of Transportation

NSF- National Sanitation Foundation

#### **1.03 SUBMITTALS**

A. Schedules

1. Tabulated Laying Schedule

A Tabulated Laying Schedule, showing stationing, deflection, elevation, slope and description of pieces shall be submitted to the ENGINEER. Pipe manufacture shall not be started until the laying schedule has been reviewed by the ENGINEER.

2. Corporation Stops (Tapping Outlets)

A complete schedule of all tapping outlets installed in water main piping shall be kept by the CONTRACTOR and submitted to the ENGINEER at the end of each water main piping section of the Project or on the last day of each week, whichever occurs first.

B. Affidavits

1. Butterfly Valves

Submit manufacturer affidavit showing compliance with AWWA C504, where applicable.

1.04 PRODUCT STORAGE AND HANDLING

A. Storage of Materials

1. Water Main Piping

Pipe shall be stored in a manner to minimize infiltration of dirt, debris and other extraneous materials.

Piping materials shall not be stacked higher than four (4) feet. Suitable racks, chairs and other supports shall be provided to protect preformed pipe mating surfaces from damage. Store bottom tiers off the ground, alternate tiers and chock tier ends.

2. Hydrants, Valves and Accessories

Store all hydrants, valves, wells and prefabricated structures off the ground, drained and kept free of water to protect against damage. Hydrants, valves, wells, their accessories and appurtenances shall be kept in their original containers until ready for installation.

3. Gasket, Glands, and Seals

All joint and sealing materials subject to ultraviolet or ozone attack and used in the water main system shall be protected from the sunlight, atmosphere and weather, stored in suitable enclosures until ready for installation.

B. Handling of Materials

1. Loading and Unloading

Load and unload piping using suitably approved hoists and skidding. Piping shall not be dropped, bumped or allowed to impact against itself. Damaged piping

shall be rejected by the ENGINEER.

2. Lifting Devices

Lifting devices shall be suited to the Work and shall protect surfaces from damage.

## **PART 2 – PRODUCTS**

### 2.01 MATERIALS

A. Scope

It is the intent of this Article to specify in detail the various types of pipe, joints, and fittings which have been indicated throughout the Plans and Specifications. This Article shall not be construed as allowing any alternate type of material to that which is indicated on the Plans or elsewhere in the Specifications.

B. Ductile Iron Piping Systems

1. Ductile Iron Pipe

Pipe shall be ANSI A21.51, with double thickness cement mortar lining and 1-mil thickness minimum of coal tar enamel inside and outside. Pipe shall have a minimum wall thickness class for the pipe nominal inside diameter as indicated on the Plans.

Acceptable manufacturers include: American Cast Iron Pipe Company, US Pipe and Foundry Company or equal.

2. Joints

Mechanical, compression gasket type, conforming to ANSI A21.11 except that slots with the same width as the diameter of the bolt holes in mechanical joints shall not be allowed in the bell flange.

Push-on, compression gasket type conforming to ANSI A21.11 with spigot of pipe marked to visually determine when the spigot is fully seated in the bell of the adjoining section.

Flanges shall have full face neoprene gaskets, 1/8" thick and conform to ANSI B16.1. Galvanized or cadmium plated bolts shall conform to ASTM A449 with nuts conforming to ASTM A563 Grade B. Bolt head and nuts shall be hex. All piping connection bolts and nuts shall be galvanized or cadmium plated.

C. Flexible Joint Piping Systems

1. Pipe

Ductile iron conforming to ANSI A21.51, with double thickness cement mortar lining and 1-mil minimum outside coating of coal tar enamel. Pipe shall have a minimum wall thickness class for the pipe nominal inside diameter as indicated on the Plans.

2. Joints

Flexible, ball and retainer type boltless joint.

D. Cement Mortar Pipe Linings

Cement mortar linings for cast iron and ductile iron pipe shall conform to the requirements of ANSI A21.4 of the thicknesses specified and shall be permanently set prior to the application of any additional pipe coating.

E. Coal Tar Enamel Coatings

1. Primers

AWWA C203, Type A.

2. Coal Tar Enamel

AWWA 203, Type I.

Pipe coatings shall be shop applied. Prime all surfaces. Coal tar enamel coatings shall be hot applied. Coatings shall be applied uniformly over all surfaces and when set, shall be firm, tenacious and tough; shall not sag at 140 degrees F and shall not check or peel at 20 degrees F. Coatings after drying for 48 hours shall have no deleterious effect upon the quality, color, taste or odor of potable water.

F. Bituminous Paint

Two (2) coats of cold-applied bituminous paint may be applied to the exterior surfaces of ductile iron pipes and fittings in lieu of hot applied coal tar enamel provided all the other requirements of paragraph 2.01.E. of this Section are met. Bituminous paint shall be prepared from coal tar enamel and suitable solvents conforming to AWWA C203, Type I.

G. Polyvinyl Chloride (PVC) Piping Systems

1. Pipe and Couplings

Rigid polyvinyl chloride bell and spigot type pressure pipe and couplings conforming to AWWA C900, for four (4) inches and larger pipe or ASTM D2241 for pipe smaller than four (4) inches, of the types and pressure class indicated on the Plans. Compounds used for production of PVC pipe and components shall be suitable for potable water products as required in Sections 3 and 4 of NSF Standard 14. Spigot end of pipe shall be marked to visually determine when the spigot is fully seated in the bell of the adjoining pipe.

2. Joints

Push-on or mechanical elastomeric gasket type, conforming to ASTM D3139.

3. Fittings

a. Polyvinyl Chloride

Two hundred (200) pound Pressure Class conforming to AWWA C900 of types and sizes indicated on the Plans.

b. Gaskets

Elastomeric seal type conforming to ASTM F477.

c. Lubricants

Manufacturers standard non-toxic conforming to AWWA C900.

H. Service Clamps

The clamps shall be compatible with the main and service lead, with straps of a ductile material to avoid crushing the main out-of-round. A molded gasket of rubber or neoprene shall completely encircle the tapped opening to insure a watertight connection. The use of lead gaskets is not allowed.

I. Restraints, Clamps, Rods, and Ties

1. Cast iron or steel as recommended by pipe manufacturer. Balls and fittings shall be bronze alloy or corrosion protected steel.

J. Structures

Material for water main structures shall conform to the requirements listed below:

1. Concrete Block

ASTM C139, Type II, shape and scored as detailed and as approved.

2. Precast Concrete Units

ASTM C478, circular with circular reinforcement as detailed. Provide lifting holes in precast units where indicated.

3. Covers and Frames

Provide types and sizes as detailed on the Plans. Covers shall be Class 30, ASTM A48 gray iron castings. The castings shall be neatly made and free from cracks, cold sheets, holes and other defects. Surfaces of castings shall be ground to assure proper fit and to prevent rocking. Units shall be frostproof and shall be provided with tapping screws and anchors where indicated on the Plans.

K. Bolts, Studs, and Nuts

Bolts, studs, and nuts shall be as specified on the Plans and shall conform to the requirements of AWWA C500 and the ASTM standards listed below:

Bronze ASTM B98

Steel ASTM A307, Grade B

Cadmium Plating ASTM A165, Grade N.S.

Zinc Coating ASTM A153 or A164, Type G.S.

Tee head bolts and nuts shall be high strength, low alloy steel conforming to ANSI/AWWA C111/A21.11.

L. Granular Material

Granular material shall be material passing a 1-inch sieve and at least 35% retained on a No. 200 sieve and meeting the approval of the ENGINEER.

## **PART 3 – EXECUTION**

### **3.01 CONTRACTOR'S VERIFICATION**

#### **A. Excavation and Bedding**

Prior to the installation of any water main piping or materials, examine all trenches and other excavations for the proper grades, lines, levels and clearances required to receive the new Work. Ascertain that all excavation bottoms, compacted subgrades and pipe bedding are adequate to receive water main materials to be installed. Correct all defects and deficiencies before proceeding with the Work.

#### **B. Existing Water Mains**

Expose the existing water main piping and structures to which the new Work is to be connected and notify the ENGINEER of the same. The ENGINEER will verify the vertical and horizontal locations of the existing system and shall inform the CONTRACTOR as to the necessary adjustments required to align the new water main work with the existing system.

### **3.02 PREPARATION**

#### **A. Pipe Ends**

Remove all lumps, blisters excess coatings from the socket and plain ends of pipe. Wire brush and wipe clean the outside surfaces of all plain ends and the inside surfaces of all socket ends before installation. Any pipe or fitting which has acquired a coating of mud or other adhesive foreign material shall be scrubbed clean with heavily chlorinated water.

#### **B. Examination of Materials**

All pipe fittings, valves, hydrants, accessories and appurtenances shall be examined carefully for damage and other defects immediately before installation. Defective or damaged materials shall be marked and held for inspection by the ENGINEER. Damaged materials are subject to rejection by the ENGINEER.

### **3.03 INSTALLATION**

#### **A. General**

##### **1. Pipe Cleanliness**

Foreign matter shall be prevented from entering the pipe while it is being placed in the trench. During and after laying operations, no debris, clothing or other materials shall be placed in the pipe.

##### **2. Pipe Plugs**

During the progress of all water main Work, watertight plugs shall be carried along and inserted in the end of each pipe as it is laid to prevent foreign matter or rodents from entering the pipe. This watertight plug shall be fastened in the end of the water main in such a manner as to prevent it from floating or being otherwise displaced whenever construction operations are temporarily halted,

such as at noon or at the end of the day's Work.

3. Pipe Bearing

Each section of pipe, when placed to grade and line, shall have firm bearing on the trench bedding throughout its length between bell holes.

4. Pipe Cutting

Cutting of pipe shall be done with approved tools and by approved methods suitable for the pipe material. Pipe cutting methods that produce a smooth, square cut end without damage to the pipe and that minimize airborne particles, shall be employed. Pipe cutting shall be performed using the recommendations of the manufacturer of the type of pipe materials being cut and according to the best trade practices.

a. Pipe Linings and Coatings

When cutting pipe or fittings, care shall be taken to prevent damage to linings and coatings. Damage to linings shall be cause for rejection of the complete section. Damage to exterior coatings shall be corrected to original Specifications.

b. Gaskets

Where pipe using a resilient gasket to effect the seal is cut, the cut pipe end shall be tapered at a 30-degree angle with the centerline of the pipe, and ground smooth, on the outside end to remove any sharp edges or burrs which might damage the gasket.

5. Pipe Laying

Unless otherwise specified, pipe shall be laid with bell ends facing in the direction of laying. After a length of pipe is placed in the trench, the spigot shall be centered in the bell end of the adjacent pipe section, the pipe shoved into position and brought to true alignment and secured with sand tamped under and on both sides of the pipe except at bell holes. Adequate support shall be provided for all water main pipe.

6. Pipe Bedding

After the bottom of the trench has been excavated and filled to the required grade with four (4) inches of bank run sand approved by the ENGINEER, meeting the requirements of granular material thoroughly compacted by tamping, the pipe shall be installed strictly in accordance with the manufacturer's recommendations. After the pipe is laid, the sand backfill shall be continued to a point 12 inches above the top of pipe barrel. Particular care shall be taken to assure filling and tamping all spaces under, around and above the top of the pipe. Backfill shall be as indicated on the Plans and in the Specifications. Continuous and uniform bedding shall be provided in the trench for all buried pipe.

7. Bolts, Studs, and Nuts

Install bolts, studs, and nuts of the type specified per the manufacturer's installation and torquing requirements. All steel bolts, studs, and nuts shall be

painted with bituminous paint after installation.

B. Ductile Iron Pipe

1. Push-On Joints

Joints shall be made by means of a compression type push-on resilient gasket. Gasket shall be pre-lubricated before installation using a lubricant recommended by the pipe manufacturer. The seated joint shall be identified by the visible mark on the spigot of the installed pipe section.

2. Mechanical Joints

Joints shall be made with bolts, molded resilient gasket and ductile iron follower gland. All nuts shall be screwed up finger tight before using a wrench. The gland and rubber gasket shall be brought up evenly at all points around the bell flange and then torqued per the manufacturers recommendations. The normal range of bolt torques to be applied to standard cast iron bolts in a joint and the lengths of wrenches that should satisfactorily produce the ranges of torques are as follows:

<u>Pipe Size</u>	<u>Bolt Size</u>	<u>Range of Torque</u>	<u>Length of Wrench</u>
3 inch	5/8 inches	45-60 ft-lb	8 inches
4-24 inch	3/4 inches	75-90 ft-lb	10 inches
30-36 inch	1 inch	100-120 ft-lb	12 inches
42-48 inch	1-1/4 inches	120-150 ft-lb	14 inches

Exposed portions of bolts shall be covered with mastic.

3. Flexible Joint Pipe

Flexible joint pipe shall be assembled, handled and installed in accordance with the printed recommendations which accompanies the pipe and is provided by the manufacturer of the piping materials being installed. Methods of handling and installation shall be acceptable to the ENGINEER.

C. Polyvinyl Chloride Pipe

Polyvinyl chloride pipe shall be laid with gasketed joints in complete accordance with the pipe manufacturer's published instructions. The joints shall be sufficiently lubricated using the pipe manufacturer's recommended lubricant.

Gaskets for pipe joints shall be inserted with the painted edge facing the end of the bell. Each length of pipe shall be pushed home individually. The pipe shall be positioned so that the reference mark on the spigot end is in line with the bell end.

D. Valves, Hydrants, Fittings, and Appurtenances

1. Valves

All valves shall be installed to the grade, lines, levels and locations indicated on the Plans.

Valve connections shall be as specified for the piping materials used. Valves shall be set with the stem plumb on permanent, firm foundations as indicated on

the Plans.

Where required, valves shall be supported with special supports as indicated on the Plans and as approved by the ENGINEER. Valves shall be installed so as not to receive support from the connecting pipe. In no case shall valve installation be used to bring misaligned pipe into alignment.

2. Hydrants

All hydrants shall be installed plumb to the lines, levels, grades and locations indicated on the Plans. Hydrants shall be set to the established grade, shall have their nozzles parallel to or at right angles to and facing the grade or curb.

Where necessary to adjust for proper hydrant grade and location, the CONTRACTOR shall install additional fitting and spigot pipe between the water main and road box.

The CONTRACTOR shall plumb all hydrants at the time they are set with a plumb line or other means acceptable to the ENGINEER. Upon substantial completion of cleanup, the CONTRACTOR shall recheck all hydrants for plumb and grade and shall make all adjustments as directed by the ENGINEER at this time. The Work of constructing fire hydrants shall not be considered complete until these final adjustments for plumb and grade have been made.

3. Relocation of Hydrants

Relocation of hydrants shall include the provision of new hydrant shoes and restraints. Provide all new materials required for hydrant relocation. Reinstall hydrants at the new locations to the lines and levels shown. Make all joint connections to new or existing water mains, joints, couplings, etc. as shown and as required. Provide all anchorage and restraint for a complete installation.

4. Valve Boxes

Install valve boxes to the grade, lines, levels and locations indicated on the Plans. Valve boxes shall not transmit shock or stress to the valve and shall be set plumb with covers centered over operating nuts and flush with the indicated surface elevations. Valve boxes that shift or fill during backfilling shall be uncovered and reset.

5. Service Clamps

Where service clamps are to be installed, the entire circumference of the main shall be free of all loose material. Installation of the clamp and tapping of the main shall be in accordance with manufacturer's recommendations.

6. Curb Stops

Install curb stops of the types and sizes indicated on the Plans.

7. Fittings, Strapping, and Lugged Pipe

a. Fittings

Install all fittings to the lines, levels and locations indicated on the Plans. Installation of fittings shall be with the type of joint specified for piping.

Fittings shall be provided with restraints as specified herein as indicated on the Plans and as required for a functional installation.

b. Strapping, Lugged Pipe and Fittings

Where indicated on the Plans and as directed by the ENGINEER, bends in water main piping and piping runs subject to impact reaction shall be secured by means of metal strapping. Install all necessary bands, tie rods, nuts and washers required. No metal strapping shall be used in direct contact with asbestos-cement or polyvinyl chloride pipe.

Where lugged pipe and special fittings are indicated on the Plans, furnish and install all necessary tie rods, nuts and washers.

E. Water Main Structures

Construct water main valve wells and structures to the grades, lines and levels indicated on the Plans and as specified. Structures shall be complete with concrete bases, reinforcing, frames, covers, adjustment rings, etc., as shown and as required for a complete installation. Water main structures shall conform to the dimensions indicated on the Plans and as described below.

1. Concrete Block

Construct concrete block structures in the locations and according to the details on the Plans. The first course of concrete blocks shall be placed on the prepared base or footings in a full bed of mortar. Mortar joints shall be full and close in all courses. Courses shall be level throughout. Stagger joints in adjoining courses by 1/2 the length of the block as nearly as practicable.

Joints shall be uniform in thickness throughout the structures. Strike all joints and properly point to provide true, smooth surfaces.

2. Precast Concrete Units

Construct as detailed on the Plans. Provide mortar joints struck smooth. Provide two (2) to four (4) courses of 8-inch brick at top of structure for future adjustment.

4. Plaster Coat

Cement mortar plaster coat shall be applied to the exterior surfaces of all gate wells and other water main structures indicated on the Plans. Plaster coat shall be 1/2-inch thick and shall be applied to the outer surfaces of the structures.

5. Inlet and Outlet Pipe

Pipe placed in structures for inlet or outlet connections shall extend through the walls and beyond the outside wall surfaces a sufficient distance to allow for complete connections. Openings between pipes and walls shall be sealed with a full bed of cement mortar. Pipe shall be supported by concrete supports.

F. Air Release Assembly

Provide all materials and construct air release assemblies where indicated on the Plans. Install all valves, fittings, caps, plugs and piping as required. Fittings and joint materials used for air release assemblies shall be as specified herein for the water main piping

materials used.

G. Blow-Off Assembly

Provide all materials and construct blow-off assemblies where indicated on the Plans. Blow-off assemblies and pipe shall be installed to the lines, levels and elevations shown, install all valves, fittings, reducers, piping, plugs, joints, etc. as detailed. Blow-off assemblies shall be installed on stable, undisturbed earth materials with changes in directions and returns provided with bedding and restraints as indicated on the Plans, as specified herein and as required for a complete installation. Blow-off assemblies shall include valve boxes as detailed.

H. Tapping Valve Assembly

Install all tapping valve assemblies of sizes and to the lines, elevations, locations and details indicated on the Plans. The tapping sleeve shall be assembled around the main, and the tapping performed in strict accordance with the manufacturers recommendations. Tapping shall be accomplished without interruption of service.

I. Anchors, Encasements, and Restraints

Plugs, tees, sleeves, bends, caps, straps and lug piping shall be provided with suitable anchors, encasements and restraints as indicated on the Plans. Anchoring, encasement and restraint methods shall be as detailed. All bearings shall be as shown. Anchors, encasements and restraints shall rest on firm, stable, compacted subgrade and shall be provided for all standard and special fittings.

J. Water Service Lines

1. General

When so indicated on the Plans, the CONTRACTOR shall provide water service lines in accordance with Article 3.03.J.2. and 3.03.J.3. of this Section.

2. New Water Main

a. General

Water service lines shall be installed after the water main has been successfully tested and put into service, including the installation of fire hydrants. The service lines shall be of the type indicated on the Plans, and shall be 3/4 inch diameter unless otherwise indicated on the Plans.

Water service lines shall be provided for all lots or parcels at the locations indicated on the Plans, within these Contract Documents or as directed by the ENGINEER. Service lines shall extend from the water main to within 1-foot of the limits of a right-of-way or easement at minimum 5-foot depth terminating with a curb stop as specified herein.

b. Installation Method

Water service lines shall be installed by boring or tunneling, unless otherwise indicated on the Plans or directed by the ENGINEER.

Backfilling of open cut construction shall be in accordance with Section 02226, Trenching, Backfilling, and Compacting, after the service line, including curb

stop, has been laid and approved by the ENGINEER. Prior to backfilling the service line the CONTRACTOR shall request an inspection by the ENGINEER and obtain approval of the service line.

Alternative methods such as hydraulic jacking; air jetting; piston mole; etc., may be used to install water service lines if approved by the ENGINEER. The proposed method must be approved by the governmental agency having jurisdiction over the Work area and the CONTRACTOR must demonstrate that, in the opinion of the ENGINEER, the method is suitable for local soil and ground conditions. To be found suitable for local conditions, the method must be demonstrated to perform within acceptable horizontal and vertical accuracy limits, must not compress soil beyond acceptable limits, and must not leave voids in the soil. Water jetting shall not be permitted. Final installation of the service pipe must be in accordance with manufacturer's recommendations and no joints or fittings shall be allowed under roadway surfaces.

### 3. Replacement Water Mains

Existing water mains shall be kept in service until all water services have been connected to the new mains. The CONTRACTOR shall repair all water services damaged during the installation of the new water mains. Only after the new mains have been accepted and put into service, will service connections be made to the new mains.

The connection of existing service lines to the new mains shall be made within the street rights-of-way or within the easements, utilizing the existing curb stops. All existing lead water service lines shall be abandoned and new water service lines installed from the new water main to the existing curb stops.

Backfill, method of construction under pavements, and new water service lines shall be as specified in Article 3.03.J.2. of this Section.

## 3.04 FIELD QUALITY CONTROL

### A. Hydrostatic Testing

After the pipe has been laid and backfilled, the pipe shall be hydrostatically tested for leakage. The CONTRACTOR shall furnish the pump, pipe connection, hydrants, valves and any other necessary apparatus including gages and meters and all personnel necessary for conducting the test. Before applying the test pressure, all air shall be expelled from the pipe. If necessary to accomplish this, taps shall be made at points of higher elevation and afterwards plugged. The test shall be made at a pressure of 150 pounds per square inch gage. The full pressure shall be held for two (2) hours. Any faulty pipe fitting, gate valves or other accessories which permit leaks during testing shall be replaced by the CONTRACTOR with sound material and the test shall be repeated until specified requirements are met.

The allowable leakage (as dictated by AWWA) shall be calculated as follows,

$$L = \frac{S \times D \times \sqrt{P}}{148,000}$$

Where L = Allowable Leakage (gal/hr)  
S = Length of Pipe Tested (ft)  
D = Diameter of Pipe (in)  
P = Average Test Pressure (psi)

B. Water for Testing

Water for testing shall be obtained from a potable water supply. The CONTRACTOR shall provide all water required at his own expense and shall make all necessary arrangements with the Authority which controls the source of water system and shall be governed in his use of water by all rules and regulations imposed thereon by said Authority. The CONTRACTOR shall provide and remove temporary connections between the source water system and the mains constructed under this Contract. All temporary connections shall meet the approval of the ENGINEER, the Authority controlling the source water system and Public Health authorities having jurisdiction.

3.05 CLEANING AND DISINFECTION

A. Flushing

After completion of water main installation, flush the new mains, valves, hydrants and appurtenances completely and as acceptable to the ENGINEER. Heavily chlorinated water discharged from a disinfected system shall be controlled adequately to protect any surface water resource or adjacent property from potential environmental damage, or from creation of a hazard to traffic. Remove and dispose of all temporary installations at completion of the flushing operation.

After flushing, and prior to final approval of the system, the CONTRACTOR shall pump down all fire hydrants and verify that the hydrant valve is properly seated to prevent the hydrant standpipe from filling with water.

B. Disinfection

After satisfactory hydrostatic testing and flushing of the new water main, disinfect the complete system by introduction of a chlorine-water solution throughout the water main piping. The liquid mixture shall be applied by means of a solution-feed chlorinating device. The chlorine solution shall be applied through a corporation stop at the beginning of the main or valved section thereof. A slow flow of water shall be let into the main approximately at the point of injection of the chlorine solution, at a rate such that the chlorine dosage of the entering water shall be at least 50 parts per million. An open discharge shall be maintained at the far end of the section of main being chlorinated, and the introduction of chlorine solution and water shall continue until the water discharging at the far end shall carry the required dosage of chlorine. As the main is filled with chlorinated water, each outlet from the main shall be opened and sufficient water drawn off to assure that the full dosage of chlorine reaches each outlet. Back pressure causing a reversal of flow in the main being chlorinated shall be prevented, and pressure in the main shall be held down to a point which will make it impossible for chlorinated water to be forced into other sections of the main or water system.

The chlorine treated water shall remain in the main at least 24 hours, and at the end of that time the chlorine residual at pipe extremities and other representative points shall be at least 25 ppm. If the chlorine residual shall be less than 25 ppm at the end of 24 hours, further application of chlorine shall be made and the retention period repeated until the required 25 ppm residual is obtained.

Should the initial treatment of all or any section of the mains, in the opinion of the ENGINEER, prove ineffective, the chlorination procedure shall be repeated until confirmed tests show that water sampled from the new mains conforms to the foregoing requirements.

The CONTRACTOR shall collect water samples and cause analyses to be made at his

own expense. Testing laboratory and sample collection shall meet the approval of Public Health authorities having jurisdiction.

C. Water for Cleaning and Disinfection

Water for cleaning and disinfection shall be obtained from a potable water supply. The CONTRACTOR shall provide all water required at his own expense and shall make all necessary arrangements with the Authority which controls the source of water system and shall be governed in his use of water by all rules and regulations imposed thereon by said Authority. The CONTRACTOR shall provide and remove temporary connections between the source water system and the mains constructed under this contract. All temporary connections shall meet the approval of the ENGINEER, the Authority controlling the source water system, and Public Health authorities having jurisdiction.

D. Bacteriological Analysis

Prior to placing a water main in service, new or existing that has been shutdown, not less than two (2) consecutive water samples taken 24 hours apart for bacteriological analysis shall be collected and each analysis shall show results meeting state drinking water standards. See Section 01030 1.26.A for requirements for existing water main shutdown.

The CONTRACTOR shall collect water samples and cause analyses to be made at his own expense. Testing laboratory and sample collection shall meet the approval of public agency having jurisdiction.

3.06 PAINTING OF ABOVE-GROUND PIPE AND FITTINGS

A. All above-ground ductile iron pipe and fittings shall be painted upon completion. Acceptable painting systems are as follows.

1. Tnemec

- 1<sup>st</sup> Coat: Tnemec Series 66 (3.0 – 5.0 mils DFT)
- 2<sup>nd</sup> Coat: Tnemec Series 66 (4.0 – 6.0 mils DFT)
- 3<sup>rd</sup> Coat: Tnemec Series 73 (2.5 – 4.5 mils DFT)

2. Carboline

- 1<sup>st</sup> Coat: Hi-Gard Epoxy (4 mils DFT)
- 2<sup>nd</sup> Coat: Carboline 134 H.S. (2.5 mils DFT)
- 3<sup>rd</sup> Coat: Hythane 4600 Series Polyurethane (2.0 mils DFT)

B. All above-ground PVC piping shall be painted upon completion. Acceptable painting systems are as follows.

1. Tnemec

- 1<sup>st</sup> Coat: Tnemec Series 66 (2.5 – 3.5 mils DFT)
- 2<sup>nd</sup> Coat: Tnemec Series 73 (2.0 – 3.0 mils DFT)
- 3<sup>rd</sup> Coat: Tnemec Series 73 (2.0 – 3.0 mils DFT)

2. Carboline

- 1<sup>st</sup> Coat: MultiBond (2 mils DFT)
- 2<sup>nd</sup> Coat: Carboline 134 H.S. (3.5 mils DFT)

C. Color selection shall be by OWNER. In general, potable water systems shall be painted blue.

**END OF SECTION**

## **SECTION 03600 GROUT & MORTAR**

### **PART I – GENERAL**

#### **1.01 DESCRIPTION**

##### **A. Scope**

This Section includes the preparation and installation of mortar and grout used for bond or primer coats, laying masonry units, caulking pipe joints, general patching, filler between slope protection and riprap, joints in precast structural members and for spaces under leveling plates and equipment bases, supporting structures, grouting dowels and anchor bolts.

##### **B. Definitions**

Mortar is a plastic mixture of cementitious materials, admixtures where specified, fine aggregate and water. Grout is mortar of pouring consistency.

#### **1.02 QUALITY ASSURANCE**

##### **A. Reference Standards**

ACI            American Concrete Institute

ANSI          American National Standards Institute

ASTM         American Society for Testing and Materials

FDOT         Florida Department of Transportation Standard Specifications for Construction

##### **B. Reference Specifications**

The latest or current ACI Standards and Code Requirements for Concrete Masonry Structures. ACI-531, shall govern all mortar and grout work except where otherwise specified herein.

#### **1.03 SUBMITTALS**

A. Manufacturers literature shall be submitted for premixed materials.

#### **1.04 PRODUCT DELIVERY, STORAGE, AND HANDLING**

Materials shall be stored and handled as recommended in ACI 304.

##### **A. Cement**

When cement is stored in the open, a floor at least six (6) inches above the ground and a waterproof covering shall be provided and so placed as to insure runoff in case of rain. At the time of its use the cement shall be free from lumps. Cement sacks shall be thoroughly shaken when emptying sacks into the batch.

Cement salvaged by the CONTRACTOR by cleaning sacks mechanically or otherwise, or from discarded sacks of cement shall not be used.

B. Aggregate

The aggregates are to be furnished, stocked and handled so that uniformity of grading will be obtained at the time of batching. The area on which stockpiles are to be built shall be thoroughly cleaned of all foreign materials and shall be firm, reasonably level, and well drained. No aggregates which have become intermixed prior to proportioning shall be used.

C. Premixed Materials

The premixed mortar or grout shall be stored and handled in strict accordance with the manufacturer's recommendations.

1.05 JOB CONDITIONS

Environmental requirements relative to temperature for mixing and placing mortar or grout shall be in accordance with paragraphs 2.02.E and 3.03.D of this Section.

**PART 2 – PRODUCTS**

2.01 MATERIALS

A. Premixed

Premixed mortar or grout shall be a complete packaged mixture to which water is to be added at the job site. Mortar and grout shall be nonshrink, nonstaining.

B. Job Mixed

1. Cement

The type of cement to be used shall be as indicated on the Plans or as specified below:

- a. Portland cement, Types I, IA or III: ASTM C150.
- b. Masonry cement: ASTM C91.
- c. Mortar, Type M or S: ASTM C270.
- d. Hydrated lime, Type S: ASTM C207.

2. Aggregate

Fine aggregate: Silica sand FDOT 902.

3. Admixtures

Integral waterproofing compounds, accelerators, retarders or other admixtures not definitely mentioned in the Specifications shall not be used in mortar or grout without the approval of the ENGINEER. Use no admixtures containing calcium chloride.

C. Water

Water shall be free from oil, acid, alkali, organic matter, and any other deleterious substances. Water approved by the State Board of Health may be used without testing. Water from other sources shall be tested before using.

2.02 MIXES

A. Premixed

Water shall be added in strict accordance with manufacturer's recommendations to prepare a stiff or plastic mix, depending on workability needed for application.

B. Job Mixed

A mixture of cement, aggregate, water and admixtures, if required, shall be combined in proportions meeting the requirements of FDOT 425 to produce mortar or grout for the use indicated on the Plans and as specified herein.

C. Proportioning

For job mixed mortar and grout the cement and aggregate shall be proportioned by weight for cubic yard batches or by volume for small batches. Shovel method of volume measuring will not be permitted. When materials are measured by volume, water shall be added in amounts necessary for the consistency required for the Work.

D. Mixing

1. Premixed

The mixing of water with packaged premixed mortar or grout shall be in strict accordance with the manufacturer's recommendations.

2. Job Mixed

The minimum mixing time shall be five (5) minutes. The consistency of mortar shall be adjusted to provide the best workability. If the mortar begins to stiffen from evaporation or absorption of a part of the mixing water, the mortar shall be retempered by adding water and remixing. The consistency of the grout shall be such that at the time of placement, it will completely fill all spaces intended to receive grout.

E. Mix Temperature

The temperature of the mix shall be between 40 degrees F and 120 degrees F.

