

DELIVER TO:
City of Fort Pierce, Purchasing Division
Room 101
100 North U.S. #1
Fort Pierce, FL 34950

MAIL TO:
City of Fort Pierce Purchasing Division,
Room 101
P.O. Box 1480
Fort Pierce, FL 34954-1480

CITY OF FORT PIERCE



**INVITATION TO BID
and
BIDDER ACKNOWLEDGMENT**

Bid Writer: Gelencia Carter, (772) 467-3102

Bid No: 2024-016

Mandatory Site-Visit:
N/A

Bid Title: KINGS LANDING OFFSITE WATER MAIN UPGRADE – AVENUE B AND INDIAN RIVER DRIVE

Mandatory Site-Visit Location:
N/A

Bid Opening Location:
Purchasing Division Conference Room, Room 101
100 North U.S. #1, 1st Floor
Ft. Pierce, Florida 34950

Bid Due Date & Time:
3:00 PM, TUESDAY, FEBRUARY 20, 2024

If you need any reasonable accommodation for any type of disability in order to participate in this procurement, please contact this department as soon as possible.

Bidder Name:

I hereby certify that this bid is made without prior understanding, agreement, or connection with any corporation, firm, or person submitting a bid for the same materials, supplies or equipment, and is in all respects fair and without collusion or fraud. I agree to abide by all conditions of this bid and certify that I am authorized to sign this bid for the bidder.

Mailing Address:

X _____
Authorized Signature (Manual)

City, State, Zip Code:

Typed or Printed Name:

Type of Entity (Select one):
Corporation _____
Partnership _____
Proprietorship _____

Title:

Incorporated in the State of: _____ **Year:** _____

Delivery in _____ **days, After Receipt Order**

Phone Number:

Payment Terms: Net 30 Days

Fax Number:

FEIN or SS Number:

E-Mail Address:

Local Business: ___ Y ___ N **MWBE:** ___ Y ___ N

Bid Security is attached, when required, in the amount of \$ _____
F.O.B. DESTINATION

If returning as a "No Bid" state reason:

THIS PAGE MUST BE COMPLETED AND RETURNED WITH YOUR BID

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CONSTRUCTION PLANS AND SPECIFICATIONS
ELECTRIC DESIGN
LIQUID EPOXY COATINGS – DATA SHEET AND APPLICATION INSTRUCTIONS

SECTION I

GENERAL CONDITIONS, INSTRUCTIONS AND INFORMATION FOR BIDDERS

1. GENERAL INFORMATION

These documents constitute the complete set of specification requirements and bid forms. All bid sheets and attachments must be executed and submitted in a sealed envelope. **DO NOT INCLUDE MORE THAN ONE BID PER ENVELOPE (CLEARLY MARK BID AS “ORIGINAL” AND REQUESTED NUMBER OF COPIES AS “COPY” ON EACH SET ENCLOSED).** The face to the envelope shall contain Bidder’s name, return address, the date and time of bid opening, the bid number and title. Bids not submitted on the enclosed Bid Form shall be rejected. By submitting a bid, the Bidder agrees to be subject to all terms and conditions specified herein. No exceptions to the terms and conditions shall be allowed. Bidders shall submit two (2) complete sets (one [1] original and one [1] electronic copy (PDF) on a Flash Drive) of their bid complete with all supporting documentation. **SUBMITTAL OF A BID IN RESPONSE TO THIS INVITATION TO BID CONSTITUTES AN OFFER BY THE BIDDER.** Bids, which do not comply with the requirements, may be rejected at the option of the City.

2. DELAYS

The City, at its sole discretion, may delay the scheduled due dates indicated above if it is to the advantage of the City to do so. The City will notify bidders of all changes in scheduled due dates by written addendum.

3. EXECUTION OF BID

Bid must contain a manual signature, in ink, of an authorized representative who has the legal ability to bind the Bidder in contractual obligations in the space provided on Page 1 of Bidder/Proposal Acknowledgment and on the Bid Response Form. FAILURE TO PROPERLY SIGN THE BID SHALL INVALIDATE SAME, AND IT SHALL NOT BE CONSIDERED FOR AN AWARD. Bids must be typed or legibly printed in ink. All corrections made by Bidder to any part of the bid document must be initialed in ink. The original bid conditions and specifications cannot be changed or altered in any way. Altered bids will not be considered. Clarification of bids submitted shall be in letter form, signed by bidders and attached to the bid.

4. NO BID

If not submitting a bid, respond by returning only the Bidder acknowledgment form, marking it “No Bid,” and give the reason in the space provided.

5. BID OPENING

Shall be public, at the address, date, and time specified on the bidder Acknowledgment form. The bid time must be and shall be scrupulously observed. Under no circumstances shall bids delivered after the time specified be considered; such bids will be returned unopened. The City will not be responsible for late deliveries or delayed mail. The time/date stamp clock located in the Purchasing Department shall serve as the official authority to determine lateness of any bid. It is the Bidders sole responsibility to assure that his/her bid is complete and delivered at the proper time and place of the bid opening. Bids, which for any reason are not so delivered, will not be considered. Offers by facsimile,

telegram, or telephone are not acceptable. A bid may NOT be altered by the Bidder after opening of the bids. Bid tabulations will be furnished on the City's web site: <https://www.cityoffortpierce.com> and Demandstar <https://www.demandstar.com>.

6. **TAXES**

The City is exempt from Federal Excise and State Sales Taxes on direct purchases of tangible personal property. The City exemption number is on the face of the Purchase Order. If requested, the Purchasing Director will provide an exemption certificate to the awarded Bidder. Vendors or contractors doing business with the City shall not be exempt from paying sales tax to their suppliers for materials to fulfill contractual obligations with the City Tax Exemption Number in securing such materials. This exemption does not apply to purchases of tangible personal property in the performance of contracts for the City.

7. **DISCOUNTS**

Cash discounts for prompt payment shall not be considered in determining the lowest net cost for bid evaluation purposes.

8. **MISTAKES**

- a. Bidders are expected to examine the specifications, delivery schedule, bid prices, extensions and all instructions pertaining to supplies and services. **FAILURE TO DO SO WILL BE AT BIDDER'S RISK.** In the event of extension error(s), the unit price will prevail and the Bidder's total offer will be corrected accordingly.
- b. Written amounts shall take precedence over numerical amounts. In the event of addition error(s), the unit price and extension thereof will prevail and the Bidder's total offer will be corrected accordingly. Bids having erasures or corrections must be initialed in ink by the Bidder.

9. **INVOICING AND PAYMENT**

Payment for any and all invoice(s) that may arise as a result of a contract or purchase order issued pursuant to this bid specification shall minimally meet the following conditions to be considered as a valid payment request:

- a. A timely submission of a properly certified invoice(s), in strict accordance with the price(s) and delivery elements as stipulated in the contract or purchase order document, and to be submitted to the Engineering Department's Project Manager at the address as stipulated on the Purchase Order.
- b. All invoices submitted shall consist of an original and one (1) copy; clearly reference the subject contract or purchase order number; provide a sufficient salient description to identify goods or service for which payment is requested; contain date of delivery; bid number, original or legible copy of signed delivery receipt including both a manual signature and printed name of a designated City/FPUA employee or authorized agent; be clearly marked as "partial", "complete", or "final" invoice. The City/FPUA will accept partial deliveries unless otherwise specified into contract or purchase order document.
- c. The invoice shall contain the Bidder's Federal Employer Identification Number (F.E.I.N.).

10. **DELIVERY**

Unless actual date is specified (or if specified delivery cannot be met), show number of days required to make delivery after receipt of purchase order or contract in space provided. Delivery time may be a basis for making of award. Delivery shall be during the normal Working hours of the user department, Monday through Friday, unless otherwise specified and incorporated into contract or purchase order document. Delivery shall be to the location specified in the bid specifications.

11. ADDITIONAL TERMS AND CONDITIONS

No additional terms and conditions included with the bid response shall be evaluated or considered. Any and all such additional terms and conditions shall have no force and effect, and are inapplicable to this bid if submitted either purposely through intent or design, or inadvertently appearing separately in transmittal letters, specifications, literature, price lists or warranties. It is understood and agreed that the general and/or any special conditions in these Bid Documents are the only conditions applicable to this bid and the Bidder's authorized signature on the Bid Form attests to this.

12. INTERPRETATION

All Bidders shall carefully examine the Bid Documents. Any ambiguities or inconsistencies shall be brought to the attention of the City in writing prior to the opening of Bids; failure to do so, on the part of the bidder, will constitute an acceptance by the Bidder of any subsequent decision. Any questions concerning the intent, meaning, and interpretation of the Bid Documents shall be requested in writing, and received by the City at least seven (7) days prior to the Bid Opening. Inquiries shall be addressed to the attention of the Contact person as indicated on Page 1. No person is authorized to give oral interpretations of, or make oral changes to, the bid. Therefore, oral statements given before the bid opening will not be binding. Any interpretation of or changes to the bid will be made in the form of a written Addendum to the bid and will be furnished to all Bidders. Receipt of all addenda shall be acknowledged by the Bidders by signing and enclosing said addenda with their bid.

The City will record its responses to inquiries and any supplemental instructions in the form of a written addendum. The City will send a written addendum to all Bidders who requested a bid directly from the City Purchasing Department. All proposers should contact the City at least seven (7) calendar days before the bid opening date to ascertain whether any addendums have been issued. Failure to do so could result in rejection of the bid as unresponsive. The City shall not be responsible for providing said addendum to proposers who receive bid packages from other sources.

13. ADDENDUM

Should revisions to the Bid Documents become necessary, the City will provide a written addendum to all proposers who received a bid package from the City's Purchasing Department. Bidders who obtain Bid Documents from other sources must officially register with the City's Purchasing Department in order to be placed on the mailing list for any forthcoming addendum or their official communications. Failure to register as a prospective Bidder may cause your bid to be rejected as non-responsive if you have failed to submit a bid without an addendum acknowledgment for the most current addendum.

Previous addenda are deemed received when a subsequent addendum is acknowledged. It is the Bidder's responsibility to contact the City in the event that a previous addendum is not

received. Latest addendum shall be signed and returned with the bid as acknowledgment of addendum.

14. DISPUTES

Any Bidder who disputes the bid selection or contract award recommendation shall file such dispute according to the bid protest procedures. These procedures are available upon request from the City.

15. CONFLICT OF INTEREST

All bidders must disclose with their bid the name of any officer, director, or agent who is also an employee of the City. All Bidders must disclose the name of any City employee who owns, directly or indirectly, an interest of five percent (5%) or more in the Bidder's firm or any of its branches.

16. LEGAL REQUIREMENTS

Bidders are required to comply with all provisions of Federal, State, County and local laws and ordinances, rules and regulations, that are applicable to the items being bid. Lack of knowledge by the bidder shall in no way be a cause for relief from responsibility, or constitute a cognizable defense against the legal effect thereof.

17. DRUG-FREE WORK PLACE (DFW)

Preference shall be given to business with Drug-Free Work Place (DFW) Programs. Whenever two or more bids which are equal with respect to price, quality, and service are received by the City for the procurement of commodities or contractual services, a bid received from a business that completes the attached DFW form certifying that it is a DFW shall be given preference in the award process.

18. MINORITY/WOMEN OWNED BUSINESS ENTERPRISE (MWBE)

Minority/Women Owned Business Enterprise (MWBE) indicates a business entity which is owned and operated by a minority. In this instance, minority group members are citizens of the United States or lawfully admitted permanent residents who are Black, Hispanics, Women, Native Americans, Asian-Pacific, Asian-Indian, and eligible others. An MWBE wishing to participate in the City/FPUA procurement process may contact the Purchasing Department for information and assistance.

19. PUBLIC ENTITY CRIMES

No award will be executed with any person or affiliate identified on the Department of Management Services "convicted vendor" list. This list is defined as consisting of persons and affiliates who are disqualified from public contracting and purchasing process because they have been found guilty of a public entity crime. No public entity shall award any contract to, or transact any business in excess of the threshold amount provided in Section 287.017, Florida Statutes for Category Two (currently \$10,000.00) with any person or affiliated on the "convicted vendor" list for a period of thirty-six (36) months from the date that person or affiliate was placed on the "convicted vendor" list unless that person or affiliate has been removed from the list pursuant to Section 287.133(3)(f) Florida Statutes.

20. AWARD

As the best interest of the City may require, the right is reserved to make award(s) by

individual item, group of items, "All or None", or a combination thereof; with one or more suppliers; to reject any or all bids, or waive any minor irregularity or technicality in bids received, and may, at its sole discretion, request a rebid. Bidders are cautioned to make no assumption until the City has entered into a contract or issued a purchase order.

21. EEO STATEMENT

The City is committed to assuring equal opportunity in the award of contracts, and therefore complies with all laws prohibiting discrimination on the basis of race, color, religion, national origin, age or sex.

22. CONTRACTUAL AGREEMENT

The terms, conditions, and provisions in this Invitation to Bid shall be included and incorporated in any final contract or purchase order. The order of precedence will be Bid Document and response, purchase order or contract, and general law. Any and all legal action necessary to enforce a contract or purchase order will be interpreted according to the laws of Florida. The venue shall be Fort Pierce, Florida.

23. GOVERNMENTAL RESTRICTION

In the event that any governmental restrictions are imposed which would necessitate alteration of the material quality, Workmanship or performance of the items offered on this bid prior to their delivery, it shall be the responsibility of the Bidder to notify the Purchasing Department at once, indicating in his/her letter the specific regulation which required an alteration, including any price adjustments occasioned thereby. The City reserves the right to accept such alteration or to cancel the contract or purchase order at no further expense to the City.

24. PATENTS AND ROYALTIES

The Bidder, without exemption, shall indemnify and save harmless, the City, its employees and/or any of its Commission/Board from liability of any nature or kind, including cost and expenses for or on account of any copyrighted, patented, or unpatented invention, process, or item manufactured by the Bidder. Further, if such claim is made, or is pending, the Bidder may, at its option and expense, procure for the City the right to use, replace or modify the item to render it non-infringing. If none of the alternatives are reasonably available, the City agrees to return the article on request to the Bidder and receive reimbursement. If the Bidder used any design, device, or materials covered by letters, patent or copyright, it is mutually agreed and understood, without exception, that the bid prices shall include all royalties or cost arising from the use of such design, device, or materials in any way involved in the Work .

25. ADVERTISING

In submitting a bid, Bidder agrees not to use the results therefrom as a part of any commercial advertising, without the express written approval, by the appropriate level of authority within the City.

26. ASSIGNMENT

Any purchase order or contract issued pursuant to this Invitation to Bid and the monies which may become due hereunder are not assignable except with the prior written approval of the City, through the Purchasing Department.

27. COMPLIANCE WITH OCCUPATIONAL SAFETY AND HEALTH

Bidder certifies that all material, equipment, etc., contained in his/her bid meets all applicable O.S.H.A. requirements. Bidder further certifies that, if he/she is the successful Bidder, and the material, equipment, etc., delivered is subsequently found to be defective in applicable O.S.H.A. requirement in effect on the date of delivery, all costs necessary to comply with the requirements shall be borne by the Bidder.

28. FACILITIES

The City reserves the right to inspect the Bidder's facilities at any reasonable time, during normal Working hours, with prior notice to determine that Bidder has a bona fide place of business, and is a responsible Bidder.

29. REPRESENTATION

A Bidder must have at the time of bid opening, be a fully authorized agent or representative of the product bid, and be capable of producing or providing the items bid, and so certify upon request.

30. DISQUALIFICATION OF BIDDER

Any of the following reasons may be considered as sufficient for the disqualification of a respondent and the rejection of its bid/proposal:

More than one bid from an individual, firm, partnership, corporation, or association under the same or different names will not be considered. Reasonable grounds for believing that a Bidder is involved in more than one bid submittal will be cause for rejection of all bids in which such Bidders are believed to be involved. Any or all bids will be rejected if there is reason to believe that collusion exists between Bidders bids in which the prices obviously are unbalanced and will be subject to rejection.

Failure to pay or satisfactorily settle all bills due for labor and material on former contracts in force at the time of advertisement of proposals. Default under previous contract.

Listing of the respondent by any Local, State or Federal Government on its barred/suspended vendor list.

31. ADJUSTMENTS/CHANGES/DEVIATIONS

No adjustments, changes or deviations shall be accepted on any item unless conditions or specifications of a bid expressly so provide. Any other adjustments, changes or deviations shall require prior written approval, and shall be binding ONLY if issued by the City's Purchasing Department. The Bidder shall bear sole responsibility for any and all costs of claims arising from any adjustments, changes or deviations not properly executed as required herein.

32. INSURANCE

The awarded Bidder(s) shall maintain insurance coverage reflecting the minimum amounts and conditions specified in the attached specifications or the Special Terms and Conditions. In the event the proposer is a governmental entity or a self-insured organization, different requirements may apply. Misrepresentation of any material fact, whether intentional or not, regarding the Bidder's insurance coverage, policies or capabilities may be grounds for rejection of the bid and rescission of any ensuing contract.

33. PUBLIC RECORDS

Sealed bids, proposals, or replies received by an agency pursuant to a competitive solicitation are exempt from § 119.07(1) and s. 24(a), Art. I of the State Constitution until such time as the agency provides notice of an intended decision or until 30 days after opening the bids, proposals, or final replies, whichever is earlier.

34. BID PREPARATION COSTS

Neither the City nor its representatives shall be liable for any expenses incurred in connection with preparation of a response to this Invitation to Bid. Bidders should prepare their bids simply and economically, providing all information and prices as required.

35. COOPERATIVE PURCHASING

Any governmental purchasing authority may participate in this purchase for services and commodities from this successful award.

36. CANCELLATION

This request may be cancelled and any response, bid or proposal may be rejected in whole or in part at any time for good cause when in the best interest of the City and /or the Fort Pierce Redevelopment Agency. Section 2-63(a)(7) of the City Code.

ANY AND ALL SPECIAL TERMS AND CONDITIONS, TECHNICAL REQUIREMENTS, SCOPE OF WORK OR SPECIFICATIONS ATTACHED HERETO WHICH VARY FROM THESE GENERAL CONDITIONS SHALL HAVE PRECEDENCE.

SECTION II

INSURANCE REQUIREMENTS

Please refer to “SAMPLE” Contract, page 34, Article 17, for insurance requirements.

Certificates of Insurance must be completed as follows:

1. Certificate Holder

City of Fort Pierce
Attn: Purchasing Department
100 North U.S. Highway 1
Fort Pierce, FL 34950

2. Additional Insured for General Liability

City and the City’s board members, officials, officers, agents and employees City of Fort Pierce

SECTION III

INSTRUCTIONS TO BIDDERS

1. **PURPOSE**

The City of Fort Pierce is requesting bids from qualified contractors for Kings Landing Offsite Water Main Upgrade from Avenue B to Indian River Drive, Fort Pierce, Florida. The Work associated with this project consists of replacing an existing 6-inch cast iron water main with a new 8-inch PVC water main to include services, fire hydrants, valves, and appurtenances on Avenue B and Indian River Drive per the construction plans. A section of 15-inch gravity sewer main is also being removed.

2. **BID OPENING DATE**

Bids are due on or before **3:00 PM, Tuesday, February 20, 2024.** Hard copies or electronic submission, see Delivery of Bids below.

3. **DELIVERY OF BIDS**

Bid response may be submitted in hard copy or electronically. Please see below instructions for submitting your bid response.

HARD COPY SUBMISSIONS

One (1) original and one (1) USB drive copy of sealed proposals. DO NOT USE RINGED BINDERS OF ANY KIND. All copies will be on 8 ½" x 11" plain, white paper, typed or printed, and signed by the Proposer's contractually binding authority and shall be mailed or delivered to:

OPTIONS FOR ELECTRONIC SUBMISSIONS

Are as follows:

- Via Demandstar Website, (www.demandstar.com). Electronic Bid (E-Bid). Instructions are provided. See Related Documents section for this bid on the City's website, [Bid Postings • Fort Pierce, FL • CivicEngage \(cityoffortpierce.com\)](http://Bid Postings • Fort Pierce, FL • CivicEngage (cityoffortpierce.com))
- By forwarding your response, pdf format to purchasing@cityoffortpierce.com no later than 3:00PM EST. **If you decide to use this submission option, your entire submission must be submitted electronically. Please do not mail hard-copies.**

NOTE: Please ensure that if a third-party carrier (Federal Express, UPS, etc.) is used, that the third party is properly instructed to deliver the Bid Submittal **only** to Room 101, in the Purchasing Division on the first (1st) floor at the above address.

Bids mailed to 100 N.US Highway 1 via the United States Postal Services (USPS) are delivered to the Post Office, not to the physical address and, therefore, may not meet the requirements of Selection 2 above. To be considered, a Bid must be received and accepted in the Purchasing Division before the Bid closing date and time.

Delivery Address:
City of Fort Pierce

Mailing Address:
City of Fort Pierce

**Attn: Purchasing Division,
Room 101
100 North U.S. #1
Fort Pierce, FL 34950**

**Attn: Purchasing Division,
Room 101
P.O. Box 1480
Fort Pierce, FL 34954-1480**

Copies of the bid documents are available electronically from the Purchasing Division by e-mail request to purchasing@cityoffortpierce.com or on the website of Demandstar.com (www.demandstar.com) and the web site of the City of Fort Pierce [Bid Postings • Fort Pierce, FL • CivicEngage \(cityoffortpierce.com\)](http://www.cityoffortpierce.com).

Any bids received after the designated time and date listed above will be returned unopened.