2.03 ACCEPTABLE MANUFACTURERS

Acceptable manufacturers of premixed, nonshrink, nonmetallic grout include: Sonneborn SonogROUT, L and M Construction Chemicals DuragROUT, Master Builders Masterflow 713, or equal.

## **PART 3 – EXECUTION**

### **3.01 CONTRACTOR'S VERIFICATION**

The CONTRACTOR shall verify the elevation of structural member or equipment bases to be grouted, and/or location of anchoring devices as indicated on the Plans or approved Shop Drawings.

### **3.02 PREPARATION**

#### **A. General**

Surfaces to receive mortar or grout shall be prepared as follows, unless otherwise specified:

1. Remove laitance down to sound concrete.
2. Surface shall be properly wet cured, being free of chemical curing compound, oil, grease, dirt and loose particles.
3. Clean bolt and/or tie holes, anchor bolts and underside of bearing plates.
4. Saturate concrete including holes prior to grouting.

#### **B. Premixed**

When a premixed mortar or grout is used, preparation of surfaces shall be in strict accordance with manufacturer's recommendations.

### **3.03 INSTALLATION**

#### **A. General**

All mortar and grout shall be used within 2-1/2 hours of initial mixing. No mortar or grout shall be used after it has begun to set.

#### **B. Premixed**

Premixed mortar or grout shall be used in strict accordance with the manufacturer's recommendations.

#### **C. Applications**

##### **1. Masonry Units**

Mortar joints to bond brick or block shall be no less than 3/8 inch and no greater than 2 inch thick. The surface of the joint shall be struck to be flush with the masonry units.

##### **2. Surface Finishing**

Nonshrink mortar shall be thoroughly compacted into all voids, holes, honeycombs, or other defects in the finish surface of concrete. The mortar shall be flush with the surrounding concrete and matching in color and texture.

##### **3. Anchoring Devices**

Nonshrink, nonstaining mortar or grout shall be placed in the hole provided, then the

anchoring device or dowel shall be set into the grout filled hole. The surface shall be flush with the surrounding concrete. No pressures or loads shall be applied to the anchoring device until the mortar or grout has attained its ultimate strength.

4. Plates and Structural Members

Thoroughly fill the area between the foundation and plate or member with nonshrink, nonmetallic grout. If required, immediately set shims and align plate or member as required. After the grout has set hard remove forms or shims and finish with a capping mortar.

D. Cold Weather

1. General

No masonry units, mortar or grout Work shall be placed in contact with frozen surfaces. No mortar or grout Work shall be performed when the mean air temperature is below 40 degrees F unless the materials are heated and/or the CONTRACTOR provides adequate protection of the Work. All Work shall be protected against freezing for no less than 48 hours after placement.

2. Temperature Requirements

a. General

Application of heat to the materials shall be made in a manner which will keep these materials clean and free from injurious substances.

b. Air Temperature 25 degrees F to 32 degrees F

Sand and mixing water shall be heated to produce mortar temperatures between 40 degrees F and 120 degrees F. Maintain temperatures of mortar on boards above freezing. Heat sand and water to a minimum 70 degrees F and maximum 160 degrees F.

c. Air Temperature 32 degrees F to 40 degrees F

Sand or mixing water shall be heated to produce mortar temperatures between 40 degrees F and 120 degrees F. Heating of either of the ingredients shall be to a minimum 30 degrees F and a maximum of 160 degrees F. The ideal mortar temperature should be 70 degrees F to 80 degrees F.

**END OF SECTION**

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# CITY OF VENICE PROCUREMENT- FINANCE DEPARTMENT

401 W. VENICE AVE. - ROOM # 204  
VENICE, FL. 34285 (941) 486-2626  
FAX (941) 486-2790

## ADDENDUM NO. 1

**Date: October 26, 2016**

**To: All Prospective Bidders**

**Re: ITB# 3044-16 Water Main Replacement Program - Phase 4, Re-Bid**

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This addendum sets forth changes and/or information as referenced and is hereby made part of and should be attached to the subject Contract Documents. Receipt of this Addendum shall be acknowledged below and in the submitted proposal. It shall be the responsibility of each proposer, prior to submitting a proposal, to contact the City of Venice- Procurement- Finance Department to determine if addenda were issued and to make such addenda a part of their proposal.

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The following is to clarify and provide additional information requested during the pre-bid meeting held October 18, 2016 at 2:00 P.M.

Peter Boers, Procurement Manager, opened the meeting

1. **Important dates:** Bids are due November 8, 2016 at 2:00 p.m. at City Hall room #204. Bids are to be delivered to Suite 204 in City Hall. The bid opening will take place in the Community Hall (room #114).
2. The Cut-Off for questions will be October 26, 2016 at 1:00 PM
3. Mr. Boers advised the bidders to read through *Instructions to Bidders*, but made note of the following Articles.
4. Article 10 Bid Security - 5% Bid Security is required.
5. Article 11 Contract Times – time to completion is 360 days from NTP.
6. Article 12 Liquidated Damages - Mr. Boers advised that the stipulated damages for this project are \$1532 per day.
7. Article 23 Contract Securities - The awarded contractor will be required to provide a Performance and Payment Bond equaling 100% of the contact amount. **EXHIBIT A**

8. Article 24 Contractors Insurance -Mr. Boers reviewed **EXHIBIT B: Insurance Requirements**.
  - a. General Liability -\$1,000,000 per occurrence
  - b. Business Auto Liability - \$1,000,000 combined single limit
  - c. Worker's Comp per State Statute
  - d. Builders' Risk Installation Coverage to be provided prior to Notice to Proceed
9. Article 29 Local Preference – Local preference is not applicable to this bid.
10. Bid Form
11. Mr. Boers reviewed the required forms that must be returned with each firm's submittal. These required forms are listed in the Appendix of the bid document. Mr. Boers advised, even if a form does not pertain to said company - to still mark it with a "N/A" and return it with each submittal. Mr. Boers also advised that the *Required Forms List* could be used as a "check off" sheet for firms to use.
12. Bidders are asked to also complete and return the *Bidder's Qualification Statement* with their bid.
13. Ms. Brendalee Westlake reviewed the SRF requirements and distributed the attached handout.
14. Mr. Ricardio Borromeo, the City's consulting Engineer from Wade Trim, reviewed the scope of work and provided a brief overview of the project.
15. Mr. Boers opened the floor for bidder's questions. He advised the attendees to follow up in writing if they do not see an answer to their question published in an addendum and to not assume a change is in effect unless published in an addendum.

#### **CLARIFICATION:**

An unsigned set of plans has been posted to Demandstar as a **separate attachment**.

#### **REVISIONS:**

##### IN THE SPECIFICATIONS

1. Bid Form

Delete the Bid Schedule and replace it with the revised Bid Schedule provided in this Addendum. **Bidders must submit Bid Form Addendum 1 Revision with their bid submittal.**

##### IN THE PLANS

1. Revised Plan Sheets C 1.07 & C1.12 have been attached to this Addendum.

Peter A. Boers  
Procurement Department

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Acknowledgment is required with your proposal response. A designated management representative of your Bank must sign the receipt for this addendum.

Receipt Acknowledged:

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Company

\_\_\_\_\_  
Date

A copy of the addendum (excluding attachments) is to be included with the proposal response.

## ADDENDUM 1 REVISION

### BID ITEMS: WATER MAIN REPLACEMENT PROGRAM - PHASE 4

Item No.	Estimated Quantity	Unit	Description	Unit Bid Price (In Numbers)	Total Amount (In Numbers)
1	2700	LF	6" Water Main Installed by Horizontal Drill Method		
2	1300	LF	6" Water Main Installed by Open Cut Method		
3	9	EA	6" Resilient Wedge Gate Valves with Box		
4	3	EA	6" Tapping Sleeves and Valves		
5	8	EA	Fire Hydrant Assemblies		
6	52	EA	Water Services with New Meter Box (Near Side Single)		
7	9	EA	Water Services with New Meter Box (Near Side Tandem)		
8	66	EA	Water Services with New Meter Box (Far Side Single)		
9	23	EA	Water Services with New Meter Box (Far Side Tandem)		
10	7	EA	Water Services without New Meter Box (Near Side Single)		
11	1	EA	Water Services without New Meter Box (Near Side Tandem)		
12	20	EA	Relocated Reduced Pressure Principal Assemblies		
13	19	EA	Relocated Dual Check Valve Assemblies		
14	16100	LF	Water Service Pipe from Meter Assemblies to Water Service Connection and/or Irrigation System		
15	19500	SF	Private Property Restoration - Sod		
16	600	SF	Private Property Restoration - Brick Pavers		
17	400	SF	Private Property Restoration - Asphalt/Concrete Driveway		
18	600	SF	Private Property Restoration - Asphalt/Concrete Walkway		
19	750	SF	Private Property Restoration - Loose Stone/Gravel		
20	300	SF	Private Property Restoration - Landscaping		
21	2	EA	Private Property Restoration - Unavoidable Obstructions (e.g. wall, wood deck)		

**ADDENDUM 1 REVISION**

22	173	Property	Contractor/Property Owner Coordination		
23	1	LS	Abandonment of Existing Water Mains		
24	1	EA	6" Line Stop		
25	1200	SY	Asphalt Restoration		
26	1	LS	Maintenance of Traffic and Traffic Control		
27	1	LS	Mobilization and Demobilization		
			<b>BASE BID SUBTOTAL</b>		
28	1	LS	General Conditions (Max 5% or Base Bid Subtotal)		
29	1	LS	Owner's Allowance	\$100,000	\$100,000
30	1	LS	Permit Fee Allowance	\$ 15,000	\$ 15,000
			<b>BASE BID TOTAL</b>		

Bidder agrees to furnish and install equipment from the above circled manufacturers in accordance with the provisions and under the terms of the Contract Documents.

**TOTAL BID PRICE IN WORDS:** \_\_\_\_\_

**NAME OF BIDDER:** \_\_\_\_\_

**ADDRESS OF BIDDER:** \_\_\_\_\_

**BIDDER'S SIGNATURE:** \_\_\_\_\_

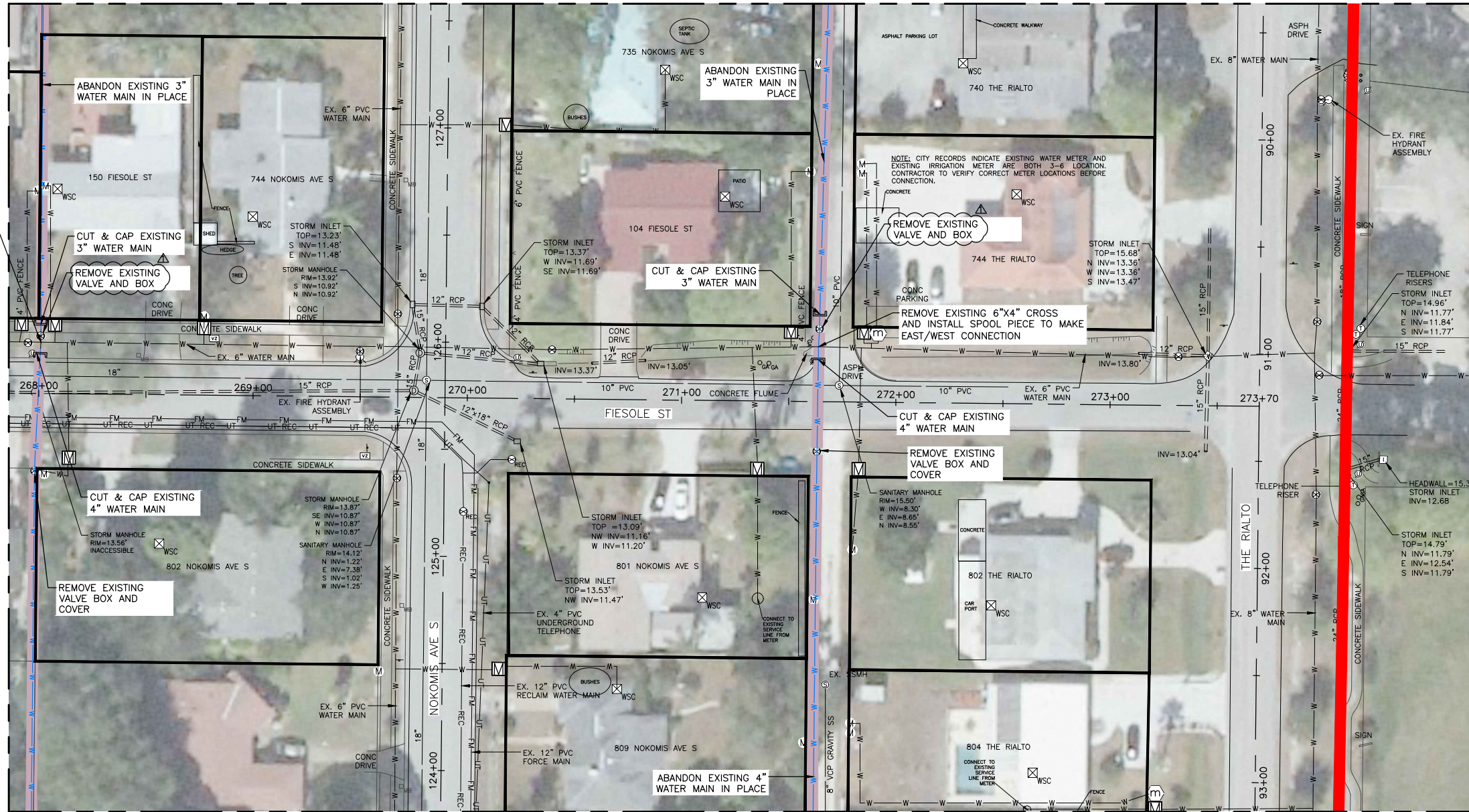
**CURRENT LICENSE NUMBER:** \_\_\_\_\_

**DATE:** \_\_\_\_\_



PROJECT MANAGER: Holly Kremers, P.E.  
 C:\P\WORK\10295970\COP-PLUS-VENICE C1.10 TO C1.12.DWG - C1.12 - PLOTTED 10/19/2016 10:41 AM BY MCKONE, DAVE

MATCHLINE SEE SHEET C1.09



MATCHLINE SEE SHEET C1.15

REMOVE EXISTING 6"x4" CROSS AND INSTALL SPOOL PIECE TO MAKE EAST/WEST CONNECTION

MATCHLINE SEE SHEET C1.11

INDICATES PROPERTIES WHERE EXISTING WATER SERVICE IS TO BE CONNECTED TO EXISTING 6" WM.

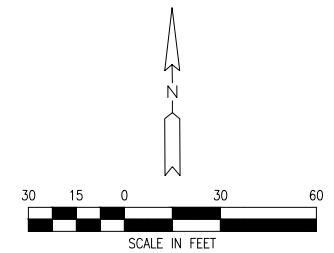
INDICATES PROPERTIES WHERE WATER METER AND SERVICE LINE WILL BE RELOCATED

**WATER SERVICE NOTE:**

WHEN CONNECTING TO AN EXISTING METER, THE CONTRACTOR SHALL CONNECT THE NEW SERVICE LINE TO THE CUSTOMER SIDE.

**WATER SERVICE NOTE:**

CONTRACTOR SHALL COORDINATE WATER METER LOCATION AND NEW WATER SERVICE ROUTE ON PRIVATE PROPERTY WITH A CITY REPRESENTATIVE AND PROPERTY OWNER. CONTRACTOR SHALL CONSULT WATER METER RELOCATION AGREEMENT.



REV#	DATE	DESCRIPTION
1	10/18/16	REVISED CALLOUT FOR VALVE & BOX REMOVAL

NOT VALID FOR CONSTRUCTION UNLESS SIGNED AND DATED:

8010 Woodbine Center Boulevard  
 Venice, Florida 33596  
 813.882.4378 FAX: 813.888.7215  
 Certificate of Authorization No. 3852  
 www.wadetrims.com

**CITY OF VENICE, FLORIDA**  
**PHASE 4**  
**WATER MAIN REPLACEMENT PROGRAM**  
 FIELDSOLE STREET



ISSUED FOR:	DATE:	BY:
50% DESIGN	8/7/15	RB
100% DESIGN	10/2/15	RB
PERMITS	11/25/15	RB
BID SET	1/5/16	RB
100% DESIGN (REVISED)	6/21/16	RB
BID SET (REVISED)	8/24/16	RB

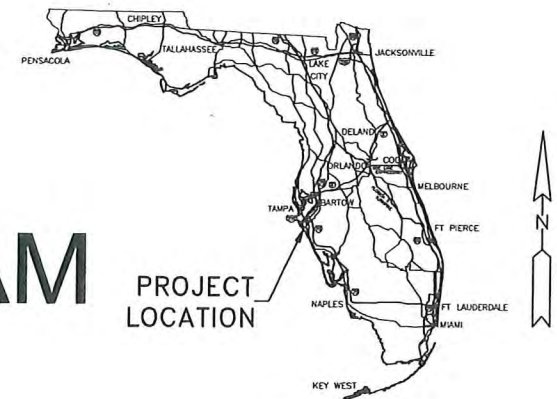
JOB NO. VEN2018-01M

SHEET C1.12

VENICE, FLORIDA WATERMAIN REPLACEMENT PROGRAM - PHASE IV © Wade Trim Group, Inc.



# CITY OF VENICE PHASE 4 WATER MAIN REPLACEMENT PROGRAM BID SET (REVISED)

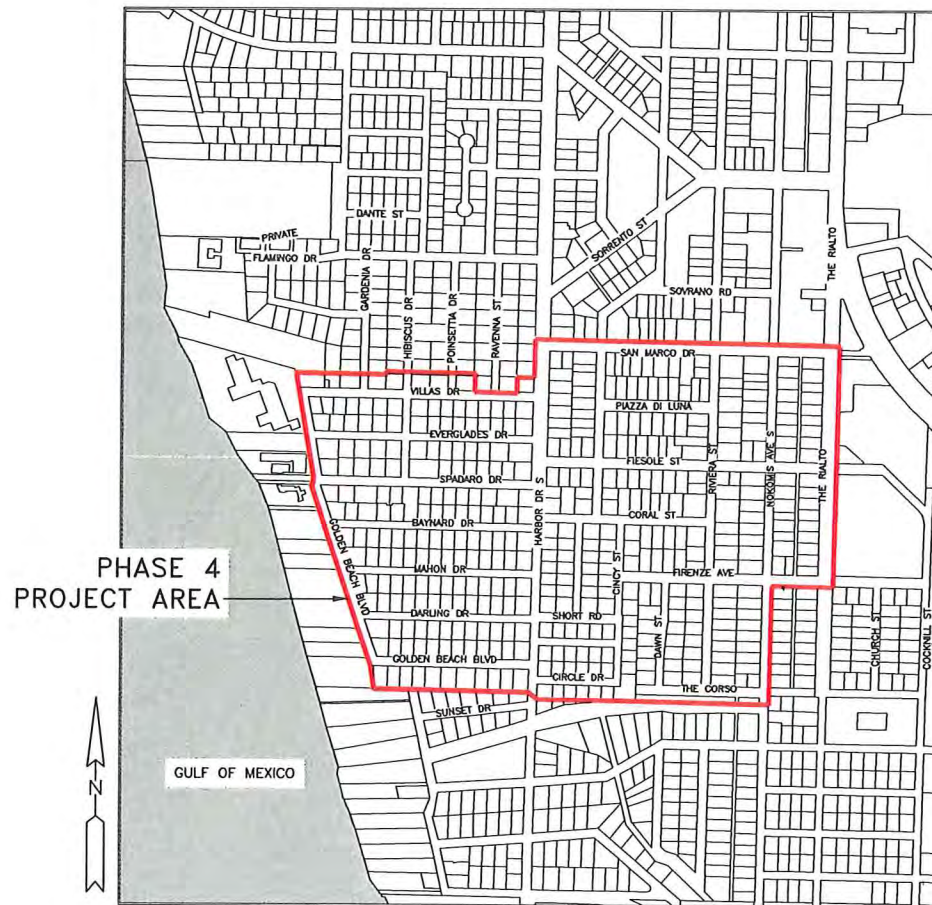


PROJECT  
LOCATION

KEY MAP  
NOT TO SCALE

CITY OF VENICE CITY COUNCIL

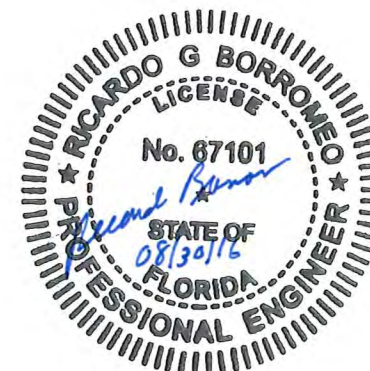
JOHN HOLIC	MAYOR
KIT MCKEON	VICE MAYOR
FRED FRAIZE	COUNCIL MEMBER
BOB DANIELS	COUNCIL MEMBER
JEANETTE GATES	COUNCIL MEMBER
RICHARD CAUTERO	COUNCIL MEMBER
DEBORAH ANDERSON	COUNCIL MEMBER



LOCATION MAP  
SCALE: 1"=600'

DRAWING INDEX

<u>SHEET</u>	<u>TITLE</u>
G0.00	COVER SHEET
G1.00	LEGEND, ABBREVIATIONS AND CITY STANDARD NOTES
G1.01	GENERAL NOTES
G1.02	STORMWATER POLLUTION PREVENTION PLAN (SWPPP)
C1.00	KEY PLAN
C1.01	NORTH - EXISTING WATERMAIN ABANDONMENT SITE PLAN
C1.02	SOUTH - EXISTING WATERMAIN ABANDONMENT SITE PLAN
C1.03	VILLAS DRIVE
C1.04	VILLAS DRIVE
C1.05	EVERGLADES DRIVE
C1.06	SAN MARCO DRIVE
C1.07	SAN MARCO DRIVE
C1.08	PIAZZA DI LUNA
C1.09	NOKOMIS AVENUE S & THE RIALTO
C1.10	FIESOLE STREET
C1.11	FIESOLE STREET
C1.12	FIESOLE STREET
C1.13	BAYNARD DRIVE & CORAL STREET
C1.14	CORAL STREET
C1.15	NOKOMIS AVENUE S & THE RIALTO
C1.16	MAHON DRIVE & ROBERT STREET
C1.17	FIRENZE AVENUE
C1.18	FIRENZE AVENUE
C1.19	SHORT ROAD
C1.20	DAWN STREET & RIVIERA STREET
C1.21	THE CORSO
C1.22	MISCELLANEOUS PROFILES
D1.00	EROSION AND SEDIMENTATION CONTROL DETAILS
D1.01	CITY OF VENICE POTABLE WATER DETAILS
D1.02	CITY OF VENICE POTABLE WATER DETAILS
D1.03	CITY OF VENICE POTABLE WATER DETAILS
D1.04	PAVEMENT AND SIDEWALK DETAILS
D1.05	MAINTENANCE OF TRAFFIC PLAN
D1.06	PEDESTRIAN CONTROL FOR CLOSURE OF SIDEWALKS



NOT VALID FOR CONSTRUCTION  
UNLESS SIGNED AND DATED:

JOB NO. <b>VEN2018-01M</b>	SHEET <b>G0.00</b>
-------------------------------	-----------------------

**WADETRIM**  
8010 Woodland Center Boulevard  
Suite 1200, Tampa, FL 33614  
813.852.4313/888.499.5624 FAX: 813.858.7215  
Certificate of Authorization No.: 3552  
www.wadetrim.com Building relationships on a foundation of excellence.

PREPARED UNDER THE SUPERVISION OF:

<i>Ricardo Borromeo</i> RICARDO BORROMELO, PE	<b>67101</b> REGISTRATION NO.
--	----------------------------------

ISSUED FOR:

50% DESIGN	08/07/2015
100% DESIGN	10/02/2015
PERMITS	11/25/2015
BID SET	01/05/2016
100% DESIGN (REVISED)	06/21/2016
BID SET (REVISED)	08/24/2016

FIELD BOOK INFORMATION: PROJECT MANAGER: HOLLY KREMEIS; C:\PW\_WORK\048BY\0559570\AGS-PLTS-VENICE PH4-G0.00\_1.DWG - COLOC - PLOTTED 8/24/2016 11:38 AM BY: DARBY, KRISTIN



Know what's below.  
Call before you dig.

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PROJECT MANAGER: Holly Kravitz, P.E.  
 CIVIL WORK: GABRY, D. 0595570.GLS - PLUS-VENICE PH54-G1.00\_1.DWG - 01.00 - PLOTTED 8/24/2016 11:38 AM BY DABBY, KRISTIN

EXISTING		PROPOSED		EXISTING		PROPOSED		EXISTING		PROPOSED		EXISTING		PROPOSED	
<b>CABLE TV</b>															
CABLE TV POLE															
CABLE TV PEDESTAL															
OVERHEAD CABLE TELEVISION															
UNDERGROUND CABLE TELEVISION															
<b>ELECTRICAL</b>															
CIRCUIT BREAKER PANEL															
HANDHOLE															
MANHOLE															
OUTLET															
PEDESTAL															
TRANSFORMER BOX															
METER															
POWER POLE															
TRANSFORMER TOWER															
OVERHEAD ELECTRIC															
UNDERGROUND ELECTRIC															
<b>GAS</b>															
VENT															
BLOW OFF															
FILLER PIPE															
MANHOLE															
METER															
STOP BOX															
SHUTOFF VALVE															
GAS															
<b>MONUMENTS</b>															
IRON (FOUND)															
IRON (SET)															
BENCH MARK															
BRASS PLATE															
CONCRETE NAIL															
DRILL HOLE															
GOVERNMENT CORNER															
GPS MONUMENT															
IRON PIPE															
MONUMENT BOX															
MONUMENT															
MERE STONE															
NGS MONUMENT															
NAIL & TAG															
PINCH IRON															
PK NAIL															
RAILROAD SPIKE															
RIGHT-OF-WAY MARKER															
SPIKE															
SHIPS SPIKE															
T-IRON															
USGS MONUMENT															
CROSS CUT															
CROSS CUT IN MONUMENT															
WOOD STAKE															
<b>OVERHEAD UTILITIES</b>															
DEADMAN ANCHOR															
FLOOD LIGHT															
GUY WIRE ANCHOR															
GUY POLE															
LAMP POLE															
METAL LIGHT POLE															
ORNAMENTAL LIGHT															
POLE BOX															
POWER & LIGHT POLE															
POWER & TELEPHONE POLE															
TELE, CTV, & LIGHT POLE															
TELE, CTV, & POWER POLE															
TELE, & CTV POLE															
TELE, CTV, & LIGHT POLE															
TELE., & LIGHT POLE															
TELE, POWER, & LIGHT POLE															
UTILITY POLE															
OVERHEAD ELECTRIC															
OVERHEAD CABLE TV & TELEPHONE															
OVERHEAD ELECTRIC & CABLE TV															
OVERHEAD ELECTRIC, CABLE TV AND TELEPHONE															
<b>SANITARY SEWER</b>															
CLEAN OUT															
PUMPSTATION MANHOLE															
SANITARY MANHOLE															
SEPTIC TANK															
SEWER VENT															
SEWER VALVE															
FORCEMAIN															
SANITARY SEWER															
<b>SITE (MISCELLANEOUS)</b>															
ABANDON ITEM															
ACCESSIBLE SYMBOL															
ADJUST ITEM															
FINISH GRADE															
FLOW ARROW															
PARKING COUNT															
RECONSTRUCT ITEM															
RELOCATE ITEM															
REMOVE ITEM															
SLOPE LABEL															
SPOT GRADE															
FLOOD LIGHT															
LAMP POLE															
LIGHT POLE (SINGLE LAMP)															
LIGHT POLE (DOUBLE LAMP 180°)															
LIGHT POLE (DOUBLE LAMP 90°)															
LIGHT POLE (THREE LAMP)															
LIGHT POLE (FOUR LAMP)															
ORNAMENTAL LIGHT POLE															
METAL LIGHT POLE															
<b>STORM SEWER/DRAINAGE</b>															
CATCH BASIN (ROUND GRATE)															
CATCH BASIN (SQUARE GRATE)															
CISTERN															
BOX CULVERT															
CULVERT HEADWALL															
CULVERT END SECTION															
DOWN SPOUT															
ROUND INLET															
SQUARE INLET															
STORM MANHOLE															
STORM SEWER STUB															

**REPORT OF SURVEY**

- PROPERTY CORNERS VISIBLE ABOVE GROUND AT THE TIME OF SURVEY WERE LOCATED TO FACILITATE THE ALIGNMENT OF THE SARASOTA COUNTY PROPERTY APPRAISER GEOGRAPHIC INFORMATION SYSTEM (GIS) TO THE FOUND MONUMENTS. PROPERTY AND RIGHT-OF-WAY LINES SHOWN HEREON ARE FOR INFORMATIONAL PURPOSES ONLY.
- BEARINGS AND COORDINATES CONTAINED WITHIN THIS ELECTRONIC DRAWING FILE/SURVEY ARE BASED ON THE FLORIDA STATE PLANE COORDINATE SYSTEM, APPLICABLE ZONE, NAD 83 (2007 ADJUSTMENT) AND ARE DERIVED BY MULTIPLE REAL-TIME KINEMATICS GPS OBSERVATIONS.
- ELEVATIONS SHOWN HEREON ARE BASED UPON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88) AND ARE BASED UPON REAL-TIME KINEMATICS GPS OBSERVATIONS.