4. SUBMITTAL REQUIREMENTS

It is not necessary to return every page of this document with your bid response; return only the pages that require signatures or information requested below:

- Completed Invitation to Bid Cover Page
- Completed W-9 Form
- Bidder's Checklist
- Completed Bid Response Form(s) (Exhibit D, page 142)
- Forms on pages 113,116, 132-141, 144-146, of Exhibit D
- Business Tax Receipt, (See item numbered 8, below)
- Proof of Insurance (See item numbered 7 below)
- Addenda – issued subsequent to the release of this solicitation must be signed and returned with the firm's Bid. Failure to return signed addenda may be cause for the Bid to be considered non-responsive.

5. INQUIRIES/QUESTIONS

5.1 All inquiries will be in a written format and addressed to the Assistant City Engineer with a copy to the Purchasing Manager:

TO
Lugy Dawson
Environmental Engineer
City of Fort Pierce
100 North U.S. #1
Fort Pierce, FL 34950
Fax: (772) 467-3780
Email: ldawson@fpu.com

COPY
Gelencia Carter
Purchasing Manager
City of Fort Pierce
100 North U.S. #1
Fort Pierce, FL 34950
Fax: (772) 467-3848
Email: purchasing@cityoffortpierce.com

5.2 No inquiries will be received no later than, **5:00 PM, Friday, February 9, 2024.**

6. CERTIFICATE INSURANCE AND BOND REQUIREMENTS

INSURANCE CERTIFICATE

Contractor shall procure, at its own expense, insurance according to insurance requirements listed in **Section IV, page 34, Article 17 of the Sample Contract.** The

insurance shall become effective prior to the commencement of Work by the contractor and shall be maintained in force until completion of job.

BOND REQUIREMENTS

Performance and Payment Bonds will be required of the successful bidder in the amount of 100% of the contract amount. **See Section IV, Sample Contract, Article 18,** of these specifications.

7. BUSINESS TAX RECEIPT (OCCUPATIONAL LICENSE)

Provide a valid Business Tax Receipt (Occupational License) from your jurisdiction with your bid submittal.

8. W-9 TAXPAYER IDENTIFICATION NUMBER AND CERTIFICATION FORM

The Bidders will be required to return a completed W-9 Taxpayer Identification Form with the Bid Response Form.

9. LEGAL REQUIREMENTS

Bidders are required to have a valid State of Florida license with a minimum of classification of "Certified General Contractor" associated with the company/firm.

SECTION IV

UNIT PRICE CONSTRUCTION “SAMPLE” CONTRACT

FOR

KINGS LANDING OFFSITE WATER MAIN UPGRADE AVENUE B AND INDIAN RIVER DRIVE

CITY OF FORT PIERCE BID NO. 2024-016



Prepared by:

The City of Fort Pierce Department of Engineering
John R. Andrews, P.E., City Engineer
100 North U.S. Hwy. 1
Ft. Pierce, FL 34950
(772) 467-3774

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SAMPLE AGREEMENT

THIS AGREEMENT (hereinafter the “Agreement” or “Contract”) entered into this _____ day of _____, 2024 by and between the **CITY OF FORT PIERCE, FLORIDA**, a municipal corporation (hereinafter the “CITY”), and _____ a _____ corporation, with its principal address at _____ (hereinafter “CONTRACTOR”).

WITNESSETH:

WHEREAS, the CITY wishes to contract for the project identified as **Kings Landing Offsite Water Main Upgrade – Avenue B and Indian River Drive, Bid No. 2024-016, Fort Pierce, Florida**, and

WHEREAS the CONTRACTOR has represented to the CITY that its staff is qualified to provide the Work required in this Agreement in a professional, timely manner, and

WHEREAS the CITY has relied upon the above representations by the CONTRACTOR, and

WHEREAS the CITY’s Representative and the City Engineer have recommended that an agreement for aforesaid construction be entered into with the CONTRACTOR.

NOW, THEREFORE, for and in consideration of these premises, of the mutual covenants herein set forth, and for other good and valuable consideration, the sufficiency of which is hereby acknowledged, the parties hereto hereby agree as follows:

ARTICLE 1 DOCUMENTS INCORPORATED BY REFERENCE

This Contract includes the construction of replacing an existing 6-inch cast iron water main with a new 8-inch PVC water main to include services, fire hydrants, valves, and appurtenances on Avenue B and Indian River Drive per the construction plans. A section of 15-inch gravity sewer main is also being removed. The Contract includes the construction drawings and the following:

1. Exhibit “A” - Invitation to Bid No. 2024-016
2. Exhibit “B” - Instructions to Bidders
3. Exhibit “C” - Technical Specifications – Dip and PVC Pipe, Fittings, Valves, and Appurtenances
4. Exhibit “D” - Technical Specifications – Water Distribution Systems
5. Exhibit “E” - Bid Forms
6. Exhibit “F” - General Conditions

All of which are hereby incorporated herein by reference and made a part hereof (hereinafter collectively referred to as the “Contract” or “Contract Documents”). Change Orders issued hereafter, Construction Change Directives, a Direction for a Minor Modification in the Work issued by the CITY, and any other amendments executed by the CITY and the CONTRACTOR shall become and be a part of this Contract. Documents not included or expressly contemplated in this Article 1 do not, and

shall not, form any part of this Contract. The Contract Documents are intended to be complementary, and a requirement in one document shall be deemed to be required in all documents. Where terms found in Exhibit “F,” “General Conditions,” conflict with Contract terms the Contract terms shall prevail.

ARTICLE 2 REPRESENTATIONS OF THE CONTRACTOR

In order to induce the CITY to execute this Contract and recognizing that the CITY is relying thereon, the CONTRACTOR, by executing this Contract, makes the following express representations to the CITY:

2(A) The CONTRACTOR is fully qualified to act as the general contractor for the Project and has, and shall maintain, any and all licenses, permits, or other authorizations necessary to act as the general contractor for, and to construct the Project.

2(B) The CONTRACTOR has become familiar with the Project site and the local conditions under which the Project is to be constructed and operated.

2(C) The CONTRACTOR has received, reviewed, and examined all of the documents which make up this Contract, including, but not limited to all plans and specifications, and has found them to the best of its knowledge, to be complete, accurate, adequate, consistent, coordinated, and sufficient for construction.

ARTICLE 3 INTENT AND INTERPRETATION

With respect to the intent and interpretation of this Contract, the CITY and the CONTRACTOR agree as follows:

3(A) This Contract (along with its exhibits), together with the CONTRACTOR’s and Surety’s performance and payment bonds for the Project constitute the entire and exclusive agreements between the parties with reference to the Project, and said Contract supersedes any and all prior discussions, communications, representations, understandings, negotiations, or agreements.

3(B) Anything that may be required, implied, or reasonably inferred by the documents which make up this Contract, or any one or more of them, shall be provided by the CONTRACTOR for the Contract Price.

3(C) Nothing contained in this Contract shall create, nor be interpreted to create, privity, or any other relationship whatsoever between the CITY and any person except the CONTRACTOR.

3(D) When a word, term, or phrase is used in this Contract, it shall be interpreted or construed first, as defined herein; second, if not defined, according to its generally accepted meaning in the construction industry; and third, if there is no generally accepted meaning in the construction industry, according to its common and customary usage.

3(E) Wherever this Contract calls for “strict” compliance or conformance with the Contract Documents as to matters other than compliance with time limits, providing an updated schedule, and claim and change order procedures, the term shall mean within tolerances as described specifically in

the Contract Documents, or if not specifically described, within industry standards and tolerances for deviation for the specific item or procedure in question.

3(F) The words “include,” “includes,” or “including,” as used in this Contract, shall be deemed to be followed by the phrase, “without limitation.”

3(G) The listing herein of any items as constituting a material breach of this Contract shall not imply that any other, non-listed item will not constitute a material breach of this Contract.

3(H) The CONTRACTOR shall have a continuing duty to read, examine, review, compare and contrast each of the documents which make up this Contract, shop drawings, and other submittals and shall give written notice to the CITY of any conflict, ambiguity, error, or omission which the CONTRACTOR may find with respect to these documents, before proceeding with the affected Work. The express or implied approval by the City Engineer of any shop drawings or other submittals shall not relieve the CONTRACTOR of the continuing duties imposed hereby, nor shall any such approval be evidence of the CONTRACTOR’s compliance with this Contract. The CITY has prepared documents for the Project, including the plans and specifications for the Project, which are accurate, adequate, consistent, coordinated, and sufficient for construction. The CONTRACTOR shall not be liable to the CITY for damage resulting from errors, inconsistencies, or omissions in the Contract Documents unless the CONTRACTOR recognized, or reasonably should have recognized, such error, inconsistency or omission and knowingly failed to report it to the CITY or City Engineer or his designee. If the CONTRACTOR performs any activity knowing it involves an error, inconsistency or omission which was recognized, obvious, or reasonably should have been recognized, without such notice to the CITY, the CONTRACTOR shall assume responsibility for such performance and shall bear the costs for correction.

3(I) In the event of any conflict, discrepancy, or inconsistency among any of the documents which make up this Contract, the following shall control:

- (1) As between this document and the plans or specifications, this document shall govern.
- (2) In the case of any conflict, discrepancy or inconsistency among any of the other Contract documents, the CONTRACTOR shall notify the CITY immediately upon discovery of same for resolution.

ARTICLE 4 CONTRACTOR’S PERFORMANCE

The CONTRACTOR shall perform all of the Work required, implied, or reasonably inferable from this Contract including, but not limited to, the following:

4(A) The CONTRACTOR will complete the entire Work described in the Contract Documents, except as specifically identified therein as the Work of other parties, in accordance with the terms herein, all as may be amended from time to time.

4(B) The furnishing of any and all required surety bonds and insurance certificate(s) and endorsement(s) to the CITY.

4(C) The provision or furnishing, and prompt payment therefore, of labor, supervision, services, materials, supplies, equipment, fixtures, appliances, facilities, tools, transportation, storage, disposal, power, fuel, heat, light, cooling, or other utilities, required for construction and all necessary building permits and other permits or licenses required for the construction of the Project.

4(D) The creation and maintenance of a detailed and comprehensive copy of the drawings, specifications, addenda, change orders and other modifications depicting all as-built construction. Said items shall be submitted to the CITY, along with other required submittals upon Completion of the Project, and receipt of same by the CITY shall be a condition precedent to final payment to the CONTRACTOR. The CONTRACTOR shall prepare and submit final as-built drawings to the CITY.

ARTICLE 5 TIME FOR CONTRACTOR'S PERFORMANCE; DELAYS

5(A) The CONTRACTOR shall commence the performance of this Contract on the date set forth in the Notice to Proceed issued by the City Engineer and shall diligently continue its performance to and until Completion of the Project. **The CONTRACTOR shall accomplish Substantial Completion within ninety (90) calendar days and Final Completion in one hundred (120) calendar days as specified on the Notice to Proceed (sometimes hereinafter referred to as the "Contract Time").** By signing this Contract, the CONTRACTOR agrees that the Contract Time is a reasonable time for accomplishing Completion of the Project. There will be no monetary early completion incentive. The CONTRACTOR shall submit its initial progress schedule in accord with Article 10(G) below.

5(B) The CONTRACTOR shall pay the CITY the sum of **\$500.00** per day for each and every calendar day of unexcused delays in achieving Substantial Completion beyond the date set forth herein for Substantial Completion. Any sums due and payable hereunder by the CONTRACTOR shall be payable, not as a penalty, but as liquidated damages representing an estimate of delay damages likely to be sustained by the CITY, estimated at the time of executing this Contract. When the CITY reasonably believes that Substantial Completion will be inexcusably delayed, the CITY shall be entitled, but not required, to withhold from any amounts otherwise due the CONTRACTOR an amount then believed by the CITY to be adequate to recover liquidated damages applicable to such delays. If and when the CONTRACTOR overcomes the delay in achieving Substantial Completion, or any part thereof, for which the CITY has withheld payment, the CITY shall promptly release to the CONTRACTOR those funds withheld, but no longer applicable, as liquidated damages.

5(C) The term "Substantial Completion," as used herein, shall mean that point at which, as certified in writing by the CONTRACTOR and approved by the CITY, the Project is at a level of completion in strict compliance with this Contract such that the CITY or its designees can enjoy beneficial use or occupancy and can legally occupy, use or operate it in all respects, for its intended purpose. Partial use or occupancy of the Project shall not result in the Project being deemed "substantially complete," and such partial use or occupancy shall not be evidence of Substantial Completion.

5(D) All limitations of time set forth herein are material and are of the essence of this Contract.

5(E) CONTRACTOR agrees to punctually and diligently perform all parts of the Work at the time scheduled as provided herein. In this connection, CONTRACTOR agrees that it will keep himself continually informed of the progress of the job and will, upon its own initiative, confer with the CITY, City Engineer or his designee, so as to plan its Work in coordinated sequence with the Work of the CITY

and of others and so as to be able to expeditiously undertake and perform its Work at the time most beneficial to the entire Project. The CONTRACTOR will be liable for any loss, costs, or damages sustained by the CITY for delays in performing the Work herein, other than for excusable delays, as set forth in 5(F) below, for which CONTRACTOR may be granted a reasonable extension of time.

5(F) If the CONTRACTOR is delayed at any time in the progress of the Work by any separate contractor employed by the CITY, changes in the Work, labor disputes, fire, unusual delay in transportation, unusually severe weather conditions, unavoidable casualties, delays specifically authorized by the CITY, or by causes beyond the CONTRACTOR's control, avoidance, or mitigation, and without the fault or negligence of the CONTRACTOR and/or subcontractor or supplier at any tier, then the Contract Time shall be extended by Change Order for such reasonable time, if any, as the CITY may determine that such event has delayed the progress of the Work, or overall completion of the Work if the CONTRACTOR complies with the notice and documentation requirements set forth herein.

If the CONTRACTOR is delayed, obstructed, hindered, or interrupted for a period of time exceeding seven (7) consecutive calendar days by any act or neglect of the CITY, an adjustment shall be made for any increase in the direct cost of performance of this Contract (excluding profit, extended home office overhead, incidental or consequential damages, or disruption damages) and the Contract modified in writing accordingly. Delays without compensation to the CONTRACTOR as a direct result of an act or neglect of the CITY or City Engineer cannot exceed forty-five (45) days in the aggregate over the term of the project. The CONTRACTOR must assert its right under this Article by giving written notice to the City Engineer, with a copy to the City Representative, within ten (10) calendar days of the beginning of a delay, obstruction, hindrance, or interruption by the CITY. No adjustment shall be made for any delay, obstruction, hindrance, or interruption after final payment under this contract or to the extent that performance would have been so delayed, obstructed, hindered, or interrupted by any other cause, including, but not limited to concurrent cause or fault or negligence of the CONTRACTOR, or for which an equitable adjustment is provided for or excluded under any other term or condition of this Contract. The direct costs described above shall be limited to those direct costs attributable solely to this project, and shall be subject to documentation and verification of costs as required by the CITY. If unit prices are established in the Contract Documents or subsequently agreed upon, they shall form the basis for cost calculations under any claims for delay.

Any claim for extension of time shall be made in writing to the City Engineer, with a copy to the City Representative, not more than ten (10) calendar days from the beginning of the delay. The notice shall indicate the cause of delay upon the progress of Work. If the cause of the delay is continuing, the CONTRACTOR must give such written notice every ten (10) calendar days. Within ten (10) calendar days after the elimination of any such delay, the CONTRACTOR shall submit further documentation of the delay and a formal Change Order request for an extension of time for such delay.

The written request for a time extension shall state the cause of the delay, the number of calendar days extension requested, and such analysis and other documentation as is reasonably requested by the City Engineer or his designee to demonstrate a delay in the progress of the Work or the overall project completion. If the CONTRACTOR does not comply with the above notice and documentation requirements, the claim for the delay shall be waived by the CONTRACTOR. The above

notice and documentation requirements shall also be a condition precedent to the CONTRACTOR's entitlement to any extension of time.

Extensions of time will be the CONTRACTOR'S primary remedy for any and all delays, obstructions, hindrances, or interference. Payment or compensation, for direct costs only, as set forth above, may be made to the CONTRACTOR for hindrances or delays solely caused by the CITY if such delays or hindrances are within the CITY's ability to control and are not partially caused by the CONTRACTOR or any of its agents, subcontractors, or others for whom it is responsible. No payment or compensation will be made for interference, obstructions, hindrances, or delays which are not solely caused by the CITY or which arise from the CITY's actions under Article 8.

Without limitation, the CITY's exercise of its rights under the changes clause, regardless of the extent or number of such changes, or the CITY's exercise of any of its remedies or any requirement to correct or re-execute defective Work, shall not under any circumstances be construed as delays, hindrances, or interference compensable further than as described herein.

ARTICLE 6 CONTRACT PRICE AND CONTRACT PAYMENTS

6(A) Based on Engineering Construction Drawings and Specifications, identified as Bid No. 2024-016, Kings Landing Offsite Water Main Upgrade – Avenue B and Indian River Drive, all of which are hereby incorporated herein by reference and made a part hereof, the CONTRACTOR shall provide all labor and materials required to complete construction as prescribed in the aforementioned Drawings and Specifications, for the sum not to exceed:
**\$ _____ (hereinafter the “Contract Amount” or “Contract Price”
Written Amount**

6(B) Prior to review of the first payment request, the CONTRACTOR must submit to the CITY and receive the CITY's approval for the schedule of values apportioning the entire Contract Amount among the different elements of the Project (hereinafter the “Schedule of Values”) for purposes of periodic and final payment. The Schedule of Values shall be presented in whatever format, with such detail including labor and material breakout, and backed up with whatever supporting information the CITY requests (see also the specifications for additional information). The CONTRACTOR shall not imbalance its Schedule of Values nor artificially inflate any element thereof. The violation of this provision by the CONTRACTOR shall constitute a material breach of this Contract. The Schedule of Values will be utilized for the CONTRACTOR's Payment Requests but shall only be so utilized after it has been approved in writing by the CITY.

6(C) Upon receipt of a proper Payment Request, the City shall make payment within twenty (20) business days. If there is a dispute as to the Payment Request, the City shall notify the CONTRACTOR in writing, commence the dispute resolution within thirty (30) days, and conclude the final decision within forty-five (45) days. Said Payment Request shall be in such format and include whatever supporting information as may be required by the City Engineer or his designee.

Therein, the CONTRACTOR may request payment for ninety-five percent (95%) of that part of the Contract Amount allocable to Contract requirements properly provided, labor, materials, and equipment properly incorporated in the Project, and materials or equipment necessary for the Project

and properly stored at the Project site, or elsewhere if offsite storage is approved in writing by the City Engineer, less the total amount of previous payments received from the CITY. Payment for materials stored offsite shall be at the discretion of the CITY and if approved, the CONTRACTOR shall provide appropriate documentation to substantiate materials are stored in a bonded warehouse or facility, title or other proof of ownership has been transferred to the CITY, and that materials have been purchased and paid for by the CONTRACTOR. Copies of paid invoices must be submitted to the City Engineer with Payment Request. Risk of loss shall be borne by, and insurance must be provided by the CONTRACTOR while in storage and in transit. Hard cost of Builders Risk Insurance to be paid by CONTRACTOR and such cost is not subject to CONTRACTOR's fee.

Amounts reflected in Change Orders may be included in Payment Requests to the extent they are not in dispute and subject to final approval of cost to the CITY for such changes in the Work.

Each Payment Request shall be signed by the CONTRACTOR and shall constitute the CONTRACTOR's representation that the quantity of Work has reached the level for which payment is requested, that the Work has been properly installed or performed in strict compliance with this Contract, and that the CONTRACTOR knows of no reason why payment should not be made as requested.

Thereafter, the City Engineer shall review the Payment Request and may also review the Work at the project site or elsewhere to determine whether the quantity and quality of the Work is as represented in the Payment Request and is as required by this Contract. The amount of each such payment shall be the amount approved for payment by the City Engineer, less such amounts, if any, otherwise owing by the CONTRACTOR to the CITY or which the CITY shall have the right to withhold as authorized by this Contract, subject to approval by the CITY. Approval of the CONTRACTOR's Payment Requests shall not preclude the CITY from the exercise of any of its rights as set forth herein.

The submission by the CONTRACTOR of a Payment Request also constitutes an affirmative representation and warranty that all Work for which the CITY has previously paid is free and clear of any lien, claim, or other encumbrance of any person whatsoever. As a condition precedent to payment, the CONTRACTOR shall, as required by the CITY, also furnish to the City Engineer properly executed waivers of lien or claim, in a form acceptable to the CITY, from all subcontractors, material, men, suppliers or others having lien or claim rights, wherein said subcontractors, material, men, suppliers or others having lien or claim rights, shall acknowledge receipt of all sums due pursuant to all prior Payment Requests and waive and relinquish any liens, lien rights or other claims relating to the Project site. Furthermore, the CONTRACTOR warrants and represents that, upon payment of the Payment Request submitted, title to all Work included in such payment shall be vested in the CITY, even though responsibility for the care and maintenance of said Work rests with CONTRACTOR until Substantial Completion of contracted Project.

6(D) When payment is received from the CITY, the CONTRACTOR shall promptly pay all subcontractors, material men, laborers, and suppliers the amounts they are due for the Work covered by such payment.

6(E) Neither payment to the CONTRACTOR, utilization of the Project for any purpose by the CITY, nor any other act or omission by the CITY shall be interpreted or construed as an acceptance of any Work of the CONTRACTOR not strictly in compliance with this Contract.