**GENERAL NOTES**

- THE INFORMATION PROVIDED IN THESE PLANS IS SOLELY TO ASSIST THE CONTRACTOR IN ASSESSING THE NATURE AND EXTENT OF CONDITIONS WHICH WILL BE ENCOUNTERED DURING THE COURSE OF THE WORK. THE CONTRACTORS ARE DIRECTED, PRIOR TO BIDDING, TO CONDUCT WHATEVER INVESTIGATIONS THEY DEEM NECESSARY TO ARRIVE AT THEIR OWN CONCLUSIONS REGARDING THE ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED, AND UPON WHICH THEIR BIDS WILL BE BASED.
- THE CONTRACTOR SHALL EMPLOY THE SERVICES OF A FLORIDA REGISTERED SURVEYOR AND MAPPER TO ESTABLISH THE PROPOSED PIPELINE, PROPERTY LINES, RIGHT-OF-WAY LINES, EASEMENTS, BASELINES, BENCH MARKS (ELEVATION), CENTER LINES AND STATIONING AS REQUIRED TO CONSTRUCT THIS PROJECT.
- LOCATIONS, ELEVATIONS, AND DIMENSIONS OF EXISTING UTILITIES, STRUCTURES, OTHER FEATURES AND PROPOSED FUTURE WORK ARE SHOWN BASED ON THE BEST INFORMATION AVAILABLE AT THE TIME OF PREPARATION OF THESE PLANS. THERE MAY BE OTHER IMPROVEMENTS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY PRIOR TO BIDDING TO VERIFY THE EXACT LOCATIONS, ELEVATIONS, AND DIMENSIONS OF ALL EXISTING UTILITIES, STRUCTURES, AND OTHER FEATURES (WHETHER OR NOT SHOWN ON THESE PLANS) AFFECTING HIS WORK. THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND CONDITIONS PRIOR TO BEGINNING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE OR RE-WORK RESULTING FROM FAILURE TO COMPLY WITH THESE INSTRUCTIONS.
- THE CONTRACTOR SHALL PROVIDE AT LEAST FORTY EIGHT (48) HOURS NOTICE TO ALL EXISTING UTILITY COMPANIES IN ORDER TO ALLOW FOR THE LOCATION OF EXISTING UNDERGROUND UTILITIES IN ADVANCE OF CONSTRUCTION. THE CONTRACTOR SHALL CONTACT "SUNSHINE STATE ONE CALL" 48 HOURS PRIOR TO OPERATIONS AT 1-800-432-4770.
- THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY TO REPORT ANY CONFLICTS BETWEEN WHAT IS SHOWN HEREIN AND ACTUAL CONDITIONS DISCOVERED DURING CONSTRUCTION.
- THE CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANIES TO RESOLVE CONFLICTS THAT MAY ARISE IN THE FIELD DURING CONSTRUCTION.
- THE CONTRACTOR SHALL COORDINATE WITH THE POWER COMPANY AND OTHER UTILITIES TO OBTAIN SUPPORT FOR UTILITY POLES WHERE CONSTRUCTION MAY CAUSE THE POLE TO LOSE ITS SUPPORT.
- FIELD CONDITIONS MAY NECESSITATE ALIGNMENT AND GRADE DEVIATION OF THE PROPOSED UTILITIES TO AVOID OBSTACLES, AS APPROVED BY THE ENGINEER OR THE OWNER'S REPRESENTATIVE.
- EXISTING UTILITY SERVICE LATERALS ARE NOT SHOWN ON THE DRAWINGS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD LOCATE ALL SERVICE LATERALS PRIOR TO CONSTRUCTION. UTILITY SERVICES SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION. EXCEPT FOR MINOR SHUT-DOWNS AS AUTHORIZED BY THE CITY.
- THE CONTRACTOR, WORKING WITH THE ENGINEER AND THE OWNER, SHALL COORDINATE THE SHUTDOWN, STARTUP AND/OR PARTIAL INTERFERENCE WITH ONGOING SYSTEM OPERATIONS. INSTALLATION AND WORK ON THE EXISTING SYSTEMS ARE NOT TO BE MADE DURING TIMES OF PEAK FLOWS. WRITTEN REQUEST SHALL BE PROVIDED 48 HOURS PRIOR TO SHUTTING DOWN ANY WATER MAIN.
- CONSTRUCTION OF PORTIONS OF THE PROJECT, AUTHORIZED BY PERMIT OR LICENSE AGREEMENT, ARE SUBJECT TO INSPECTION AND TESTS AS MAY BE NECESSARY BY THE PERMIT GRANTING AUTHORITY. ALL CONTRACTOR SUPERVISORY PERSONNEL SHALL FURNISH INFORMATION TO AND COOPERATE WITH THESE AUTHORITIES IN CONDUCTING THEIR TESTING AND INSPECTION PROGRAM.
- WORK SHALL BE IN ACCORDANCE WITH THE LATEST APPLICABLE FEDERAL, STATE AND LOCAL AGENCYS REGULATIONS AND STANDARDS.
- CONTRACTOR SHALL COMPLY WITH THE "TRENCH SAFETY ACT", CHAPTER 90-96, FLORIDA STATUTES.
- SIGNS & BARRICADES SHALL BE IN ACCORDANCE WITH LATEST F.D.O.T. MANUAL OF SAFE PRACTICES; REFERENCE F.D.O.T. INDEXES 600 THROUGH 670 AND 17349 PER ROADWAY AND TRAFFIC DESIGN STANDARDS LATEST EDITION.
- THE CONTRACTOR SHALL NOT ENTER UPON OR IN ANY WAY ALTER ANY WETLAND AREAS THAT MAY BE ENCOUNTERED. ALL WORK IN THE VICINITY OF OPEN WATER AND/OR WETLANDS IS TO BE PERFORMED IN COMPLIANCE WITH THE ENVIRONMENTAL REGULATIONS AND/OR PERMITS FOR THE PROJECT. THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY FINE RESULTING FROM HIS VIOLATION OF ANY REGULATIONS OR PERMIT CONDITIONS.
- SPECIAL PIPE FOUNDATIONS, IF REQUIRED, SHALL BE DETERMINED IN THE FIELD AND THE TYPE REQUIRED WILL BE AS DIRECTED BY THE ENGINEER.
- THE CONTRACTOR SHALL PROVIDE ALL REQUIRED SHEETING AND TRENCH SHORING REQUIRED TO PROTECT EXISTING UTILITIES AND OTHER FACILITIES INTENDED TO REMAIN IN SERVICE.
- ALL PROPOSED MAINS SHALL HAVE A MINIMUM COVER OF 36".
- WATER MAINS SHALL BE INSTALLED AT LEAST 5 FEET HORIZONTALLY FROM ANY EXISTING OR PROPOSED FORCE MAINS. THE DISTANCE SHALL BE MEASURED FROM FACE TO FACE. VERTICAL SEPARATION BETWEEN WATER MAINS CROSSING OTHER PIPELINES/UTILITIES SHALL BE A MINIMUM VERTICAL DISTANCE OF 12 INCHES BETWEEN THE OUTSIDE OF THE OTHER PIPELINES/UTILITIES AND THE OUTSIDE OF THE WATER MAIN. WHERE THE MINIMUM REQUIRED VERTICAL SEPARATION CANNOT BE MAINTAINED, THE CROSSING SHALL BE ARRANGED SUCH THAT THE JOINTS OF THE PROPOSED MAIN ARE EQUIDISTANT FROM THE POINT OF CROSSING WITH NO LESS THAN 10 FEET BETWEEN ANY TWO JOINTS.
- ALL VALVES SHALL BE APPROPRIATELY TAGGED OR LABELED. ALL PIPING, PIPELINES, VALVES, AND OUTLETS SHALL BE COLOR-CODED BLUE, OR OTHERWISE MARKED, ALL VALVE BOX COVERS SHALL BE MARKED "WATER".
- JOINT RESTRAINT SHALL BE PROVIDED AT ALL FITTINGS UNLESS NOTED OTHERWISE ON PLANS. THE MINIMUM LINEAR FEET RESTRAINED ON BOTH SIDES OF FITTINGS OR VALVES FOR DUCTILE IRON PIPE SHALL BE AS SHOWN ON THE DETAILS PROVIDED IN THESE DRAWINGS.
- THE CONTRACTOR SHALL LOCATE ANY POTENTIAL UTILITY CONFLICTS AND PROVIDE FITTINGS AND RESTRAINTS AS NECESSARY AHEAD OF PIPE LAYING OPERATIONS.
- CONTRACTOR SHALL USE TRENCH BOXES, SHEETING AND OTHER MEANS TO LIMIT THE WIDTH OF THE TRENCH AND AVOID ENCROACHMENT ONTO ADJACENT PROPERTY AND TO MINIMIZE WETLAND IMPACTS.
- CONTRACTOR SHALL PROVIDE A DECHLORINATION PLAN AND DESCRIPTION OF THE METHODS FOR DISPOSAL TO THE ENGINEER OF RECORD AND CITY OF VENICE FOR APPROVAL. AS A RESULT OF THE DECHLORINATION EFFORTS THERE SHALL BE "NO FISH KILL" PERMITTED WITH THE DISPOSAL.

**GENERAL NOTES (CONTINUED)**

- CONTRACTOR SHALL PROVIDE THE CITY OF VENICE WITH 24 HOUR NOTICE PRIOR TO COMMENCING WORK WITHIN THE CITY LIMITS AND 48 HOUR NOTICE PRIOR TO PERFORMING ANY WET TAP TO THE CITY'S WATER DISTRIBUTION SYSTEM.
- ANY DIGGING AND/OR DISTURBANCE TO THE ROADSIDE SWALES WITHIN THE RIGHT-OF-WAY OF THE CITY OF VENICE SHALL BE PROPERLY GRADED, SODDED AND RESTORED. CONTACT THE CITY OF VENICE PUBLIC WORKS DEPARTMENT.
- THE CONTRACTOR SHALL NOTIFY THE FOLLOWING SARASOTA COUNTY AND CITY OF VENICE AGENCIES A MINIMUM OF 2 WEEKS IN ADVANCE IN WRITING, OF ANY ROAD CLOSURES, DETOURS AND CONSTRUCTION ACTIVITIES PRIOR TO CONSTRUCTION. THE NOTICE SHALL BE ACCOMPANIED WITH A SCHEDULE OF ROAD CLOSURES AND ANTICIPATED INTERRUPTIONS IN TRAFFIC.
 

SCHOOL BOARD OF SARASOTA COUNTY ATTN: MICKI RYAN, PLANNING ANALYST LONG RANGE PLANNING DEPARTMENT BLUE AWNING BUILDING - ROOM 106 1960 LANDINGS BOULEVARD SARASOTA, FLORIDA 34231  PHONE: 941-927-9000 E-MAIL: MLCKL_RYAN@SARASOTA.K12.FL.US  UNITED STATE POST OFFICE ATTN: PHILLIP FLEENER DELIVERY SUPERVISOR 350 W. VENICE AVE VENICE, FLORIDA 34285-0001  PHONE: 941-483-4195 E-MAIL: PHILLIP.E.FLEENER@USPS.GOV  CITY OF VENICE PUBLIC INFORMATION OFFICER ATTN: LORRAINE ANDERSON VENICE CITY HALL 401 W. VENICE AVE VENICE, FLORIDA 34285  PHONE: 941-486-2626 EXT. 7401 E-MAIL: LANDERSON@VENICEGOV.COM	CITY OF VENICE FIRE DEPARTMENT ATTN: JOE SILVA BATTALION CHIEF  200 GROVE STREET NORTH VENICE, FLORIDA 34285  PHONE: 941-480-3030 E-MAIL: JSILVA@CI.VENICE.FL.US  CITY OF VENICE CITY OF VENICE SOLID WASTE ATTN: BOB MORONI ACTING SOLID WASTE SUPERINTENDENT 221 SEABOARD AVENUE VENICE, FLORIDA 34285  PHONE: 941-486-2422 E-MAIL: BMORONI@VENICEGOV.COM
--	--
- THROUGHOUT CONSTRUCTION THE CONTRACTOR SHALL MAINTAIN ALL WEATHER EMERGENCY ACCESS AT ALL ROAD CROSSINGS. THE ACCESS MUST WITHSTAND THE WEIGHT OF A 32 TON FIRE TRUCK.
- CONTRACTOR SHALL STORE AND PROVIDE PROTECTION FOR ALL COMBUSTIBLE PRODUCTS AND MATERIALS FROM VEHICULAR DAMAGE AND VANDALISM.
- GROUNDWATER DEWATERING ACTIVITIES ARE NOT COVERED BY THE PROJECT ENVIRONMENTAL RESOURCE PERMIT. THE CONTRACTOR SHALL APPLY TO THE FDEP FOR COVERAGE UNDER THE GENERIC PERMIT FOR THE DISCHARGE OF PRODUCED GROUNDWATER FOR ANY NON-CONTAMINATED SITE ACTIVITY PURSUANT TO 62-621.300 (2), F.A.C. CONTRACTOR IS RESPONSIBLE FOR ALL ASSOCIATED SAMPLING AND TESTING. A COPY OF THE APPROVED PERMIT SHALL BE PROVIDED TO THE AUTHORITY, ENGINEER OF RECORD AND CITY OF VENICE.
- CONTRACTOR SHALL SIGN THE STORM WATER POLLUTION PREVENTION PLAN PROVIDED ON SHEET G1.02 AND SHALL SUBMIT THE REQUIRED NOTICE OF INTENT TO USE GENERIC PERMIT FOR STORM WATER DISCHARGE FROM LARGE AND SMALL CONSTRUCTION ACTIVITIES (FORM 62-621.300(4)(B)) TO THE FDEP ALONG WITH ANY REQUIRED FEE.
- PRESSURE MAINS (POTABLE, RECLAIMED, FORCE MAINS)
  - COMPACTION TESTING SHALL BE PERFORMED EVERY 250 FEET.
  - PRESSURE TEST (MAIN)
    - PRIOR TO TESTING, ALL AIR MUST BE EXPELLED FROM THE PRESSURE MAIN. TEST PRESSURE SHALL BE
 

WATER (POTABLE AC RECLAIMED) MAINS: 150 PSI
FORCE (WASTEWATER) MAINS: 100 PSI

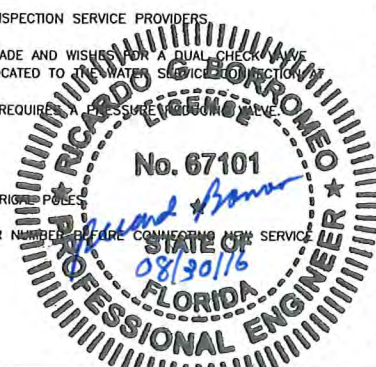
 TEST PRESSURE SHALL BE HELD FOR A MINIMUM OF 2 HOURS  
 ALLOWABLE LEAKAGE SHALL BE CALCULATED WITH THE FOLLOWING:  

$$L = \frac{S \cdot D \cdot \sqrt{P}}{148,000}$$
 L = ALLOWABLE LEAKAGE, GPH  
 S = LENGTH OF PIPE TESTED, FT  
 D = DIAMETER OF PIPE, IN  
 P = AVERAGE TEST PRESSURE, PSI
    - PRESSURE TEST (TAPPING SLEEVE & VALVE) SHALL BE IN CONFORMANCE WITH DETAIL 5, SHEET D1.01 OF THE DETAILS.
    - BACTERIOLOGIC TESTING OF POTABLE MAINS SHALL BE COORDINATED THROUGH COV UTILITIES DEPT. AND IN CONFORMANCE WITH STATE OF FLORIDA DEPARTMENT OF HEALTH. BACTERIAL SAMPLE SHALL BE TAKEN BY A CERTIFIED LABORATORY OR FDOH PERSONNEL ONLY.
    - FOR ALL WATER NEEDED FOR FLUSHING, PRESSURE TESTING OR BACTERIOLOGICAL SAMPLING, PLEASE PROVIDE 48 HOURS ADVANCE NOTICE TO THE CITY OF VENICE UTILITIES DEPARTMENT (480-3333). THE CITY WILL OPERATE ALL VALVES.
    - DISINFECTING OF WATER MAINS MUST FOLLOW ANSI/AWWA 651-99 AND MUST BE WITNESSED BY CITY UTILITIES. 48 HR. ADVANCE NOTICE IS REQUIRED (480-3333). DISINFECTION PLAN TO BE SUBMITTED TO COV UTILITIES DEPT. FOR REVIEW AC APPROVAL PRIOR TO SCHEDULING DISINFECTION.
    - FORCE MAINS SHALL BE A MINIMUM OF 4" IN DIAMETER.
- BACKFLOW ASSEMBLIES
  - BACKFLOW ASSEMBLIES SHALL BE TESTED UPON INSTALLATION BY A CERTIFIED PLUMBER AND RESULTS SUBMITTED TO THE UTILITIES DEPARTMENT WITHIN 72 HOURS.
  - COORDINATE WITH TECHNICAL DIVISION FOR A LIST OF INDEPENDENT INSPECTION SERVICE PROVIDERS
  - IF A CUSTOMER HAS A BACKFLOW PREVENTER DEVICE (BFP) ABOVE GRADE AND WISHES FOR A DUAL CHECK VALVE TO BE INSTALLED, THE EXISTING THERMAL EXPANSION MUST BE RELOCATED TO THE WATER SERVICE CONNECTION AT THE HOUSE.
  - EVERY BFP EXCEPT FOR REDUCE PRESSURE ZONE ASSEMBLIES (RPZ) REQUIRE A PRESSURE ZONE ASSEMBLY.
- CONTRACTOR SHALL CONTACT PROPERTY OWNER PRIOR TO INSTALLATION.
- PROPOSED WATER MAIN SHALL BE 18" (MIN) OFFSET FROM EXISTING ELECTRICAL POLES.
- CONTRACTOR SHALL CONFIRM WATER METER NUMBER AND IRRIGATION METER NUMBER BEFORE CONNECTING NEW SERVICE LINES WHEN EXISTING METERS ARE NEXT TO EACH OTHER.

**EROSION AND SEDIMENTATION CONTROL NOTES**

- ALL PRACTICABLE EFFORT SHALL BE TAKEN DURING CONSTRUCTION TO CONTROL AND PREVENT EROSION AND TRANSPORT OF SEDIMENT MATERIALS TO INLETS, SURFACE DRAINS, WETLANDS AND LAKE AREAS, PER FDEP/SWFMD "BEST MANAGEMENT PRACTICES". THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL RESTORATION EFFORTS THAT MAY BE REQUIRED.
- THE CONTRACTOR IS TO CONTROL ALL FUGITIVE DUST ORIGINATING FROM THE PROJECT BY WATERING OR OTHER METHODS AS REQUIRED.
- THE CONTRACTOR IS RESPONSIBLE FOR REMOVING SILT FROM THE SITE IF NOT REUSABLE ON-SITE AND ASSUMING PLAN ALIGNMENT AND GRADE IN ALL DITCHES AND SWALES AT COMPLETION OF CONSTRUCTION.
- ADDITIONAL PROTECTION - ON-SITE PROTECTION IN ADDITION TO THE ABOVE MUST BE PROVIDED THAT WILL NOT PERMIT SILT TO LEAVE THE PROJECT CONFINES DUE TO UNFORESEEN CONDITIONS OR ACCIDENTS.
- THE CONTRACTOR SHALL ENSURE THAT ALL EXISTING DRAINAGE STRUCTURES, PIPES, ETC., ARE CLEANED OUT AND WORKING PROPERLY AT THE TIME OF PROJECT COMPLETION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING DIRT AND SEDIMENT FROM ALL CONSTRUCTION EQUIPMENT AND VEHICLES PRIOR TO ENTERING PUBLIC ROAD WAYS.
- THE CONTRACTOR SHALL CLEAN ALL ROADWAYS WITHIN OR ADJACENT TO THE PROJECT LIMITS ON A DAILY BASIS OR AS NEEDED TO PREVENT TRANSFER OF SEDIMENTATION.
- HAY BALES SHALL BE EITHER WIRE-BOUND OR STRING-TIED WITH THE BINDINGS ORIENTED AROUND THE SIDES RATHER THAN OVER AND UNDER THE BALES.
- HAY BALES SHALL BE PLACED LENGTHWISE IN A SINGLE ROW SURROUNDING THE INLET, WITH THE ENDS OF ADJACENT BALES PRESSED TOGETHER.
- THE FILTER BARRIER SHALL BE ENTRENCHED AND BACKFILLED. A TRENCH SHALL BE EXCAVATED TO A MINIMUM DEPTH OF 8 INCHES. AFTER THE BALES ARE STAKED, THE EXCAVATED SOIL SHALL BE BACKFILLED AND COMPACTED AGAINST THE FILTER BARRIER.
- EACH HAY BALE SHALL BE SECURELY ANCHORED AND HELD IN PLACE BY AT LEAST TWO STAKES OR REBARS DRIVEN THROUGH THE BALES.
- LOOSE STRAW SHOULD BE WEDGED BETWEEN THE BALES TO PREVENT WATER FROM ENTERING BETWEEN THE BALES.
- STRAW BALE BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAIN EVENTS.
- CLOSE ATTENTION SHALL BE PAID TO THE REPAIR OF DAMAGED BALES, END RUNS AND UNDERCUTTING BENEATH BALES.
- NECESSARY REPAIRS TO BARRIERS OR REPLACEMENT OF BALES SHALL BE ACCOMPLISHED PROMPTLY.
- ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE STRAW BALE BARRIER IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM TO THE EXISTING GRADE, PREPARED AND SEEDED.
- SILT FENCES AND FILTER BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.
- SHOULD THE FABRIC ON A SILT FENCE OR FILTER BARRIER DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER STILL BE NECESSARY, THE FABRIC OR BALES SHALL BE REPLACED PROMPTLY.
- SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH STORM EVENT. THEY MUST BE REMOVED WHEN THE DEPOSITS REACH APPROXIMATELY ONE-THIRD THE HEIGHT OF THE BARRIER.
- ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE OR FILTER BARRIER IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM WITH EXISTING GRADE, PREPARED AND SEEDED.
- EXISTING STORM STRUCTURES SHALL BE INSPECTED AFTER EACH RAIN EVENT, REPAIRS MADE TO THE FILTER BARRIERS, AND SILT / SEDIMENT REMOVED FROM PIPES AND STRUCTURES AS NEEDED TO PROVIDE POSITIVE FLOW.
- SEDIMENT SHALL BE REMOVED AND THE TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO 1/3 THE DESIGN DEPTH OF THE TRAP. REMOVED SEDIMENT SHALL BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.
- THE CONTRACTOR IS RESPONSIBLE FOR FOLLOWING THE BEST EROSION AND SEDIMENT CONTROL PRACTICES AS OUTLINED IN THE PLANS, SPECIFICATIONS AND SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT SPECIFICATIONS AND CRITERIA.
- FOR ADDITIONAL INFORMATION ON SEDIMENT AND EROSION CONTROL REFER TO: "THE FLORIDA DEVELOPMENT MANUAL - A GUIDE TO SOUND LAND AND WATER MANAGEMENT", FROM THE STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION (F.D.E.P.), CHAPTER 6.
- EROSION AND SEDIMENT CONTROL BARRIERS SHALL BE PLACED ADJACENT TO ALL WETLAND AREAS WHERE THERE IS A POTENTIAL FOR DOWNSTREAM WATER QUALITY DEGRADATION.
- ALL DISTURBED AREAS SHALL BE GRASSED, FERTILIZED, MULCHED AND MAINTAINED UNTIL A PERMANENT VEGETATIVE COVER IS ESTABLISHED.
- SOD SHALL BE PLACED IN AREAS WHICH MAY REQUIRE IMMEDIATE EROSION PROTECTION TO ENSURE WATER QUALITY STANDARDS ARE MAINTAINED.
- ANY DISCHARGE FROM DEWATERING ACTIVITY SHALL BE FILTERED AND CONVEYED TO THE OUTFALL IN A MANNER THAT LIMITS THE DISCHARGE TO 29 NTU ABOVE THE BACKGROUND CONCENTRATION OF THE OUTFALL.
- DEWATERING PUMPS SHALL NOT EXCEED THE CAPACITY OF THAT WHICH REQUIRES A CONSUMPTIVE USE PERMIT FROM THE SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT.
- ALL DISTURBED AREAS TO BE STABILIZED THROUGH COMPACTION, SILT SCREENS, HAY BALES AND GRASSING. ALL FILL SLOPES 3:1 OR STEEPER SHALL RECEIVE STAKED SOLID SOD.
- ALL DEWATERING, EROSION AND SEDIMENT CONTROL DEVICES ARE TO REMAIN IN PLACE AFTER COMPLETION OF CONSTRUCTION AND REMOVED ONLY WHEN AREAS HAVE BEEN STABILIZED.
- THESE NOTES INDICATE THE MINIMUM EROSION AND SEDIMENT MEASURES REQUIRED FOR THIS PROJECT. THE CONTRACTOR IS RESPONSIBLE FOR MEETING ALL APPLICABLE RULES, REGULATIONS AND WATER QUALITY GUIDELINES AND MAY NEED TO INSTALL ADDITIONAL CONTROLS.
- THE CONTRACTOR SHALL BE REQUIRED TO RESPOND TO ALL FDEP OR WATER MANAGEMENT DISTRICT INQUIRIES, RELATIVE TO THE COMPLIANCE FOR EROSION AND SEDIMENTATION CONTROL.
- THE CONTRACTOR IS RESPONSIBLE FOR REMOVING THE TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES AFTER COMPLETION OF CONSTRUCTION AND ONLY WHEN AREAS HAVE BEEN STABILIZED.
- THE CONTRACTOR SHALL EXECUTE THE STORM WATER POLLUTION PREVENTION PLAN PROVIDED ON SHEET G1.02 PRIOR TO INITIATING CONSTRUCTION.

FIELD BOOK INFORMATION: PROJECT MANAGER: HSN, VENICE, FL. PLOT NO: 01 - PLOTTED 8/24/2016 11:38 AM BY DARBY, KRISTIN.



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CITY OF VENICE, FLORIDA  
 PHASE 4  
 WATER MAIN REPLACEMENT PROGRAM  
 GENERAL NOTES

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BID SET	1/25/16 RB	
100% DESIGN (REVISED)	6/21/16 RB	
BID SET (REVISED)	8/24/16 RB	

JOB NO. VEN2018-01M

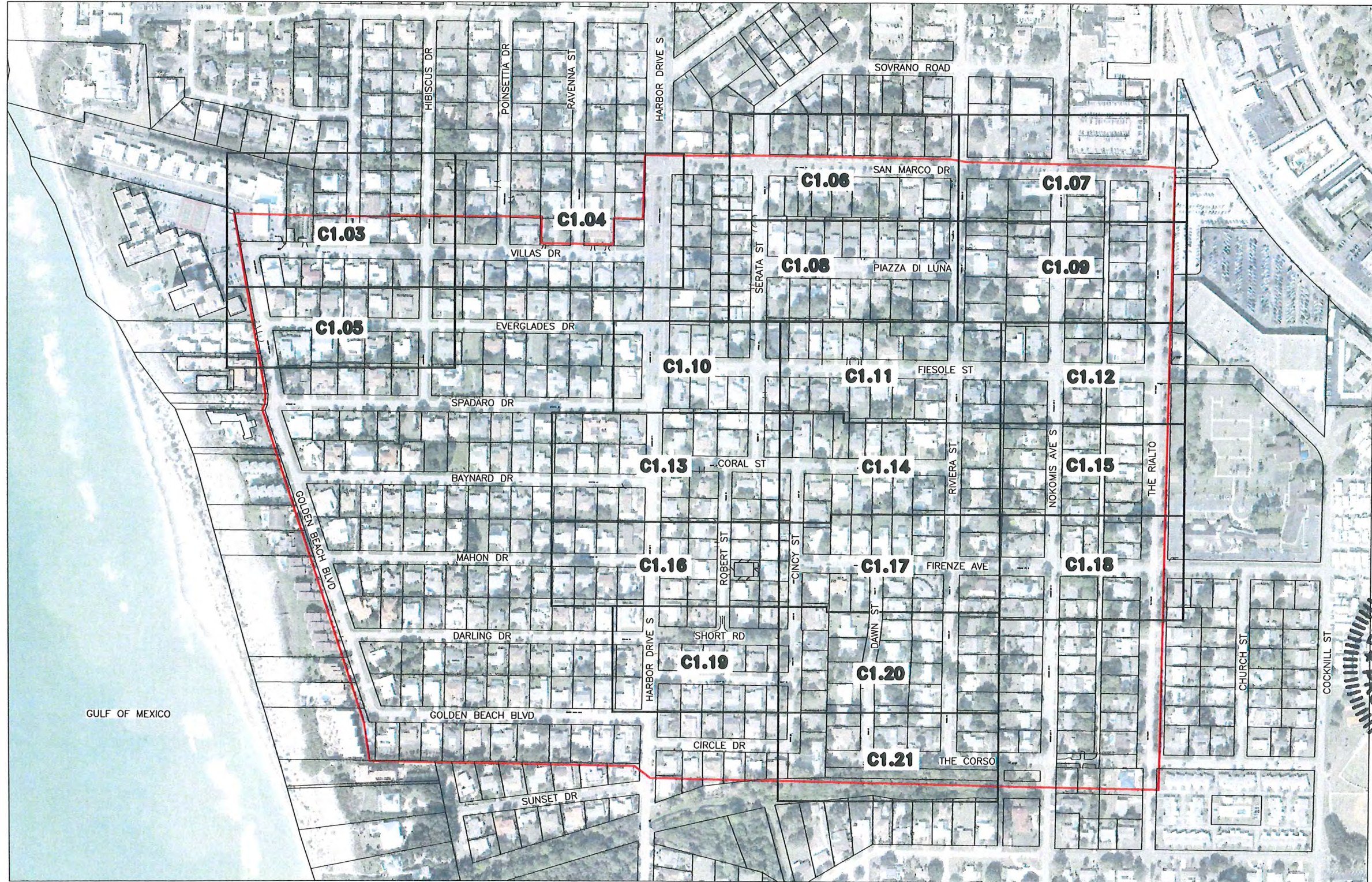
SHEET

G1.01

VENICE, FLORIDA WATERMAIN REPLACEMENT PROGRAM - PHASE IV © Wade Trim, Inc.

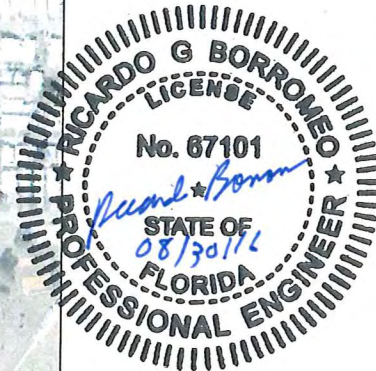
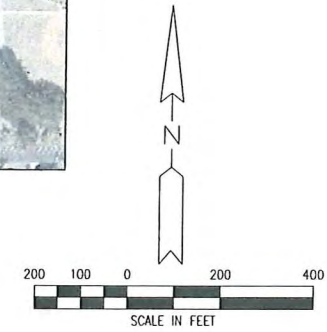


PROJECT MANAGER: Holly Kravitz, P.E.  
 C:\PW\WORK\KDRBY\20559570\GRP-PLTS-VENICE-C1.00.DWG - C1.00 - PLOTTED 8/24/2016 11:39 AM BY DARBY, KRISTIN



**LEGEND**

— PHASE 4 BOUNDARY



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CITY OF VENICE, FLORIDA  
 WATER MAIN REPLACEMENT PROGRAM  
 PHASE 4  
 KEY PLAN

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BID SET (REVISED)	8/24/16	RB

JOB NO. VEN2018-01M  
 SHEET C1.00

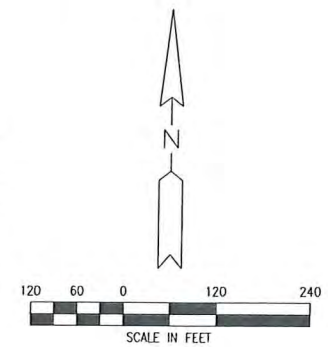
VENICE, FLORIDA WATER MAIN REPLACEMENT PROGRAM - PHASE IV

PROJECT MANAGER: HILY, KRISTINE, P.E.  
 CA\_PW\_WORK\KORBY\0059570\_CDP-PLUS-VENICE C1.01 TO C1.02.DWG - C1.01 - PLOTTED 8/24/2016 11:39 AM BY DABBY, KRISTIN



**NOTE:**  
 ALL WATER MAINS SHOWN TO BE ABANDONED SHALL BE ABANDONED UPON CITY APPROVAL AFTER CLEARANCE OF NEW WATER MAINS AND CONNECTION OF NEW WATER MAIN SERVICES IS COMPLETED. CONTRACTOR TO PROVIDE TO THE CITY A SHUTDOWN SCHEDULE AT LEAST 72 HOURS BEFORE ABANDONMENT. FOR ABANDONMENT AND SHUT DOWN REQUIREMENTS SEE SECTION 01030.

MATCHLINE SEE SHEET C1.02



NOTE: INDICATES WATER MAIN TO BE ABANDONED

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**PHASE 4**  
**WATER MAIN REPLACEMENT PROGRAM**  
 NORTH - OVERALL EXISTING WATER MAIN ABANDONMENT SITE PLAN  
 WATERMAIN REPLACEMENT PROGRAM - PHASE IV

**Venice, FL**  
 City on the Gulf

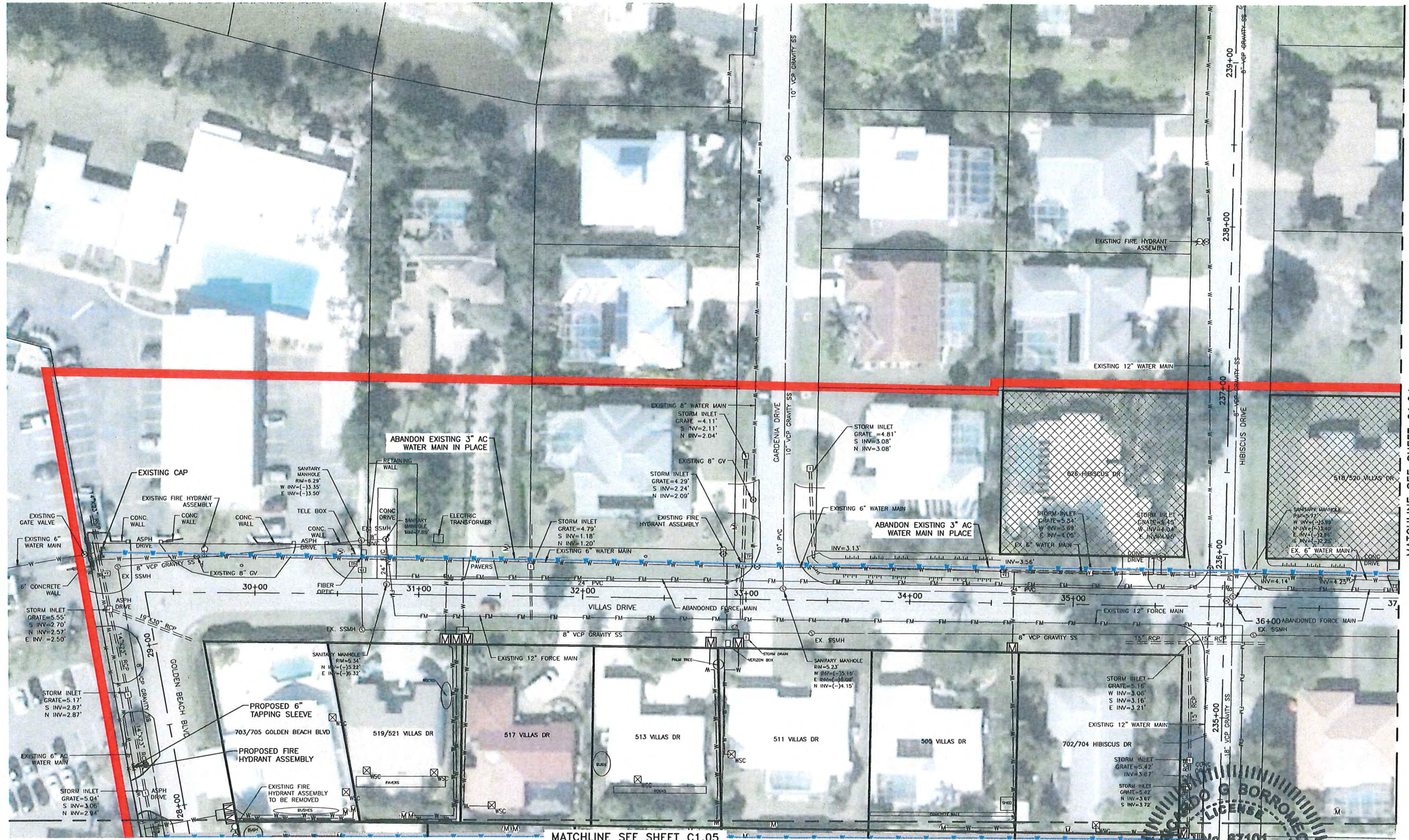
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JOB NO. VEN2018-01M  
 SHEET  
**C1.01**

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PROJECT MANAGER: Holly Kromer, P.E.  
 C:\PW\WORK\KORBY\0059570\GUP-PLIS-VENICE C-1.03 TO C1.05.DWG - C1.03 - PLOTTED 8/24/2016 11:40 AM BY DABBY, KRISTIN



MATCHLINE SEE SHEET C1.05

MATCHLINE SEE SHEET C1.04

**NOTE:**

THE FOLLOWING HOMES ARE CONNECTED TO THE EXISTING 3" WATER MAIN THAT IS TO BE ABANDONED:

- 626 HIBISCUS DR
- 518/520 VILLAS DR

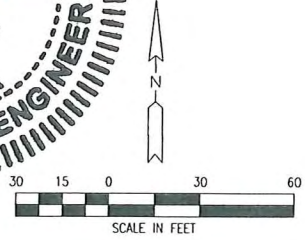
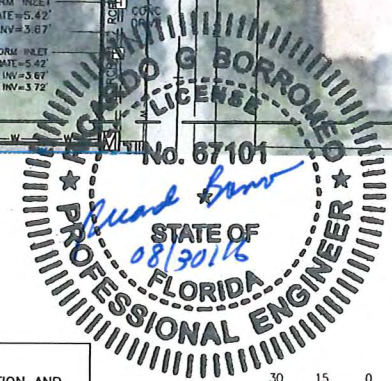
CONTRACTOR SHALL PROVIDE NEW WATER SERVICES FROM EXISTING 6" WATER MAIN TO EXISTING METERS.

**WATER SERVICE NOTE:**

WHEN CONNECTING TO AN EXISTING METER, THE CONTRACTOR SHALL CONNECT THE NEW SERVICE LINE TO THE CUSTOMER SIDE.

**WATER SERVICE NOTE:**

CONTRACTOR SHALL COORDINATE WATER METER LOCATION AND NEW WATER SERVICE ROUTE ON PRIVATE PROPERTY WITH A CITY REPRESENTATIVE AND PROPERTY OWNER. CONTRACTOR SHALL CONSULT WATER METER RELOCATION AGREEMENT.



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CITY OF VENICE, FLORIDA  
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 WATER MAIN REPLACEMENT PROGRAM  
 VILLAS DRIVE

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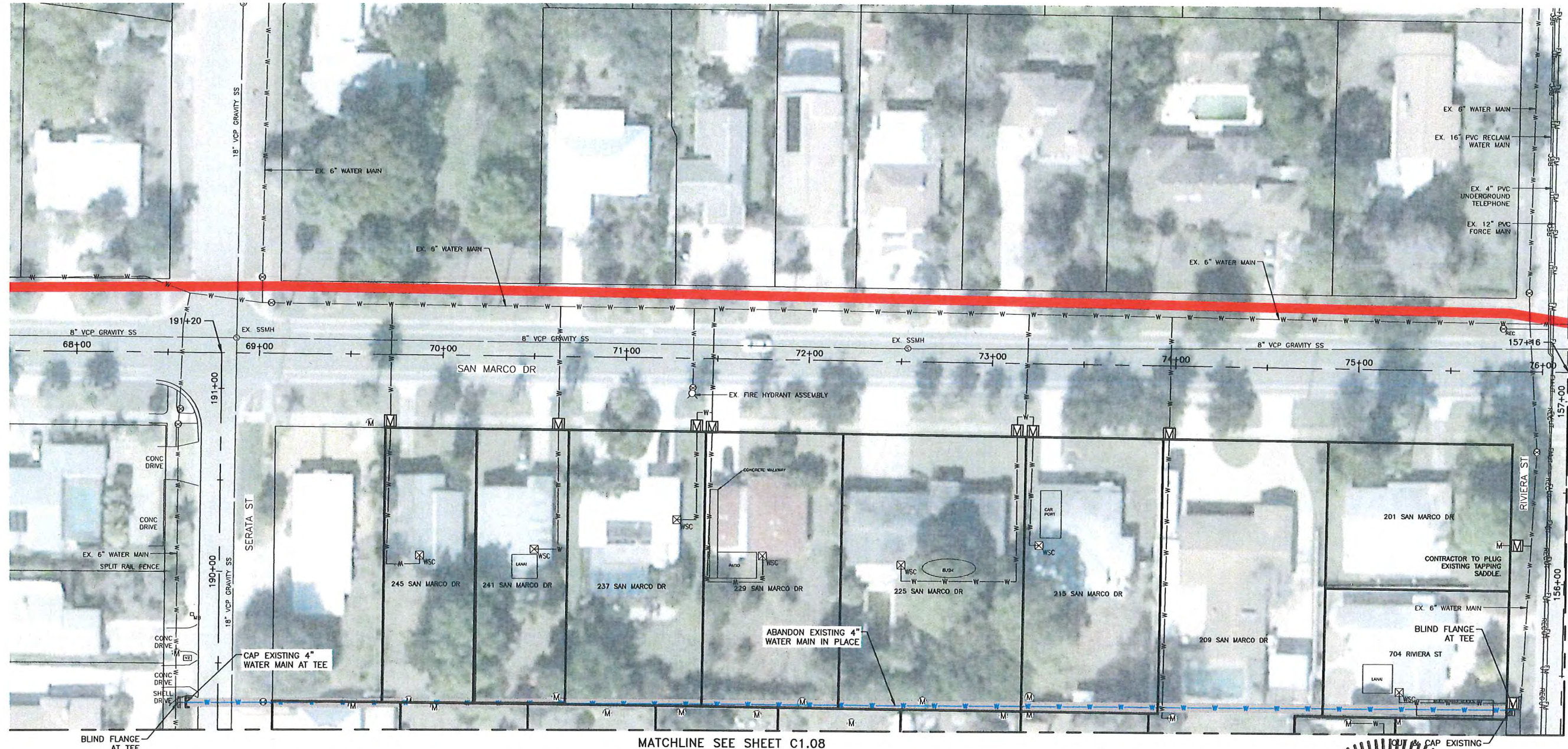
JOB NO. VEN2018-01M

SHEET **C1.03**





PROJECT MANAGER: Holly Kremers P.E.  
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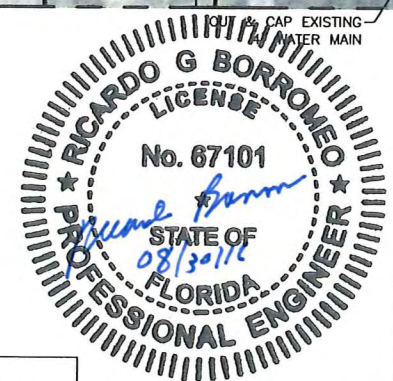
MATCHLINE SEE SHEET C1.07

MATCHLINE SEE SHEET C1.08

- INDICATES PROPERTIES WHERE EXISTING WATER SERVICE IS TO BE CONNECTED TO EXISTING 6" WM.
- INDICATES PROPERTIES WHERE WATER METER AND SERVICE LINE WILL BE RELOCATED

**WATER SERVICE NOTE:**  
 WHEN CONNECTING TO AN EXISTING METER, THE CONTRACTOR SHALL CONNECT THE NEW SERVICE LINE TO THE CUSTOMER SIDE.

**WATER SERVICE NOTE:**  
 CONTRACTOR SHALL COORDINATE WATER METER LOCATION AND NEW WATER SERVICE ROUTE ON PRIVATE PROPERTY WITH A CITY REPRESENTATIVE AND PROPERTY OWNER. CONTRACTOR SHALL CONSULT WATER METER RELOCATION AGREEMENT.



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**WATER MAIN REPLACEMENT PROGRAM**  
 SAN MARCO DRIVE

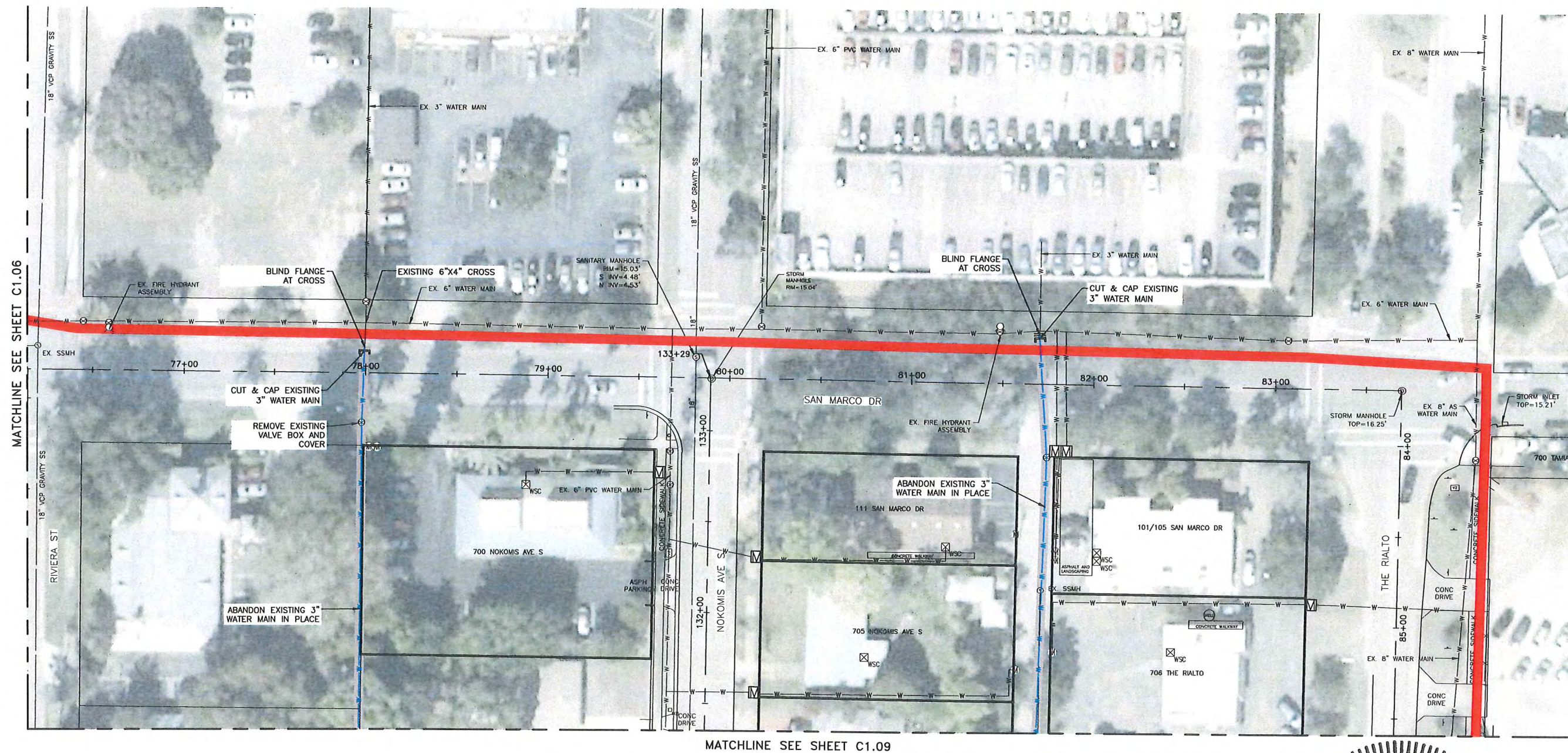


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PERMITS	11/25/15	RB
BID SET	1/5/16	RB
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BID SET (REVISED)	8/24/16	RB

JOB NO. VEN2018-01M

SHEET C1.06

PROJECT MANAGER: Holly Kiemera, P.E.  
 C:\PW\WORK\VENICE\10095970\CUP-PLIS-VENICE C1.06 TO C1.09.DWG - C1.07 - PLOTTED 8/29/2016 9:43 AM BY DABBY, KRISTIN



MATCHLINE SEE SHEET C1.06

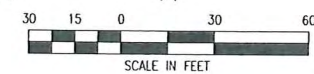
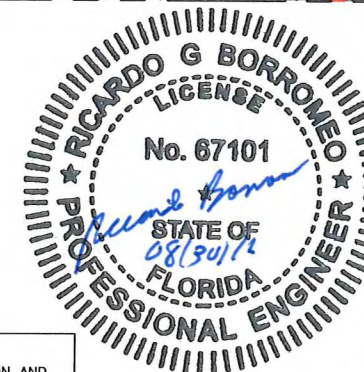
MATCHLINE SEE SHEET C1.09

**WATER SERVICE NOTE:**  
 WHEN CONNECTING TO AN EXISTING METER, THE CONTRACTOR SHALL CONNECT THE NEW SERVICE LINE TO THE CUSTOMER SIDE.

INDICATES PROPERTIES WHERE EXISTING WATER SERVICE IS TO BE CONNECTED TO EXISTING 6" WM.

INDICATES PROPERTIES WHERE WATER METER AND SERVICE LINE WILL BE RELOCATED

**WATER SERVICE NOTE:**  
 CONTRACTOR SHALL COORDINATE WATER METER LOCATION AND NEW WATER SERVICE ROUTE ON PRIVATE PROPERTY WITH A CITY REPRESENTATIVE AND PROPERTY OWNER. CONTRACTOR SHALL CONSULT WATER METER RELOCATION AGREEMENT.



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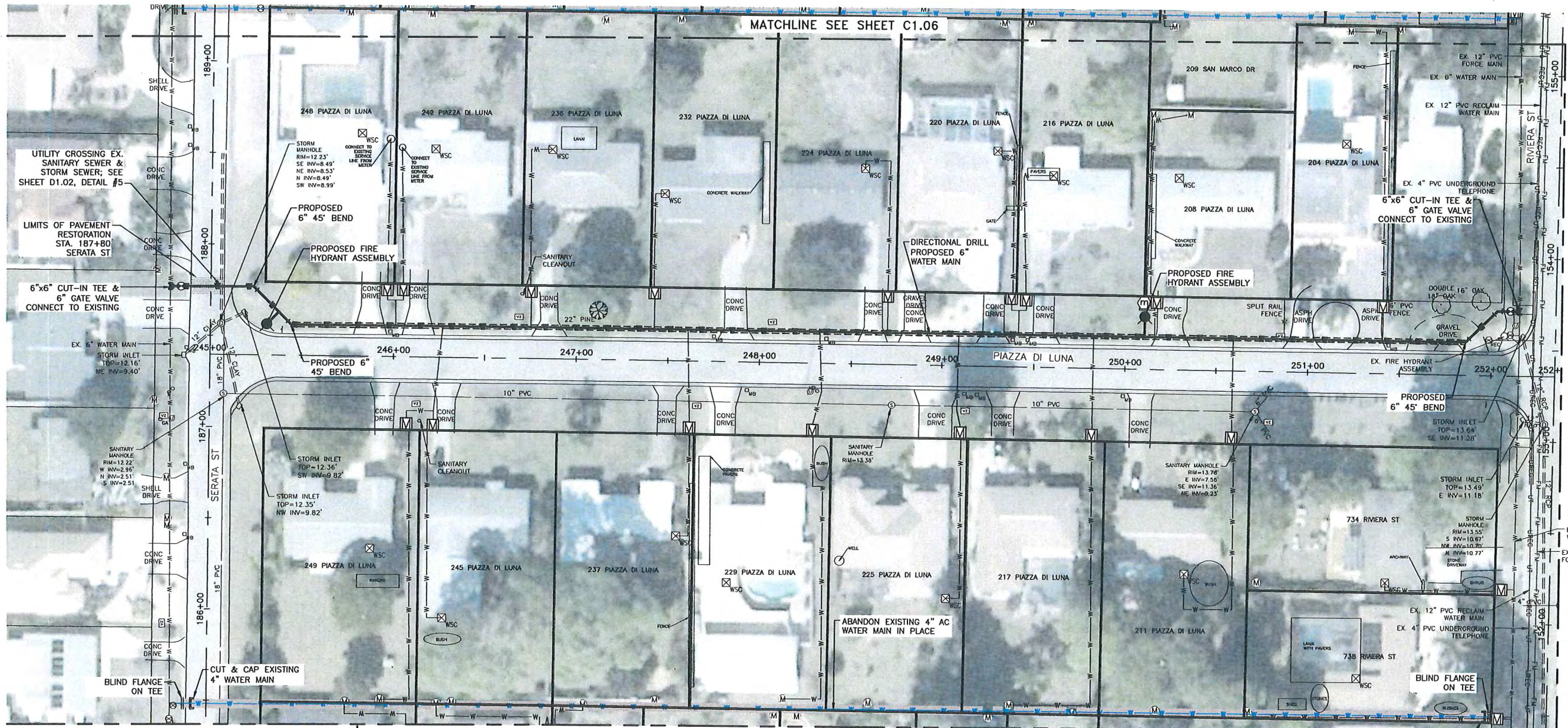
**CITY OF VENICE, FLORIDA**  
**PHASE 4**  
**WATER MAIN REPLACEMENT PROGRAM**  
 SAN MARCO DRIVE

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PERMITS	11/25/15	RB
BID SET	1/5/16	RB
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BID SET (REVISED)	8/24/16	RB

JOB NO. VEN2018-01M  
 SHEET C1.07

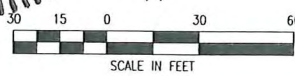
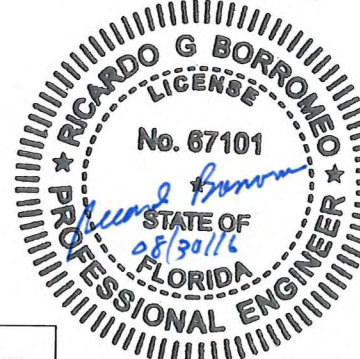
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PROJECT MANAGER: Holly Kremers, P.E. FIELD BOOK INFORMATION: C:\PW\WORK\VENICE\080916\080916-VENICE C1.08 TO C1.09.DWG - C1.08 - PLOTTED 8/24/2016 11:41 AM BY DANEY, KRISTIN



**WATER SERVICE NOTE:**  
WHEN CONNECTING TO AN EXISTING METER, THE CONTRACTOR SHALL CONNECT THE NEW SERVICE LINE TO THE CUSTOMER SIDE.

**WATER SERVICE NOTE:**  
CONTRACTOR SHALL COORDINATE WATER METER LOCATION AND NEW WATER SERVICE ROUTE ON PRIVATE PROPERTY WITH A CITY REPRESENTATIVE AND PROPERTY OWNER. CONTRACTOR SHALL CONSULT WATER METER RELOCATION AGREEMENT.



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CITY OF VENICE, FLORIDA  
PHASE 4  
WATER MAIN REPLACEMENT PROGRAM  
PIAZZA DI LUNA

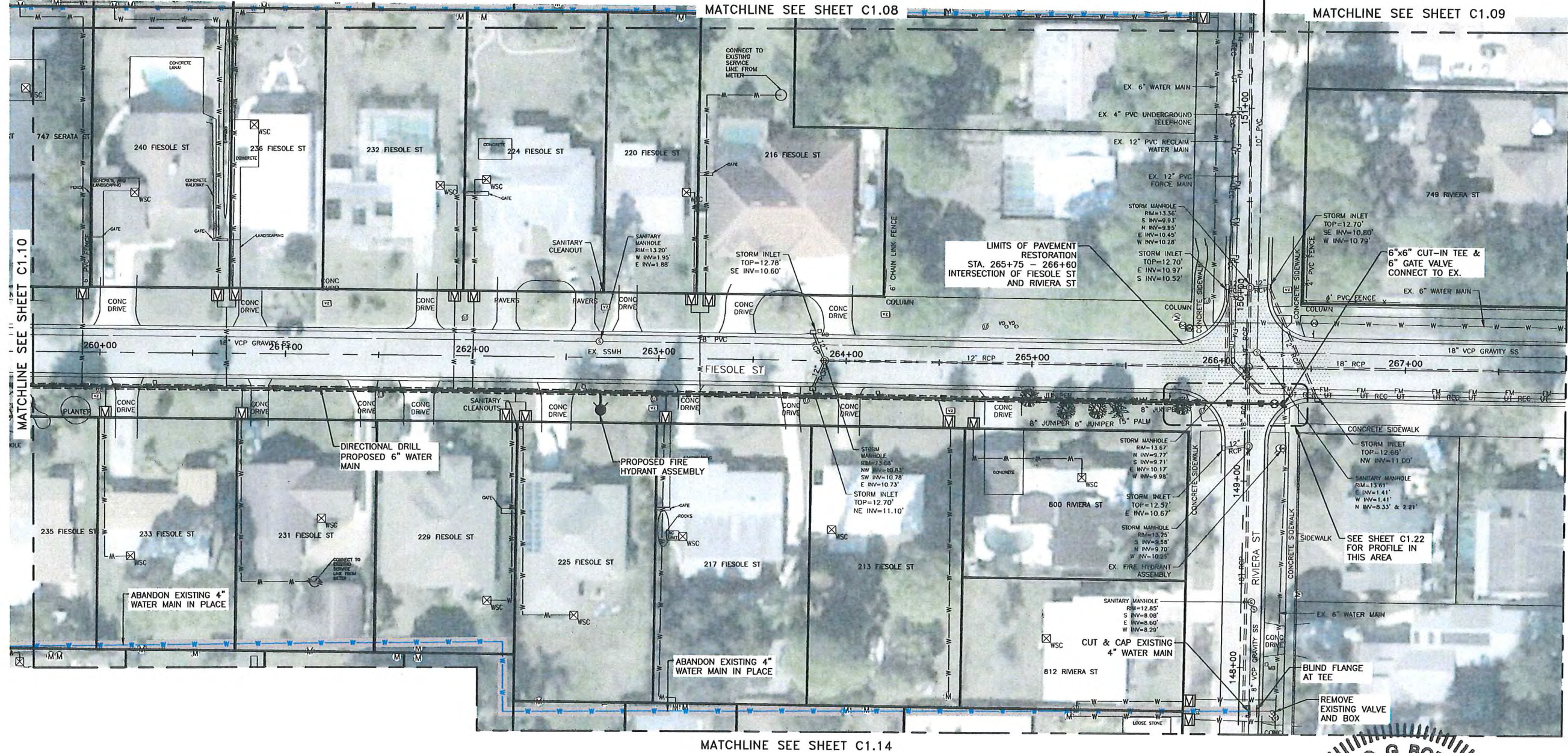
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BID SET	1/5/16	RB
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SHEET	C1.08	

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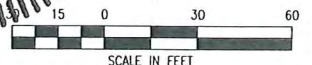
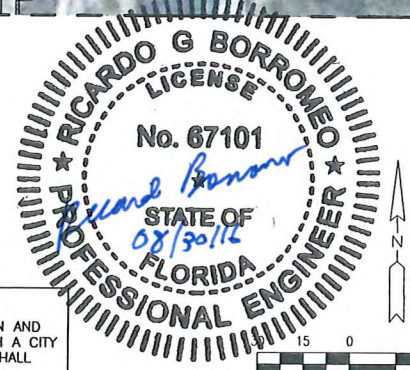
PROJECT MANAGER: Holly Kretmers D.E.  
 C:\PW\WORK\VENICE\0595970\0595970-PL1S-PL1S-VENICE C1.10 TO C1.12.DWG - C1.11 - PLOTTED 8/24/2016 11:42 AM BY DABBY KRISTIN



**WATER SERVICE NOTE:**  
 WHEN CONNECTING TO AN EXISTING METER, THE CONTRACTOR SHALL CONNECT THE NEW SERVICE LINE TO THE CUSTOMER SIDE.

**WATER SERVICE NOTE:**  
 CONTRACTOR SHALL COORDINATE WATER METER LOCATION AND NEW WATER SERVICE ROUTE ON PRIVATE PROPERTY WITH A CITY REPRESENTATIVE AND PROPERTY OWNER. CONTRACTOR SHALL CONSULT WATER METER RELOCATION AGREEMENT.

- ☒ INDICATES PROPERTIES WHERE EXISTING WATER SERVICE IS TO BE CONNECTED TO EXISTING 6" WM.
- ☐ INDICATES PROPERTIES WHERE WATER METER AND SERVICE LINE WILL BE RELOCATED



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**WATER MAIN REPLACEMENT PROGRAM**  
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BID SET (REVISED)	8/24/16	RB

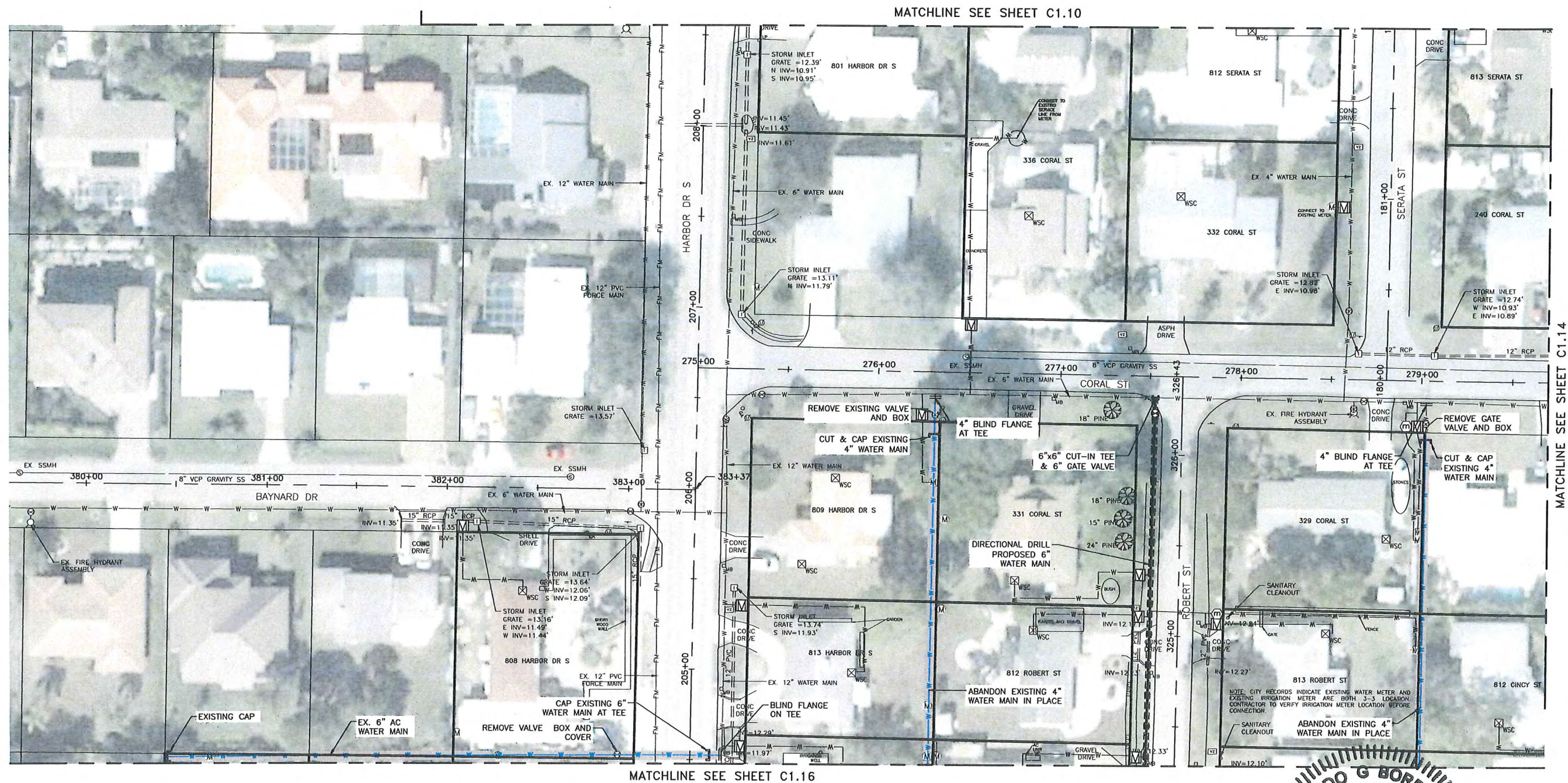
JOB NO. VEN2018-01M

SHEET C1.11

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PROJECT MANAGER: Holly Krometsch, P.E.  
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MATCHLINE SEE SHEET C1.16

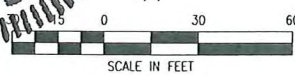
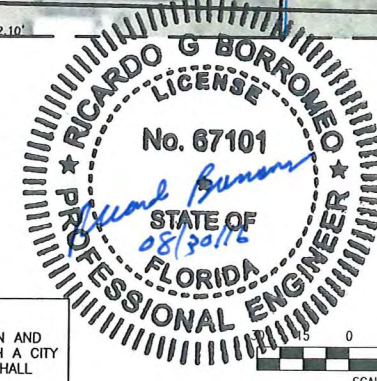
MATCHLINE SEE SHEET C1.10

MATCHLINE SEE SHEET C1.14

**WATER SERVICE NOTE:**  
 WHEN CONNECTING TO AN EXISTING METER, THE CONTRACTOR SHALL CONNECT THE NEW SERVICE LINE TO THE CUSTOMER SIDE.