After written notice to the CONTRACTOR and a reasonable opportunity to cure, the

CITY shall have the right to refuse to make payment, in whole or in part, and, if necessary may demand the return of a portion or the entire amount previously paid to the CONTRACTOR due to:

- (1) The quality of a portion, or all, of the CONTRACTOR's Work not being in requirements of this Contract; or
- (2) The quantity of the CONTRACTOR's Work not being as represented in the CONTRACTOR's Payment Request, or otherwise; or
- (3) The CONTRACTOR's rate of progress being such that, in the opinion of the City Engineer or his designee, Substantial Completion may be inexcusably delayed; or
- (4) The CONTRACTOR's failure to use Contract funds, previously paid the CONTRACTOR by the CITY to pay CONTRACTOR's project-related obligations including, but not limited to, subcontractors, laborers, and material and equipment suppliers; or
- (5) Claims made, or likely to be made, against the CITY or its property for which the CONTRACTOR or its agents or subcontractors or others for whom it is responsible are, or reasonably appear to be at fault; or
- (6) Loss caused by the CONTRACTOR; or
- (7) The CONTRACTOR's failure or refusal to perform any of its obligations to the CITY after written notice and a reasonable opportunity to cure as set forth above.

In the event that the CITY makes written demand upon the CONTRACTOR for amounts previously paid by the CITY as contemplated in this Subarticle 6(E), the CONTRACTOR shall promptly comply with such demand. The CITY's rights hereunder survive the term of this Contract, are not waived by final payment and/or acceptance, and are in addition to CONTRACTOR's obligations in Article 14 and elsewhere herein.

6(F) When the CONTRACTOR believes that Substantial Completion has been achieved, the CONTRACTOR shall notify the CITY in writing and shall furnish a listing of those matters yet to be finished. The City Engineer or his designee will thereupon conduct a site review to confirm that the Work is in fact substantially complete. Upon confirmation that the CONTRACTOR's Work is substantially complete, the City Engineer or his designee will therein set forth the date of Substantial Completion for approval. After approval the CITY will so notify the CONTRACTOR. If the City Engineer or his designee, through his review, fails to find that the CONTRACTOR's Work is substantially complete, and is required to repeat all, or any portion, of its Substantial Completion review, the CONTRACTOR shall bear the cost of such repeat site review(s) which cost may be deducted by the CITY from any payment then or thereafter due to the CONTRACTOR.

Guarantees and equipment warranties required by this Contract shall commence on the date of Substantial Completion.

Upon Substantial Completion, the CITY shall pay the CONTRACTOR an amount sufficient to increase total payments to the CONTRACTOR to one hundred percent (100%) of the Contract Amount less any amounts attributable to damages, and less one hundred fifty percent (150%) of the costs, as reasonably determined by the CITY for completing all incomplete Work, correcting, and bringing into conformance all defective and nonconforming Work, and handling any outstanding or threatened claims. Such a calculation by the City Engineer of costs for completing all incomplete Work, correcting and bringing into conformance all defective and nonconforming Work, and handling any outstanding or

threatened claims shall not bar the CITY from exercise of its rights elsewhere herein, in Article 16 below, or otherwise as provided by law for any incomplete, defective, or nonconforming Work or claims which are discovered by the CITY after the date of making such calculation or after the date of any partial or final payment, whether or not such incomplete, defective or nonconforming Work or claims were obvious or should have been discovered earlier.

6(G) When the Project is complete and the CONTRACTOR is ready for a final review, they shall notify the CITY Engineer and the CITY Representative thereof in writing. Thereupon, the City Engineer or City Representative will perform a final inspection of the Project. If the City Engineer concurs that the Project is complete and in full accordance with this Contract and that the CONTRACTOR has performed all of their obligations to the CITY hereunder, the CONTRACTOR will furnish a final Request for Payment to the CITY certifying to the CITY that the Project is complete and the CONTRACTOR is entitled to the remainder of the unpaid Contract Price, less any amount withheld pursuant to this Contract. If the City Engineer is unable to issue his final Approval for Payment and is required to repeat the final inspection of the Project, the CONTRACTOR shall bear the cost of such repeat inspection(s), which costs may be deducted by the CITY from the CONTRACTOR's final payment.

6(H) In addition to other remedies of the CITY, actual damages may be withheld or collected for failure to meet the date for final completion as set forth in Article 5 above and elsewhere herein.

6(I) The CITY shall, subject to its rights set forth in Subarticle 6 above, endeavor to make final payment of all sums due the CONTRACTOR within thirty (30) calendar days of the final Request for Payment, with the exception of items in dispute or concerning which the City Engineer has exercised any of his rights to investigate or remove.

ARTICLE 7 INFORMATION AND MATERIAL SUPPLIED BY THE CITY

7(A)(i) The CITY shall furnish to the CONTRACTOR, prior to the execution of this Contract, any and all written and tangible material in its possession concerning existing site conditions within the limits of the Project. Such written and tangible material is furnished to the CONTRACTOR only in order to make complete disclosure of such material as being in the possession of the CITY and for no other purpose. By furnishing such material, the CITY does not represent, warrant, or guarantee its accuracy either in whole, in part, implicitly or explicitly, or at all.

7(A)(ii)(a) Differing Site Conditions: The CONTRACTOR shall promptly, and before such conditions are disturbed, notify the City Engineer in writing of : (1) subsurface or latent physical conditions at the site differing materially from those indicated in the contract, or (2) unknown physical conditions at the site, of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inhering in Work of the character provided for in this contract. The City Engineer or his designee shall investigate the conditions, and if it is discovered that such conditions do materially so differ and cause an increase or decrease in the CONTRACTOR's cost of, or the time required for, performance of any part of the Work under this Contract, whether or not changed as a result of such conditions, an adjustment shall be made, through negotiation and mutual agreement, and the contract modified in writing accordingly.

7(A)(ii)(b) No claim of the CONTRACTOR under this clause shall be allowed unless the CONTRACTOR has given the notice required herein: provided, however, the time prescribed therefore may be extended by the CITY.

7(A)(ii)(c) No claim by the CONTRACTOR for an adjustment hereunder shall be allowed if asserted after final payment under this Contract.

7(B) The CONTRACTOR is responsible for obtaining ALL permits and paying all fees required of the CONTRACTOR by this Contract, or permits and fees customarily the responsibility of the CONTRACTOR. The CONTRACTOR shall coordinate with the CITY and all other authorities having jurisdiction.

7(C) The City Manager and the City Engineer or his designee shall be the sole authorized representatives of the CITY. Other than in matters of public safety or in time of natural disaster or crisis, the CONTRACTOR shall not take direction or act upon information from any City personnel other than the City's authorized representative(s). This provision shall in no way limit the authority of the Procurement Director as described herein or of the City Attorney's Office or Building Department.

ARTICLE 8 CEASE AND DESIST ORDER OWNER'S RIGHT TO PERFORM WORK

8(A) In the event the CONTRACTOR fails or refuses to perform the Work, or any separable part thereof, as required herein, or with the diligence that will ensure its proper, timely completion in accordance with the Contract Documents, the City Engineer may instruct the CONTRACTOR, by written notice, to cease and desist further Work, in whole or in part, or to correct deficient Work. Upon receipt of such instruction, the CONTRACTOR shall immediately cease and desist, or proceed, as instructed by the CITY. In the event the City Engineer issues such instructions to cease and desist, the CONTRACTOR must, within seven (7) calendar days of receipt of the City Engineer's instructions, provide a written, verified plan to eliminate or correct the cause of the City Engineer's order, which plan appears to the City Engineer to be reasonable, actually attainable and in good faith. In the event that the CONTRACTOR fails and/or refuses to provide such a plan or diligently execute an approved plan, then the CITY shall have the right, but not the obligation, to subcontract the Work, or any portion thereof, with its own forces, or with the forces of another contractor, and the CONTRACTOR shall be fully responsible and liable for the costs of the CITY performing such Work, which costs may be withheld from amounts due to the CONTRACTOR from the CITY. The rights set forth herein are in addition to, and without prejudice to, any other rights or remedies the CITY may have against the CONTRACTOR.

If Work completed by the CITY or other contractors affects, relates to, is to be attached onto or extended by later Work of the CONTRACTOR, the CONTRACTOR shall, prior to proceeding with the later Work, and to the extent visible, report any apparent defects or variance from the Contract requirements which would render the CONTRACTOR's later Work not in compliance with the Contract requirements or defective or not in compliance with warranties or other obligations of the CONTRACTOR hereunder.

8(B) The provisions of this Article shall be in addition to the CITY's ability to remove portions of the Work from this Contract and complete it separately.

ARTICLE 9
DUTIES, OBLIGATIONS, AND RESPONSIBILITIES OF THE CONTRACTOR

In addition to any and all other duties, obligations, and responsibilities of the CONTRACTOR set forth in the Contract Documents, the CONTRACTOR shall have and perform the following duties, obligations, and responsibilities to the CITY:

9(A) Reference is hereby made to the continuing duties set forth in Subarticle 3(H) which are by reference hereby incorporated in this Subarticle 9(A). The CONTRACTOR shall not perform Work without adequate plans and specifications, or without, as appropriate, approved shop drawings, or other submittals. If the CONTRACTOR performs Work knowing or believing, or if through exercise of reasonable diligence they should have known that such Work involves an error, inconsistency, or omission in the Contract without first providing written notice to the City Engineer, the CONTRACTOR shall be responsible for such Work and shall correct same bearing the costs set forth in Article 3(H) above.

9(B) All Work shall strictly conform to the requirements of this Contract. To that end, the CONTRACTOR shall be solely responsible for and have control over construction means, methods, techniques, sequences and procedures and for coordinating all portions of the Work, unless otherwise specified in the Contract Documents.

9(C) The Work shall be strictly supervised, the CONTRACTOR bearing full responsibility for any and all acts, errors, or omissions of those engaged in the Work on behalf of the CONTRACTOR, including, but not limited to, all subcontractors and their employees. The CONTRACTOR shall maintain an on-site superintendent while any portion of the Work is being performed.

9(D) The CONTRACTOR hereby warrants that all laborers furnished under this Contract shall be qualified and competent to perform the tasks undertaken, that the product of such labor shall yield only first-class results, that all materials and equipment provided shall be new (unless otherwise specified) and of high quality, that the completed Work will be complete, of high quality, without defects, and that all Work strictly complies with the requirements of this Contract. Any Work not strictly complying with the requirements of this Subarticle shall constitute a breach of this CONTRACTOR's warranty.

9(E) The CONTRACTOR will be responsible for acquiring the permit(s) and calling for routine inspections. The CONTRACTOR will cooperate with and abide by the decision of inspectors having jurisdiction. The CONTRACTOR shall comply with all legal requirements applicable to the Work.

9(F) The CONTRACTOR shall employ and maintain at the Project site only competent, qualified full time supervisory personnel, augmented with part time and offsite supervision, to be identified in the approved general conditions. Key supervisory personnel assigned by the CONTRACTOR to this Project are as follows:

NAME	FUNCTION

If at any time the City Engineer or his designee reasonably determines that any employee of the CONTRACTOR is not properly performing the Work in the best interest of the project, or is hindering the progress of the Work, or is otherwise objectionable, the City Engineer shall so notify the CONTRACTOR, whom shall replace the employee as soon as possible, at no increased cost to the CITY.

9(G) The CONTRACTOR must submit to the City Engineer and the City Representative the CONTRACTOR's schedule for completing the Work prior to submittal of the first application for payment. The CITY Engineer will not review any payment request until such schedule has been submitted and approved. Such schedule shall be in a form as specified in the Technical Specifications which shall provide for expeditious and practicable construction of the Project. The CONTRACTOR's schedule shall be updated no less frequently than monthly (unless the parties otherwise agree in writing) and shall be updated to reflect conditions encountered from time to time and shall apply to the total project. Each such revision shall be furnished to the City Engineer and the City Representative. Strict compliance with the requirements of this Subarticle 9(G) shall be a condition precedent to payment to the CONTRACTOR and failure by the CONTRACTOR to strictly comply with said requirements shall constitute a material breach of this Contract.

9(H) The CONTRACTOR shall keep an updated copy of the Contract Documents at the site. Additionally, the CONTRACTOR shall keep a copy of approved shop drawings and other submittals. All of these items shall be available to the City Engineer during all regular business hours.

9(I) Shop drawings and other such submittals from the CONTRACTOR do not constitute a part of the Contract. The CONTRACTOR shall not do any Work requiring shop drawings or other submittals unless such has been approved in writing by the City Engineer or as required by the Contract Documents. All Work requiring approved shop drawings or other submittals shall be done in strict compliance with such approved documents or Contract requirements. However, approval by the City Engineer shall not be evidence that Work installed pursuant thereto conforms with the requirements of this Contract, and shall not relieve the CONTRACTOR of responsibility for deviations from the Contract unless the City Engineer has been specifically informed of the deviation by a writing incorporated in the submittals and has approved the deviation in writing.

The delivery of submittals shall constitute a representation by the CONTRACTOR that it has verified that the submittals meets the requirements of the Contract, or will do so, including field measurements, materials, and field construction criteria related thereto.

The City Engineer shall have no duty to review partial submittals or incomplete submittals. The CONTRACTOR shall have the duty to carefully review, inspect, examine, and physically stamp and sign any and all submittals before submission of same to the City Engineer.

9(J) The CONTRACTOR shall maintain the Project site and adjacent areas affected by its Work and/or the acts of its employees, material, men, and subcontractors in a reasonably clean condition during performance of the Work. Upon Substantial Completion, the CONTRACTOR shall thoroughly clean the Project site of all debris, trash, and excess materials or equipment. If the CONTRACTOR fails to do so, the CITY may complete the cleanup, by its own forces or by separate contract, and shall be entitled to charge the CONTRACTOR for same through the collection or withholding of funds through the mechanisms provided elsewhere herein.

9(K) At all times relevant to this Contract, the CONTRACTOR shall permit the CITY and its consultants to enter upon the Project site and any offsite lay down areas, and to review or inspect the Work and any materials on any such site, without formality or other procedure.

9(L) The CONTRACTOR recognizes that the CITY may enter into other contracts to perform Work relating to the Project, or to complete portions of the Work itself, the CONTRACTOR shall ensure that its forces reasonably accommodate the forces of the CITY and other contractors hired by the CITY. The CONTRACTOR shall coordinate its schedule with the Work of other contractors. If the CONTRACTOR claims that delay or damage results from these actions of the CITY, it shall promptly submit a claim as provided herein.

9(M) PROTECTION OF PERSONS AND PROPERTY. It shall be the responsibility of the CONTRACTOR to initiate, continue, and supervise all safety programs and precautions in the performance of the terms of this Contract. The CONTRACTOR shall take reasonable precautions for the safety of, and shall provide reasonable protection to prevent damage, injury or loss to its employees, subcontractors' employees, employees of the CITY, and members of the public, the Work itself and unassembled components thereof, and other property at the site or adjacent thereto. As part of the CONTRACTOR's obligations hereunder, the CONTRACTOR shall erect and maintain safeguards, barriers, signs, warnings, etc.

With notice to the CITY Engineer, the CONTRACTOR shall promptly remedy loss or damage to the Work or any person or property described herein caused in whole or in part by the acts of the CONTRACTOR or any subcontractor, sub-subcontractor or material man. This obligation shall be in addition to the requirements of Article 10 herein. The City Engineer may direct the CONTRACTOR to remedy violations of applicable laws, rules, regulations, and interpretations related to safety when and if observed on the site. However, through exercising this authority the City Engineer shall not incur any obligations to monitor, initiate, continue, or supervise safety programs and precautions such to diminish the CONTRACTOR's primary role in same. The City Engineer shall have the right to report suspected safety violations to the Occupational Safety and Health Administration (OSHA).

The CONTRACTOR shall promptly notify the City Engineer upon discovery of any unidentified material which CONTRACTOR reasonably believes to be asbestos, lead, PCB, or other hazardous material, and shall immediately stop Work in the affected area of the Project. The CONTRACTOR shall not be responsible for removal or other Work with regard to such hazardous material unless otherwise agreed between the City Engineer and the CONTRACTOR. In the case of Work stopped hereunder, Article 6 shall apply to claims for delay, hindrance or interference. Work will resume in the affected area of the Project immediately after such time as the hazardous material has been removed or rendered harmless, as certified by an industrial hygienist to be engaged by the CITY.

ARTICLE 10 INDEMNITY

Except for expenses or liabilities arising from the negligence of the CITY, the CONTRACTOR hereby expressly agrees to indemnify and hold the CITY harmless against any and all expenses and liabilities arising out of the performance or default of this Contract as follows:

10(A) CONTRACTOR shall indemnify and hold harmless, to the maximum extent permitted by law, CITY and its officers and employees, from and against any and all liability, damages, losses,

(whether in contract or in tort, including personal injury, accidental death or property damage, and regardless, of whether the allegations are false, fraudulent, or groundless), and costs (including reasonable attorney fees, litigation, arbitration, mediation, and appeal expenses) to the extent caused by the negligence, recklessness, or intentional wrongful misconduct of the CONTRACTOR and persons employed by or utilized by the CONTRACTOR in CONTRACTOR's performance of this Agreement.

10(B) CONTRACTOR's obligation to indemnify and hold harmless shall remain in effect and shall be binding upon CONTRACTOR whether such injury or damage shall accrue, or may be discovered, before or after termination of this Agreement.

10(C) CONTRACTOR's failure to comply with this section's provisions shall constitute a material breach upon which CITY may immediately terminate or suspend this Agreement.

ARTICLE 11 CLAIMS BY THE CONTRACTOR

Claims by the CONTRACTOR against the CITY, other than for time extensions covered by Article 5 hereof, are subject to the following terms and conditions:

11(A) All CONTRACTOR claims against the CITY shall be initiated by a written claim submitted to the CITY. Notice of such claim shall be received by the CITY no later than either ten (10) calendar days after the event, or ten (10) calendar days after the first appearance of the circumstances causing the claim, whichever is sooner, and same shall set forth in detail all known facts and circumstances supporting the claim. Final costs associated with any claim upon which notice has been filed must be submitted in writing to the CITY within thirty (30) calendar days after notice has been received.

11(B) The CONTRACTOR and the CITY shall continue their performance hereunder regardless of the existence of any claims submitted by the CONTRACTOR including claims set forth in Article 6 hereof.

11(C) In the event the CONTRACTOR discovers previously concealed and unknown site conditions which are materially vary from those typically and ordinarily encountered in the general geographical location of the Project, the Contract Price may, with the approval of the CITY, be modified, either upward or downward, upon the written notice of claim made by either party within ten (10) calendar days after the first appearance to such party of the circumstances. Final costs must be submitted within thirty (30) calendar days after such notice is received by the CITY, unless extended by written agreement of the parties. As a condition precedent to the CITY having any liability to the CONTRACTOR due to concealed and unknown conditions, the CONTRACTOR must give the City Engineer written notice of, and an opportunity to observe, such condition prior to disturbing it. The failure by the CONTRACTOR to give the written notice and make the claim as provided by this Subarticle 11(C) and Subarticle 7(A)(ii) shall constitute a waiver by the CONTRACTOR of any rights arising out of or relating to such concealed and unknown condition.

11(D) In the event the CONTRACTOR seeks to make a claim for an increase in the Contract Amount, as a condition precedent to any liability of the CITY therefore, unless emergency conditions exist, the CONTRACTOR shall strictly comply with the requirements of Subarticle 11(A) above and such claim shall be made by the CONTRACTOR before proceeding to execute any Work for which a claim

is made. Failure to comply with this condition precedent shall constitute a waiver by the CONTRACTOR of any claim for additional compensation.

11(E) In connection with any claim by the CONTRACTOR against the CITY for compensation in excess of the Contract Amount, any liability of the CITY for the CONTRACTOR's cost shall be limited to those cost categories set forth in Article 13(E) below.

ARTICLE 12 SUBCONTRACTORS

12(A) Prior to execution of this Contract, the CONTRACTOR shall have identified to the City Engineer, in writing, those parties required to be listed on the proposal form as subcontractors on the Project. Any changes to this list at any time shall be subject to the prior approval of the City Engineer. The City Engineer shall, in writing, state any objections the CITY may have to one or more of such subcontractors. The CONTRACTOR shall not enter into a subcontract with an intended subcontractor to whom the CITY reasonably objects. If at any time the CITY objects to a subcontractor, the CONTRACTOR shall solicit proposals from potential replacements and shall submit the three lowest proposals to the City Engineer, along with the CONTRACTOR's proposed choice as replacement without an increase in bid price.

All subcontracts shall afford the CONTRACTOR rights against the subcontractor which correspond to those rights afforded to the CITY against the CONTRACTOR herein, including those rights of Contract termination as set forth herein.

12(B) Each and every subcontract related to the Project is hereby assigned by the CONTRACTOR to the CITY, contingent upon the termination of this Contract for default or convenience as provided herein, and only as to those subcontracts which the City Engineer accepts in writing directed to the CONTRACTOR. This contingent assignment is subject to the prior rights of any surety obligated under a bond related to this Contract. This contingent assignment will operate prospectively from the effective date of assignment, and will not obligate the CITY to any liabilities existing on the effective date of the assignment, or arising from events, acts, failures to act, facts or circumstances existing prior to the effective date of the assignment. The contracts subject to this contingent assignment shall also be further assignable by the CITY, at the CITY's sole option. The CONTRACTOR shall bear the responsibility of notifying subcontractors of this contingent assignment and including it in all subcontracts in connection with the Project.

ARTICLE 13 CHANGE ORDERS

One or more changes to the Work within the general scope of this Contract may be ordered by Change Order. The CITY may also issue written directions for minor changes in the Work and may issue Construction Change Directives, as set forth below. The CONTRACTOR shall proceed with any such changes or Construction Change Directives without delay and in a diligent manner, and same shall be accomplished in strict accordance with the following terms and conditions:

13(A) Change Order shall mean a written order to the CONTRACTOR executed by the CITY after execution of this Contract, directing a change in the Work. A Change Order may include a change in the contract amount (other than a change attributable to damages to the CONTRACTOR for delay

as provided in Article 6 hereof) or the time for the CONTRACTOR's performance, or any combination thereof. Where there is a lack of total agreement on the terms of a Change Order or insufficient time to execute a bilateral change, the CITY may also direct a change in the Work in the form of a Construction Change Directive, which will set forth the change in the Work and the change, if any, in the Contract Amount or time for performance, for subsequent inclusion in a Change Order; Construction Change Directives shall include a not-to-exceed preliminary price, against which the CONTRACTOR may begin billing (subject to the requirements for pay applications elsewhere herein) as the Work is performed.

- a. The CONTRACTOR shall furnish a price breakdown, itemized as required and within the time specified by the City Engineer, with any proposal for a contract modification.
- b. The price breakdown:
 - (a) Must include sufficient detail to permit an analysis of all costs for material, labor, equipment, and subcontracts; and
 - (b) Must cover all Work involved in the modification, whether the Work was deleted, added, or changed.
- c. The CONTRACTOR shall provide similar price breakdowns to support any amounts claimed for subcontracts.
- d. The CONTRACTOR's proposal shall include a complete justification for any time extension proposed.

13(B) Any change in the contract amount resulting from a Change Order shall be determined as follows:

- (1) By mutual agreement between the CITY and the CONTRACTOR as evidenced by: (a) the change in the Contract Amount being set forth in the Change Order, (b) such change in the Contract Amount, together with any conditions or requirements relating thereto, being initialed by both parties, and (c) the CONTRACTOR's execution of the Change Order; or
- (2) If no mutual agreement occurs between the CITY and the CONTRACTOR, the change in the Contract Amount, if any, shall be derived by determining the reasonable actual costs incurred or savings achieved, resulting from revisions in the Work. Such reasonable actual costs or savings shall include a component for direct job site overhead and profit but shall not include home-office overhead or other indirect costs or components. The calculation of actual costs shall conform to the markup schedule in Article 13(E) below. Any such costs or savings shall be documented in the format and with such content and detail as the CITY requires.

The CONTRACTOR shall promptly submit such documentation and other backup as the CITY may require in evaluating the actual costs incurred.

13(C) The execution of a Change Order by the CONTRACTOR shall constitute conclusive evidence of the CONTRACTOR's agreement to the ordered changes in the Work, this Contract as thus

amended, the Contract Price, and the time for performance by the CONTRACTOR. The CONTRACTOR, by executing the Change Order, waives and forever releases any claim against the CITY for additional time or compensation for matters relating to, arising out of or resulting from the Work included within or affected by the executed Change Order of which the CONTRACTOR knew or should have known.

13(D) The CONTRACTOR shall notify and obtain the consent and approval of the CONTRACTOR's surety with reference to all Change Orders if such notice, consent or approval are required by the CITY, the CONTRACTOR's surety, or by law. The CONTRACTOR's execution of the Change Order shall constitute the CONTRACTOR's warranty to the CITY that the surety has been notified of, and consents to, such Change Order and the surety shall be conclusively deemed to have been notified of such Change Order and to have expressly consented thereto.

13(E) For the purpose of Change Orders, the following definitions of terms apply:

CONTRACTOR's or Subcontractor's Materials shall include the cost of materials, sales tax, and the cost of all transport. The cost of items listed shall be directly related to the Change Order. Indirect costs not specifically related to the Change Order shall not be considered.

CONTRACTOR's or Subcontractor's Direct Labor Cost shall be limited to the hourly rate of directly involved Workmen, employer contributions towards company standard benefits, pensions, unemployment or social security (if any), and employer costs for paid sick and annual leave.

CONTRACTOR's or Subcontractor's Overhead shall include license fees, bond premiums, supervision, wages of timekeepers and clerks, incidentals, home and field office expense, and vehicle expense directly related to the Project, and all other direct Project expenses not included in the CONTRACTOR's materials, direct labor, and equipment costs.

The allowance for Overhead and Profit shall be limited to the following schedule:

1. For the CONTRACTOR, for any Work performed by the CONTRACTOR's own forces, 10% of the Subtotal of Costs to the CONTRACTOR.
2. For the CONTRACTOR, for any Work performed by his Subcontractor, 5% of the amount due the Subcontractor.
3. For each Subcontractor or Sub-subcontractor involved, for any Work performed by their own forces, 10% of their materials and direct labor costs.
4. For each Subcontractor, for Work performed by his Sub-subcontractor(s), 5% of the amount due the Sub-subcontractor.

For Change Orders, the total cost or credit to the Owner shall be based on the following schedule:

CONTRACTOR's Materials Cost

+ CONTRACTOR's Direct Labor Costs
+ CONTRACTOR's Equipment Costs (includes owned/rental equipment)
+ Applicable Subcontractor Costs
Subtotal of Costs to the CONTRACTOR
+ CONTRACTOR's Overhead and Profit
Total Cost or Credit to the Owner

13(F) Nothing Contained in this Article shall be deemed to contradict or limit the terms of Article 6(E) herein.

ARTICLE 14 DISCOVERING AND CORRECTING DEFECTIVE OR INCOMPLETE WORK

14(A) In the event that the CONTRACTOR covers, conceals, or obscures its Work in violation of this Contract or in violation of an instruction from the City Engineer, such Work shall be uncovered and displayed for review by the City Engineer and/or the City's consultants upon request, and shall be reworked at no cost in time or money to the CITY.

14(B) If any of the Work is covered, concealed, or obscured in a manner not covered by Subarticle 14(A) above, it shall, if directed by the City Engineer, be uncovered and displayed for the City Engineer and/or the City's consultants. If the uncovered Work conforms strictly to this Contract, the costs incurred by the CONTRACTOR to uncover and subsequently, replace such Work shall be done by the CITY. Otherwise, such costs shall be borne by the CONTRACTOR.

14(C) The CONTRACTOR shall, at no cost in time or money to the CITY, correct Work rejected by the City Engineer as defective or failing to conform to this Contract. Additionally, the CONTRACTOR shall reimburse the CITY for all testing, review, inspections, and other expenses incurred as a result thereof.

14(D) In addition to its warranty obligations set forth elsewhere herein and any manufacturers' warranties provided on the Project, and in addition to other remedies provided herein or by law to the CITY, the CONTRACTOR shall be specifically obligated to promptly correct any and all defective or nonconforming Work, whether obvious or after-discovered, for a period of twelve (12) months following Substantial Completion upon written direction from the City Engineer.

14(E) The City Engineer may, but shall in no event be required to, choose to accept defective or nonconforming Work. In such event, the Contract Amount shall be reduced by the greater of: (1) the reasonable costs of removing and correcting the defective or nonconforming Work plus 150% of costs, or (2) the difference between the fair market value of the Project as constructed and the fair market value of the Project had it not been constructed in such a manner as to include defective or nonconforming Work. If the remaining portion of the unpaid Contract Amount, if any, is sufficient to compensate the CITY for the acceptance of defective or nonconforming Work, the CONTRACTOR shall, upon written demand from the CITY, pay the CITY such remaining compensation for accepting defective or nonconforming Work. The CONTRACTOR shall have an opportunity to correct any defect or non-conformance prior to the CITY taking the above actions. The contractor, upon written notice of any defect or non-conformance, shall have ten (10) calendar days to make corrections, unless the City

Engineer agrees that the correction will require more than ten (10) calendar days to correct and agrees, in writing, to correct the defect or non-conformance.

ARTICLE 15
CITY'S RIGHT TO SUSPEND CONTRACTOR'S PERFORMANCE

15(A) In addition to the CITY's rights under Article 8 and elsewhere herein, the CITY shall have the right at any time to direct the CONTRACTOR to suspend its performance, or any designated part thereof when in the interests of the CITY. If any such suspension is directed by the CITY, the CONTRACTOR shall immediately comply with same.

15(B) In the event the City Engineer directs a suspension of performance under this Article, through no fault of the CONTRACTOR, if the suspension is lifted other than by termination, the CITY shall pay the CONTRACTOR as full compensation for such suspension the CONTRACTOR's ordinary and reasonable costs, actually incurred and paid, of:

- (1) demobilization and remobilization, including such justifiable costs paid to subcontractors (cost categories and markups limited to those set forth in Article 13(E) above); and
- (2) preserving and protecting Work in place; and
- (3) approved storage of materials or equipment purchased for the Project, including insurance thereon; and
- (4) substantiated extended field office overhead (no home office overhead).

15(C) The CITY may order suspension of the Work in whole or in part for such time as deemed necessary because of the failure of the CONTRACTOR to comply with any of the requirements of this Agreement, and the Agreement's Completion Date shall not be extended on account of any such suspension of Work.

When the City Engineer orders any suspension of the Work under this Subarticle 15(C), the CONTRACTOR shall not be entitled to any payment for Work which the CONTRACTOR performs after notice of suspension and/or during the suspension period and shall not be entitled to any costs or damages resulting from such suspension.

15(D) The CITY's rights under this Article shall be in addition to those contained elsewhere herein or provided by law.

ARTICLE 16
TERMINATION BY THE CITY

The CITY may terminate this Contract in accordance with the following terms and conditions:

16(A) Termination for Convenience. The CITY may, when in the interests of the CITY, terminate performance under this Contract by the CONTRACTOR, in whole or in part, for the convenience of the CITY. The CITY shall give written notice of such termination to the CONTRACTOR specifying when termination becomes effective. The CONTRACTOR shall incur no further obligations

in connection with the Work so terminated, other than warranties and guarantees for completed Work and installed equipment, and the CONTRACTOR shall stop Work when such termination becomes effective. The CONTRACTOR shall also terminate outstanding orders and subcontracts for the affected Work. The CONTRACTOR shall settle the liabilities and claims arising out of the termination of subcontracts and orders. The CITY may direct the CONTRACTOR to assign the CONTRACTOR's right, title, and interest under termination orders or subcontracts to the CITY or its designee. The CONTRACTOR shall transfer title and deliver to the CITY such completed or partially completed Work and materials, equipment, parts, fixtures, information, and contract rights as the CONTRACTOR has in their possession or control. When terminated for convenience, the CONTRACTOR shall be compensated as follows:

16(A)(1) The CONTRACTOR shall submit a termination claim to the CITY specifying the amounts due because of the termination for convenience together with costs, pricing or other data required by the CITY. If the CONTRACTOR fails to file a termination claim within one (1) year from the effective date of termination, the CITY shall pay the CONTRACTOR an amount derived in accordance with Subarticle 16(A)(3) below.

16(A)(2) The CITY and the CONTRACTOR may agree to the compensation, if any, due to the CONTRACTOR hereunder.

16(A)(3) Absent agreement to the amount due to the CONTRACTOR, the CITY shall pay the CONTRACTOR the following amounts:

- (a) Contract costs for labor, materials, equipment, and other services accepted under this Contract.
- (b) Reasonable costs incurred in preparing to perform and in performing the terminated portion of the Work, and in terminating the CONTRACTOR's performance, plus a fair and reasonable allowance for direct job site overhead and earned profit thereon (such profit shall not include anticipated profit or consequential damages); provided however, that if it reasonably appears that the CONTRACTOR would have not profited or would have sustained a loss if the entire Contract would have been completed, no profit shall be allowed or included and the amount of compensation shall be reduced to reflect the anticipated rate of loss, if any.
- (c) Reasonable costs of settling and paying claims arising out of the termination of subcontracts or orders pursuant to Subarticle (A) of this Article (if contingent assignment of such contracts has not been elected as provided herein). These costs shall not include amounts paid in accordance with other provisions hereof. This clause is subject to and the CONTRACTOR shall be limited by the CITY's right to direct the replacement of subcontractors under Article 12 (A).
- (d) The total sum to be paid the CONTRACTOR under this Subarticle 16(A) shall not exceed the total contract amount, as properly adjusted, reduced by the amount of payments otherwise made, and shall in no event include duplication of payment.

16(B) Termination for Cause. If the CONTRACTOR does not perform the Work, or any part thereof, in a timely manner, supply adequate labor, supervisory personnel or proper equipment, or materials, or if it fails to timely discharge its obligations for labor, equipment and materials, or proceeds to disobey applicable law, or otherwise commits a violation of a material provision of this Contract, then the CITY, in addition to any other rights it may have against the CONTRACTOR or others, may terminate the performance of the CONTRACTOR, in whole or in part at the CITY's sole option, and assume possession of the Project site and of all materials and equipment at the site and may complete the Work.

In such case, the CONTRACTOR shall not be paid further until the Work is complete. After Completion has been achieved, if any portion of the Contract Amount, as it may be modified hereunder, remains after the cost to the CITY of completing the Work, including all costs and expenses of every nature incurred, has been deducted by the CITY, such remainder shall belong to the CONTRACTOR. Otherwise, the CONTRACTOR shall pay and make whole the CITY for such cost. This obligation for payment shall survive the termination of the Contract.

In the event the employment of the CONTRACTOR is terminated by the CITY for cause pursuant to this Subarticle 16(B) and it is subsequently determined by a Court of competent jurisdiction that such termination was without cause, such termination shall thereupon be deemed a Termination for Convenience under Subarticle 16(A) and the provisions of Subarticle 16(A) shall apply.

16(C) Termination for Non-Appropriation. The CITY may also terminate this Contract, in whole or in part, for non-appropriation of sufficient funds to complete or partially complete the Project, regardless of the source of such funds, and such termination shall be on the terms of Subarticle 16(A).

16(D) The CITY's rights under this Article shall be in addition to those contained elsewhere herein or provided by law.

ARTICLE 17 INSURANCE

17(A) CONTRACTOR shall be responsible for all damage to person and or property resulting from its negligent acts, reckless or intentional misconduct, errors, or omissions, or those of their subcontractors, agents, or employees in connection with such services and shall be responsible for all parts of its Work, both temporary and permanent.

17(A)(1) Evidence of Insurance

CONTRACTOR shall, at its own expense, procure and maintain throughout the term of this Contract, with insurers acceptable to the CITY, the types and amounts of insurance conforming to the minimum requirements set forth herein. CONTRACTOR shall not commence Work until the required insurance is in force and evidence of insurance acceptable to the CITY has been provided to, and approved by, the CITY. The CITY at all times reserves the right to request such additional documentation and evidence of insurance as in its sole discretion it may require and the CONTRACTOR hereby agrees to provide same.

With respect to the Workers' Compensation/Employer's Liability Insurance, and Business Auto Liability Insurance, an appropriate Certificate of Insurance (which identifies the Project), and a copy of the actual notice of cancellation endorsement(s) as issued on the policy(ies), signed by an authorized

representative of the insurer(s) shall be satisfactory evidence of insurance. With respect to the Commercial General Liability, Watercraft Liability and Pollution Liability Insurance an appropriate Certificate of Insurance (which identifies the Project) signed by an authorized representative of the insurer, and copies of the actual additional insured and notice of cancellation endorsements as issued on the policy(ies), shall be satisfactory evidence of such insurance. With respect to Property Insurance, a fully completed Evidence of Commercial Property Insurance (ACORD Form 28) signed by an authorized representative of the insurance, a copy of the notice of cancellation endorsement and a copy of the waiver of subrogation endorsement shall be satisfactory evidence of such insurance. All endorsements shall be properly completed and signed by an authorized representative of the insurer providing the coverage and shall indicate the policy number.

To the extent CONTRACTOR is permitted to and elects to sub-contract any of the Work performed under this Agreement, CONTRACTOR shall require Subcontractors to maintain any and all insurance required by law. Except to the extent required by law, or as otherwise specifically provided by this Agreement, this Agreement does not establish minimum insurance requirements for Subcontractors.

If the insurance policies expire or terminate during the term of this Agreement CONTRACTOR shall provide CITY with renewal or replacement evidence of the insurance, including endorsements, no less than fifteen (15) days before the expiration or termination of the insurance for which previous evidence of insurance has been provided.

Notwithstanding the prior submission of a Certificate of Insurance, copies of endorsements, or other evidence initially acceptable to CITY, if requested by CITY, CONTRACTOR shall, within thirty (30) days after receipt of a written request from CITY, provide CITY with a certified copy or certified copies of the policy or policies providing the coverage required by this Article 17. CONTRACTOR may redact or omit, or cause to be redacted or omitted, those provisions of the policy or policies which are not relevant to the insurance required by Article 17.

17(A)(2) Workers' Compensation /Employer's Liability Insurance.

Worker's Compensation/Employer's Liability Insurance shall be no more restrictive than that provided by the latest edition of the standard Workers' Compensation Policy, as filed for use in Florida by the National Council on Compensation Insurance (NCCI), without any restrictive endorsements other than any endorsements required by NCCI or the State of Florida. In addition to coverage for the Florida Workers' Compensation Act, where appropriate, coverage is to be included for the Federal Employer's Liability Act and any other applicable Federal or State law.

The policy must be endorsed to waive the insurer's right to subrogate against CITY, and its members, officials, officers and employees in the manner which would result from the attachment of the NCCI Waiver of Our Right to Recover from Others Endorsement (Advisory Form WC 00 03 13) with CITY, and its officials, officers, and employees scheduled thereon.

The policy must be endorsed to provide CITY with thirty (30) days prior written notice of cancellation. The minimum amount of coverage (inclusive of any amount provided by an umbrella or excess policy) shall be:

Part One:	"Statutory"	
Part Two:	\$2,000,000	Each Accident

\$2,000,000 Disease - Policy Limit

17(A)(3) Commercial General Liability Insurance.

Commercial General Liability Insurance shall be no more restrictive than that provided by the latest edition of the standard Commercial General Liability Form (Form CG 00 01) as filed for use in the State of Florida by the Insurance Services Office (ISO), without any restrictive endorsements other than any endorsements specifically required by ISO or the State of Florida.

The coverage may include restrictive endorsements which exclude coverage for liability arising out of:
Mold, fungus, or bacteria
Terrorism
Silica, asbestos, or lead
Sexual molestation”

CITY and its members, officials, officers, and employees shall be included as an “Additional Insured” on a form no more restrictive than ISO form CG 20 10 (Additional Insured – Owners, Lessees, or Contractor).

The policy must be endorsed to provide CITY with 30 days prior written notice of cancellation.

The minimum limits (inclusive of amounts provided by an umbrella or excess policy) shall be:

General Aggregate	\$2,000,000
Products/Completed Operations Aggregate	\$2,000,000
Personal and Advertising Injury	\$2,000,000
Each Occurrence	\$2,000,000

CONTRACTOR shall continue to maintain products/completed operations coverage in the amounts stated above for a period of three (3) years after the Final Completion of the Work. The insurance shall be on a form no more restrictive than, and shall cover those sources of liability which would be covered by Coverage A of, the latest occurrence form edition of the Commercial General Liability Coverage Form (ISO Form CG 00 01), or of the occurrence Products/Completed Operations Liability Coverage Form (ISO Form CG 00 37), as filed for use in the State of Florida by ISO, without any restrictive endorsements other than those than those which, under an ISO filing, must be attached to the policy (i.e., mandatory endorsements).

17(A)(4) Automobile Liability Insurance.

Automobile Liability Insurance shall be no more restrictive than that provided by Section II (Liability Coverage) of the most recent version of the standard Business Auto Policy (ISO Form CA 00 01) without any restrictive endorsements, including coverage for liability contractually assumed, and shall cover all owned, non-owned, and hired autos used in connection with the performance of the Work.

The policy must be endorsed to provide CITY with 30 days prior written notice of cancellation.

Such insurance shall not be subject to any aggregate limit and the minimum limits (inclusive of any amounts provided by an umbrella or excess policy) shall be:

Each Occurrence Bodily Injury and Property Damage Liability Combined	\$2,000,000
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17(A)(5) Watercraft Liability

To the extent watercraft are utilized, the CONTRACTOR shall purchase and maintain, or cause its subcontractors to purchase and maintain, insurance which shall, at a minimum, cover the CONTRACTOR and subcontractor for injuries or damage arising out of the use of all owned, non-owned and hired watercraft.

The insurance shall include the CITY and its members, officials, officers and employees as additional insureds.

The policy must be endorsed to provide CITY with 30 days prior written notice of cancellation.

The limits applicable to watercraft liability (inclusive of any amounts provided by an umbrella or excess policy) shall be:

Each Occurrence/Annual Aggregate	\$2,000,000
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17(A)(6) Pollution Legal Liability

Pollution Legal Insurance shall cover CONTRACTOR for liability resulting from pollution or other environmental impairment arising out of, or in connection with, Work performed under this Agreement, or which arises out of, or in connection with this Agreement, including coverage for clean-up of pollution conditions and third party bodily injury and property damage claims arising from pollution conditions. Such insurance shall also include transportation coverage and non-owned disposal site coverage.

The policy must be endorsed to provide CITY with thirty (30) days prior written notice of cancellation

Coverage must either be on an occurrence basis; or, if on a claims-made basis, the coverage must respond to all claims reported within, three (3) years following the period for which coverage is required and which would have been covered had the coverage been on an occurrence basis.

The minimum limits (inclusive of any amounts provided by an umbrella or excess policy) shall be:

Each Claim	\$2,000,000
Annual Aggregate	\$2,000,000

The CITY and the CITY's members, officials, officers, and employees shall be included as an "Additional Insureds" on the policy.

The Maximum permissible deductible or self-insured retention on the policy shall be \$50,000 per claim. The payment of any amount owed under any deductible or self-insured shall be the sole responsibility of CONTRACTOR and CONTRACTOR shall pay on behalf of the CITY or CITY's members, officials,

officers, agents and employees any deductible or self-insured retention applicable to a claim against the CITY or the CITY's officials, officers, agents and employees.