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 CONTRACTOR SHALL COORDINATE WATER METER LOCATION AND NEW WATER SERVICE ROUTE ON PRIVATE PROPERTY WITH A CITY REPRESENTATIVE AND PROPERTY OWNER. CONTRACTOR SHALL CONSULT WATER METER RELOCATION AGREEMENT.

- ☒ INDICATES PROPERTIES WHERE EXISTING WATER SERVICE IS TO BE CONNECTED TO EXISTING 6" WM.
- ☐ INDICATES PROPERTIES WHERE WATER METER AND SERVICE LINE WILL BE RELOCATED



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**CITY OF VENICE, FLORIDA**  
**PHASE 4**  
**WATER MAIN REPLACEMENT PROGRAM**  
 BAYNARD DRIVE / CORAL STREET

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 PERMITS 11/25/15 RB  
 BID SET 1/5/16 RB  
 100% DESIGN (REVISED) 6/21/16 RB  
 BID SET (REVISED) 8/24/16 RB

JOB NO. VEN2018-01M  
 SHEET C1.13

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FIELD BOOK INFORMATION: PROJECT MANAGER: Holly Kremers, P.E. C:\PW\_WORK\KADBY\059570\CUP-PLIS-VENICE C1.13 TO C1.15.DWG - C1.15 - PLOTTED 8/24/2016 11:44 AM BY: DAREY, KRISTIN

MATCHLINE SEE SHEET C1.14

MATCHLINE SEE SHEET C1.12



MATCHLINE SEE SHEET C1.18

**GENERAL NOTES**

821 NOKOMIS AVE S:  
IF THE LABELED WSC ON PROPERTY  
CANNOT BE FOUND, THE CONTRACTOR  
SHALL CONNECT AT EXISTING METER.

INDICATES PROPERTIES WHERE EXISTING WATER  
SERVICE IS TO BE CONNECTED TO EXISTING 6" WM.

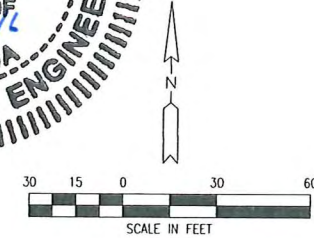
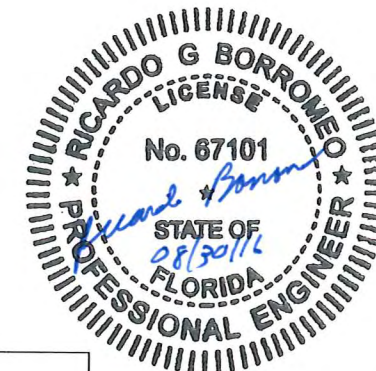
INDICATES PROPERTIES WHERE WATER METER  
AND SERVICE LINE WILL BE RELOCATED

**WATER SERVICE NOTE:**

WHEN CONNECTING TO AN EXISTING METER, THE CONTRACTOR  
SHALL CONNECT THE NEW SERVICE LINE TO THE CUSTOMER  
SIDE.

**WATER SERVICE NOTE:**

CONTRACTOR SHALL COORDINATE WATER METER LOCATION AND  
NEW WATER SERVICE ROUTE ON PRIVATE PROPERTY WITH A CITY  
REPRESENTATIVE AND PROPERTY OWNER. CONTRACTOR SHALL  
CONSULT WATER METER RELOCATION AGREEMENT.



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8110 Woodland Center Boulevard  
Suite 1200, Tampa, FL 33614  
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www.wadetrims.com  
Professional Engineer License No. 1652

**CITY OF VENICE, FLORIDA**  
**PHASE 4**  
**WATER MAIN REPLACEMENT PROGRAM**  
NOKOMIS AVE S & THE RIALTO



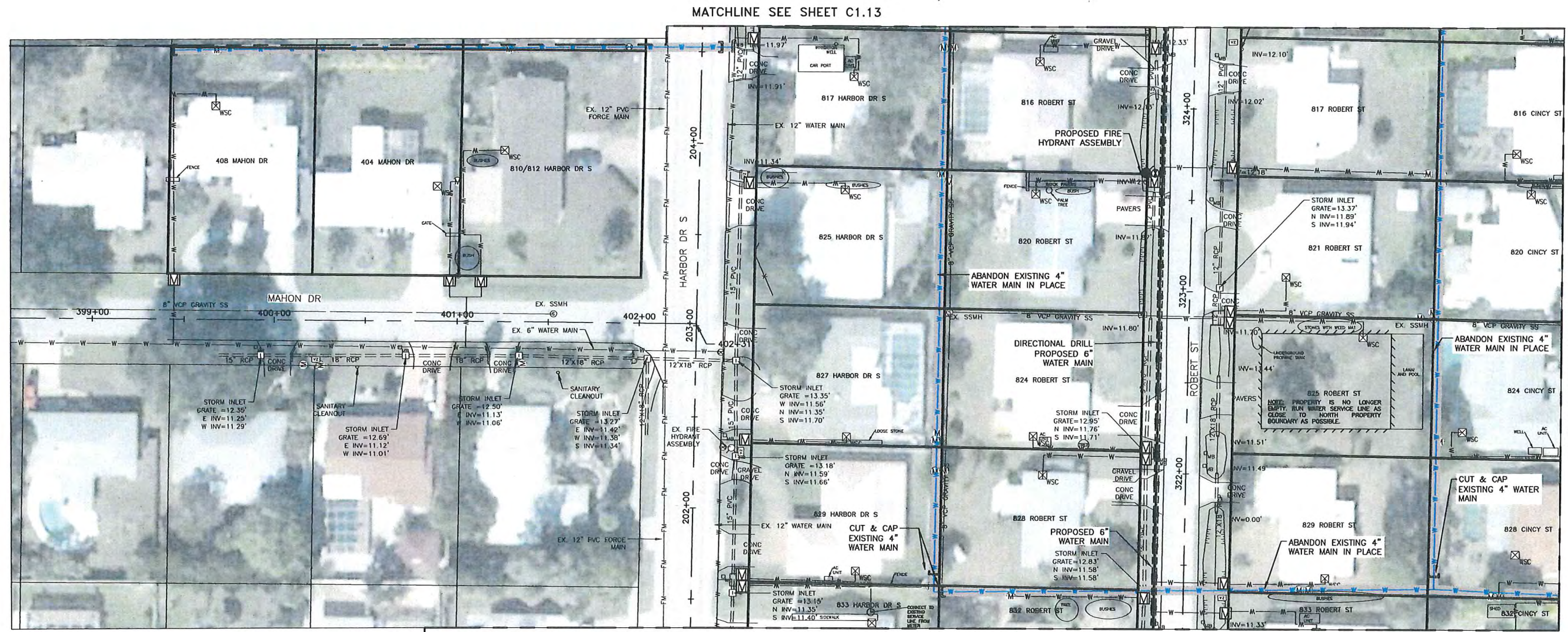
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SHEET  
**C1.15**

VENICE, FLORIDA WATERMAIN REPLACEMENT PROGRAM - PHASE IV © Wade Trim Group, Inc.

PROJECT MANAGER: Holly Kremerz, P.E.  
 C:\PW\WORK\NORBY\0899570\CUP-PLIS-VEICE - C1.16 - PLOTTED 8/24/2016 11:45 AM BY: DREBY, KRISTIN



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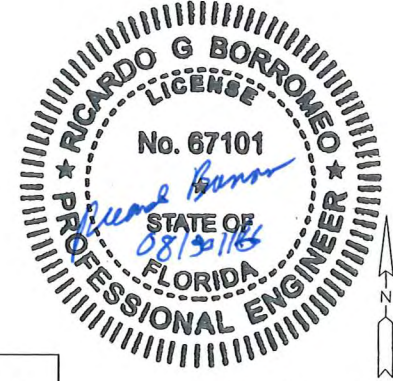
MATCHLINE SEE SHEET C1.19

MATCHLINE SEE SHEET C1.17

**WATER SERVICE NOTE:**  
 WHEN CONNECTING TO AN EXISTING METER, THE CONTRACTOR SHALL CONNECT THE NEW SERVICE LINE TO THE CUSTOMER SIDE.

**WATER SERVICE NOTE:**  
 CONTRACTOR SHALL COORDINATE WATER METER LOCATION AND NEW WATER SERVICE ROUTE ON PRIVATE PROPERTY WITH A CITY REPRESENTATIVE AND PROPERTY OWNER. CONTRACTOR SHALL CONSULT WATER METER RELOCATION AGREEMENT.

- INDICATES PROPERTIES WHERE EXISTING WATER SERVICE IS TO BE CONNECTED TO EXISTING 6" WM.
- INDICATES PROPERTIES WHERE WATER METER AND SERVICE LINE WILL BE RELOCATED



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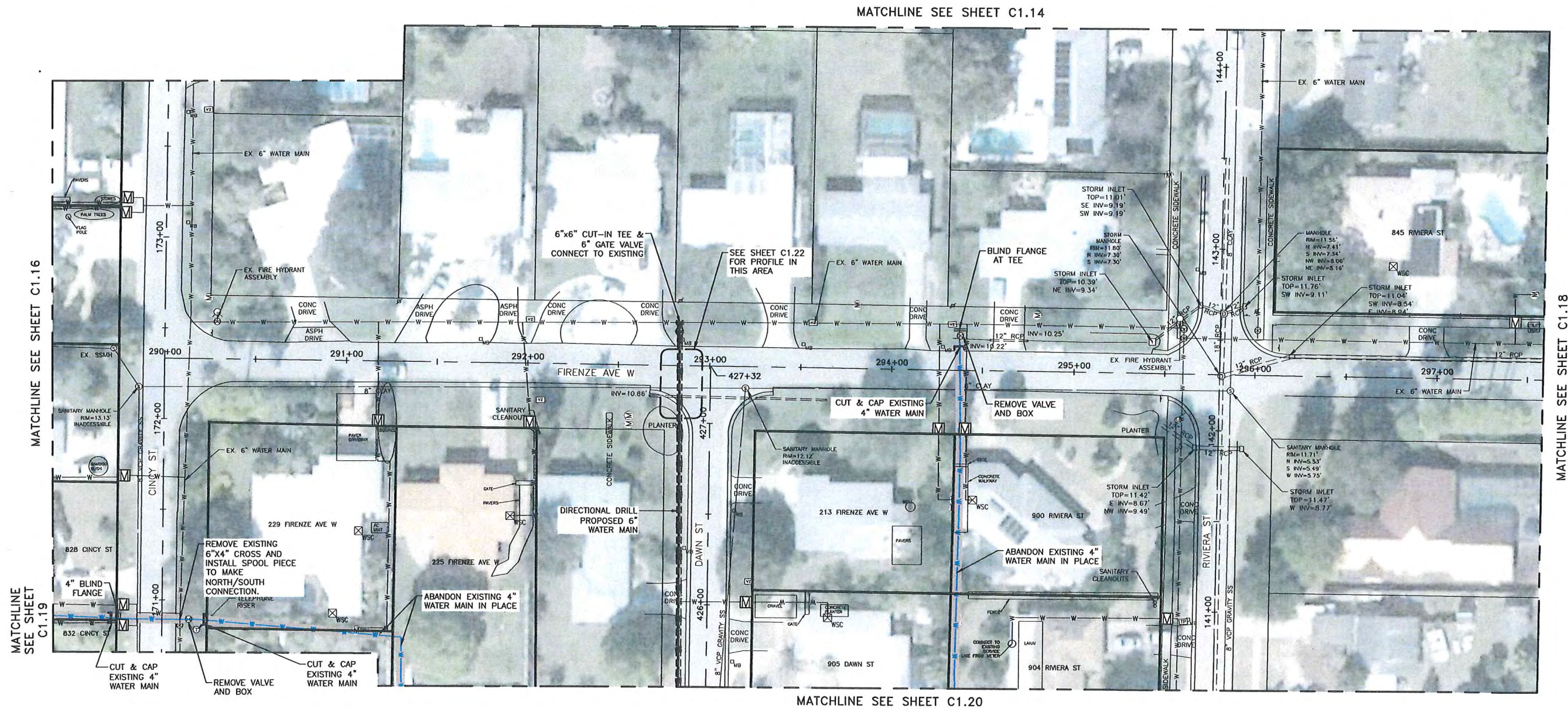
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**PHASE 4**  
**WATER MAIN REPLACEMENT PROGRAM**  
 MAHON DRIVE & ROBERT STREET



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BID SET (REVISED)	8/24/16	RB

JOB NO. VEN2018-01M  
 SHEET C1.16

PROJECT MANAGER: HAN, KENNETH, P.E.  
 C:\PW\WORK\YDAREY\2059570\CUP-PLTS-VENICE-C1.17 - PLOTTED 8/24/2016 2:33 PM BY DARBY, KRISTIN



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MATCHLINE SEE SHEET C1.16

MATCHLINE SEE SHEET C1.19

MATCHLINE SEE SHEET C1.18

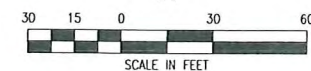
MATCHLINE SEE SHEET C1.20

INDICATES PROPERTIES WHERE EXISTING WATER SERVICE IS TO BE CONNECTED TO EXISTING 6" WM.

INDICATES PROPERTIES WHERE WATER METER AND SERVICE LINE WILL BE RELOCATED

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**FIRENZE AVENUE**



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BID SET	1/5/16	RB
100% DESIGN (REVISED)	6/21/16	RB
BID SET (REVISED)	8/24/16	RB

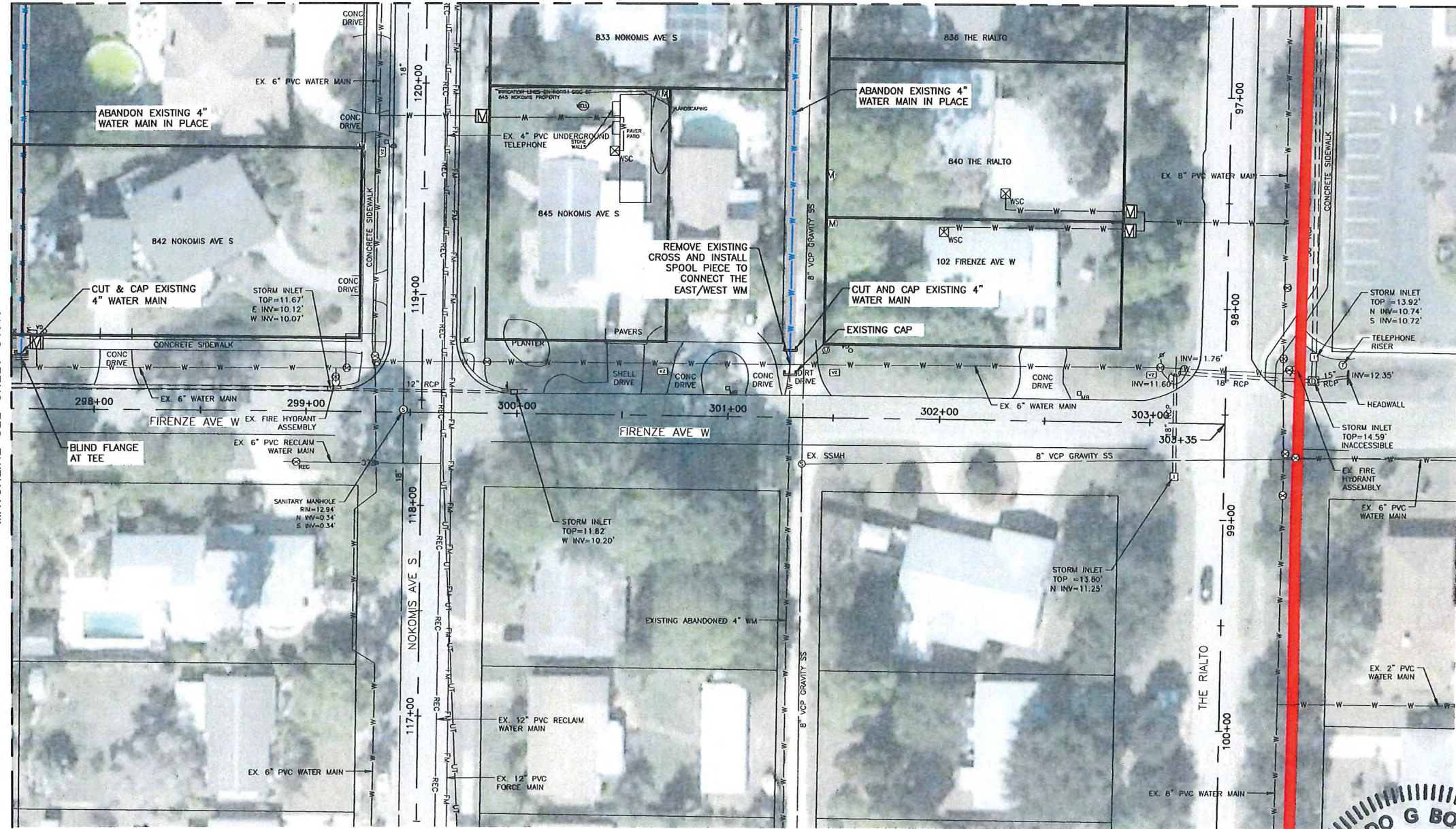
JOB NO. VEN2018-01M

SHEET C1.17

VENICE, FLORIDA WATERMAIN REPLACEMENT PROGRAM - PHASE IV

MATCHLINE SEE SHEET C1.17

MATCHLINE SEE SHEET C1.15

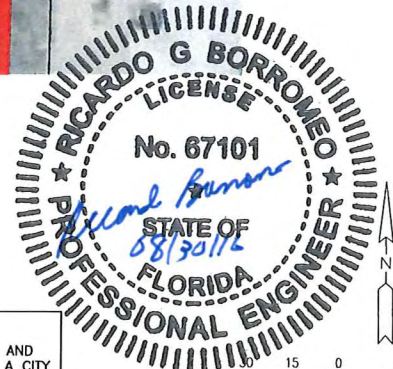


INDICATES PROPERTIES WHERE EXISTING WATER SERVICE IS TO BE CONNECTED TO EXISTING 6\"/>

INDICATES PROPERTIES WHERE WATER METER AND SERVICE LINE WILL BE RELOCATED

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**PHASE 4**  
**WATER MAIN REPLACEMENT PROGRAM**  
**FIRENZE AVENUE**

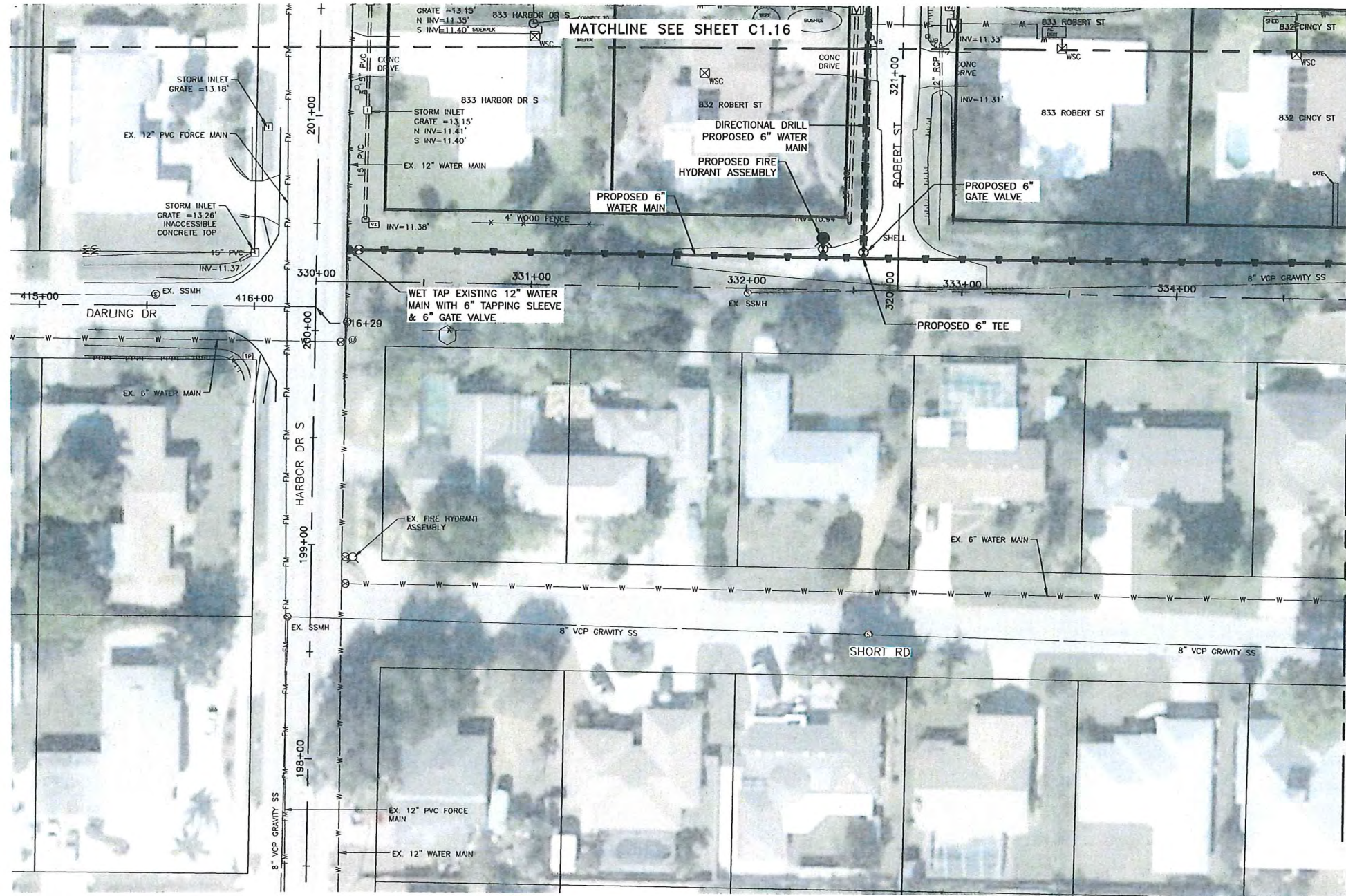


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BID SET (REVISED)	8/24/16	RB

JOB NO. VEN2018-01M

SHEET C1.18

FIELD BOOK INFORMATION: PROJECT MANAGER: Holly Kravitz, P.E. VENICE, FLORIDA WATERMAIN REPLACEMENT PROGRAM - PHASE IV  
 C:\PW\_WORK\KDBRY\20559570\CUP-PLTS-VENICE C1.19 TO C1.21.DWG - C1.19 - PLOTTED 8/24/2016 11:46 AM BY DAREY, KRISTIN



MATCHLINE SEE SHEET C1.17

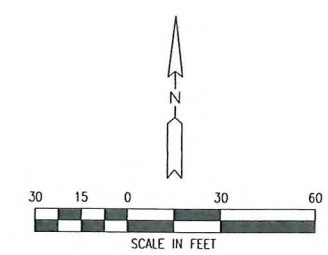
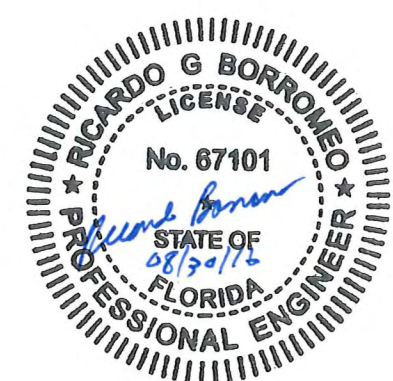
MATCHLINE SEE SHEET C1.20

INDICATES PROPERTIES WHERE EXISTING WATER SERVICE IS TO BE CONNECTED TO EXISTING 6\"/>

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 813.882.4370 / 813.882.4324 FAX: 813.888.7215  
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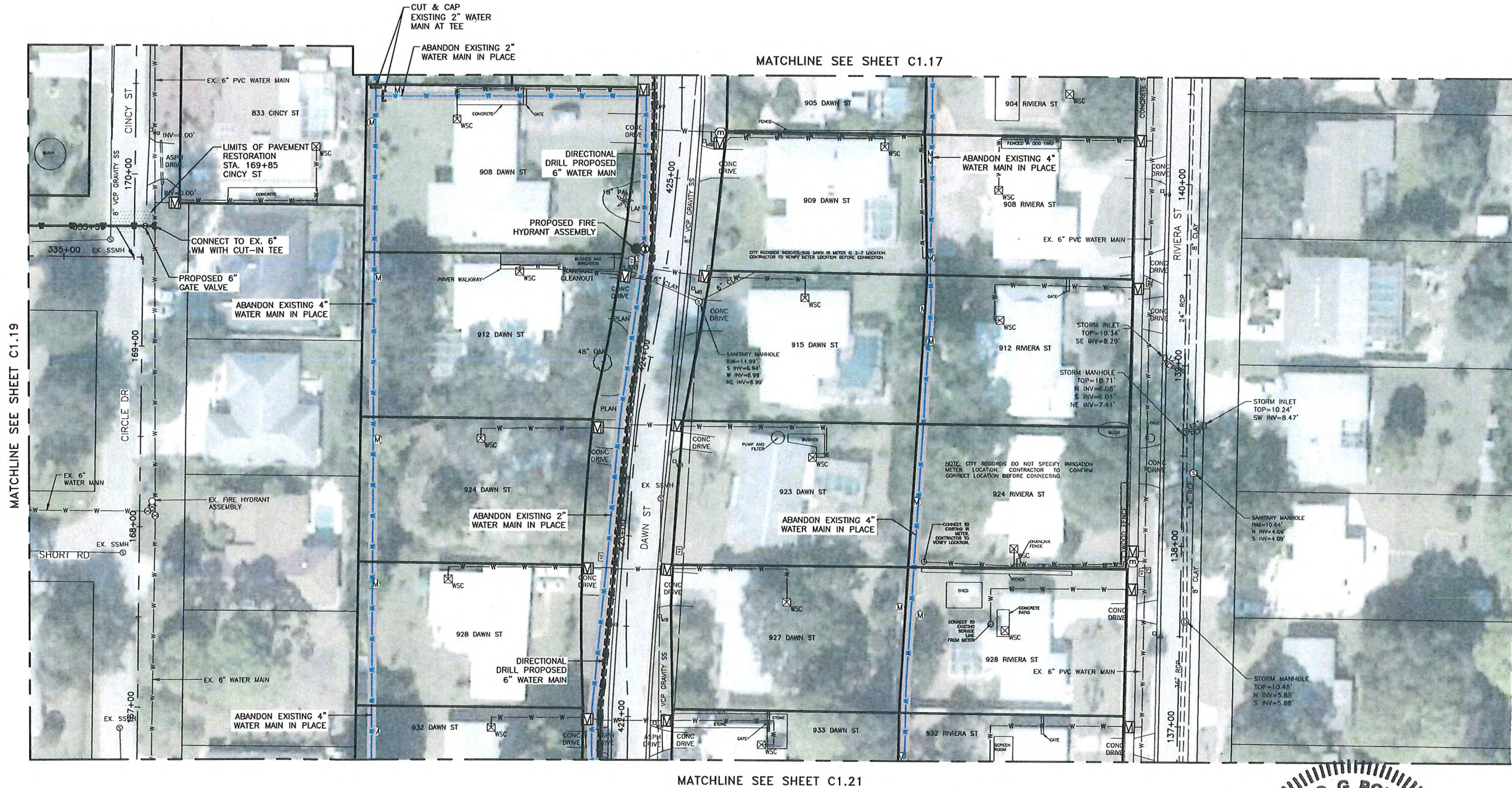
CITY OF VENICE, FLORIDA  
 PHASE 4  
 WATER MAIN REPLACEMENT PROGRAM  
 SHORT ROAD



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PERMITS	11/25/15	RB
BID SET	1/25/16	RB
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JOB NO. VEN2018-01M  
 SHEET C1.19  
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FIELD BOOK INFORMATION: - PROJECT MANAGER: Holly Kremers, P.E. - C:\PW\WORK\GDARBY\0559570\CUP-PLIS-VENICE - C1.20 - PLOTTED 8/24/2018 11:46 AM BY DARBY, KRISTIN



MATCHLINE SEE SHEET C1.21

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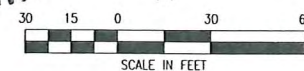
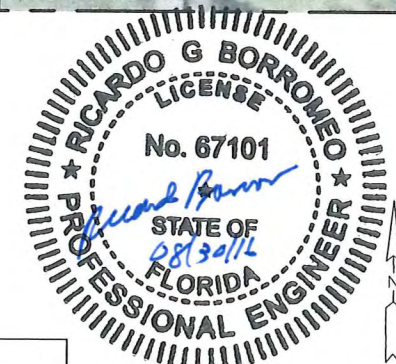
MATCHLINE SEE SHEET C1.19

INDICATES PROPERTIES WHERE EXISTING WATER SERVICE IS TO BE CONNECTED TO EXISTING 6" WM.