17(A)(7) Property/Builder's Risk Insurance

CONTRACTOR shall provide, in a policy acceptable to the CITY, "all risk" (i.e., Special Form) property or builder's risk insurance on all such construction, additions, modifications, machinery, and equipment. The policy shall be issued on a non-reporting form of policy. The amount of the insurance shall be no less than the Contract Amount.

The maximum deductible for other than windstorm or hail shall be \$10,000 per occurrence. The maximum deductible per occurrence for windstorm and hail shall be the greater of \$20,000 or 5% of the Contract Amount. CONTRACTOR shall be responsible for the payment of such deductible.

The policy must be endorsed to provide the CITY with thirty (30) days prior written notice of cancellation. The policy must be endorsed to waive the insurer's right to subrogate against CITY, and its members, officials, officers, and employees.

17(A)(8) General Conditions

The insurance provided by the CONTRACTOR shall apply on a primary basis to and shall not require contribution from, any other insurance or self-insurance maintained by CITY or CITY's members, officials, officers, or employees. Any insurance, or self-insurance, maintained by the CITY shall be in excess of, and shall not contribute with, the insurance provided by CONTRACTOR.

Except as otherwise specifically authorized in this Agreement, no deductible or self-insured retention for any required insurance provided by CONTRACTOR pursuant to this Agreement will be allowed. To the extent any required insurance is subject to any deductible or self-insured retention (whether with or without approval of CITY), CONTRACTOR shall be responsible for paying on behalf of CITY (and any other person or organization CONTRACTOR has, in this Agreement, agreed to include as an insured for the required insurance) any such deductible or self-insured retention.

Compliance with these insurance requirements shall not limit the liability of CONTRACTOR, its subcontractors, sub-subcontractors, employees, or agents. Any remedy provided to the CITY or CITY's members, officials, officers, or employees by the insurance provided by CONTRACTOR or the CITY shall be in addition to and not in lieu of any other remedy (including, but not limited to, as an indemnitee of CONTRACTOR) available to the CITY under this Contract or otherwise.

Neither approval nor failure to disapprove insurance furnished by CONTRACTOR shall relieve CONTRACTOR from the responsibility to provide insurance as required by this Contract.

17(A)(9) CONTRACTOR shall deliver to CITY the required certificate(s) of insurance and endorsement(s) before beginning any Work under this Agreement. Failure to do so shall constitute a material breach upon which the City may immediately terminate or suspend this contract.

17(A)(10) At its sole discretion, CITY may obtain or renew CONTRACTOR insurance, and CITY may pay all or part of the premiums. Upon demand, CONTRACTOR shall repay CITY all monies

paid to obtain or renew the insurance. CITY may offset the cost of the premium against any monies due CONTRACTOR from CITY. CONTRACTOR's failure to obtain, pay for, maintain any required insurance shall constitute a material breach upon which the CITY may immediately terminate or suspend this agreement.

ARTICLE 18 PERFORMANCE AND PAYMENT BONDS

(a) **BONDS REQUIRED:** Prior to issuance of the Notice of Commencement, CONTRACTOR shall provide CITY with a Common Law Performance Bond, and a Statutory Payment Bond meeting the standards specified herein, on the forms provided by the CITY, and attached hereto, with a Power of Attorney Affidavit, each in an amount not less than the Contract price. Within fifteen (15) days after issuance of the Notice of Commencement, CONTRACTOR shall record in the public records of the county where the improvement is located, the statutory payment bond and common law performance bond as required in Section 255.05(a) Florida Statutes. CONTRACTOR shall provide the CITY with a true copy of the recorded bond(s) as evidence of such recording.

(b) **SURETY'S QUALIFICATIONS:** All bonds required under this Contract, including, but not by way of limitation, any Bid Bond, Common Law Performance Bond or Statutory Payment Bond, shall be written through a reputable and responsible surety bond agency licensed to do business in the State of Florida and with a surety which holds a certificate of authority authorizing it to write surety bonds in Florida meeting the following requirements:

(1) Ratings by A.M. Best

The surety company or corporation shall have minimum ratings by the A.M. Best Company of A- or better with a Financial Size Category of "V" or larger.

(2) Circular 570

In addition to meeting the requirements of paragraph (1) above, the surety shall also comply with the United State of the Treasury Circular 570, Revised 2022 requirements as set forth in this paragraph (2). The surety shall maintain a current certificate of authority as an acceptable surety on Federal Bonds in accordance with U.S. Department of Treasury Circular 570, Revised 2022. If the amount of the bond exceeds the underwriting limitations set forth in the Circular, in order to qualify, the net retention of the surety company shall not exceed the underwriting limitation in the Circular and the excess risk must be protected by co-insurance, reinsurance, or other methods in accordance United States Department of Treasury with Treasury Circular 297, revised September 1, 1978 implemented at 31CFR Part 223. Further the surety company shall provide the CITY with evidence satisfactory to the CITY, that such excess risk has been protected in an acceptable manner.

(c) **ADDITIONAL OR REPLACEMENT BOND:** It is further mutually agreed between the parties hereto that if, at any time, the CITY shall deem the surety or sureties upon any bond to be unsatisfactory, or if for any reason, such bond (because of increases in the Work or otherwise) ceases to be adequate, the CONTRACTOR shall, at their expense within five (5) days after the receipt of notice from the CITY to do so, furnish an additional or replacement bond or bonds in such form, amount, and with such surety or sureties as shall be satisfactory to the CITY. In such event, no further payments to the CONTRACTOR shall be deemed to be due under this Contract until such

new or additional security for the faithful performance of the Work shall be furnished in manner and form satisfactory to the CITY.

(d) CO-SURETIES: Subject to the following requirements, the bonds required by this Contract may be provided by more than one surety:

- (1) At least one of the co-sureties shall meet the requirements of Paragraph (b) for the full amount of the bond; and
- (3) Each surety shall be jointly and several liable for the full amount of the bond required.

(e) FLORIDA AGENT: The surety company shall have a Florida agent whose name shall be listed in the prescribed space on the forms provided by the CITY for all bonds required by the CITY.

ARTICLE 19 PROJECT RECORDS

All documents relating in any manner whatsoever to the Project, or any designated portion thereof, which are in the possession of the CONTRACTOR, or any subcontractor of the CONTRACTOR, shall be made available to the CITY and/or their consultants for inspection and copying upon written request by the CITY. Furthermore, said documents shall be made available, upon request by the CITY, to any state, federal or other regulatory authority and any such authority may review, inspect and copy such records. Said records include, but are not limited to, all drawings, plans, specifications, submittals, correspondence, minutes, memoranda, tape recordings, videos, or other writings or things which document the Project, its design, and its construction. Said records expressly include those documents reflecting the cost of construction to the CONTRACTOR. The CONTRACTOR shall maintain and protect these documents for no less than three (3) years after Completion of the Project, or for any longer period of time as may be required by law or good construction practice. The CONTRACTOR further agrees to include these provisions in any subcontracts issued by The CONTRACTOR in connection with this Agreement.

ARTICLE 20 APPLICABLE LAW

The laws of the State of Florida shall govern this Agreement. In any litigation arising under this Agreement, the parties agree to a waiver of the right to a trial before a jury, and all such litigation shall be litigated only in a non-jury hearing in St. Lucie County, Florida.

ARTICLE 21 SUCCESSORS AND ASSIGNS

Each party binds itself, its successors, assigns, executors, administrators, or other representatives to the other party hereto and to successors, assigns, executors, administrators, or other representatives of such other party in connection with all terms and conditions of this Contract. The CONTRACTOR shall not assign this Contract without prior written consent of the CITY.

ARTICLE 22
MISCELLANEOUS PROVISIONS

22(A) Compliance By CONTRACTOR: Nondiscrimination

CONTRACTOR shall comply with all Federal, State and Local laws, ordinances, rules and regulations of any authorities throughout the duration of this Agreement. The CONTRACTOR shall be responsible for compliance with any such law, ordinance, rule or regulation, and shall hold CITY harmless and indemnify same in the event of non-compliance. CONTRACTOR agrees to abide by the requirements under Federal Executive Order Number 11246, "Equal Employment Opportunity" as amended, including specifically the provisions of the equal opportunity clause.

22(B) Drug-Free Workplace

CONTRACTOR shall comply with Section 287.087, Florida Statutes, regarding Drug-Free Workplaces.

22(C) State and Local Taxes

Except as otherwise provided, contract prices shall include all applicable state and local taxes.

CONTRACTOR shall indemnify and hold harmless the CITY for any loss, cost, or expense incurred by, levied upon or billed to the CITY as a result of CONTRACTOR's failure to pay any tax of any type due in connection with this Agreement. CONTRACTOR shall ensure that the above sections are included in all subcontracts and sub-subcontracts, and shall ensure withholding on out of state subcontractors and sub-subcontractors to which withholding is applicable.

22(D) Gratuities and Kickbacks

Gratuities. It shall be unethical for any person to offer, give, or agree to give any employee or former employee, or for any employee or former 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, or any part of a program requirement or a purchase request, influencing the content of any specification or procurement standard, rendering of advice, investigation, auditing, 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 of a contract or subcontract, or to any solicitation or proposal therefore.

Kickbacks. It shall be unethical for any payment, gratuity, or offer of employment to be made by or on behalf of a subcontractor under a contract to the prime contractor, or to hire any subcontractor or any person associated therewith, as an inducement for the award of a subcontract or order.

22(E) Any and all notices required to be sent under this Contract or otherwise shall be sent to the following:

CITY:

John R. Andrews, P.E., City Engineer
City of Fort Pierce
100 N. US Highway 1
Fort Pierce, FL 34950
Phone: 772-467-3774
Fax: 772-460-6847

CONTRACTOR:

Phone:
Fax:

Copies to:

City Attorney
City Manager

ARTICLE 23
ENTIRE AGREEMENT

Any modification to this Agreement must be supported by an additional, articulated consideration, and must either be in writing, executed by the parties hereto, or, if made orally, should be confirmed in writing, which writing should state the consideration which supports the modification. Failure to confirm an oral modification in writing shall constitute a waiver of any claim for additional compensation with regard to the oral modification. Nothing in this Article shall be construed to limit the CITY's authority to issue changes set forth in Article 13 herein.

ARTICLE 24
SEVERABILITY

If any term or condition of this Contract or the application thereof to any person(s) or circumstances is held invalid, this invalidity shall not affect other terms, conditions or applications which can be given effect without the invalid term, condition, or application. To this end, the terms and conditions of this Contract are agreed to be severable.

ARTICLE 25
WAIVER

Waiver of any breach of any term or condition of this Contract shall not be deemed a waiver of any prior or subsequent breach and shall not entitle any party hereto to any subsequent waiver of any terms hereunder. No term or condition of this Contract shall be held to be waived, modified, or deleted except by an instrument, in writing, signed by the parties hereto.

ARTICLE 26
E-VERIFY

Effective January 1, 2021, as required by Section 448.095(2)(a), Florida Statutes, CONTRACTOR and any subcontractors shall register with and use the E-Verify system to verify the work authorization status of all newly hired employees. The City, CONTRACTOR, and any subcontractors may not enter into a contract unless each party uses the E-Verify System. Contractor shall provide documentation of its compliance with this requirement upon request by the City.

If CONTRACTOR enters into a contract with a subcontractor, the subcontractor must provide CONTRACTOR with an affidavit stating the subcontractor does not employ, contract with, or subcontract with an unauthorized alien. CONTRACTOR shall maintain a copy of the affidavit during the terms of this Agreement.

The City will not intentionally award Contracts to any Contractor who knowingly employs unauthorized alien workers, constituting a violation of the employment provisions of the Immigration and Nationality Act ("INA"). The City shall consider the employment by Contractor of unauthorized aliens a violation of Section 8 U.S.C. 1324(a)(3) [Section 274(e) of the INA]. Contractor agrees that violation by Contractor shall be grounds for unilateral termination of this Agreement by the City.

ARTICLE 27
SOVEREIGN IMMUNITY

Nothing contained in this Contract shall be deemed or otherwise interpreted as waiving the City's Sovereign Immunity protections existing under the laws of the State of Florida, or as increasing the limits of liability as set forth in Section 768.28, Florida Statutes.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]

IN WITNESS WHEREOF, the Parties have executed this Agreement under their several seals the day and year first written above.

WITNESSETH:

CONTRACTOR:

Print Name

Print Name

By: _____

Signature

Title: _____

Federal Tax ID No: _____

Print Name

Signature

ATTEST:

CITY OF FORT PIERCE

Linda Cox, City Clerk

Linda Hudson, Mayor

Date

APPROVED AS TO FORM AND CORRECTNESS:

Sara Hedges, City Attorney

PLEASE COMPLETE AND INCLUDE IN WITH YOUR BID SUBMISSION.

Form **W-9**
(Rev. October 2007)
Department of the Treasury
Internal Revenue Service

**Request for Taxpayer
Identification Number and Certification**

**Give form to the
requester. Do not
send to the IRS.**

Print or type See Specific Instructions on page 2.	Name (as shown on your income tax return)	
	Business name, if different from above	
	Check appropriate box: <input type="checkbox"/> Individual/Sole proprietor <input type="checkbox"/> Corporation <input type="checkbox"/> Partnership <input type="checkbox"/> Limited liability company. Enter the tax classification (D=disregarded entity, C=corporation, P=partnership) ▶ <input type="checkbox"/> Exempt payee <input type="checkbox"/> Other (see instructions) ▶	
	Address (number, street, and apt. or suite no.)	Requester's name and address (optional)
	City, state, and ZIP code	
List account number(s) here (optional)		

Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on Line 1 to avoid backup withholding. For individuals, this is your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the Part I instructions on page 3. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN* on page 3.

Social security number : : : :
OR
Employer identification number : : : :

Note. If the account is in more than one name, see the chart on page 4 for guidelines on whose number to enter.

Part II Certification

Under penalties of perjury, I certify that:

1. The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me), and
2. I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding, and
3. I am a U.S. citizen or other U.S. person (defined below).

Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the Certification, but you must provide your correct TIN. See the instructions on page 4.

Sign Here	Signature of U.S. person ▶	Date ▶
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General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

Purpose of Form

A person who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) to report, for example, income paid to you, real estate transactions, mortgage interest you paid, acquisition or abandonment of secured property, cancellation of debt, or contributions you made to an IRA.

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN to the person requesting it (the requester) and, when applicable, to:

1. Certify that the TIN you are giving is correct (or you are waiting for a number to be issued),
2. Certify that you are not subject to backup withholding, or
3. Claim exemption from backup withholding if you are a U.S. exempt payee. If applicable, you are also certifying that as a U.S. person, your allocable share of any partnership income from a U.S. trade or business is not subject to the withholding tax on foreign partners' share of effectively connected income.

Note. If a requester gives you a form other than Form W-9 to request your TIN, you must use the requester's form if it is substantially similar to this Form W-9.

Definition of a U.S. person. For federal tax purposes, you are considered a U.S. person if you are:

- An individual who is a U.S. citizen or U.S. resident alien,
- A partnership, corporation, company, or association created or organized in the United States or under the laws of the United States,
- An estate (other than a foreign estate), or
- A domestic trust (as defined in Regulations section 301.7701-7).

Special rules for partnerships. Partnerships that conduct a trade or business in the United States are generally required to pay a withholding tax on any foreign partners' share of income from such business. Further, in certain cases where a Form W-9 has not been received, a partnership is required to presume that a partner is a foreign person, and pay the withholding tax. Therefore, if you are a U.S. person that is a partner in a partnership conducting a trade or business in the United States, provide Form W-9 to the partnership to establish your U.S. status and avoid withholding on your share of partnership income.

The person who gives Form W-9 to the partnership for purposes of establishing its U.S. status and avoiding withholding on its allocable share of net income from the partnership conducting a trade or business in the United States is in the following cases:

- The U.S. owner of a disregarded entity and not the entity,

CITY OF FORT PIERCE BIDDER'S CHECKLIST

This checklist is provided to assist each Bidder in the preparation of their bid response. Included in this checklist are important requirements, which is the responsibility of each Bidder to submit with their response in order to make their response fully compliant. This checklist is only a guideline, it is the responsibility of each Bidder to read and comply with the Invitation to Bid in its entirety.

Check "Yes" or "No" to each of the following:	YES	NO
Is Invitation to Bid cover page (page 1) completed, signed and attached?		
Did you include proof of proper insurance as stated in the bid documents?		
Is Bid Response Form completed, signed and attached?		
Did you completed, signed and attached the W-9 Form?		
All prices have been reviewed for mathematical accuracy, all price corrections initialed, and all price extensions and totals thoroughly checked.		
Include proof of proper licensing as stated in bid documents.		
Hard Copy Submissions Only: Are the correct copies included? One (1) original and One (1) USB Drive?		
Is each Bid Addendum (when issued) signed and included?		

PLEASE SIGN AND RETURN WITH BID

SECTION V

BID DOCUMENTS



**INVITATION TO BID
CITY OF FORT PIERCE, FORT PIERCE, FLORIDA
INVITATION TO BID NO. 2024-016**

Sealed Bids will be received by the City of Fort Pierce Purchasing Department until **3:00 PM, Tuesday, February 20, 2024**, for:

**KINGS LANDING OFF SITE WATER MAIN UPGRADE
AVENUE B AND INDIAN RIVER DRIVE**

The work associated with this project consists of replacing an existing 6-inch cast iron water main with a new 8-inch PVC water main to include services, fire hydrants, valves, and appurtenances on Avenue B and Indian River Drive per the construction plans. A section of 15-inch gravity sewer main is also being removed.

Specifications are available upon request in the Office of the Purchasing Manager, City of Fort Pierce City Hall, 100 North U.S. 1, Fort Pierce, Florida.

Electronic copies of the documents may be obtained from the Office of Purchasing at no cost.

The City of Fort Pierce encourages Minority Business Enterprise participation.

Advertising for Bids will conform to federal requirements which include advertising for a minimum of two (2) weeks.

CITY OF FORT PIERCE

Gelencia Carter

Gelencia Carter, M.P.A
Purchasing Manager

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SECTION 1 - DEFINED TERMS

1.1 Terms used in these "INSTRUCTIONS TO BIDDERS" which are defined in the General Conditions have the meanings assigned to them in the General Conditions.

SECTION 2 - COPIES OF BIDDING DOCUMENTS

2.1 Complete sets of Bidding Documents may be obtained in the manner defined in the Call for Bids.

2.2 Complete sets of Bidding Documents shall be used in preparing Bids; City shall not assume any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.

2.3 City, in making copies of Bidding Documents available on the above terms, does so only for the purpose of obtaining Bids on the Work and does not confer a license or grant for any other use.

SECTION 3 - QUALIFICATIONS OF BIDDERS

3.1 Each Bid must contain evidence that the Bidder has a valid State of Florida license with a minimum classification of "Certified General Contractor" associated with the company bidding along with evidence of the Bidder's qualifications to do business in the State of Florida. To demonstrate qualifications to perform the Work, each Bidder must submit to City, together with the Bid, information including but not limited to financial data, capability to obtain Payment and Performance and previous experience on similar projects, including references and evidence of authority to conduct business in the jurisdiction where the Project is located. Submittals requested pursuant to this paragraph are in addition to those required elsewhere.

SECTION 4 - EXAMINATION OF CONTRACT DOCUMENTS AND SITE

4.1 Before submitting a Bid, each Bidder must (a) examine the Contract Documents thoroughly; (b) visit the site to familiarize himself with local conditions that may in any manner affect cost, progress, or performance of the Work; (c) familiarize himself with federal, state and local laws, ordinances, rules, regulations and policies that may in any manner affect cost, progress or performance of the Work; (d) study and carefully correlate Bidder's observations with the Contract Documents; and (e) make written requests for interpretations promptly after discovering any conflicts, errors, ambiguities of inconsistencies. Written requests must be received prior to the Pre-Bid Conference.

4.2 Reference may be made to the identification of investigations and tests of subsurface and latent physical conditions at the site, or otherwise affecting cost, progress or performance of the Work which have been relied upon by the City Engineer or City Consultant in preparing the Drawings and Specifications. Such reports are available

for review by any bidder at the office of the City Engineer. These reports are not guaranteed as to accuracy or completeness, nor are they part of the Contract Documents; they are provided for guidance only. If this information is used by Bidder in preparing his proposal, he shall assume all risks resulting from actual conditions differing from the conditions set out in the reports.

4.3 If a log of test borings showing a record of the data is obtained by the investigation of subsurface conditions by the City, or their consultants, it is expressly understood and agreed that said log of test borings does not constitute a part of the contract, represents only the opinion of the City, or their consultants as to the character of the materials encountered by them in the test borings, is included in the plans or other documents only for the convenience of bidders, and its use is subject to all of the conditions and limitations set forth in this article. Discrepancies must be reported prior to the Pre-Bid Conference.

4.4 Before submitting a Bid, each Bidder shall, at Bidder's own expense, make or obtain any additional investigations, examinations, explorations and tests and obtain any additional information which pertains to the physical conditions (surface, subsurface, and Underground Facilities) at or contiguous to the site or otherwise which may affect cost, progress or performance of the Work and which Bidder deems necessary to determine its Bid for performing the Work in accordance with the time, price and other terms and conditions of the Contract Documents.

4.5 City will provide each Bidder reasonable access to the site to conduct such investigations and tests as each Bidder deems necessary for submission of his Bid. Bidder shall restore site to condition existing prior to conducting said investigations and tests.

4.6 The lands upon which the work is to be performed, rights-of-way for access thereto and other lands designated for use by CONTRACTOR in performing the Work are identified in the Contract Documents. All additional lands and access thereto required for temporary construction facilities or storage of materials and equipment are to be provided by Contractor.

4.7 The submission of the Bid shall be an indication that the Bidder has considered normal local weather conditions (daily and monthly variations) for the previous ten years from the date of the Bid as compiled by the National Weather Service.

SECTION 5 - INTERPRETATIONS

5.1 All questions about the meaning or intent of the Contract Documents shall be submitted to the City Engineer. Bidders are required to advise the City Engineer of any conflicts in the Contract Documents or any discrepancies between conditions noted at the project site and those shown on the Drawings or described in the Specifications. Replies will be issued by Addenda mailed or delivered to all parties recorded by the City's Purchasing Agent as having received the Bidding Documents. Questions received less than seven days prior to the date for the opening of Bids shall not be answered. Only questions answered by formal written Addenda shall be binding.

Oral and other interpretations or clarifications will be without legal effect. All addenda shall be issued no less than five days prior to bid opening.

SECTION 6 - BID SECURITY

6.1 Bid Security shall be made payable to City, in an amount of 10 percent of the Bidders maximum Bid price and in the form of a certified or cashier's check or a Bid Bond on the prescribed form attached issued by a Surety.

6.2 The Bid Security of the Lowest and Best Bidder shall be retained until such Bidder has executed the Agreement, furnished the required Contract Security, the Insurance Certificates and Endorsements, and complied with the State of Florida requirements; if the Lowest and Best Bidder fails to execute and deliver the Agreement or furnish the Contract Security within ten (10) days of the receipt of Agreement, City may annul the Notice of Award and the Bid Security of that Bidder may be forfeited. The Bid Security of any Bidder whom City believes to have a reasonable chance of receiving the award may be retained by City until the earlier of the seventh day after the "effective date of the Agreement" (which term is defined in the General Conditions) or the sixty-first day after the Bid opening. Bid Security of other Bidders may be returned within seven days of the Bid opening.

SECTION 7 - CONTRACT TIME

7.1 The time of completion is of the essence of the Contract, and the Bidder awarded the Contract shall proceed with the Work in accordance with the Contract time period specified in the Notice to Proceed for each project. In the event of failure to complete the Work within the time specified, the City may assess damages and/or impose penalties as provided by law or the Contract Documents, unless an appropriate extension of time has been granted by the City.

SECTION 8 - LIQUIDATED DAMAGES

8.1 Provisions for liquidated damages, if any, are set forth in the Agreement.

SECTION 9 – SUBSTITUE MATERIAL AND EQUIPMENT

9.1 Not applicable.

SECTION 10 - SUBCONTRACTORS, ETC.

10.1 The City shall receive from the Apparent Lowest and Best Bidder (or the Lowest and Best Bidder), within ten days after receipt of the Bids, a list of all Subcontractors and other persons and organizations, including those who are to furnish the principal items of material and equipment. This list shall include the name and address of the Subcontractor, person or organization, a description of the services, materials or equipment to be supplied. Such list shall be accompanied by a statement of experience with pertinent information as to similar projects and other evidence of qualification for each such Subcontractor, person or organization. If City has reasonable objection to any proposed Subcontractor, other person or organization, the City

may, before the Notice of Award, request the Apparent Lowest and Best Bidder (or the Lowest and Best Bidder) to submit an acceptable substitute without an increase in Bid price. If the Apparent Lowest and Best Bidder (or the Lowest and Best Bidder) declines to make any such substitution, the Contract may not be awarded to such Bidder at the City's sole discretion. Bidder's declining to make any such substitution shall constitute grounds for sacrificing his Bid Security. Any Subcontractor, other person or organization so listed and to whom City does not make written objection prior to the Notice of Award will be deemed acceptable to City, but City does not thereby waive any right it may have against the Contractor because of the actions or omissions of said Subcontractor, other person or organization, or request from the Contractor to replace Sub-contractors depending on their performance or workmanship.

SECTION 11 - BID FORM

11.1 The Bid Form(s) is included in the Contract Documents.

11.2 Bid Forms must be completed in ink or typewritten. **Bid prices shall be provided for all items listed. All partial bid proposals shall be rejected.**

11.3 Bids by corporations must be executed in the corporate name by the president or a vice-president (or other corporate officer, accompanied by evidence of authority to sign), and the corporate seal must be affixed and attested by the secretary or an assistant secretary. The corporate address and state of incorporation shall be shown below the signature.

11.4 Bids by partnership must be executed in the partnership name and signed by an authorized partner, whose title must appear under the signature.

11.5 All names and titles must be typed or printed below the signature.

11.6 The Bid shall contain an acknowledgment of receipt of all Addenda (the numbers of which shall be filled in on the Bid Form).

11.7 The address to which communications regarding the Bid are to be directed must be shown.

SECTION 12 - SUBMISSION OF BIDS

12.1 Submit bids on Bid Forms supplied herein. Bids shall be submitted at the time and place indicated in the CALL FOR BIDS and shall be included in an opaque sealed envelope marked with the Project title and name and address of the Bidder and accompanied by the Bid Security.

If the bid is sent through the mail or other delivery system, the sealed envelope shall be enclosed in a separate envelope with the notation "BID ENCLOSED" on the face thereof.

12.2 Bids received after the time and date specified in the CALL FOR BIDS shall not be considered and will be returned unopened.

SECTION 13 - MODIFICATION AND WITHDRAWAL OF BIDS

13.1 Bids may be modified or 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 at any time prior to the opening of Bids. Withdrawal of a bid will not prejudice the rights of Bidder to file a new Bid

SECTION 14 - OPENING OF BIDS

14.1 At the specified time and place as indicated in the CALL FOR BIDS, Bids shall be opened publicly and read aloud.

14.2 An abstract of the amounts of the base bids and major alternates (if any) will be prepared and made available within a reasonable time after the opening of Bids.

14.3 Quantities of work and materials in the Bid Form(s) or in the plans are approximate only and for the purpose of providing a bidder with information that maybe used for the computation of the Base Bid, to obtain unit prices for the approval of payments for the work done, and to determine additions or deletions to the Contract Sum. It shall be the Bidder's responsibility to determine if a different quantity of any item required and to bring the same to the attention of the City Engineer, or Consultant prior to submittal of the Bid.

14.4 Notwithstanding any other provision contained in the Contract Documents, the City reserves the right to reject any and all bids, or portions thereof, and waive any and all irregularities, and the right to disregard any or all nonconforming, unbalanced, or conditional bids or counter proposals. The City may reject, as non-responsive, any or all bids where bidders fail to acknowledge receipt of addenda as prescribed. If the City elects not to reject a bid which fails to acknowledge receipt of any addendum, the bid shall be construed as though the addendum has been received and acknowledged by the Bidder.

14.5 The bids supplied shall be a Unit Price Bid. Unit Price bids for the work items shall be based on estimated quantities for the purpose of determining the best and Lowest Bidder and unit prices as shown in the Bid Form (see Paragraph 14.3 above). In the event that work in addition to estimated quantities is required, compensation to the Contractor shall be based on the unit prices indicated in the Bid Form. For basis of award, discrepancies between the total Bid and the sum of columns of figures shall be resolved in favor of the total Bid. Contractor shall be responsible for the accuracy of the arithmetic of the bid, in particular with the addition of the columns to match the total Bid. City has the right to accept the total Bid whether it is less or more than any additions of any columns or extensions and prorate the unit prices to match the total Bid amount. Contractor shall lose his bid deposit if contract award is not accepted by such Contractor.

SECTION 15 - BIDS TO REMAIN OPEN

15.1 All Bids shall remain open for sixty (60) days after the day of the Bid opening, but City may, in its sole discretion, release any Bid and return the Bid Security prior to that date.

15.2 Extensions of time when bids shall remain opened beyond the sixty-day period may be made only by mutual agreement between the City, the Lowest and Best Bidder, and the Surety, if any, for the Lowest and Best Bidder.

SECTION 16 - AWARD OF CONTRACT

16.1 Award shall be based on products, equipment and materials named in the Contract Documents.

16.2 In evaluating Bids, City shall consider the qualifications of the Bidders, and whether or not the Bids comply with the prescribed requirements.

16.3 In evaluating Bids, City shall consider the information provided by the Bidder as described in these INSTRUCTIONS TO BIDDERS.

16.4 The Lowest and Best Bidder shall submit, to City, documentation evidencing its capability to obtain Performance and Payment Bonds and to perform classes of work contemplated, and the necessary plant and sufficient capital, to execute the work properly within the time specified. **This information must be received by City as per Section 10 above.**

16.5 The City shall require the Lowest and Best Bidder to submit a certified statement describing his organization, plant, manpower and financial resources, and list all previous and/or ongoing construction contracts over the last 5 years, regardless of amount or completion status. Information shall be submitted on the Associated General Contractors of America Form "Standard Questionnaires and Financial Statement for Bidders", available from AGC, 1957 "E" Street, N.W., Washington, D.C., 20006, or other form acceptable to City. The information shall be certified by a Certified Public Accountant for bids over \$25,000 and shall be submitted to the City prior to Contract Award. The City, at its discretion, may require any or all of the above listed information from any other Bidder.

16.6 City may consider qualifications and experience of Subcontractors and other persons and organizations (including those who are to furnish the principal items of material or equipment) proposed for those portions of the Work as to which the identity of Subcontractors and other persons and organizations must be submitted as provided in the Bid Form and Section 10 of these Instructions.

16.7 City may conduct such investigations and require supplemental information as it deems necessary to assist in the evaluation of any Bid and to establish the responsibility, qualifications and financial ability of the Bidders, proposed Subcontractors, proposed equipment and material suppliers, and other persons and organizations to do the Work in accordance with the Contract Documents to City's satisfaction within the prescribed time.

16.8 City reserves the right to reject the Bid of any Bidder who does not pass any such evaluation to City's satisfaction.

16.9 City reserves the right to reject the Bid of any Bidder which is or was behind on the approved completion schedule for any existing or past contracts with the City, is in litigation with the City, has previously defaulted on a contract with the City, has delayed or skipped

subcontractor payment(s), or has provided unsatisfactory performance on current or previous City Contracts.

16.10 If the Contract is to be awarded, it will be awarded to the best and lowest responsible Bidder on the basis of the total Bid amount, qualifications, experience, and ability to perform the work. City reserves the right to reject all bids or portions thereof.

SECTION 17 - BONDS AND INSURANCE

17.1 The General and Special Supplemental Conditions set forth the City's requirements as to Bonds and Insurance. When the Successful Bidder delivers the executed Agreement to City, it shall be accompanied by the required Bonds, Insurance Certificates, and Endorsements on forms prescribed by City. The City must receive with Successful Bidder executed Agreement copies of all insurance policies for the insurance requirements set forth in the General and Special Supplemental Conditions. Attorneys-in-fact who sign Bid Bonds, Performance Bonds and Payment Bonds must file with such Bonds a certified copy of their power- of-attorney to sign the Bonds.

SECTION 18 - SIGNING OF AGREEMENT

18.1 When City gives a Notice of Award to the Successful Bidder, it will be accompanied by at least two (2) unsigned counterparts of the Agreement and all other Contract Documents. Within ten (10) days of receipt thereafter, Successful Bidder shall sign and deliver at least two (2) counterparts of the Agreement to City, together with the documents described in Section 17 above attached. Within ten (10) days after receipt of the properly executed and completed submittal, City will deliver a fully signed counterpart to Successful Bidder.

18.2 Failure by a Successful Bidder to whom the contract is awarded to execute the Agreement, or to correctly complete or furnish required Bonds or insurance certificates and endorsements, shall be just cause for the annulment of the award and the forfeiture of the Bid Security.

18.3 If Successful Bidder is a Corporation, the Agreement shall be signed by the President, attested by the Secretary, and have the Corporate Seal affixed. The executed Agreement shall be accompanied by a Certificate of Good Standing dated within 30 days and an Incumbency Certificate, under oath, executed by Legal Counsel or the Secretary of the Corporation, and the Corporate Seal if by the Secretary.

18.4 A Successful Bidder who is awarded the Contract and fails to execute the Agreement or correctly complete or furnish the required Bonds, insurance certificates and endorsements within the time period specified in Article 10, Section 18.1 above or fails to comply with submittal requirements specified in Article 20 shall be liable to the City for all damages resulting there from, including reasonable attorneys' fees and costs, and attorneys' fees and costs on appeal. The Bid Security forfeited shall not be a limitation thereon.

SECTION 19 - SCHEDULE OF SUBMITTALS

19.1 Within ten (10) days prior to Contract Award, the Successful Bidder shall submit a preliminary progress schedule and a schedule of projected payments in accordance with the General Conditions. This schedule shall show in a summary fashion the order in which the Successful Bidder proposes to perform the Work and shall indicate approximate starting and completion dates for said projects. This progress schedule shall not replace, but serve as a basis for, the progress schedule submittals to be developed as required in the Specifications. Failure by the Successful Bidder to furnish this Schedule of Submittals, as required, in a sufficiently complete and responsible manner, shall void evaluation of the Bid, and will constitute proof that the Successful Bidder has abandoned all his rights and interests in the award, and his Bid Security may be declared forfeited to the City as liquidated damages, and the Work may be awarded to another Bidder.

SECTION 20 - SPECIAL WARRANTY, GUARANTEE, BOND, INSURANCE, MAINTENANCE, AND CORRECTION PERIOD REQUIREMENTS

20.1 There may be special requirements pertaining to Warranty, Guarantee, Bonds, Insurance, Maintenance, and the Correction Period which are described in the Contract Documents. Bidders shall review these special requirements, if applicable, and reflect in their bids all costs associated therewith.

SECTION 21 – MATERIALS

21.1 Materials produced by convict labor are prohibited from use on the PROJECT unless specific written authority for such use is obtained.

21.2 State produced materials are now allowed.

21.3 State/Local Owned/Furnished/Designated materials may be utilized if it is in the public interest and approved by the CITY.

END OF SECTION

GENERAL REQUIREMENTS

(Section 01000)

PART 1 – GENERAL

1.01 INTRODUCTION:

The specifications and standards presented herein are to assure uniformity and quality of construction of potable water and wastewater facilities that will be connected to FPUA water and wastewater systems. These specifications shall be used in the design and construction of such systems, and applicable provisions herein shall be incorporated into all plans and specifications for new systems or connections to existing systems. In case of conflicts, the following precedence will apply: State and local ordinance, FPUA Resolutions, FPUA approved contracts, FDEP Regulations, these design standards, drawings, and specifications. Conflicts should be brought to the attention of the Utilities Engineer. Both plan and profile drawings are required, and shall be submitted to FPUA for review and approval.

A. TERMINOLOGY

Contractor – The Owner, Developer, Builder, Contractor, or other individual, company, or corporation responsible for the construction of potable water and/or wastewater facilities covered by these standards.

FPUA – Fort Pierce Utilities Authority, governed by the Fort Pierce Utilities Authority Board, whose offices are located at 206 South Sixth Street, Fort Pierce, FL 34950.

Director – The Director of Utilities or his authorized representative.

Department – The applicable FPUA Water or Wastewater Department.

Utilities Engineer – FPUA Water/Wastewater/Natural Gas Utilities Engineer or his authorized representative.

Engineer – Engineer of Record.

He, His – Pronouns used to designate either male or female personnel.

1.02 COMMENCEMENT OF WORK:

No construction work shall be started without approval by the Utilities Engineer and by other interested agencies having jurisdiction. A pre-construction meeting shall be held a minimum of 48 hours prior to commencement of construction. All agencies having jurisdiction shall be notified of the preconstruction meeting.

1.03 USE OF RIGHT-OF-WAY:

Permission for use of right-of-way shall be obtained from the appropriate governing agency having jurisdiction. All required right-of-way use permits shall be obtained prior to construction. Owner and Engineer are responsible for applying for and obtaining all required permits.

GENERAL REQUIREMENTS

1.04 OTHER STANDARDS:

These standards and specifications contain certain abbreviated references to standards or specifications of various organizations including, but not limited to, the following:

AASHTO, American Association of State Highway Traffic Officials

ANSI (USASI, ASA), American National Standards Institute (formerly United States of America Standards Institute, formerly the American Standards Association) AWWA, American Water Works Association CSI, Construction Standards Institute

DIPRA, Ductile Iron Pipe Research Association

EPA, Environmental Protection Agency, United States

FDEP, Florida Department of Environmental Protection

FDOT, Florida Department of Transportation, State of Florida

FM, Factory Mutual

FS, Florida Statutes

NEC, National Electrical Code

NEMA, National Electrical Manufacturers Association

OSHA, Occupational Safety and Health Administration - (U.S. Department of Labor) SFWMD,

South Florida Water Management District

TSS (S), Ten State Standards, i.e., Recommended Standards for Wastewater Facilities

TSS (W), Ten State Standards, i.e., Recommended Standards for Water Works

UL, Underwriters Laboratories

When standards or specifications are indicated herein by reference, the referenced portion shall apply to the most recent edition of the publication and shall have the same force and effect, to the extent indicated by the references thereto, as if they were included herein in their entirety.

1.05 SAMPLING AND TESTING:

GENERAL REQUIRMENTS

- A. Except as otherwise provided, sampling and testing of materials, and the laboratory methods and testing equipment used, when required, shall be in accordance with the latest published standards (including published tentative) or methods of ASTM, (including published tentative) or methods of AASHTO, AWWA, or other such organizations recognized as authoritative for the type of test required.
- B. The testing of samples and materials shall be made at the expense of the Contractor, unless otherwise specifically authorized or approved in writing. All test results shall be submitted to the Engineer and Utilities Engineer for review and acceptance.

1.06 LEGAL RESTRICTIONS AND PERMITS:

The Contractor at all times shall observe and comply with all Federal, State, County, City, and other laws, codes, ordinances, and regulations in any manner affecting the conduct of the work. He shall further procure all permits, other than those required by the Engineer, and licenses, pay all charges and fees, and give all notices necessary and incidental to the due and lawful prosecution of the work. The Engineer will be responsible for City, County, State, Regional, and Federal permits.

1.07 PUBLIC CONVENIENCE AND SAFETY:

- A. Materials stored at the site of the work shall be so placed and the work shall at all times be so conducted as to cause no obstruction to vehicular or pedestrian traffic. No roadway shall be closed except by express permission of the authorized public agency having jurisdiction. Contractor is responsible for public convenience.
- B. Precaution shall be exercised at all times for the protection of persons and property. The Contractor shall be responsible for safety on the job site. The safety provisions of applicable laws, building codes and construction codes shall be observed. Machinery, equipment and other hazards shall be guarded in accordance with the safety provisions of OSHA, and the Manual of Accident Prevention in Construction, published by the Associated General Contractors of America.

1.08 CHEMICAL USAGE:

All chemicals used during project construction or furnished for project operations, whether herbicide, pesticide, disinfectant, polymer, reactant or of other classification, must show approval of either U.S. Environmental Protection Agency or U.S. Department of Agriculture. Use of all such chemicals and disposal of residues shall be in strict conformance with environmental regulations. Any chemicals used in construction or operation of the water system shall be NSF International approved.

1.09 PROTECTION OF PROPERTY

GENERAL REQUIREMENTS

- A. The Contractor shall not enter upon private property for any purpose without first obtaining permission, and he shall use every precaution necessary to prevent damage or injury to any public or private property, trees, fences, monuments, and underground structures, etc., on and adjacent to the site of the work. If work is to be performed in an easement on private property, then affected property owners shall be notified 24 hours in advance of construction.
- B. The Contractor shall not do any work that would affect any railway track, pipeline, telephone, power transmission line, or other utilities or structure, or enter upon the right-of-way or other land appurtenant thereto, until proper authority has been secured from the proper persons. Utility location agencies shall be given sufficient notice prior to construction in accordance with Underground Facility Damage Prevention and Safety FS 556.
- C. The Contractor shall be responsible for all damage or injury to property of any character resulting from any act, omission, neglect or misconduct in his manner or method or executing said work, from his non-execution of said work, or from defective work or materials, and he shall not be released from said responsibility until the work has been completed and accepted and the warranty requirements fulfilled.

1.10 RESTORATION OF PROPERTY

- A. Responsibility: All damage as a result of construction work done to existing structures, wetland areas, roadway pavement, driveways, other paved areas, fences, utilities, traffic control devices, and any other obstruction not specifically named herein, shall be repaired, restored, or replaced by the Contractor unless otherwise specified.

When or where any direct or indirect damage or injury is done to public or private property by or on account of any act, omission, neglect, or misconduct in the execution of the work, or in consequence of the non-execution thereof on the part of the Contractor, he shall restore such property, at his own expense, to a condition equal to that existing before such damage or injury was done by repairing, rebuilding, or otherwise restoring, as may be directed, or he shall make good such damage or injury in a manner acceptable to the damaged or injured party.

- B. Temporary Repairs: All damage named in Paragraph 1.10A above shall be at least temporarily repaired, restored, or replaced immediately following construction efforts at that location. Temporary restoration shall mean putting the affected area back into a safe, usable condition. In no case shall trenches remain open overnight within a street right-of-way unless specific approval is granted by the agency having jurisdiction.
- C. Permanent Repairs: All damage named in Paragraph 1.10A above shall be permanently repaired, restored, or replaced no later than the 30 calendar days following

GENERAL REQUIREMENTS

the completion of construction at that location unless otherwise stipulated. Permanent repairs will be accomplished in a professional workmanship-like manner in accordance with specifications contained herein, or contract documents, if addressed. The Contractor may be relieved of the 30-day time limit only by specific written agreement with the Utilities Engineer or by the Director.