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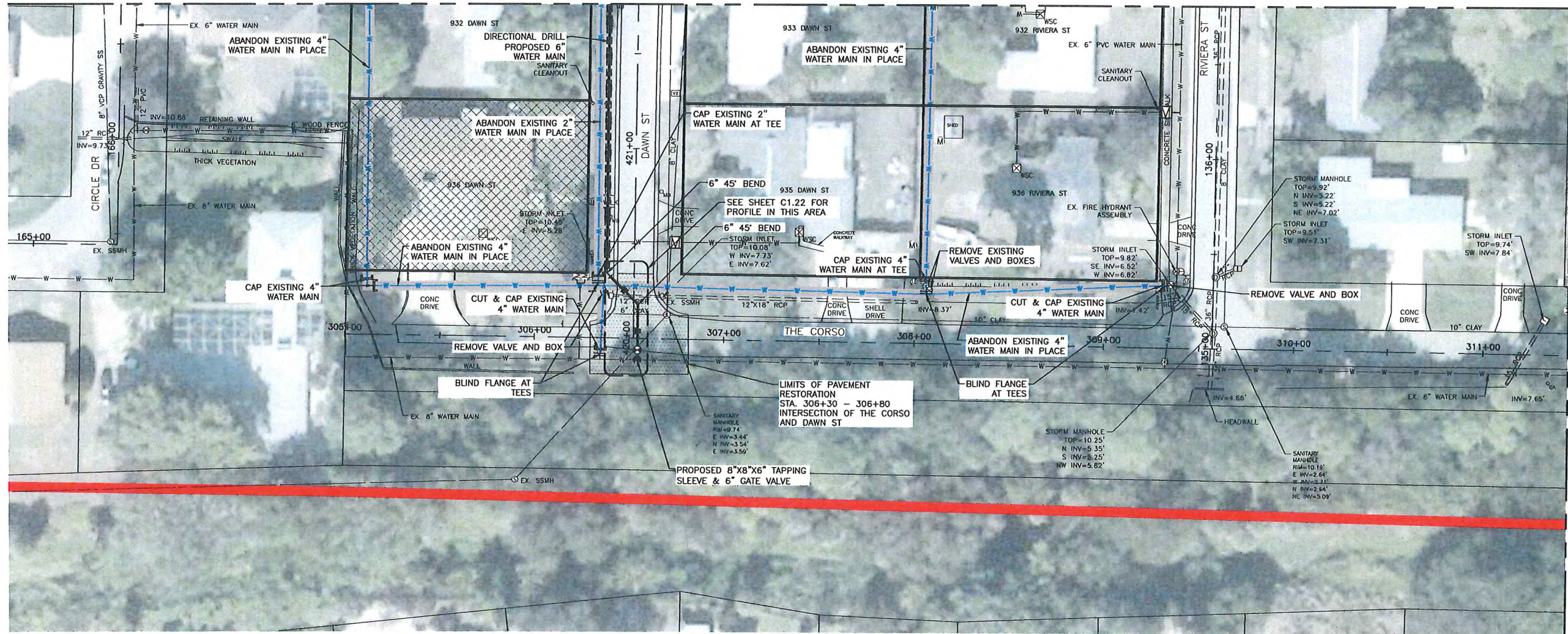
MUST READ FOR CONSTRUCTION UNLESS SIGNED AND DATED.  
**WADE TRIM**  
 3330 W. MacArthur Blvd., Suite 1200, Tampa, FL 33614  
 813.882.4373 / 888.469.8264 FAX: 813.888.7215  
 Certificate of Authorization No. 18952  
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**CITY OF VENICE, FLORIDA**  
**WATER MAIN REPLACEMENT PROGRAM**  
**PHASE 4**  
**DAWN STREET & RIVIERA STREET**

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 100% DESIGN 10/2/15 RB  
 PERMITS 11/23/15 RB  
 BID SET 1/5/16 RB  
 100% DESIGN 6/21/16 RB  
 (REVISED)  
 BID SET 8/24/16 RB  
 (REVISED)  
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PROJECT MANAGER: Holly Krenners, P.E.  
 CIVIL WORK: DARRBY UDENBERG, P.E. / PLTS-VENICE  
 FIELD BOOK INFORMATION:  
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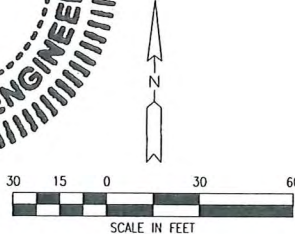
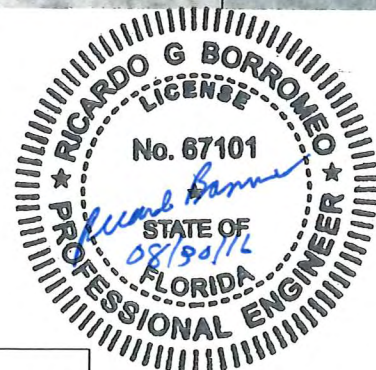
MATCHLINE SEE SHEET C1.20



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CITY OF VENICE, FLORIDA  
 PHASE 4  
 WATER MAIN REPLACEMENT PROGRAM  
 THE CORSO



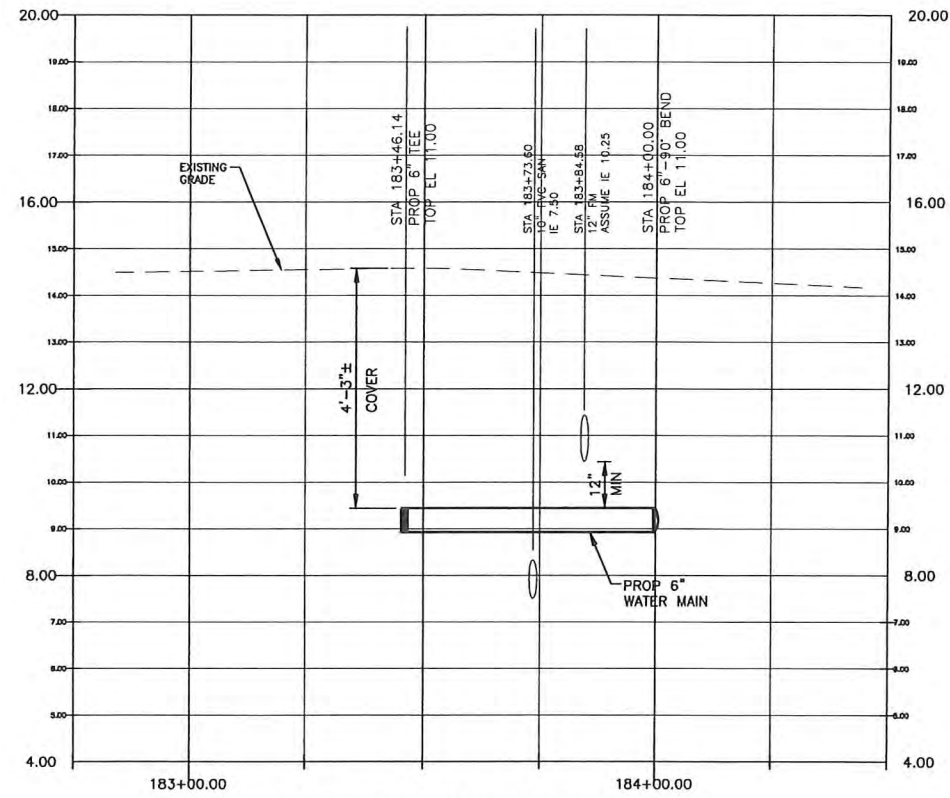
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BID SET (REVISED)	8/24/16	RB

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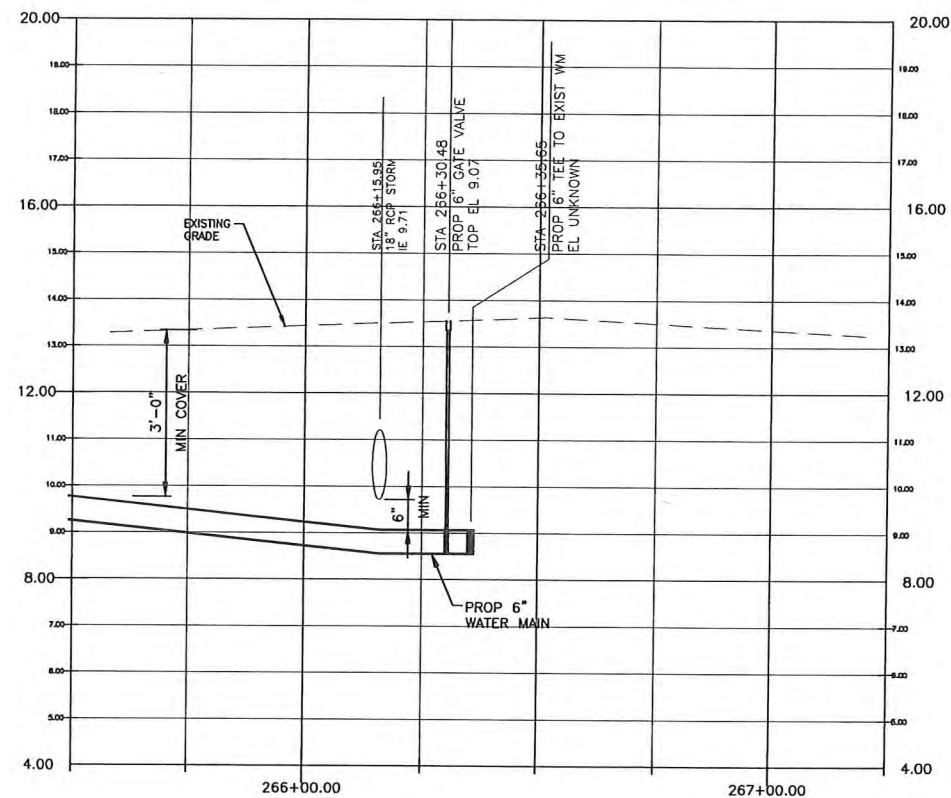
SHEET  
**C1.21**

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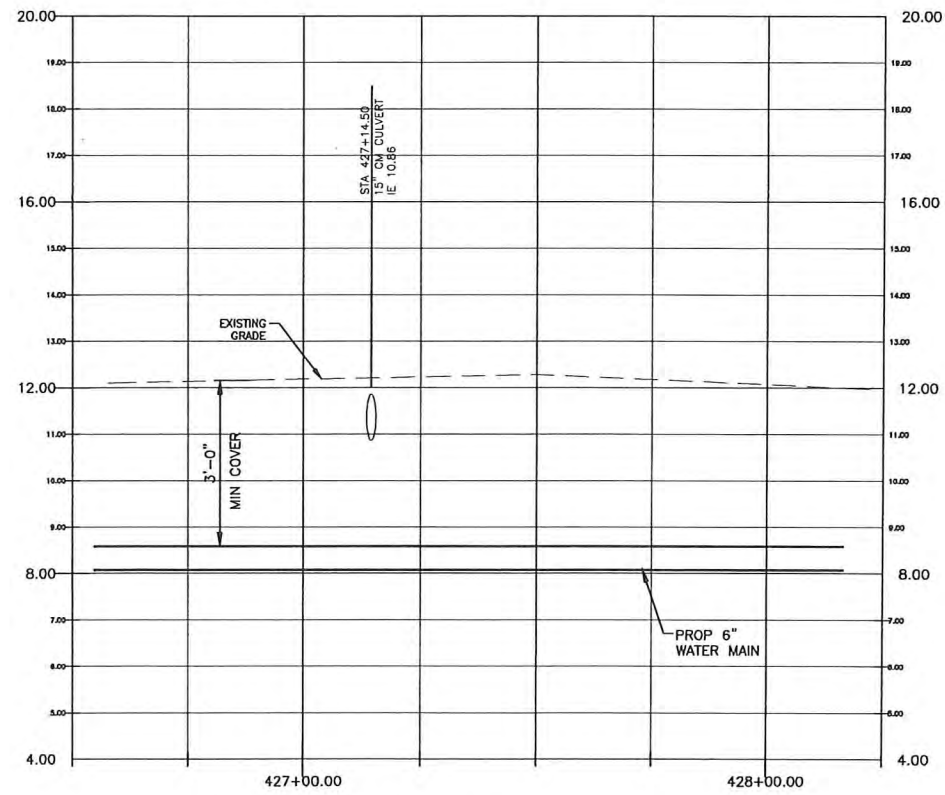
PROJECT MANAGER: Holly Krueger, P.E.  
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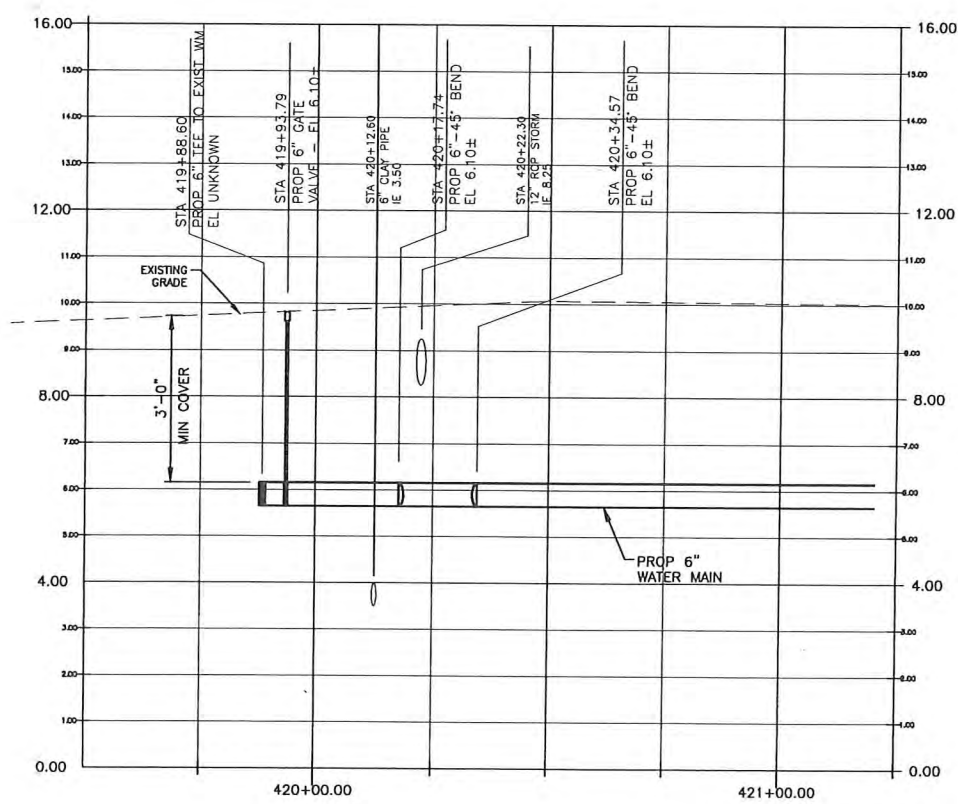
**SERATA ST PROFILE AT FIESOLE ST**  
 SCALE: 1:40 HORIZ  
 1:4 VERT



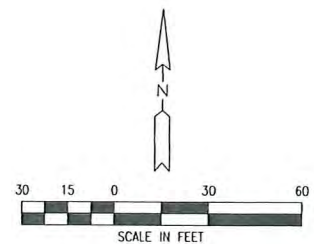
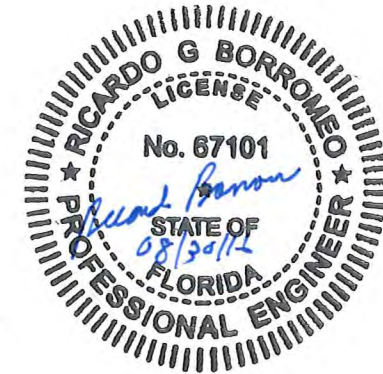
**RIVIERA ST PROFILE AT FIESOLE ST**  
 SCALE: 1:40 HORIZ  
 1:4 VERT



**DAWN ST PROFILE AT FIRENZE ST**  
 SCALE: 1:40 HORIZ  
 1:4 VERT



**DAWN ST PROFILE AT THE CORSO**  
 SCALE: 1:40 HORIZ  
 1:4 VERT



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**PHASE 4**  
**WATER MAIN REPLACEMENT PROGRAM**  
 MISCELLANEOUS PROFILES

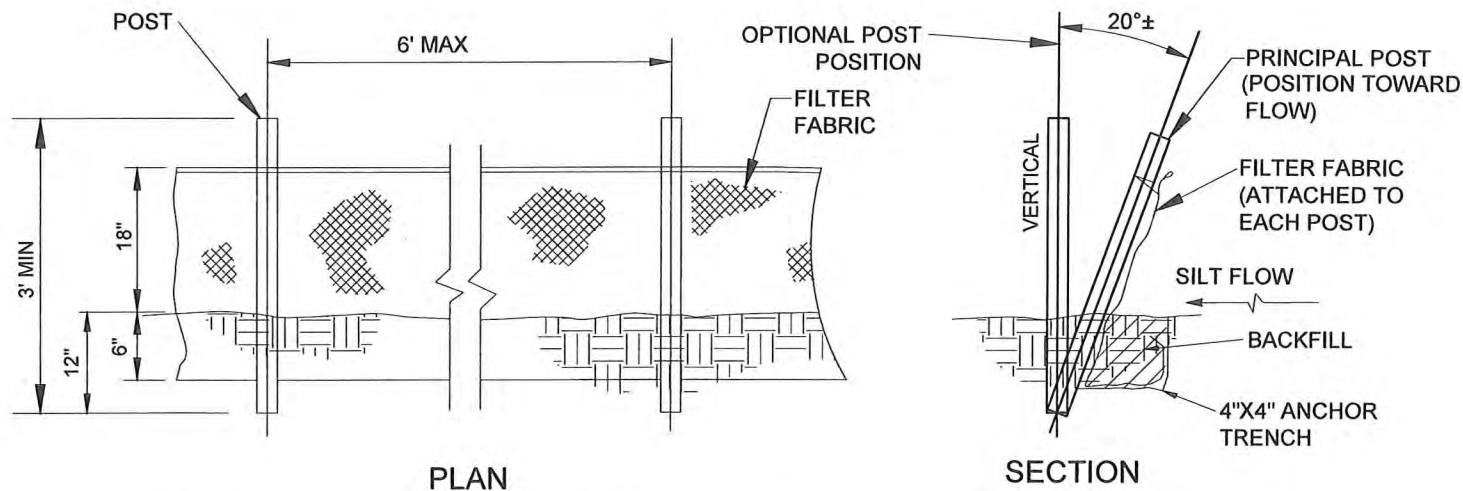
**VENICE, FL**  
*City on the Gulf*

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100% DESIGN	10/2/15 RB	
PERMITS	11/25/15 RB	
BID SET	1/5/16 RB	
100% DESIGN (REVISED)	6/21/16 RB	
BID SET (REVISED)	8/24/16 RB	

JOB NO. **VEN2018-01M**

SHEET **C1.22**

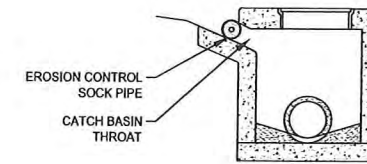
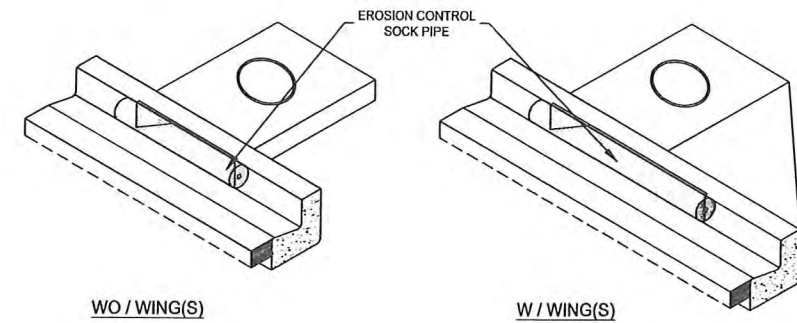
VENICE, FLORIDA WATERMAIN REPLACEMENT PROGRAM - PHASE IV  
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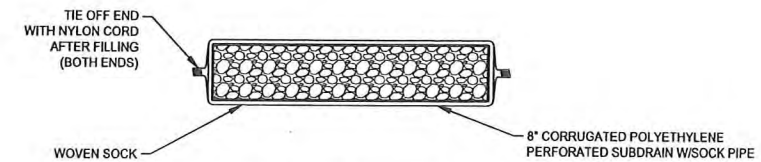
- 1.) POSTS SHALL BE WOOD (2"X4" OR 2 1/2" DIA.) OR STEEL (MIN. 1.33 LBS/FT.).
- 2.) SILT FENCE SHALL BE PLACED PRIOR TO ANY EARTHMOVING, EXCAVATION OR VEGETATION REMOVAL.
- 3.) CONTRACTOR IS RESPONSIBLE FOR MONITORING & MAINTAINING THE SILT FENCE IN GOOD CONDITION THROUGHOUT THE LIFE OF THE PROJECT.
- 4.) THE CITY ENGINEER OR HIS DESIGNEE MAY ISSUE A STOP WORK ORDER IN THE EVENT THAT SILT FENCE IS NOT BEING MAINTAINED OR IF SEDIMENT IS MIGRATING OFF-SITE.

**SILT FENCE DETAIL**

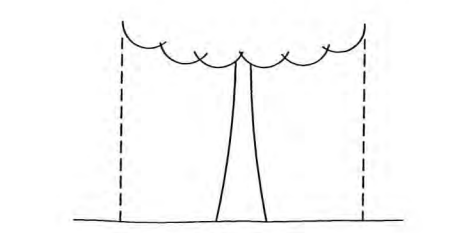
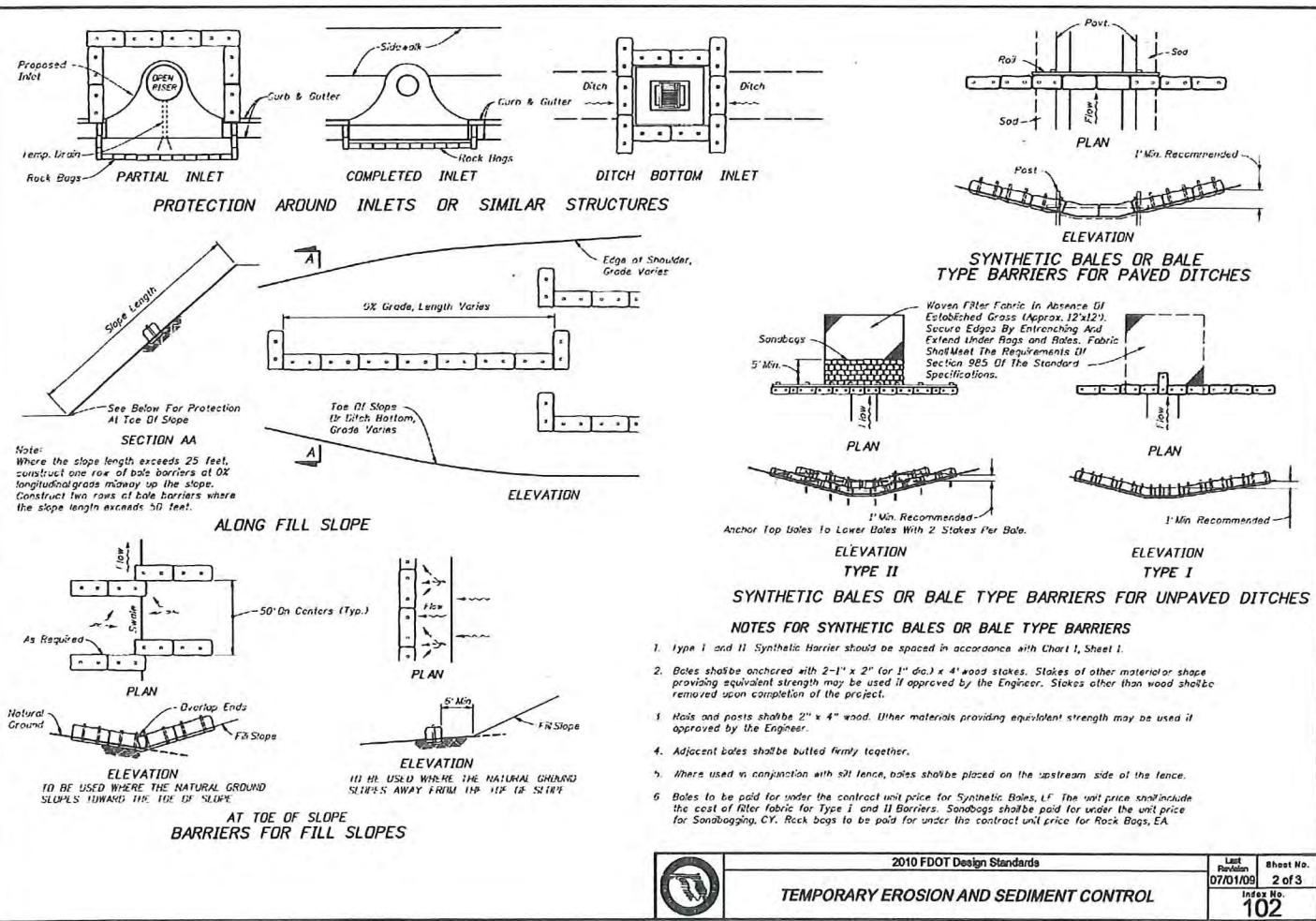
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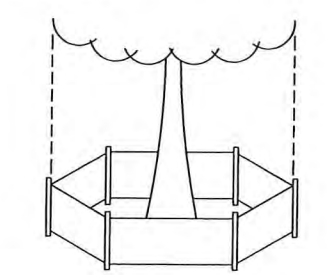
SECTION



**CURB INLET FILTER SOCK  
SEDIMENTATION CONTROL**



**FIGURE A**  
THE DRIPLINE OF A TREE IS THE IMAGINARY, VERTICAL LINE THAT EXTENDS DOWNWARD FROM THE OUTERMOST TIPS OF THE TREE'S BRANCHES TO THE GROUND.



**FIGURE B**  
FOUR CORNER UPRIGHT STAKES OF NO LESS THAN 2\"/>

**NOTE**  
DURING LAND ALTERATION AND CONSTRUCTION ACTIVITIES, IT SHALL BE UNLAWFUL TO REMOVE VEGETATION BY GRUBBING OR TO PLACE SOIL DEPOSITS, DEBRIS, SOLVENTS, CONSTRUCTION MATERIAL, MACHINERY OR OTHER EQUIPMENT OF ANY KIND WITHIN THE DRIPLINE OF A TREE TO REMAIN ON SITE.

**TREE BARRICADE DETAIL**



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8010 Woodland Center Boulevard  
813.882.4378/888.469.8824 FAX: 813.888.7215  
Certificate of Authorization No.: 3852  
www.wadetrims.com

**CITY OF VENICE, FLORIDA**  
**PHASE 4**  
**WATER MAIN REPLACEMENT PROGRAM**  
**EROSION AND SEDIMENTATION CONTROL DETAILS**

VENICE, FLORIDA WATER MAIN REPLACEMENT PROGRAM - PHASE IV

ISSUED FOR: 50% DESIGN 8/7/15 RB  
100% DESIGN 10/2/15 RB  
PERMITS 11/25/15 RB  
JOB NO. VEN2018-01M

DATE: 8/24/16 RB  
BY: 8/24/16 RB  
REVISION: 8/24/16 RB

SHEET: D1.00

2010 FDOT Design Standards  
**TEMPORARY EROSION AND SEDIMENT CONTROL**  
Last Revision: 07/01/09  
Sheet No. 2 of 3  
Index No. 102

FIELD BOOK INFORMATION: PROJECT MANAGER: Jody K. Kester, P.E. C:\P\1\WORK\VENICE\WDRS9570\CD\PLTS-VENICE PHASE 4-D1.00-DWG - 01.00 - PLOTTED 8/24/2016 11:47 AM BY DARBLY, KRISTIN

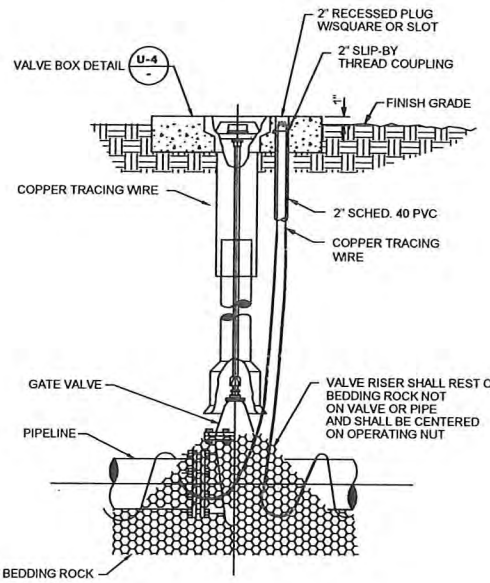
MINIMUM LENGTH (FT) OF FORCE MAIN TO BE RESTRAINED ON EACH SIDE OF FITTING										
FITTING	PIPE SIZE (INCHES)									
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45 BEND:	H	6	9	12	14	16	21	23	25	29
	VU	4	6	7	9	10	13	15	16	19
	VD	12	20	26	32	37	48	53	28	68
22.5 BEND:	H	3	4	6	7	8	10	11	12	14
	VU	2	3	4	4	5	6	7	8	9
	VD	7	10	13	15	18	23	26	28	33
11.25 BEND:	H	2	2	3	3	4	5	5	6	7

MINIMUM LENGTH (FT) OF WATER OR REUSE MAIN TO BE RESTRAINED ON EACH SIDE OF FITTING										
FITTING	PIPE SIZE (INCHES)									
	4	6	8	10	12	16	18	20	24	
90 BEND:	H	23	33	43	51	60	76	83	90	104
45 BEND:	H	10	14	18	21	25	31	34	37	43
	VU	6	8	11	13	16	20	22	24	28
	VD	22	30	40	48	56	72	80	87	102
22.5 BEND:	H	5	7	8	10	12	15	17	18	21
	VU	3	4	5	6	7	10	11	12	14
	VD	10	15	19	23	27	35	38	42	49
11.25 BEND:	H	2	3	4	5	6	7	8	9	10
PLUGS:		52	73	96	115	136	174	193	211	246

ABBREVIATIONS: H=HORIZONTAL, VU=VERTICAL UP, VD=VERTICAL DOWN.

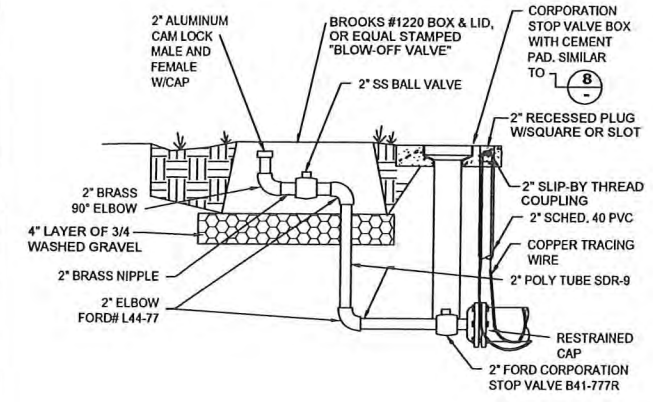
- FOR TEE OR REDUCER FITTINGS SUBMIT RESTRAINED JOINT LENGTH CALCULATIONS TO CITY ENGINEER FOR REVIEW AND APPROVAL, USING THE ASSUMPTIONS LISTED ABOVE.
- RESTRAINED JOINT LENGTH FOR WATER AND REUSE MAINS BASED ON TEST PRESSURE OF 150 PSI. RESTRAINED JOINT LENGTH FOR FORCE (SEWER) MAINS BASED ON TEST PRESSURE OF 100 PSI. CALCULATIONS WERE MADE USING EBAA IRON SOFTWARE (AVAILABLE AT WWW.EBAA.COM) AND THE FOLLOWING ASSUMPTIONS: GRANULAR MATERIAL (GM) SOIL TYPE, TRENCH TYPE 3, BURY DEPTH OF 3 FT, AND SAFETY FACTOR OF 2 TO 1. IF FIELD CONDITIONS DIFFER FROM ABOVE ASSUMPTIONS EOR SHALL PROVIDE CALCULATIONS BASED ON ACTUAL CONDITIONS.
- RESTRAINED JOINT SHALL BE USED ON ALL JOINTS FROM ANY MAIN TEE TO ANY FIRE HYDRANT ASSEMBLY.
- THRUST BLOCKS WILL NOT BE ACCEPTED, UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.

**PRESSURE MAIN RESTRAINED JOINT TABLE**  
N.T.S.



- GATE VALVES SHALL BE RESILIENT WEDGE-TYPE MANUFACTURED BY MUELLER, AMERICAN VALVE, OR EQUAL. ALL GATE VALVES SHALL BE FUSION BONDED EPOXY COATED (INTERIOR AND EXTERIOR) MEET ANSIAWWA C550, AND BE NSF61 CERTIFIED.
- FOR VALVES LARGER THAN 12" IN USE BUTTERFLY STYLE VALVE.
- VALVE SHALL BE INSTALLED IN CONFORMANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- COPPERHEAD TRACING WIRE PART #12 AWG OR EQUAL SHALL BE USED. IT SHALL BE COLOR CODED TO REFLECT WHAT THE PIPE CARRIES. (BLUE = WATER, PURPLE = REUSE)

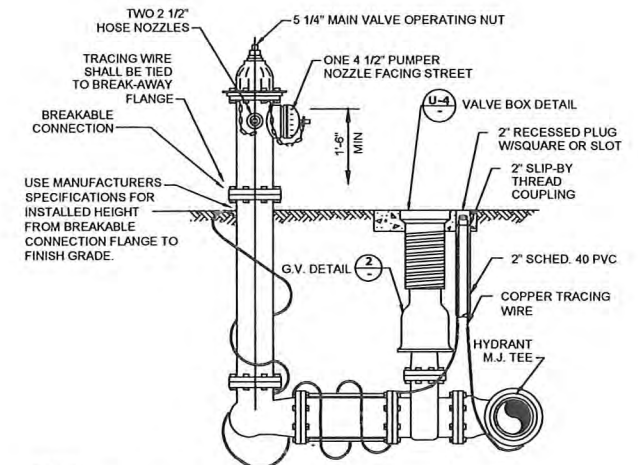
**GATE VALVE DETAIL**  
(WATER AND REUSE ONLY)  
N.T.S.