- D. FPUA Restitution: In the event that the Contractor fails to make the permanent repairs within the time specified in Paragraph 1.10 C. above, FPUA at its option will with its own resources or by contract with others, cause the repair, restoration, or replacement of the affected area to be accomplished. The costs of such work will then be deducted either from the next pay request or from any other monies owed the Contractor by FPUA.
- E. Protection and Restoration of Easement on and/or Road Right-of-Way, and Private Property: During the course of construction, the Contractor shall take special care and provide adequate protection in order to minimize damage to vegetation, surfaced areas, and structures within the construction right-of-way, easement, or site, and take full responsibility for the replacement or repair thereof. The Contractor shall immediately repair any damage to the private property created by encroachment thereon. Should the removal or trimming of valuable trees, shrubs or grass be required to facilitate the installation within the designated construction area, this work shall be done in cooperation with the appropriate agency having jurisdiction in the area in which the work takes place. Said valuable vegetation, removed or damaged, shall be replanted, if possible, or replaced by items of equal quality, and maintained until growth is reestablished. Topsoil damaged in the course of work shall be replaced with at least a four-inch layer of suitable material. Following construction completion, the work area along the route of the installation shall be finish graded to elevations compatible with the adjacent surface, with grassing or hand raking required within developed areas.
- F. Sidewalk and Driveway Restoration: Existing sidewalks and driveways removed, disturbed, or destroyed by construction shall be replaced or repaired. Restoration shall be to the nearest joint, right-of-way line or road apron. The finished work shall, as a minimum, be equal in all respects to the original or as required by the specific permit.
- G. Cleanup: Work site cleanup and property restoration shall follow behind construction operations without delay. In order to facilitate an acceptable construction site, debris and waste materials shall be removed from the site daily and trenching length versus pipe laying shall be coordinated to preclude overnight trench opening. Construction site maintenance, along with on-going cleanup and final property restoration acceptance, shall be as directed and approved by Engineer, the Utilities Engineer, or the City, State, and/or County, if necessary.

1.11 WORK IN STREETS:

GENERAL REQUIRMENTS

- A. Traffic Control: The Contractor shall provide bypasses, crossings, and other means for the maintenance of one-way traffic in all streets, and two-way traffic wherever possible, in all streets where work is in progress. Construction operations shall be carried on only between those hours and days as required by the appropriate agency having jurisdiction, except for operations specified for alternate times or in cases of emergency. The Contractor shall plan and schedule his operations to impose the least possible interference with normal traffic flow. The Contractor is required to have a City, County, or State approved traffic control plan for each situation that may occur during the course of construction. This applies to State-controlled right-of-way as well as City or County right-of-way. The traffic control plan must be submitted to

the appropriate agency having jurisdiction in adequate time prior to any activity for review and approval.

- B. Traffic Control Devices, Signs, and Barricades: The Contractor shall provide, erect, and maintain effective barricades, traffic control devices, danger signals, and signs on all intercepted streets or highways and in other locations where required for the protection of the work and the safety of the public. Barricades or obstructions that encroach on, or, are adjacent to, public rights-of-way shall be provided with lights that shall be kept burning at all times between sunset and sunrise. Conformity with State, County, City, and local laws and regulations is required in the use of streets and highways. The Contractor shall be responsible for all damages resulting from any neglect or failure to meet these requirements. Flagmen shall be provided as required by local regulations or as necessary to fulfill the requirements stated herein.
- C. Traffic and Services: Adequate means of access to all public and private properties during all stages of construction shall be provided. Unless approval in writing is secured from the appropriate agency having jurisdiction, there shall be no interruption of service to present customers of such utilities requiring repairs, changes, or modifications caused by the construction work.
- D. Applicable Codes: The FDOT Roadway and Traffic Design Standards, Uniform Manual for Traffic Control Devices, FPUA Design and Construction Standards, the City of Fort Pierce Ordinances, and the St. Lucie County Ordinances shall be followed as applicable.

1.12 DISRUPTION TO EXISTING SYSTEM OPERATIONS:

The Contractor shall perform operations necessary for connecting to the existing system at times of minimum flow rate. Said operations shall be accomplished expeditiously in order to minimize service disruption. All schedules shall be coordinated with and approved by the Utilities Engineer. A plan for connection shall be submitted to the Utilities Engineer at a minimum of three (3) working days prior to connection.

1.13 MINIMIZING SILTATIONS AND BANK EROSION:

GENERAL REQUIREMENTS

During all dewatering or other operations involving the use and disposal of water, suitable means shall be provided by the Contractor to minimize soil erosion, siltation, and sedimentation of natural or artificial ditches, drainage channels, streams, lakes, or other waterways. The Engineer must approve such means proposed by the Contractor prior to any dewatering, pumping, or other water-involved operations in above areas. If required, in the opinion of the Engineer, methods such as stilling basins, baffles, siltation basins, matting, spread-disposal, recharge pits, etc., shall be used by the Contractor to minimize siltation and bank erosion, with said methods in full compliance with FDEP and SFWMD standards and requirements. Copies of all approved and applicable permits from Federal, State, and local agencies shall be in the possession of the Contractor prior to commencing any work.

14 SURVEY AND CONSTRUCTION STAKES:

It shall be the responsibility of the Contractor to provide and set in place all construction stakes and marks for lines, grades and measurements necessary or required for the proper prosecution and control of the work. He shall be responsible for the accuracy and preservation of the stakes and marks. The plans shall also show or describe the reference points or monuments from which the Contractor shall lay out the work and the Contractor shall scrupulously preserve these reference points. He shall immediately restore any damaged, dislodged, or lost reference points, at his expense.

1.15 BENCHMARKS AND MONUMENTS:

The Contractor shall carefully maintain all benchmarks, monuments, and other reference points. Survey monuments or benchmarks which have to be disturbed by this construction work shall be carefully witnessed before removal and replaced upon completion of the work by a Professional Land Surveyor, registered in and by the State of Florida.

1.16 EMPLOYEES AND SUPERINTENDENTS:

The Contractor shall employ superintendents, supervisory personnel, and employees who are careful and competent. When FPUA is the owner, FPUA may demand the removal of any person or persons employed by the Contractor on the work who shall be incompetent, unsafe, or negligent in the proper performance of their duties, or neglect or refuse to comply with the directions given.

1.17 SANITARY PROVISIONS:

The Contractor shall provide and maintain in a neat and sanitary condition, accommodations for the use of his employees as may be necessary to comply with the requirements and regulations of OSHA, State, local health department, or other agencies having jurisdiction.

1.18 CONFORMITY WITH PLANS AND ALLOWABLE DEVIATIONS:

GENERAL REQUIREMENTS

The entire installation and each part thereof shall be constructed in the position required, the finished surfaces of structures shall conform to the elevations and gradients specified, and all parts of both substructures and superstructures shall be in proper alignment and adjustment and confirmed by the Engineer of Record during and/or prior to actual installation. The Contractor shall provide all frames, forms, false work, shoring, guides, anchors, and temporary structures that may be required to assure these results. Any deviation from the plans and working drawings that may be required must have prior approval of the Engineer and the Utilities Engineer.

1.19 SUBSTITUTIONS OR "APPROVED EQUALS":

Whenever a material or article required is specified or shown on the approved plans by using the name of the proprietary product or of a particular manufacturer or vendor, it shall be considered that this was done only for the purpose of establishing a standard of quality for

the specified materials. Any material or article which will perform the function imposed by the general design will be considered equal and satisfactory, provided the Utilities Engineer is assured the material or article so proposed is of like substance, form and function. Such substitutions shall not be purchased or installed without written approval from the Utilities Engineer. Substitution may be restricted because of inventory control.

1.20 INSPECTION BY DEVELOPER

The purpose of this section is to clearly define the qualifications and responsibilities of all inspectors of private development projects. "Inspector" shall be used to define said private inspector for this Section 1.20.

- A. All inspectors considered for work on an FPUA project must submit a resume for review and acceptance by the Utilities Engineer prior to the preconstruction meeting.
- B. The inspector shall be required to spend an average of three hours per day on the project unless otherwise relieved of this responsibility by the Utilities Engineer. He shall be present at all critical times such as tie-ins, utility crossings, pressure testing, pigging, flushing, chlorinating, structure installations, televising, lift station start-up and testing or any other events as determined by the Utilities Engineer.
- C. The inspector shall be responsible for obtaining a current copy of the FPUA Water/Wastewater Engineering "Design and Construction Standards," available at www.FPUA.com.
- D. The inspector shall provide all necessary equipment required to perform his job in a professional manor.
- E. In the event that construction is required in public right-of-ways or public easements, the inspector shall provide a detailed VHS or digital video of the

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construction route, which will be reviewed by the Utilities Engineer. The video must be provided to FPUA a minimum of one week prior to the start of construction.

- F. There will be no deviations to the design on any portion of the project without the approval of the Utilities Engineer. The inspector will be responsible for providing pictures of all points of conflict or approved changes in the design.
- G. The inspector will be required to keep detailed daily reports to be turned in to the Utilities Engineer on a weekly basis. He shall keep accurate mark-ups on the approved utility plans to include all daily measurements and utility clearances. These plans will serve as the project engineer's point of reference for the creation of record drawings. At project completion, said plans shall be turned over to the Utilities Engineer.
- H. The inspector shall work closely with the Utilities Engineer at all times. In the event that the quality or quantity of inspection services is questioned by the Utilities Engineer, he may direct the inspector to report to him on a more regimented schedule. If the inspector's performance is still not acceptable to the Utilities Engineer, he may direct that the construction be stopped until a suitable replacement is found.

1.21 INSPECTION BY OTHER AGENCIES:

The EPA, the U.S. Department of Labor, the DEP, and other authorized governmental agencies having legal interest in the project shall have free access to the site for inspecting materials and work, and the Contractor shall afford them all necessary facilities and assistance for doing so. Any instructions to the Contractor resulting from these inspections shall be given through the Engineer or Utilities Engineer. These rights of inspection shall not be construed to create any contractual relation between the Contractor and these agencies.

1.22 RECORD DRAWINGS

Record drawings are the sole responsibility of the Engineer of Record. The Utilities Engineer will not accept record drawings produced by a surveyor. The Engineer shall utilize the services of the inspector as referenced in Section 1.20 to compile accurate record drawings in conformance with all requirements listed below.

- A. Record drawings shall be signed and sealed by the Design Engineer on plans approved for construction.
- B. Record drawings by surveyors obtained **after** completion of construction **will not be accepted.**
- C. All record information shall be placed in the following datums:
 - 1. Horizontal: NAD 1983 State Plane Florida East Zone0901 Foot

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2. Vertical: NGVD29 or NAVD88 - (NAVD88 benchmarks are not as readily available however use when possible)
 3. Datums shall be clearly identified on ALL submittals.
- D.** All entities (lines, points, etc...) in AutoCAD files shall be placed in datums listed above. A drawing file referenced to a datum will not be acceptable. For example, an AutoCAD file may be drawn to a benchmark however placed on coordinate system such as (0,0) or (10,000,10,000). All associated or x-ref files shall adhere to datum requirements.
- E.** Submittals for Record drawings are listed below:
1. First Submittal and Re-submittals
 - i. (2) Complete set on paper (Bond).
 2. Final Submittal
 - i. (2) Complete sets on paper (Bond).
 - ii. (1) Complete set on Mylar (Matte Film)
 - iii. (1) CD with AutoCAD File and any related files.
- F.** All utility record drawing information shall be placed in one AutoCAD file. All layouts shall be in paper space regardless of plan and profile sheet count.
- G.** All utility plans shall not be larger than 24" by 36" paper size and shall adhere to one of the following scale schedule: 1" = (10', 20', 30', 40', 50'). All related profiles shall be one-tenth scale of the plan: 1"= (1', 2', 3', 4', 5').
- H.** All plans shall be printed as a utility plan. All utility infrastructures shall be clearly legible. For example, other utilities such as drainage shall be shown but grayed out.
- I.** All utilities shall use the following layering convention:
1. Proposed and/or Existing underground – P-U-*-%
 - i. Use "P" and/or "E" for proposed and existing, respectively.
 - ii. The * can be replaced with Water, Sewer, Raw, Gas, Electric
 - iii. The % can be replaced with the following:
 1. FH = Fire Hydrant
 2. VALVE = Gate, Check, Butterfly, etc...
 3. MH = Manhole
 4. LS = Lift Station
 5. ARV = Air Release Valve
 6. BO = Blow Off
 7. REDUCER = Reducer
 8. FITNS = Fittings
 9. Other layers may be used as deemed necessary by the engineer of record
 - iv. Examples: P-U-Water-FH, E-U-Sewer-MH, etc...

GENERAL REQUIRMENTS

- J. Prior to submittal to the Utilities Engineer, all other formats of digital record drawings shall be converted to AutoCAD 2004 or later.
- K. All changes to design location of all material shall be drawn to scale.
- L. Draw in detail any substantial changes.
- M. Include linear footages installed for all pipelines (water and sewer).
- N. Mark depth of pipelines (water and sewer) from grade every 100 feet.
- O. Confirm all design utility separations on record drawings (vertical & horizontal).
- P. Denote all pipeline horizontal location from edge of pavement and right-of-way.
- Q. Mark locations and footage of all laterals from the downstream manhole.
- R. Mark all grade, footages and inverts on sanitary runs and manholes.
- S. Include make, model number, impeller size, float settings and serial number of pumps.
- T. Mark all bacteriological sampling points on plans.
- U. Bore logs required for all directional drills: include on record drawing depicting both horizontally and vertically. GPS all appurtenances with sub meter or greater accuracy (valves, fittings, hydrants, etc.) using datum listed in Item 1.22(C).
- W. All language on record drawings shall be present tense.
- X. Mark all pipeline material changes, for example PVC, DIP, and HDPE.
- Y. Show location of all other on-site utilities with respect to off-site utilities.
- Z. Show any dedicated easements, identified by O.R. Book and Page Number.

1.23 DEFECTIVE AND UNAUTHORIZED WORK:

- A. All work that has been rejected or condemned shall be removed and replaced unless a repair is approved by the Utilities Engineer. Materials not conforming to the requirements of the specifications shall be removed immediately from the site of the work and replaced with satisfactory material by the Contractor at his own expense.

GENERAL REQUIREMENTS

- B. Upon reasonable cause, due justification by, and at the request of FPUA, the Contractor shall, at any time before final acceptance of the work, remove or uncover such portions of the finished work as may be directed. After examination, the Contractor shall restore the said portions of the work to the condition required by the approved plans and specifications. If the work uncovered is rejected, then the Contractor is responsible for restoration, as well as repair. Otherwise, FPUA will bear responsibility.
- C. Failure to reject any defective work or material during construction shall not prevent later rejection upon discovery prior to acceptance or obligate FPUA to final acceptance.

1.24 WARRANTY:

- A. One Year Warranty Period: If, within one year after the date of final acceptance by FPUA or such longer period of time as may be prescribed by laws or regulations, or 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, the Contractor shall promptly, without cost to FPUA and in accordance with written instructions from the Engineer and/or the Utilities Engineer, either correct such defective work, or if it has been rejected, remove it from the site and replace it with non-defective work. If the Contractor does not promptly comply with the terms of such instructions, FPUA may have the defective work corrected or the rejected work removed and replaced, and all direct, indirect, and consequential costs of such removal and replacement (including, but not limited to, fees and charges of engineers, architects, attorneys, and other professionals) will be paid by the

Contractor. In special circumstance where a particular item of equipment is placed in continuous service before substantial completion of all the work, the warranty period for that item may start to run from an earlier date if so provided by the specifications or by written amendment to the Contract Documents.

- B. Emergency Repairs: During the time that a utilities construction project is either under construction or under a warranty period, emergencies which arise must be handled as the situation dictates. In as much as each situation is unique because of time, place, and circumstance, the following guidelines will be used to the extent possible:
 1. An emergency is defined as a situation, which develops suddenly and demands immediate action to halt a worsening condition.
 2. Upon notification of an emergency situation, FPUA will respond as rapidly as possible to bring the situation under control, i.e., to terminate the emergency. The Contractor will be notified of the situation, as soon as practical by FPUA. Repairs, which must be affected in the aftermath of an emergency, are the responsibility of the Contractor.

GENERAL REQUIRMENTS

3. Those non-emergency type repairs must be complete or at least in progress within seven (7) calendar days of notification by FPUA.
4. Any repairs accomplished under this section by FPUA are subject to be billed to the Contractor.
5. If circumstances warrant, notifications should be given to the Emergency Operations Center 911.

1.25 UTILITY EASEMENTS:

- A. Required minimum utility easements in subdivisions, residential and commercial are fifteen (15) feet, unless approved in writing by FPUA.
- B. Sidewalks shall not be constructed within utility easements, unless approved in writing by FPUA.

1.26 ACTIVATION OF NEW SERVICES:

The following items are required by the Utilities Engineer before activation of new services.

- A. 100% completion of punch list items as provided by FPUA inspector or Utility Engineer.
- B. Letter of Certification from the Engineer, stating all lines or lift stations, etc., have been inspected, tested, and installed according to the Engineer's specifications and as-built drawings. Show calculations and test results according to AWWA Standards.
- C. Certification of compliance from the FPUA Department Superintendent(s) following the final inspection.
- D. Copy of FDEP Letter of Acceptance stating that the facilities have been approved and may be put into service.
- E. One set of as-built prints, one set of Mylar as built prints signed and sealed by the Engineer of, and corrected digital file in AutoCAD 2004 format.
- F. Valve GPS data as specified in section 1.22.
- G. Copy of all release of lien forms.
- H. Copy of release of bond from any applicable agencies.
- I. Final costs and quantities for all pipe, valves, structures and appurtenances.

GENERAL REQUIRMENTS

- J. Executed utility easements, if applicable forms.
- K. Executed Annexation Agreement, if applicable.
- L. The owner must make application for service and make payment of applicable fees. Send complete package to:

FORT PIERCE UTILITIES AUTHORITY
Water/Wastewater/Natural Gas Engineering
1701 South 37th Street (34947)
P.O. Box 3191
Fort Pierce, FL 34948-3191

1.27 EQUIPMENT INSTALLATION:

All equipment shall be installed satisfactorily and properly for the specified service, and in accordance with the manufacturer's recommendations. All required piping, electrical connections, and other necessary items shall be furnished and connected in order to provide a complete operating facility.

1.28 NAMEPLATES:

With the exceptions noted, each piece of equipment furnished and installed by the Contractor shall be provided with a substantial nameplate of non-corrodible metal, securely fastened in place and clearly and permanently inscribed with the manufacturer's name, model or type designation, serial number, principal rated capacities, electrical or other power characteristics, and similar information as appropriate.

1.29 MODIFICATIONS TO EXISTING EQUIPMENT:

Should modifications to existing FPUA equipment be required in order to achieve the required operational facility, the Engineer shall coordinate all designs and construction procedures with the Utilities Engineer and receive advance approval there from. Additionally, the Engineer shall consult with, and obtain the written commendation of, the existing equipment manufacturer regarding any such modifications, and include all such information in the approval presentation.

1.30 SALVAGE:

Existing equipment and materials that are to be removed during the course of modification work, including pumps, motors, and pump parts; pipe, valves, and fittings; electrical and control parts; and other salvageable items, shall remain the property of Contractor, unless otherwise specified.

GENERAL REQUIREMENTS

1.31 EQUIPMENT OPERATING TESTS:

Following the installation and final adjustment, all equipment shall be test operated under normal and full load conditions for a period of not less than two hours. Any faults or deficiencies that may appear shall be promptly corrected and the system re-tested for satisfactory operation. The tests shall be performed in the presence of the authorized representatives of the Utilities Engineer and the Engineer. The Contractor shall instruct designated employees of FPUA in the proper care, operation, and maintenance of all equipment and materials. The Contractor shall furnish all electricity, gas, lubricants, water, and other materials required to make tests and shall replace or repair all material or equipment found to be defective or deficient. Timing and performance of tests shall be coordinated with the Utilities Engineer.

1.32 MANUFACTURER SUPERVISION:

The Contractor shall require manufacturers furnishing primary equipment to provide the services of a qualified technical representative for such periods as are necessary to supervise proper installation; perform final adjustments and testing for the operational system; and instruct operating personnel in the use of the equipment. The manufacturer shall certify in writing to the Utilities Engineer as to the correct installation and operation of their equipment.

1.33 OPERATING INSTRUCTIONS AND PARTS LISTS:

The Contractor shall furnish, for each piece of operating equipment, three complete, neatly bound sets giving the information listed below:

- A. Clear and concise instructions for the operation, adjustment, and lubrication and other maintenance of the equipment. These instructions shall include a complete lubrication chart.
- B. List of all parts for the equipment, with catalog numbers and other data necessary for ordering replacement parts.

PART 2 – PRODUCTS

Not Used

PART 3 – EXECUTION

Not Used

END OF SECTION

UTILITY EXCAVATION, TRENCHING, AND BACKFILLING (Section 02200)

PART 1 - GENERAL

1.01 GENERAL

The provisions set forth in this section shall be applicable to all underground wastewater and water piping installations, regardless of location, unless prior approval is received from the Utilities Engineer for special design considerations. All excavations shall be properly shored, sheeted and braced or cut back at the proper slope to provide safe working conditions, to prevent shifting of material, to prevent damage to structures or other work and to avoid delay to the work, all in compliance with the U.S. Department of Labor Occupational Safety and Health Act (OSHA), the State of Florida Trench Safety Act (Chapters 90-96 of the laws of Florida, CS/CB 2626 or as amended), and under Section 107 of the Contract Work Hours and Safety Standards Act (Public Law 91-54 or as amended). The minimum shoring, sheeting, and bracing for trench excavations shall meet the general trenching requirements of the safety and health regulations. In all cases where a conflict exists in the requirements of OSHA Regulations, Florida Trench Safety Act, and these specifications, the requirements of the state agency shall prevail.