**NOTES:**

- FOR ALL DEAD-END WATER MAINS.
- BLOW OFF CAPS WILL BE RESTRAINED ACCORDING TO DETAIL 2, PAGE WSR-3 OF THESE STANDARD DETAILS.
- COPPERHEAD TRACING WIRE PART #12 AWG OR EQUAL SHALL BE USED.
- IF AN AUTOMATIC FLUSHING DEVICE IS REQUIRED, IT SHALL BE AN ECLIPSE MODEL #9400 FLUSHING DEVICE.

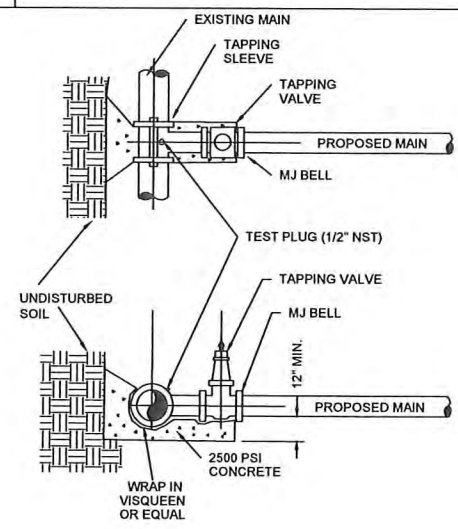
**7 DEAD-END BLOW-OFF DETAIL**  
(PERMANENT)



**NOTES:**

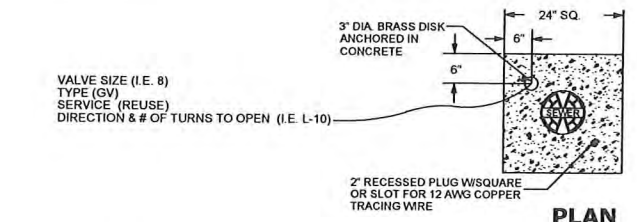
- POTABLE WATER FIRE HYDRANTS SHALL BE PAINTED "SAFETY YELLOW".
- REUSE FIRE HYDRANTS SHALL BE PAINTED PANTONE PURPLE 522C AND TAGGED WITH A PERMANENT LABEL "RECLAIMED WATER-DO NOT DRINK"
- HYDRANT SHALL BE MUELLER SUPER CENTURIAN MODEL A423, AMERICAN B84BV WITH BREAK-AWAY FEATURE. ALL BOLTS SHALL BE SS (BONNET, SAFETY FLANGE, SHOE).
- RESTRAINED JOINTS SHALL BE USED BETWEEN TEE AND HYDRANT.
- HYDRANTS SHALL HAVE "OUT OF SERVICE" TAGS AND BE BAGGED UNTIL MAINS PASS.
- ALL WEEP HOLES SHALL BE PLUGGED.
- HYDRANT LOCATED AT LEAST 3' OR MORE FROM ANY STORM WATER PIPE OR DITCH AND AT LEAST 6' OR MORE FROM ANY SANITARY SEWER STRUCTURE.
- FOR CLEARANCE ISSUES, PLEASE REFER TO CURRENT FLORIDA FIRE PREVENTION CODE REQUIREMENTS.
- COPPERHEAD TRACING WIRE #12 AWG OR EQUAL SHALL BE USED. IT SHALL BE COLOR CODED TO REFLECT WHAT THE PIPE CARRIES. (BLUE = WATER, PURPLE = REUSE)
- FIRE HYDRANT ASSEMBLY SHALL BE BEDDED IN 8" OF CRUSHED SHELL.
- FIRE HYDRANT ASSEMBLY INCLUDES GATE VALVE.

**FIRE HYDRANT ASSEMBLY DETAIL**  
N.T.S.



- EXISTING MAIN SHALL NOT BE TAPPED UNTIL THE ASSEMBLED SLEEVE AND VALVE ARE TESTED IN PLACE AT A MINIMUM OF 150 PSI FOR THIRTY MINUTES.
- UPON SUCCESSFUL TAPPING SLEEVE PRESSURE TEST (NOTE 1), THE THRUST BLOCK SHALL BE POURED AND HAVE SET FOR 24 HRS PRIOR TO TAPPING. READY-MADE THRUST BLOCKS CAN BE USED WITH CITY APPROVAL.
- STAINLESS STEEL TAPPING SLEEVE SHALL BE FORD. ALL HARDWARE SHALL BE STAINLESS STEEL. GASKETS SHALL BE VIRGIN SBR COMPOUND.
- GATE VALVES SHALL BE RESILIENT WEDGE-TYPE MANUFACTURED BY MUELLER OR AMERICAN VALVE. ALL GATE VALVES SHALL BE FUSION BONDED EPOXY COATED (INTERIOR AND EXTERIOR) MEET ANSIAWWA C550, AND BE NSF61 CERTIFIED.
- TAPPING SLEEVES MAY ONLY BE USED WHEN THE TAP DIAMETER IS AT LEAST ONE PIPE SIZE SMALLER THAN THE DIAMETER OF THE MAIN BEING TAPPED.

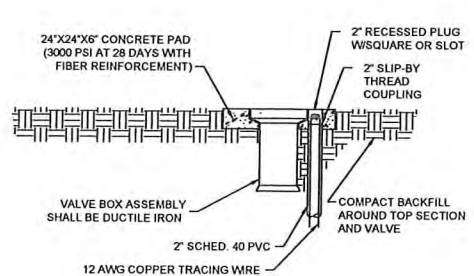
**TAPPING SLEEVE & VALVE DETAIL**  
N.T.S.



**COVER DETAIL**  
APPROPRIATE SERVICE TYPE SHALL BE INDICATED (WATER, SEWER OR REUSE)

- PAVED AREAS: SET CONCRETE PAD AND COVER FLUSH WITH FINISHED GRADE.
- UNPAVED AREAS: SET PAD AND COVER 1 INCH ABOVE FINISHED GRADE.
- VALVES LOCATED IN DITCH AND OVER 4' DEPTH (LINE) MUST USE TRENCH CUTTER VALVE BOX (AMERICAN FLOW CONTROL).
- COPPERHEAD TRACING WIRE #12 AWG OR EQUAL SHALL BE USED. IT SHALL BE COLOR CODED TO REFLECT WHAT THE PIPE CARRIES. (BLUE = WATER, GREEN = SEWER, PURPLE = REUSE)
- PRE-CAST PADS MAY BE USED WITH CITY APPROVAL.

**VALVE BOX DETAIL**  
N.T.S.



**PROFILE**

REV#	DATE	DESCRIPTION	BY

NOT VALID FOR CONSTRUCTION UNLESS SIGNED AND DATED.

**WADETRIM**  
8015 Woodland Center Boulevard  
Suite 1200, Tampa, FL 33614  
813.880.4370 (Toll Free) Fax: 813.888.7215  
www.wadetrtrim.com

**CITY OF VENICE, FLORIDA**  
**PHASE 4**  
**WATER MAIN REPLACEMENT PROGRAM**  
**POTABLE WATER DETAILS**

**VENICE, FLORIDA WATER MAIN REPLACEMENT PROGRAM - PHASE IV**

ISSUED FOR:	DATE:	BY:
50% DESIGN	8/7/15	RB
100% DESIGN	10/2/15	RB
PERMITS	11/25/15	RB
BID SET	1/5/16	RB
100% DESIGN (REVISED)	6/21/16	RB
BID SET (REVISED)	8/24/16	RB

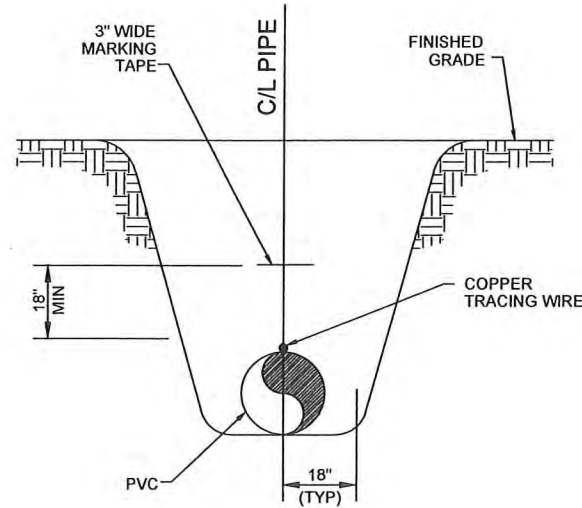
JOB NO. VEN2018-01M  
SHEET

**D1.01**

**PROFESSIONAL ENGINEER**  
**RIKARDO G. BORRERO**  
No. 67101  
STATE OF FLORIDA  
08/30/14

PROJECT MANAGER: Holly Krueger, P.E. FIELD BOOK INFORMATION: - D1.01 - PLOTTED 8/24/2016 11:48 AM BY: DAREY, KRISTIN C:\PW\WORK\VENICE\VENICE PH4-D1.01 - PLOT.DWG





MARKING TAPE AND MESSAGES		
PIPE	TAPE COLOR	MESSAGE
PVC STORM WATER	WHITE	CAUTION STORM WATER OR STORM DRAIN BELOW
POTABLE WATER MAIN	BLUE	CAUTION POTABLE WATER MAIN BELOW
REUSE WATER MAIN	PURPLE	CAUTION REUSE WATER MAIN BELOW
SEWER FORCE MAIN	GREEN	CAUTION SEWER FORCE MAIN BELOW
SEWER & SERVICE LATERALS	GREEN	CAUTION SEWER MAIN BELOW

- 1.) COPPERHEAD TRACING WIRE #12 AWG OR EQUAL SHALL BE ATTACHED TO TOP OF PIPE AT 20' INTERVALS ON ALL RECLAIMED WATER, FORCE, OR POTABLE WATER MAINS. IT SHALL BE COLOR CODED TO REFLECT WHAT THE PIPE CARRIES. (BLUE = WATER, GREEN = SEWER, PURPLE = REUSE)
- 2.) MINIMUM COVER SHALL BE 36" FROM TOP OF PIPE TO FINISHED GRADE. MAXIMUM COVER SHALL BE 42" FROM FINISHED GRADE UNLESS OTHERWISE APPROVED.
- 3.) INSTALLATION OF PIPE SHALL BE IN CONFORMANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- 4.) PAVEMENT RESTORATION SHALL CONFORM WITH DETAIL ENG-2 OF THESE CITY STANDARDS.
- 5.) CONFLICTS - UTILIZE 45° BENDS WITH SEPARATION AS PER CITY DETAILS.
- 6.) ALL UTILITIES (PUBLIC & PRIVATE) THAT CROSS A DITCH/SWALE SHALL BE 36" MIN. BELOW THE ACTUAL/DESIGN BOTTOM OF CONVEYANCE.

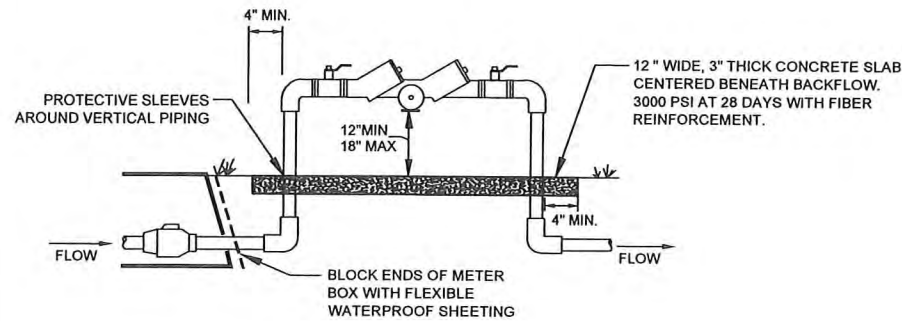
**PIPE TRENCH DETAIL**  
N.T.S.

SERVICE	COLOR	MATERIAL / CLASS
POTABLE WATER MAIN	BLUE	AWWA C900 PVC / DR 18 FUSIBLE C900 PVC / DR 18
RAW WATER MAIN	WHITE	
REUSE MAIN	PURPLE	HDPE PPI PE 3408 / DR 11 (DUCTILE IRON PIPE SIZE)
FORCE MAIN (MIN. 4" DIAMETER)	GREEN	
WATER SERVICE	BLUE	PE (POLYTUBING) / DR 9
REUSE SERVICE	PURPLE	PE (POLYTUBING) / DR 9
GRAVITY SEWER MAIN (MIN. 8" DIAMETER)	GREEN	ASTMD3034 / SDR 26 FUSIBLE PVC / SDR 26
SEWER LATERAL (MIN. 6" DIAMETER)	GREEN	ASTMD3034 / SDR 26 / SDR 35 / SCH 40 PVC

**PIPE MATERIAL SCHEDULE**  
N.T.S.

1. A DRILLING BORE LOG SHALL BE SUBMITTED WITHIN SEVEN (7) DAYS OF PERFORMING THE BORE. DEPTHS SHALL BE RECORDED AT A MAXIMUM OF EVERY TEN (10) FEET. RECORD DRAWINGS SHALL INDICATE ELEVATIONS.
2. ALL DBs SHALL BE HIGH-DENSITY POLYETHYLENE (HDPE) WITH DR-11 MINIMUM OR EQUAL.
3. PIPE SHALL BE COLOR-CODED BY THE PIPE MANUFACTURED DURING FABRICATION INDICATING APPROPRIATE SERVICE.
4. AIR RELEASE VALVES SHALL BE INSTALLED ON THE UPSTREAM SIDE OF THE BORE.
5. WELDED MJ ADAPTERS ARE REQUIRED AT BOTH ENDS OF THE BORE. ONLY STAINLESS STEEL INSERT STIFFENERS WILL BE ACCEPTABLE.
6. TRACE WIRES REQUIRED. SECURE TO PIPE PRIOR TO PULLING.
7. ISOLATION VALVE SHALL BE INSTALLED ON BOTH SIDES OF DIRECTIONAL BORE.
8. DIRECTIONAL BORING MUST BE COMPLETED BETWEEN THE HOURS OF 8:00 A.M. AND 3:00 P.M.
9. ALL D.B.'S CROSSING A DITCH/SWALE MUST BE AT LEAST 36" BELOW ACTUAL/DESIGN BOTTOM OF CONVEYANCE.
10. STORMWATER DRAINAGE FACILITIES ARE NOT CONSIDERED UNDERGROUND FACILITIES BY FLORIDA STATUTE AND THEREFORE WILL NOT BE LOCATED AND MARKED BY THE FLORIDA STATE ONE CALL SYSTEM. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE AND AVOID ALL STORMWATER DRAINAGE FACILITIES AND THE CONTRACTOR WILL BE HELD LIABLE FOR ANY DAMAGES RESULTING FROM THE DIRECTIONAL BORE WORK.

**DIRECTIONAL BORING (DB)**



- 1.) BACKFLOW PREVENTION ASSEMBLY TYPE SHALL BE DETERMINED BY THE CITY OF VENICE UTILITIES DEPARTMENT'S MOST CURRENT CROSS-CONNECTION CONTROL PROGRAM.
- 2.) ALL BACKFLOW PREVENTION ASSEMBLIES SHALL BE APPROVED BY THE UNIVERSITY OF SOUTHERN CALIFORNIA FOUNDATION FOR CROSS-CONNECTION CONTROL AND HYDRAULIC RESEARCH AND/OR ASSE 1013.
- 3.) ALL ABOVE GROUND PIPING SHALL BE RIGID COPPER.
- 4.) THE WATER METER AND BACKFLOW PREVENTER SHALL BE THE SAME SIZE.
- 5.) INSTALLED IMMEDIATELY AFTER THE UTILITY WATER METER UNLESS OTHERWISE APPROVED BY THE CITY OF VENICE UTILITIES DEPARTMENT.
- 6.) NO BRANCH OR TEE CONNECTIONS SHALL EXIST BETWEEN THE WATER METER AND BACKFLOW PREVENTER.

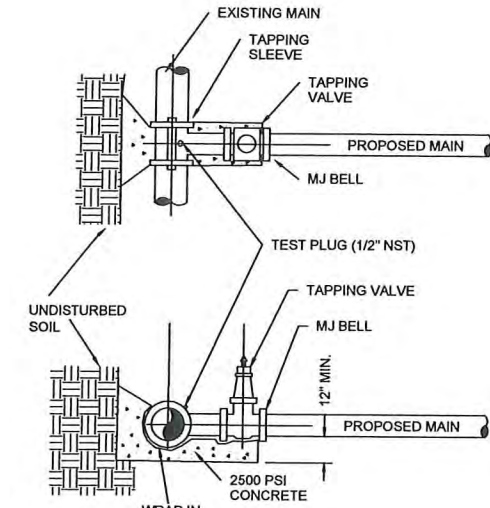
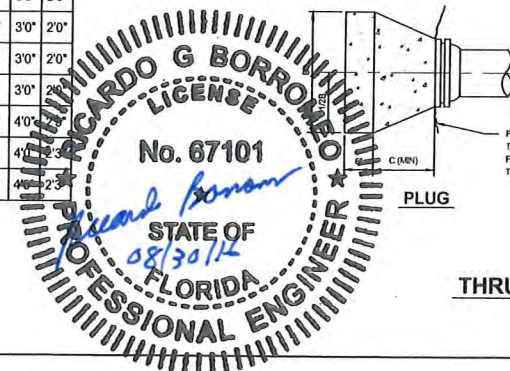
**BACKFLOW PREVENTION ASSEMBLY (RESIDENTIAL, NOT MASTER METERED)**  
N.T.S.

DIAMETER OF PIPE D	90° BEND			45° BEND			22-1/2° BEND			11-1/4° BEND			PLUG		
	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
6"	20"	18"	9"	18"	18"	12"	15"	21"	12"	21"	12"	18"	18"	9"	
8"	29"	20"	12"	20"	20"	15"	15"	21"	12"	21"	12"	20"	20"	12"	
10" & 12"	40"	30"	15"	33"	30"	18"	20"	30"	15"	30"	15"	30"	30"	15"	
14"	50"	36"	18"	36"	36"	18"	26"	36"	18"	36"	18"	36"	36"	18"	
16" & 18"	56"	40"	18"	40"	40"	21"	30"	40"	18"	40"	18"	40"	40"	18"	
20"	70"	40"	21"	70"	40"	21"	39"	40"	21"	26"	40"	21"	60"	40"	21"
24"	80"	50"	24"	80"	50"	24"	40"	50"	24"	29"	50"	24"	70"	50"	24"

NOTE: THRUST BLOCKS WILL NOT BE ACCEPTED, UNLESS OTHERWISE NOTED ON PLANS AND APPROVED BY THE CITY ENGINEER.

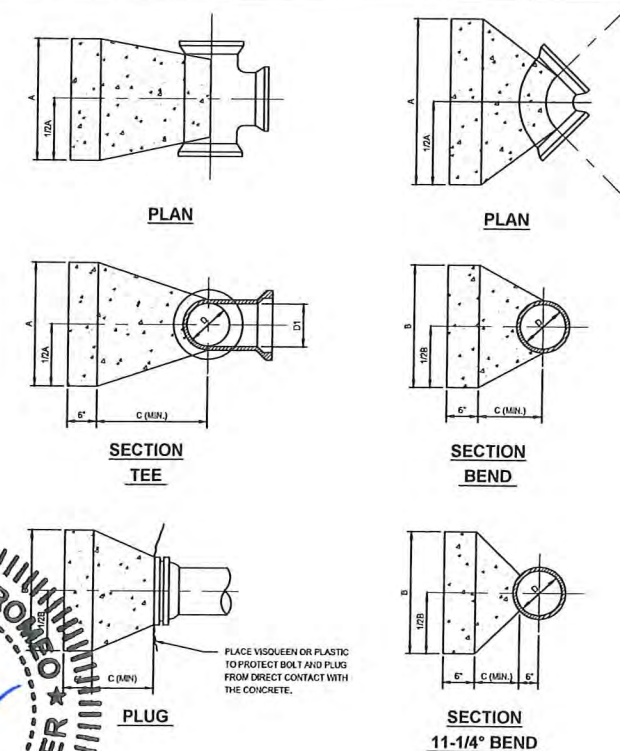
**STANDARD THRUST BLOCKS**

TEE			
DIAMETER D	D1	A	C
8"	8"	20"	21"
12"	8"	20"	21"
16"	8"	20"	21"
12"	12"	30"	20"
16"	12"	30"	20"
20"	12"	30"	20"
24"	12"	30"	20"
16"	16"	40"	20"
20"	16"	40"	20"
24"	16"	40"	20"



- 1.) EXISTING MAIN SHALL NOT BE TAPPED UNTIL THE ASSEMBLED SLEEVE AND VALVE ARE TESTED IN PLACE AT A MINIMUM OF 150 PSI FOR THIRTY MINUTES.
- 2.) UPON SUCCESSFUL TAPPING SLEEVE PRESSURE TEST (NOTE 1), THE THRUST BLOCK SHALL BE POURED AND HAVE SET FOR 24 HRS PRIOR TO TAPPING. READY-MADE THRUST BLOCKS CAN BE USED WITH CITY APPROVAL.
- 3.) STAINLESS STEEL TAPPING SLEEVE SHALL BE FORD. ALL HARDWARE SHALL BE STAINLESS STEEL. GASKETS SHALL BE VIRGIN SBR COMPOUND.
- 4.) GATE VALVES SHALL BE RESILIENT WEDGE-TYPE MANUFACTURED BY MUELLER OR AMERICAN VALVE. ALL GATE VALVES SHALL BE FUSION BONDED EPOXY COATED (INTERIOR AND EXTERIOR) MEET ANSI/AWWA C550, AND BE NSF61 CERTIFIED.
- 5.) TAPPING SLEEVES MAY ONLY BE USED WHEN THE TAP DIAMETER IS AT LEAST ONE PIPE SIZE SMALLER THAN THE DIAMETER OF THE MAIN BEING TAPPED.

**TAPPING SLEEVE & VALVE DETAIL**  
N.T.S.



**THRUST BLOCK DETAILS**  
NO SCALE

REV.#	DATE	DESCRIPTION	BY

NOT VALID FOR CONSTRUCTION UNLESS SIGNED AND DATED.

**WADETRIM**  
8070 Woodland Center Boulevard  
Suite 1200, Tampa, FL 33614  
813.882.4370/888.469.4624 FAX: 813.888.7215  
www.wadetrims.com

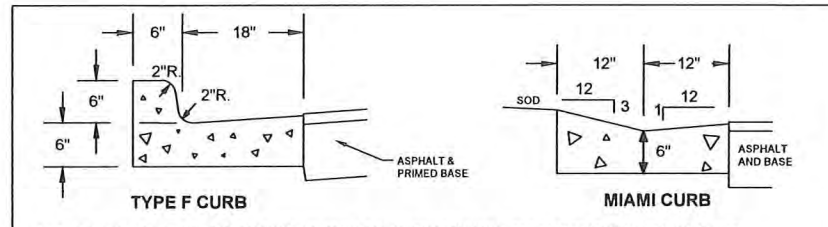
CITY OF VENICE, FLORIDA  
PHASE 4  
WATER MAIN REPLACEMENT PROGRAM  
POTABLE WATER DETAILS

**Venice, FL**  
City on the Gulf

ISSUED FOR: DATE: BY:  
50% DESIGN 8/7/15 RB  
100% DESIGN 10/2/15 RB  
PERMITS 11/25/15 RB  
JOB NO. VEN2018-01M  
SHEET D1.03

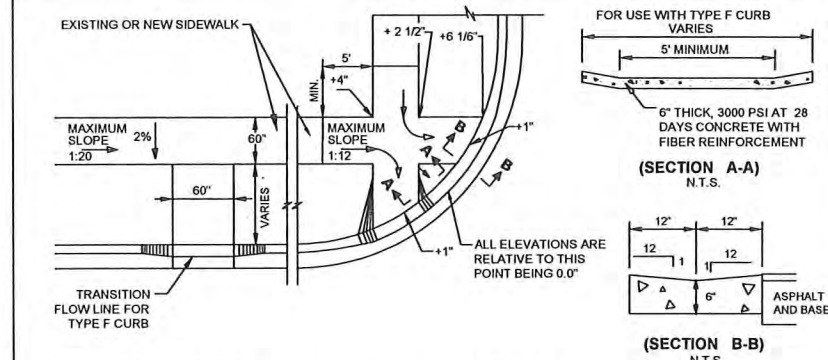
VENICE, FLORIDA WATERMAIN REPLACEMENT PROGRAM - PHASE IV

PROJECT MANAGER: Holly Krenners, P.E.  
C:\PW\WORK\VENICE\0099570\CDT-PITS-VENICE PHA4-01 TO D1.06-DWG - D1.03 - PLOTTED 8/24/2018 11:48 AM BY: DAREY, KRISTIN



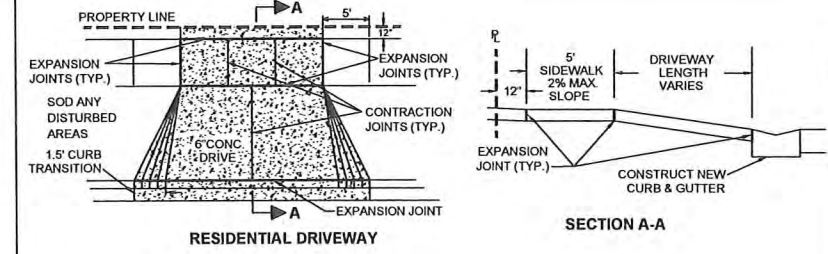
1.) ALL STREETS SHALL HAVE A TWO-FOOT WIDE CONCRETE (3000 PSI AT 28 DAYS WITH FIBER REINFORCEMENT) CURB AND GUTTER, AND MEET OR EXCEED FDOT SPECIFICATIONS UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.

**CURB DETAIL**  
N.T.S.

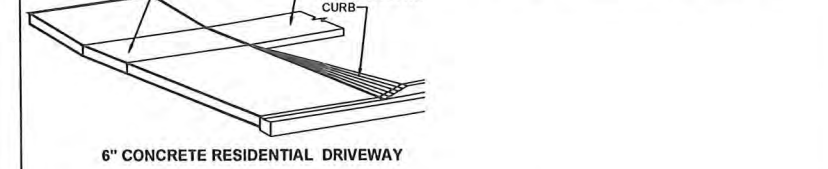


- 1.) ALL CONCRETE RAMPS SHALL BE 4" THICK, INCREASING TO 6" THICK WITHIN 48" OF THE CURB
- 2.) ALL CONNECTIONS TO AN EXISTING SIDEWALK SHALL BE AT AN EXPANSION OR CONTRACTION JOINT
- 3.) THE MAXIMUM RAMP SLOPE SHALL BE 1:12, FOR A VERTICAL DISTANCE OF NOT MORE THAN 6 INCHES.
- 4.) THE MAXIMUM RUNNING SIDEWALK SLOPE SHALL BE 1:20, AND MAXIMUM CROSS SLOPE SHALL BE 2%.
- 5.) ALL SIDEWALK RAMPS AND STREET CONNECTIONS WITHIN THE PUBLIC ROW SHALL HAVE A TACTILE SURFACE.
- 6.) TACTILE SURFACES SHALL MEET THE MOST CURRENT AMERICANS WITH DISABILITIES ACT STANDARDS AND SHALL BE BRICK RED IN COLOR.
- 7.) ALL MATERIALS & METHODS OF CONSTRUCTION SHALL BE IN ACCORDANCE WITH LATEST EDITION OF THE FDOT, "STANDARDS FOR ROAD & BRIDGE CONSTRUCTION". IN ADDITION, CONCRETE SHALL BE 3000 PSI AT 28 DAYS WITH A MAXIMUM 4" SLUMP AND FIBER REINFORCEMENT.

**SIDEWALK RAMP DETAIL**  
N.T.S.



- 1.) SIDEWALKS AND DRIVEWAYS SHALL BE CONSTRUCTED OF 3000 PSI AT 28 DAYS CONCRETE (MAXIMUM 4" SLUMP) WITH FIBER REINFORCEMENT.
- 2.) ALL SIDEWALKS SHALL BE 5' WIDE AND CONSTRUCTED WITH A MAX. CROSS SLOPE OF 2% AND MAX. RUNNING SLOPE OF 5%.
- 3.) CONTRACTION SAW-CUTS SHALL BE CONSTRUCTED EVERY 5' LENGTH OF SIDEWALK. EXPANSION JOINTS SHALL BE CONSTRUCTED AT 50' INTERVALS.
- 4.) 1/2-INCH THICK ASPHALTIC FELT OR "PRESSURE TREATED WOOD" SHALL BE PLACED AT EACH EXPANSION JOINT.
- 5.) EXISTING CURB AND GUTTER SHALL BE REMOVED ONLY AT EXISTING JOINTS.
- 6.) DRIVEWAY WIDTH AND LOCATION SHALL COMPLY WITH ZONING CODES, SECTIONS 122-446, 62-64, 62-65.
- 7.) DRIVEWAY SLOPES SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE FDOT, "ROADWAY AND TRAFFIC DESIGN STANDARDS", INDEX 515.



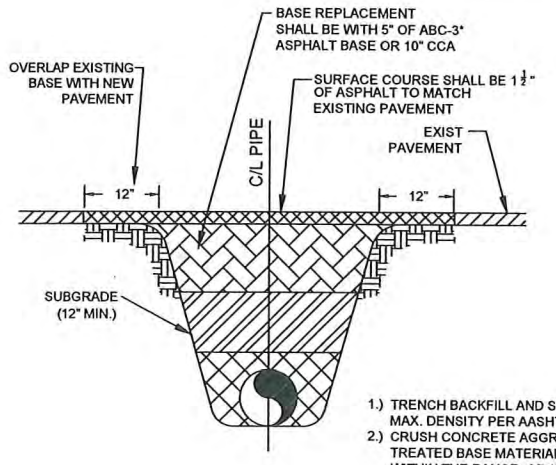
**DRIVEWAY & SIDEWALK DETAIL**  
N.T.S.

- HEAVY DUTY:** COMMERCIAL AND INDUSTRIAL DEVELOPMENTS WITHIN PRIMARY ACCESSWAYS, PARKING LOTS, ETC. WITH EXPOSURE TO TRUCK TRAFFIC
- LIGHT DUTY:** RESIDENTIAL SUBDIVISIONS AND COMMERCIAL DEVELOPMENTS WITHIN LOW VOLUME ACCESSWAYS, PARKING LOTS, ETC. (LESS THAN 5% TRUCK TRAFFIC)

	A	B
SUBGRADE - TYPE B STABILIZED LBR 40 MIN.	12"	8"
ABC3 - ASPHALT BASE	5"	4"
CTB	10"	7"
CCA	10"	7"
ASPHALTIC CONCRETE	1 1/2" OF S-1	1 1/2" OF S-1/S-3

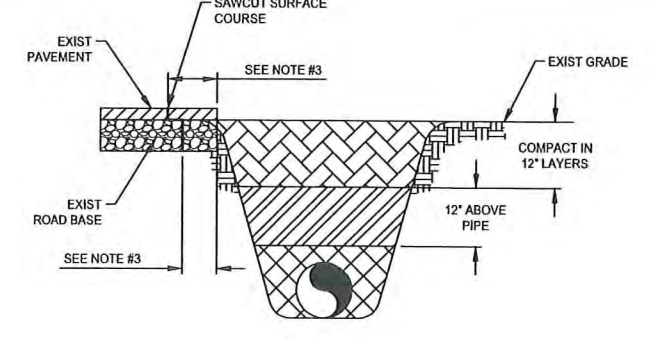
CONCRETE PAVEMENT FOR PARKING LOTS ONLY:  
SUBGRADE - 12" TYPE B STABILIZED LBR 40 MIN.  
PAVEMENT - 6" CONCRETE 3000PSI @28 DAYS WITH MAX. 4" SLUMP & FIBER REINFORCEMENT.

**PAVEMENT STANDARD**  
N.T.S.



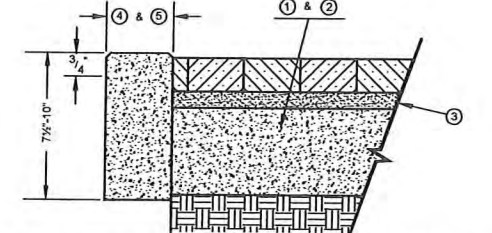
- 1.) TRENCH BACKFILL AND SUBGRADE TO BE COMPACTED TO 98% OF MAX. DENSITY PER AASHTO T-180.
- 2.) CRUSH CONCRETE AGGREGATE MUST HAVE AN LBR ≥ 150. CEMENT TREATED BASE MATERIAL MUST YIELD COMPRESSIVE STRENGTH WITHIN THE RANGE OF 175 TO 275 PSI. SHELL IS NOT AN ACCEPTABLE BASE MATERIAL.

**PAVEMENT RESTORATION DETAIL**  
N.T.S.



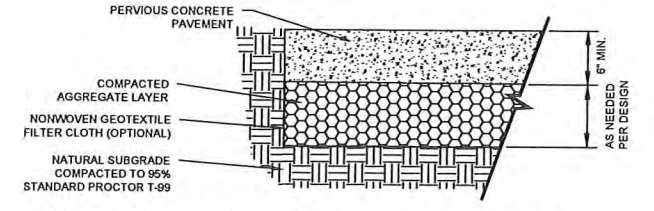
- NOTES:
1. TRENCHED LOCATED UNDER PAVEMENT OR INSIDE THE 2' HORIZONTAL TO 1' VERTICAL SLOPE, DOWNWARD FROM THE ROADWAY SHOULDER OR THE BACK OF CURB AND FROM THE SPRING LINE TO THE BOTTOM OF SUBGRADE OR THE FINISHED SURFACE OF THE EMBANKMENT, AS APPROPRIATE, SHALL BE COMPACTED TO A DENSITY OF 98% AS DETERMINED BY AASHTO T-180.
  2. TRENCHES LOCATED OUTSIDE OF THE 2' HORIZONTAL TO 1' VERTICAL SLOPE DOWNWARD FROM THE ROADWAY SHOULDER OR THE BACK OF CURB AND WHERE NO VEHICULAR TRAFFIC WILL PASS OVER THE TRENCHES, BACKFILL SHALL BE COMPACTED TO A DENSITY APPROXIMATELY EQUAL TO THAT SOIL ADJACENT TO THE TRENCH BUT NOT LESS THAN 95% OF THE MAXIMUM DENSITY AS DETERMINED BY AASHTO T-99 METHOD-C.
  3. REMOVAL AND REPLACEMENT OF PAVEMENT AND ROAD BASE SHALL BE MADE IN ACCORDANCE WITH APPLICABLE LOCAL REGULATIONS.

**TYPICAL TRENCH BACKFILL DETAIL**  
SCALE: NONE



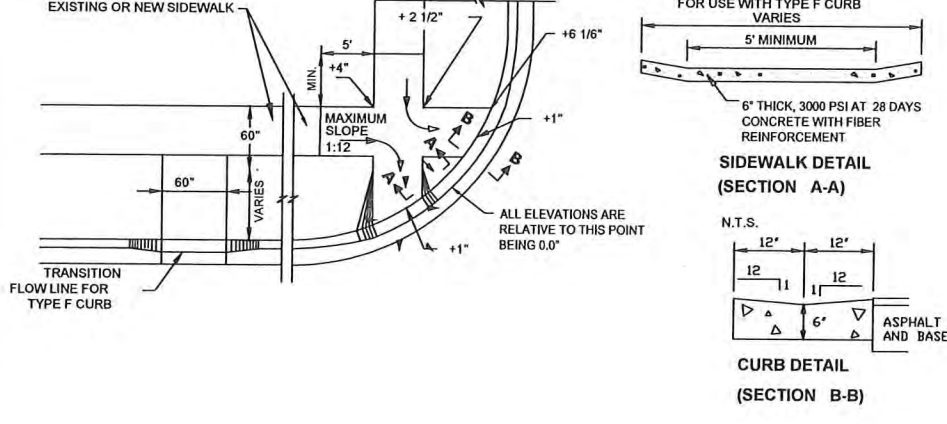
- 1.) 4" POURED CONCRETE 3,000 P.S.I. @ 28 DAYS OR COMPACTED CCA BASE FOR SIDEWALK.
- 2.) 6" POURED CONCRETE 3,000 P.S.I. @ 28 DAYS OR COMPACTED CCA BASE FOR DRIVEWAY.
- 3.) 1" MIN. TO 1 1/2" MAX. SAND BEDDING.
- 4.) 6" POURED CONCRETE BOND BAND SHALL BE INSTALLED WHERE CURB IS NOT PRESENT WITH 3/4" REVEAL AT EDGE OF TRAVEL WAY.
- 5.) 6" POURED CONCRETE BOND BAND SHALL BE INSTALLED ON ALL OUTSIDE EDGES WHERE NO EXISTING OR NEW SOLID STRUCTURE IS PRESENT TO HOLD PAVERS IN PLACE.
- 6.) ALL PAVERS WITHIN TRAFFIC AREAS MUST BE TRAFFIC BEARING.
- 7.) A RIGHT OF WAY USE PERMIT AND AN APPROVED LICENSE AGREEMENT MUST BE OBTAINED IF PAVERS ARE TO BE INSTALLED IN CITY RIGHT OF WAY.
- 8.) PAVER INSTALLATION SPECIFICATIONS APPLY TO PUBLIC AND PRIVATE IMPROVEMENTS EXCEPT FOR NON-TRAFFIC BEARING SIDEWALKS CONSTRUCTED ENTIRELY ON PRIVATE PROPERTY.

**BRICK PAVER INSTALLATION DETAIL**  
N.T.S.



- 1.) FOR USE IN PARKING AREAS AND LOW VOLUME ACCESSWAYS ONLY.
- 2.) ENGINEER OF RECORD SHALL SUBMIT PERVIOUS PAVEMENT DESIGN AND SPECIFICATIONS BASED ON THE SITE SPECIFIC SOIL CONDITIONS, STORMWATER STORAGE REQUIREMENTS AND THE ANTICIPATED TRAFFIC LOADINGS.
- 3.) PERVIOUS CONTRACTORS SHALL BE NRMCA CERTIFIED CRAFTSMEN.
- 4.) PERVIOUS PRODUCERS/SUPPLIERS AND TESTING FIRMS SHALL USE NRMCA CERTIFIED TECHNICIANS.
- 5.) POROUS ASPHALT MAY BE USED AS AN ALTERNATIVE MATERIAL AS DESIGNED BY THE EOR.

**PERVIOUS CONCRETE PAVEMENT DETAIL**  
N.T.S.



- NOTES:
- 1.) ALL CONCRETE RAMPS SHALL BE 4" THICK, INCREASING TO 6" THICK WITHIN 48" OF THE CURB
  - 2.) ALL CONNECTIONS TO AN EXISTING SIDEWALK SHALL BE AT AN EXPANSION OR CONTRACTION JOINT
  - 3.) WHERE PEDESTRIAN MOVEMENT CROSSES RAMP, THE MAXIMUM SLOPE SHALL BE 1:12
  - 4.) ALL RAMPS AND WALKS WITHIN THREE FEET OF A FREQUENTLY USED DRIVE (GREATER THAN DUPLEX) SHALL HAVE A TACTILE SURFACE. RAMPS ARE DEFINED AS WALKS WITH A SLOPE GREATER THAN 1:12 AND/OR ADJACENT TO CURBS.
  - 5.) TACTILE SURFACES SHALL MEET THE MOST CURRENT AMERICANS WITH DISABILITIES ACT STANDARDS AND SHALL BE BRICK RED IN COLOR.
  - 6.) ALL MATERIALS & METHODS OF CONSTRUCTION SHALL BE IN ACCORDANCE WITH LATEST EDITION OF THE FDOT, "STANDARDS FOR ROAD & BRIDGE CONSTRUCTION". IN ADDITION, CONCRETE SHALL BE 3000 PSI AT 28 DAYS WITH A MAXIMUM 4" SLUMP AND FIBER REINFORCEMENT.

**TYPICAL HANDICAPPED RAMP**

NO.	DESCRIPTION	REV#	DATE	BY

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**WADETRIM**  
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CITY OF VENICE, FLORIDA  
PHASE 4  
WATER MAIN REPLACEMENT PROGRAM  
PAVEMENT AND SIDEWALK DETAILS

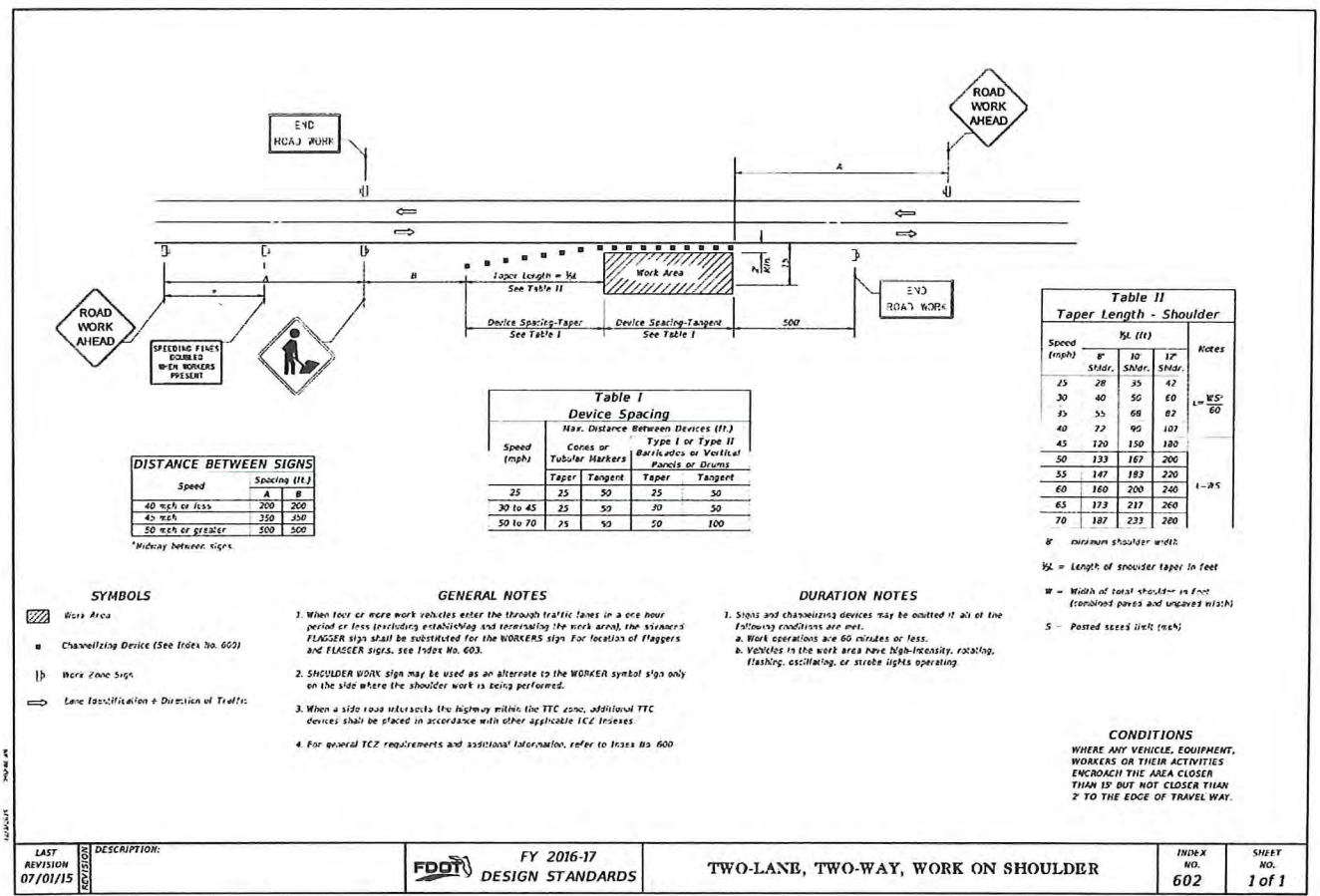
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BID SET 1/5/16 RB  
100% DESIGN 6/21/16 RB  
(REVISED)  
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(REVISED)

JOB NO. VEN2018-01M  
SHEET D1.04

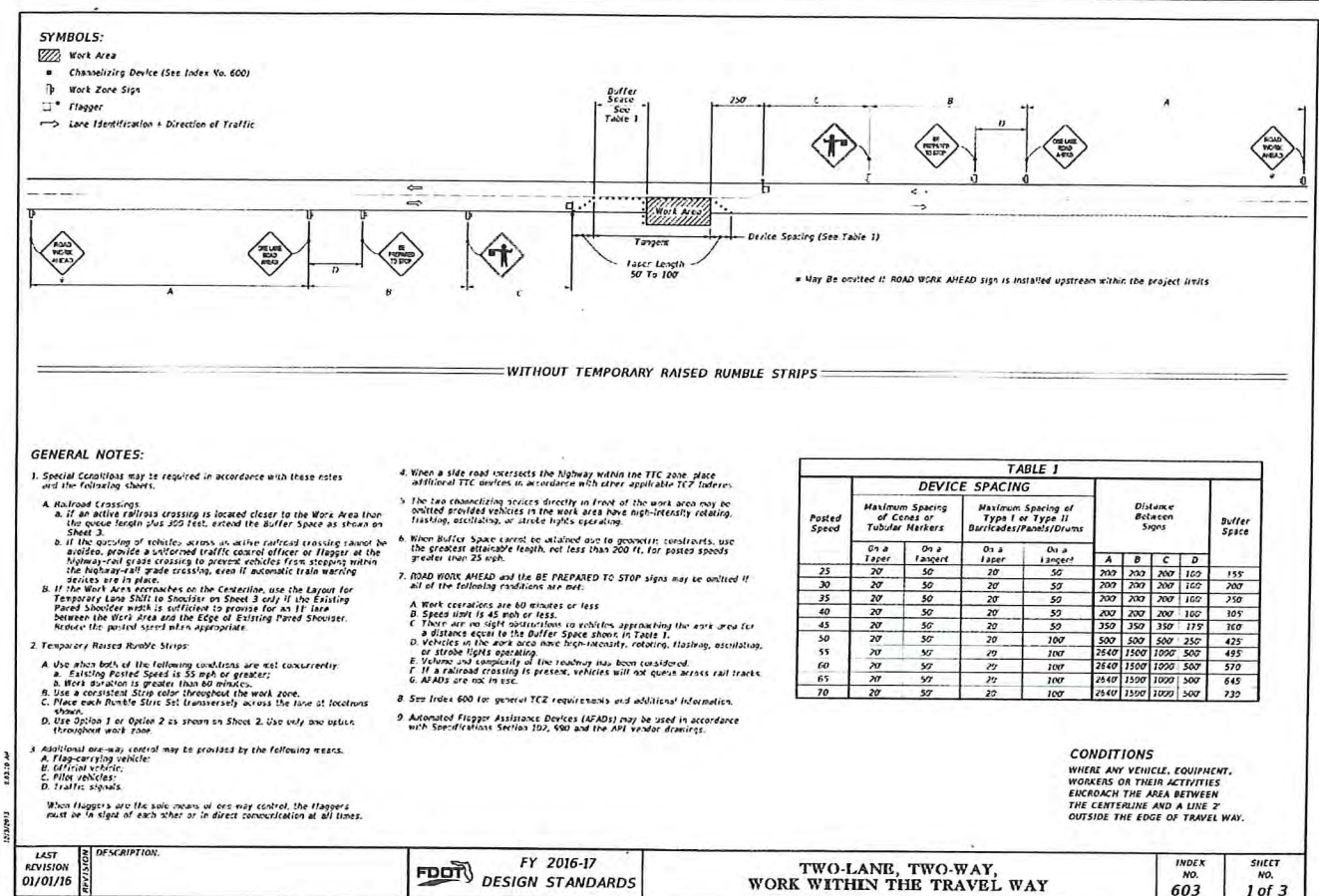
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LICENSE No. 67101  
Professional Engineer  
STATE OF FLORIDA  
08/30/16

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PROJECT MANAGER: Holly Kremer, P.E.  
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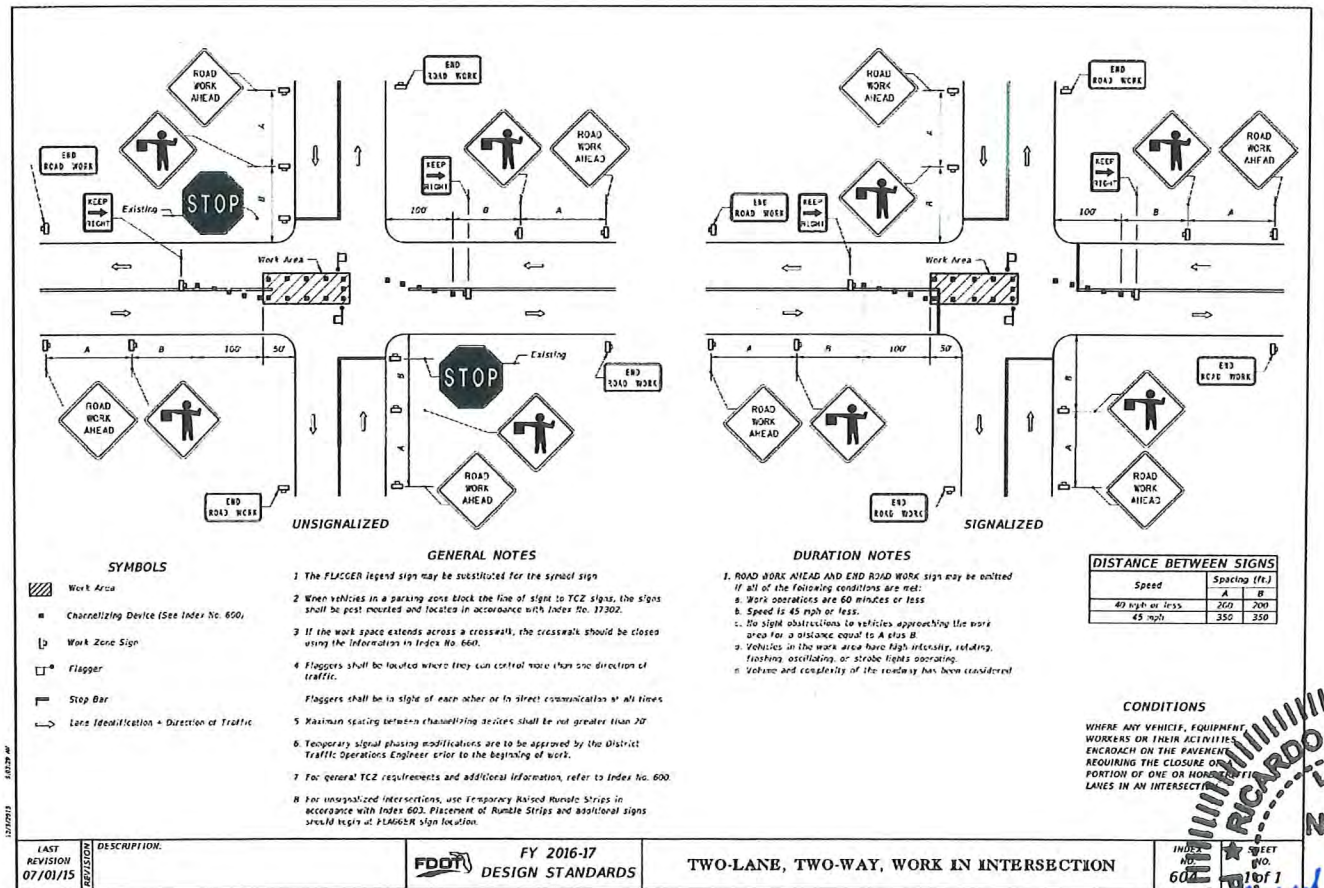
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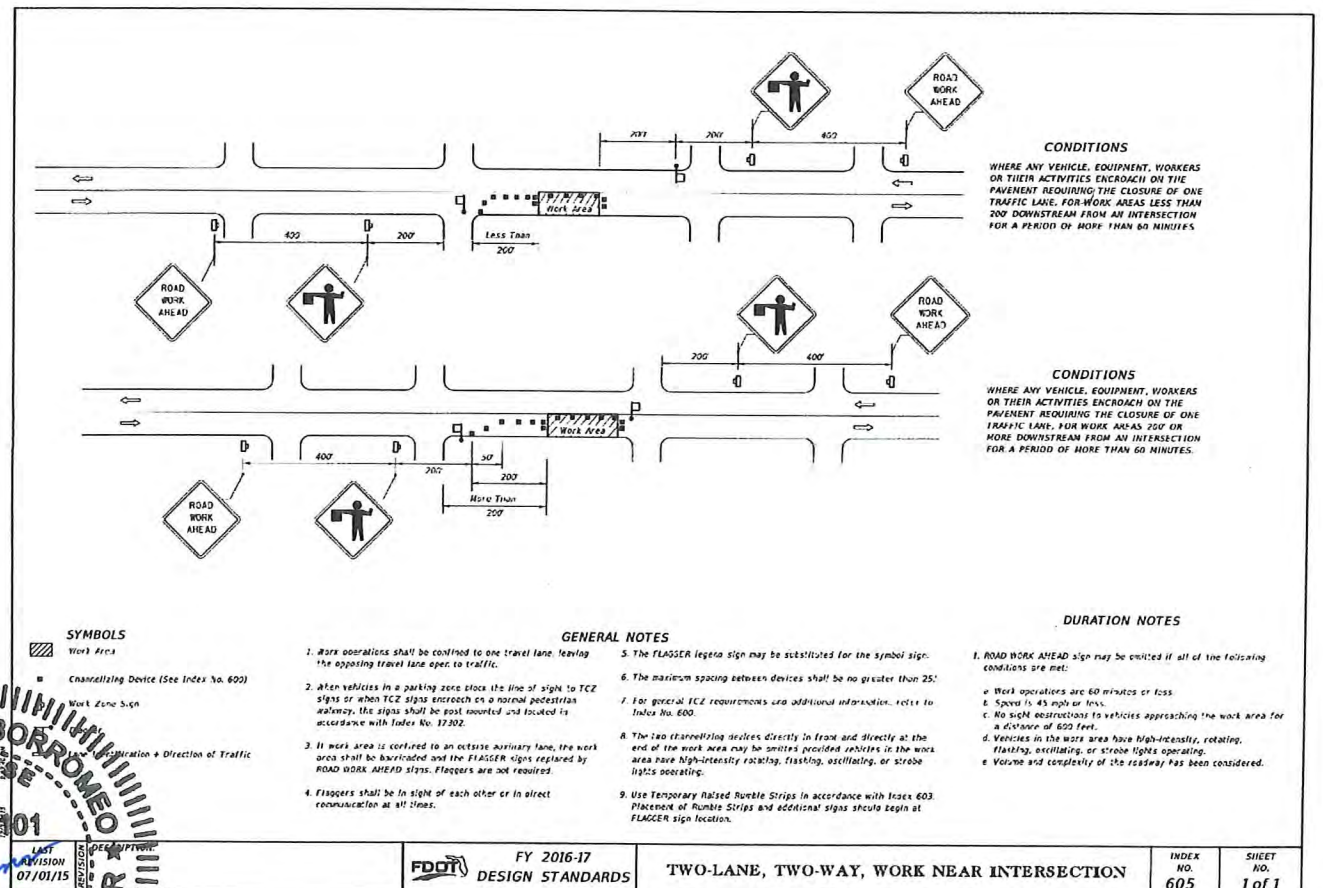
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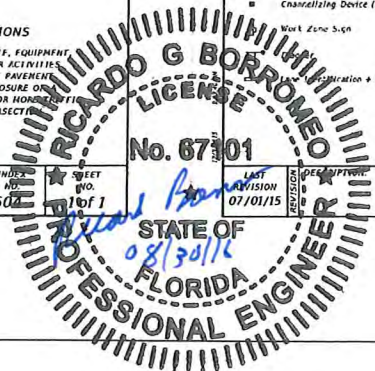
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LAST REVISION: 07/01/15	DESCRIPTION: DESIGN STANDARDS	FY 2016-17	TWO-LANE, TWO-WAY, WORK IN INTERSECTION	INDEX NO. 604	SHEET NO. 1 of 1
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LAST REVISION: 07/01/15	DESCRIPTION: DESIGN STANDARDS	FY 2016-17	TWO-LANE, TWO-WAY, WORK NEAR INTERSECTION	INDEX NO. 605	SHEET NO. 1 of 1
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NOTE: CONTRACTOR SHALL REFERENCE THE LATEST EDITION OF THE FDOT ROADWAY DESIGN STANDARDS FOR COMPLETE DETAILS AND SPECIFICATIONS

CITY OF VENICE, FLORIDA  
 WATER MAIN REPLACEMENT PROGRAM  
 PHASE 4  
 MAINTENANCE OF TRAFFIC PLAN

VENICE, FLORIDA WATERMAIN REPLACEMENT PROGRAM - PHASE IV

ISSUED FOR: DATE: BY:  
 50% DESIGN 8/7/15 RB  
 100% DESIGN 10/2/15 RB  
 PERMITS 11/25/15 RD  
 B D SET 1/5/16 RB  
 100% DESIGN 6/21/16 RB  
 (REVISED)  
 B D SET 8/24/16 RB  
 (REVISED)

JOB NO. VEN2018-01M  
 SHEET D1.05

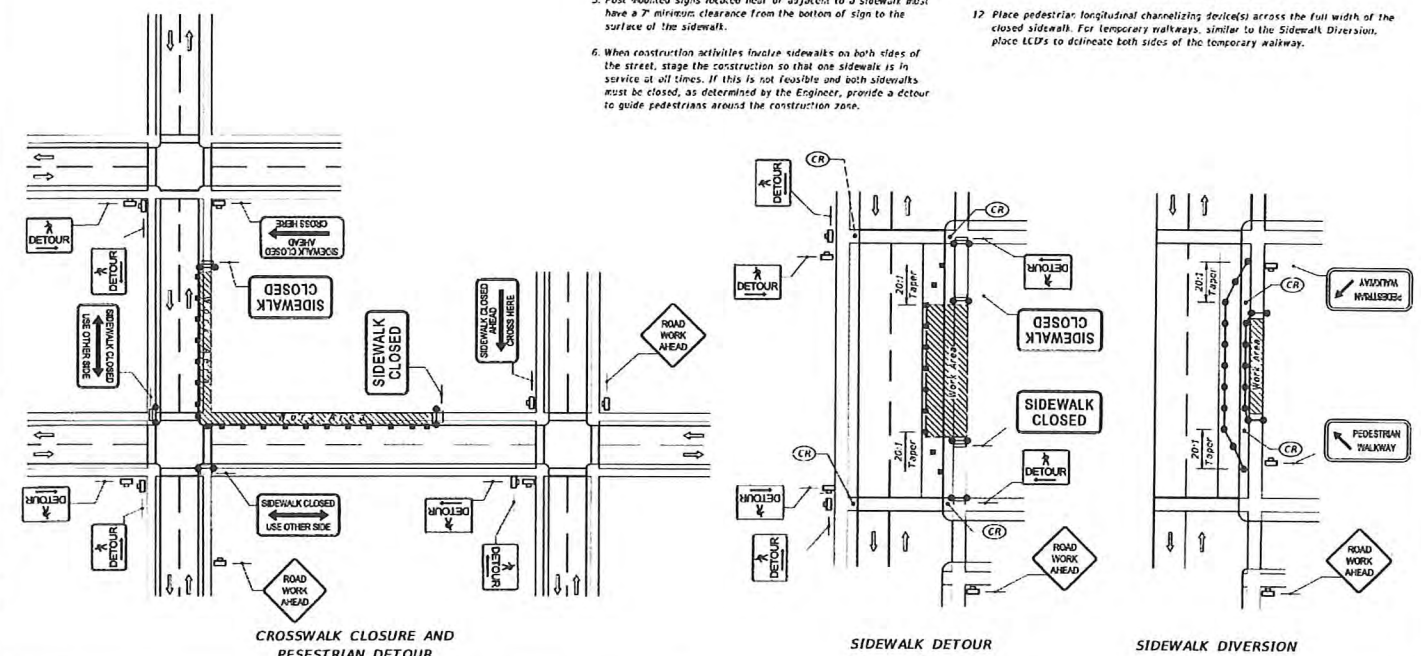
WADETRIM  
 8015 Woodloch Center Boulevard  
 Suite 1000, Tampa, FL 33614  
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DATE: 07/01/15

LAST REVISION	DESCRIPTION
07/01/15	

- SYMBOLS**
- Work Area
  - Channelizing Device (See Index 600)
  - Work Zone Sign
  - Required Locations For Either Temporary or Permanent Curb Ramps
  - Lane Identification & Direction of Traffic
  - Pedestrian Longitudinal Channelizing Device (LCD) with Mounted Work Zone Sign
  - Pedestrian Longitudinal Channelizing Device (LCD)

- GENERAL NOTES**
1. Route pedestrian traffic around work areas when construction activities encroach on the sidewalk for more than 60 minutes using the devices and remedies shown on this Index. Use project specific designs for scenarios not included on this Index.
  2. For spacing of traffic control devices and general TCZ requirements refer to Index 600. The maximum spacing between barricades, vertical panels, drums or tubular markers is 25'.
  3. Use delineators on longitudinal channelizing devices separating the work area from vehicular traffic.
  4. Cover or deactivate pedestrian traffic signal displays controlling closed crosswalks.
  5. Post mounted signs located near or adjacent to a sidewalk must have a 7' minimum clearance from the bottom of sign to the surface of the sidewalk.
  6. When construction activities involve sidewalks on both sides of the street, stage the construction so that one sidewalk is in service at all times. If this is not feasible and both sidewalks must be closed, as determined by the Engineer, provide a detour to guide pedestrians around the construction zone.
  7. Provide a 5' wide temporary walkway, except where space restrictions warrant a minimum width of 4'. Provide a 5' x 5' passing space for temporary walkways less than 5' in width at intervals not to exceed 200'.
  8. Provide a cross-slope with a maximum value of 0.02 for all temporary walkways.
  9. Temporary walkway surfaces and ramps must be stable, firm, slip resistant, and kept free of any obstructions and hazards such as holes, debris, mud, construction equipment and stored materials.
  10. Remove temporary walkways immediately after reopening of the sidewalk, unless otherwise noted in the plans.
  11. Meet the requirements of Index 304 for temporary curb ramps.
  12. Place pedestrian longitudinal channelizing device(s) across the full width of the closed sidewalk. For temporary walkways, similar to the Sidewalk Diversion, place LCDs to delineate both sides of the temporary walkway.



CROSSWALK CLOSURE AND PEDESTRIAN DETOUR

SIDEWALK DETOUR

SIDEWALK DIVERSION

FY 2016-17 DESIGN STANDARDS	PEDESTRIAN CONTROL FOR CLOSURE OF SIDEWALKS	INDEX NO. 660	SHEET NO. 1 of 1
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NOTE: CONTRACTOR SHALL REFERENCE THE LATEST EDITION OF THE FDOT ROADWAY DESIGN STANDARDS FOR COMPLETE DETAILS AND SPECIFICATIONS

REV#	DATE	DESCRIPTION	BY

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 PHASE 4  
 WATER MAIN REPLACEMENT PROGRAM  
 PEDESTRIAN CONTROL  
 FOR CLOSURE OF SIDEWALKS

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50% DESIGN	8/7/15	RB
100% DESIGN	10/2/15	RB
PERMITS	11/25/15	RB
BID SET	1/5/16	RB
100% DESIGN (REVISED)	6/21/16	RB
BID SET (REVISED)	8/24/16	RB

JOB NO. VEN2018-01M  
 SHEET  
**D1.06**