PART 2 - PRODUCTS

2.01 MATERIALS:

A. SHEETING AND BRACING:

1. Wood sheeting to be left in place shall be pressure treated with preservative in accordance with the current requirements of the American Wood Preservers Association Manual of Recommended Practice.
2. Steel sheeting to be left in place shall be as specified in ASTM Designation A328.

B. CONCRETE:

Required concrete shall have a minimum 3,000 pounds per square inch compressive strength.

PART 3 – EXECUTION

3.01 TRENCHING:

- A. Trench Dimensions:** The minimum width of the trench shall be equal to the outside diameter of the pipe, plus 12 inches, and the maximum width of trench, measured at the top of the pipe, shall not exceed the outside pipe diameter plus two feet, unless otherwise shown on the drawing details or approved by the Engineer.

UTILITY EXCAVATION, TRENCHING, AND BACKFILLING
(Section 02200)

- B.** Trench Grade: Standard trench grade shall be defined as the bottom surface of the utility to be constructed or placed within the trench. Trench grade for utilities in rock or other non-cushioning material shall be defined as six inches below the outside of the bottom of the utility, which six inches shall be backfilled with extra utility bedding material. Excavation below trench grade that is done in error shall be backfilled to trench grade with granular material and compacted.
- C.** Utility Bedding: The bottom of the trench shall be shaped to provide a firm bedding for the utility pipe. The utility shall be firmly bedded in undisturbed firm soil, or hand-shaped unyielding material. The bedding shall be shaped so that the pipe will be in continuous contact therewith for its full length and shall provide a minimum bottom segment support for the pipe equal to the spring line of the pipe or one-half of the outside diameter of the barrel. Bedding shall be installed in accordance with ANSI/AWWA C150/A21.50. Special bedding may be required, due to depth of cover, impact loadings, or other conditions.
- D.** Unsuitable Material Below Trench Grade: Soil unsuitable for a proper foundation encountered at or below trench grade, such as muck or other deleterious material, shall be removed for the full width of the trench and to the depth required to reach suitable foundation material, unless special design considerations receive prior approval from the Utilities Engineer. Backfilling below trench grade shall be in compliance with the applicable provisions of Subsection M, "Backfill", with material as specified under Paragraphs M.1. and M.2 of this section.
- E.** Extra Utility-Bedding Material: When rock or other non-cushioning material is encountered at trench grade, excavation shall be extended to six inches below the outside of the bottom of the utility, and a cushion of granular material rock shall be provided. Utility-bedding material shall be installed as specified under Paragraph M.2.
- F.** Sheeting and Bracing: In order to prevent damage to property, injury to persons, erosion, cave-ins, or excessive trench widths, adequate sheeting and bracing shall be provided, as required, and/or directed by the Engineer, in accordance with accepted standard practice. When the situation arises, sheeting and bracing shall be used as necessary to protect the integrity of the road shoulder. Sheeting shall be removed when the trench has been backfilled to at least one-half its depth, or when removal would not endanger the construction of adjacent structures. When required, to eliminate excessive trench width or other damage, sheeting, bracing, or shoring shall be left in place and the top cut off at an elevation of 5.0 feet below finished grade, unless otherwise directed.

All sheeting and bracing will be in accordance with OSHA, and the Florida Trench Safety Act.

UTILITY EXCAVATION, TRENCHING, AND BACKFILLING

(Section 02200)

- G.** Excavated Material: Excavated material to be used for backfill shall be neatly and safely deposited at the sides of the trenches where space is available. Whenever possible, excavated material near a roadway should be deposited on the right-of-way side of the trench away from the travel way. Where stockpiling of excavated material is required, the Contractor shall be responsible for obtaining the sites to be used and shall maintain his operations to provide for natural drainage and not present an unsightly appearance. All sites shall be restored after fill is removed.
- H.** Material Disposal: Excess, unsuitable, or cleared and grubbed material resulting from the utility installation shall be removed from the work site and disposed of a location(s) secured by the Contractor, and in accordance with the agency having jurisdiction. Excess excavated material shall be spread on the disposal site and graded in a manner to drain properly and not disturb existing drainage conditions, in accordance with applicable permit requirements.
- I.** Borrow: Should there be insufficient satisfactory material from the excavations to meet the requirements for fill material, borrow shall be obtained from pits secured by the Contractor. All borrow shall meet the provisions of these specifications.
- J.** Rock Excavation: Rock excavation shall be defined as excavation of any hard natural substance that cannot be removed by a one cubic yard bucket and requires the use of explosives and/or special impact tools such as jackhammers, sledges, chisels, or similar devices specifically designed for use in cutting or breaking rock.
- K.** De-watering: Utilities shall be laid "in the dry," unless otherwise approved. Trench excavations may be dewatered by using one or more of the following methods: well point system, sumps with pumps, or other methods(s) as approved by the Engineer. Dewatering systems shall be utilized in accordance with good standard practice and must be efficient enough to lower the water level in advance of the excavation and maintain it continuously to keep the trench bottom and sides firm and dry. If the material encountered at trench grade is suitable for the passage of water without destroying the sides or utility foundation of the trench, sumps may be provided at intervals at the side of the main trench excavation, with pumps used to lower the water level by taking their suction from said sumps. Discharge from dewatering shall be disposed of in such a manner that it will not interfere with normal drainage of the area, in which the work is being performed, create a public nuisance, or form pending. All discharge shall be in accordance with any SFWMD issued permits. The operations shall not cause injury to any portion of the work completed, or in progress, or to the surface of streets, or to private property. The proposed dewatering method(s) and schedule shall be approved by the Utilities Engineer and necessary regulatory agencies prior to construction.

Additionally, where private property will be involved, advance permission shall be obtained in writing by the Contractor.

UTILITY EXCAVATION, TRENCHING, AND BACKFILLING (Section 02200)

- L. Obstructions: It shall be the Contractor's responsibility to acquaint himself with existing conditions and to locate structures and utilities along the proposed utility alignment in order to avoid conflicts. Where actual conflicts are unavoidable, work shall be coordinated with the facility owner and performed so as to cause as little interference as possible with the service rendered by the facility disturbed. All affected utilities shall be notified prior to excavation in their vicinity.

M. Backfill in Existing Traffic Zones:

1. General: Backfill material shall be clean earth fill composed of sand, clay, and sand, sand and rock, crushed rock, or an approved combination thereof. Backfilling shall be divided into three specified areas: First, from trench grade to a point 12 inches above the top of the utility, called the pipe zone; second, from the top of the pipe zone to the bottom of the sub-grade; and third, from the bottom of the replacement base course to the replacement surface, see standard details. Where encasements or other below-grade concrete work have been installed, backfilling shall not proceed until the concrete has obtained sufficient strength to support the backfill load. The frequency of density testing is to be specified by the Engineer on the Construction Drawings.

At a minimum, density testing will be at each manhole and tested at one point between manholes as specified by FPUA. On a sanitary sewer line, density testing is required at least one point along the run when the service line is under pavement. In a development, when there are many sanitary sewer services, at least 25% of all services need to have a density test in conjunction with the sewer main as directed by FPUA. Force mains, gas mains, and water mains under pavement will require a density test every 200-feet.

2. Pipe Zone: Granular material shall be carefully placed and tamped around the lower half (springline) of the utility. Backfilling shall be carefully continued until the fill is 12 inches above the top of the utility, using the best available material from the excavation, if approved. The material shall be lowered to within two feet above the top of pipes before it is allowed to fall, unless the material is placed with approved devices that protect the pipes from impact. The pipe zone shall exclude stones, or rock fragments larger than one inch for either ductile iron or PVC pipe.
3. Second Area: The remainder of the trench, about the pipe zone and below the sub grade, shall be backfilled and compacted in layers not exceeding 12 inches. Compaction of each lift shall be equal to 98% of maximum density as determined by AASHTO Specification T-99.

UTILITY EXCAVATION, TRENCHING, AND BACKFILLING

(Section 02200)

4. Shoulder Restoration: All shoulder restoration shall be in accordance with the applicable permit requirements of the agency having jurisdiction.
 5. Compaction Methods: The above-specified compaction shall be accomplished using accepted standard methods (powered tampers, vibrators, etc.), with the exception that the first 12 inches of backfilling over the pipe shall be compacted by hand-operated tamping devices. Flooding or puddling with water to consolidate backfill is not acceptable, except where sand is encountered and the operation has been approved by the Utilities Engineer.
 6. Density Tests: Density tests for determination of the above-specified compaction shall be made by a testing laboratory approved by the Engineer and at the expense of the Contractor, or as otherwise specified. Test locations will be determined by the Engineer, and the permit agency having jurisdiction. Tests shall also be made where a trench crosses a paved roadway or future paved roadway. If any test results are unsatisfactory, the Contractor shall re-excavate, re-compact the backfill, and retest, at his expense until the desired compaction is obtained. Additional compaction tests shall be made to each side of an unsatisfactory test, as directed, to determine the extent of re-excavation and re-compaction necessary.
- N.** Backfill in New Traffic Zones: Compaction and testing requirements for backfill in areas of new road construction, i.e. subdivisions, shall be the same as for "Existing Traffic Zones," except:
1. One compaction test shall be required 24 inches above the top of the pipe.
 2. Although the trench must be backfilled and compacted in 12-inch lifts as required in "Existing Traffic Zones," compaction tests are required in each 12-inch lift.
- O.** Backfill in Non-traffic Zones: Backfill must be placed as specified in Subsection M for the pipe zone. Above the pipe zone, the trench must be backfilled to natural density or to 95% of AASHTO T-99, whichever is greater.
- P.** Protective Concrete Slab: Protective concrete slabs shall be installed where required by the Utilities Engineer, to protect the installed utility against excessive loads, or when insufficient cover exists.
- Q.** Seed and Mulch: Fertilizing, seeding and mulching operations will be carried out in accordance with the permit agency having jurisdiction.

UTILITY EXCAVATION, TRENCHING, AND BACKFILLING

(Section 02200)

- R. Sodding: Fertilizing and sodding operations will be carried out in accordance with the permit agency having jurisdiction.

END OF SECTION

WASTEWATER COLLECTION SYSTEM
(Section 02730)

PART 1 – GENERAL

1.01 GENERAL:

This section includes general technical criteria for the design and installation of wastewater collection systems.

The relevant provisions included in Division 2, "Technical Specifications – General," and shown on "Standard Details – Wastewater Systems," and "Standard Location Plan – Underground Utilities," shall be applicable to this section, unless otherwise indicated herein or changed in writing by the Utilities Engineer.

1.02 DESIGN STANDARDS:

A. Required Reference: The Contractor shall comply with the applicable requirements established by the Florida Department of Environmental Protection Rule 17-604, FAC. The criteria set forth in Chapter 30, "Design of Sewers," of the "Ten State Standards – Recommended Standards for Wastewater Facilities." shall be used as a design guide. Conflicts will be brought to the attention of the Utilities Engineer.

B. System Design:

1. Average Design Flows: the sewer system design shall be based on full ultimate development as shown in the following table:

<u>Design Flow – Residential</u>	<u>Estimated Flow</u>
Single-Family Unit Normal 3br/2bath	240 gpd
Multifamily Unit – Normal type	210 gpd

Note: All other units not specified above will be assessed on a case-by-case basis.

The average daily flow (ADF) from domestic units shall be calculated at the minimum rate of 100 gallons per capita per day, which will normally cover infiltration, but should conditions be unfavorable, an additional

WASTEWATER COLLECTION SYSTEM

(Section 02730)

allowance shall be included. Flow requirements from commercial, industrial, institutional, or other special development areas shall be established from existing records, or by estimated projections using the best available data; however, in no case shall a rate of less than 1,000 gallons per acre per day be used, unless specifically approved otherwise by the Utilities Engineer. The progressive summation of the previously described contributions shall constitute the ADF for specific sections of the wastewater system.

2. Peak Design Flows: Gravity sewers shall be designed on the basis of ultimate development maximum rates of flow, which will be the product of selected peak factors, times the accumulative Maximum Monthly Average Daily Flow (MMADF) for the subject portion. In general, the following peak factors shall be applicable for the range of average daily flow rates indicated (million gallons per day – MGD); unless larger values are required for specific conditions or prior approval is received from the Engineer for modification thereof.

<u>Flow Range (MMADF), MGD</u>	<u>Peak Factor</u>
0.000 to 0.250	1.67
0.250 to 1.000	1.50
1.000 to 4.000	1.40

3. Wastewater Main Size Computation: Wastewater gravity mains shall be sized to provide ample capacity for the required peak flow rates. The minimum allowable size for any sewer, other than service connections, shall be eight inches in diameter. All gravity mains shall be designed at slopes providing minimum velocities of not less than two feet per second when flowing full or half full. Said computation shall be based on Hazen- Williams Formula, using a roughness coefficient ("C") of not less than 100, unless justifiably approved otherwise.

In general, the following minimum slopes shall be provided for sewer sizes to 24 inches:

<u>Sewer Size per 100 Feet)</u>	<u>Minimum Slope, % (Inches) (Feet</u>
8	0.40
10	0.28
12	0.22
15	0.17
18	0.14

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21	0.12
24	0.10

Minimum slopes slightly less than those indicated may be considered; providing the depth of flow will not be less than 0.3 of the pipe diameter or the velocity less than 2.0 feet per second at design average daily flow, and justifiable reasons for the modification are presented to the Utilities Engineer, and to the (Project) Engineer.

4. Design Considerations:

- (a) Gravity mains shall be installed with straight alignment and grade between manholes, with manhole spacing not to exceed 400 feet. Special provisions may be considered for sizes 30 inches and larger.
- (b) All wastewater gravity mains shall terminate at manholes or terminal cleanout.
- (c) Wastewater mains of diverse sizes shall always join at manholes, with no size conversions between. Where different sizes join, the pipes shall be placed at elevations where the depth points are equal, unless higher points are required. If the entrance pipe elevation exceeds twenty-four inches above the effluent wastewater main, drop manhole connections shall be provided.
- (d) Flow direction changes in excess of 90 degrees shall not be included in wastewater main alignments without special consideration. An extra flow line elevation drop (0.1'+/-) across manholes shall be provided.
- (e) Where design velocities greater than 15 feet per second are attained, due to topography or other reasons, special equipment shall be provided for wastewater main protection, as approved by the Utilities Engineer.
- (f) Minimum size of gravity main is eight inches; minimum slope for an eight-inch main is 0.40%, except as allowed in Paragraph 3. above.

PART 2 – PRODUCTS:

2.01 STANDARD REQUIREMENTS:

- A. General: The materials of construction and general installation procedures shall comply with the specific applicable standards set forth under Section 02200, "Utility Excavation, Trenching and Backfilling," Section 02315, "Casing Pipe – Boring and Jacking," and Section 02600, "DIP and PVC Pipe, Fittings, Valves and Appurtenances," as well as the Standard Details section.

WASTEWATER COLLECTION SYSTEM
(Section 02730)

- B. Approved Pipe:** The types tabulated below, with the restrictions indicated, are approved for wastewater gravity main and lateral construction:

<u>Pipe and Fittings</u>	<u>Restrictions</u>
Plastic (PVC) – SDR 26	Allowed at inverts 0-20 feet
Ductile Iron (DI) Pipe (CL-250) & Fittings - Interior Ceramic Epoxy Coated	Required at inverts below 20 feet

- C. Wastewater Manholes:**

1. Manholes shall be precast concrete, as detailed. Alternate manhole materials and designs shall receive prior approval from the Engineer. The minimum inside diameter of manholes shall be 48 inches for wastewater main sizes up to 21 inches in diameter or less, with submittal of special designs for larger pipes.
2. Precast reinforced manholes shall be in accordance with ASTM Designation C478, with preformed flexible plastic joint sealer conforming to Federal Specification SS S-00210 – (GSA-FSS), "RAM-Nek", as manufactured by the K. T. Snyder Company, Inc., Houston, Texas, or approved equal. Two layers of "Ram-Nek", or approved equal, shall be required. Installation of "Ram-Nek" shall not allow overlapping of material but layering as to abut the ends. Installation of precast manholes shall comply with the details shown on "Standard Detail Sheets" and in accordance with the manufacturer's recommendations.
3. Manhole frames and covers shall be gray cast iron heavy duty conforming to ASTM Designation A48, Class 30, and shall be U.S. Foundry 170, or approved equal. Covers shall have no perforations and shall be marked with the words "SANITARY SEWER". Frames and covers shall be fully bedded in mortar to the correct finish grade elevation, with adjustment precast concrete manhole rings placed below, as detailed, for precast manholes. Frames shall be suitable for the future addition of cast iron rings for upward adjustment of top elevation.
4. Manhole flow channels shall be as shown on the "Standard Detail Sheets" with smooth and carefully shaped bottoms, built-up sides and benching constructed from concrete. Channels shall conform to the dimension of the adjacent pipe and provide changes in size, grade and alignment evenly.

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5. All manholes, in areas designated by the Utilities Engineer as subject to flooding, shall have sewer rain guards installed. Rain guards shall only be installed in manholes that have gravity mains twelve inches and smaller. Sewer rain guards must have a snug fit, of shallow design and shall be manufactured by Fosroc-Preco Industries, South West Packing and Seals, Inc., Parson Environmental Products or approved equal.
 6. Where additional pipe connections or modification of existing factory-made openings are required on new or existing precast concrete manholes, all cutting relative thereto shall be performed only by a power driven abrasive wheel or saw. It is specifically noted that such connections to existing manholes shall be installed in accordance with the details for new units shown on "Standard Detail Sheets" and shall be sleeved (using a grouted manhole adaptor) and caulked watertight with non-shrinking grout. Mud shall be applied around the bottom of the pipe connection, but not the top, to provide extra watertight connection.
- D. Pipe Depth and Protection: The minimum allowable cover for wastewater gravity mains shall be thirty inches from the top of the pipe to finish grade. Where waterways are crossed, interior ceramic epoxy coated ductile iron pipe shall be installed across and to ten feet each side of the crossing. Additionally, approved utility crossing signs shall be placed on the pipe alignment at each side of the waterway. Sign shall be approved by FPUA and the Agency having jurisdiction of said waterway.
- E. Pipe Bedding: Special care shall be exercised in design and installation to provide adequate bedding for the type of pipe used, taking into consideration trench width and depth, superimposed loadings above grade, and the material below trench grade. Pipe loading capabilities shall be computed in accordance with established design criteria and special supporting bedding or facilities shall be provided as required by the Engineer (see Section 02200).
- F. Special Exterior Protection for Corrosion: Extra protection shall be provided for underground cast or ductile iron pipe and fittings within areas of severe corrosive conditions (i.e. the islands, Indian River Flood Plain and select areas east of U.S. Highway 1), as described in ANSI/AWWA C116/A21.16. The soil-test evaluation to determine the necessity for extra protection in suspect areas shall be as set forth in ANSI Standard A21.5. Additionally, where other existing utilities are known to be cathodically protected, cast or ductile iron pipe crossing said utility shall be protected for a distance of 20 feet to each side, and when installed parallel to and within ten feet of, protection shall also be provided. Steel pipe shall not be installed in severe corrosion areas.
- G. Connections at Structures: Were wastewater gravity mains connect to structures, pipe joints shall be provided at the wall face. When it is necessary to extend wastewater

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(Section 02730)

mains through structures, such as conflicting elevation storm drain bypassing chambers, the pipe within shall be ductile iron with no inside joints or a ductile iron casing will be provided (casing size per Section 2315) and casing spacers used to maintain uniform slope through structure. This design must be submitted to FPUA for review and approval prior to constructing.

- H. Transition Connections: Where pipes of alternate materials (VC to CI, etc.) are to be connected between manholes, suitable approved transition couplings shall be installed. Couplings shall be a stainless steel backed "Fernco", or approved equal. Special designed units may be submitted for approval; however, concrete collars are not acceptable.
- I. Pipe Cutting: The cutting of ductile iron pipe for installation length adjustment, or connections for future services to existing wastewater mains, shall be in strict compliance with the methods specified in AWWA C600.
- J. Service Connections: Installation of service laterals shall be as shown on Detail Sheet "Service Connection Details"; including the T-WYE branches installed in the sewer main at the point of connections, and the service pipe and required fittings extend to the property line, perpendicular to said line, terminating with cleanout as shown on Detail Sheet "Wastewater Service Placement". The minimum service pipe size shall be six inches in diameter for a single service and for a double service. The exact location for each installed service shall be marked by permanent magnetic markers installed at the cleanout location of each property line. Lateral magnetic markers shall be: 3M Corporation Ball locators, or approved equal. Service lines to commercial or multi-family buildings shall have a transition manhole in accordance with U.A. Resolution 91-19, or as updated.

PART 3 – EXECUTION:

3.01 TESTING:

The Contractor shall perform testing of all wastewater gravity mains, as set forth in the following, and shall conduct said tests in the presence of representatives from the Department with two days advance notice provided. All testing (lamp testing, television inspection, deflection testing and/or infiltration/exfiltration testing) shall be performed after compaction but before any asphalt as been replaced. The contractor shall be responsible for all expenses accrued during this testing.

- A. Lamp Testing: The installed wastewater gravity main shall be "lamped" between manholes as they are installed or other structures in order to ascertain that they are clear and in correct alignment. The concentricity of the lamp image received shall be such that the diameter of said image shall have no vertical reduction from that of the

WASTEWATER COLLECTION SYSTEM

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pipe inside diameter and not more than 10 percent (10%) horizontal reduction. Testing shall not proceed until all facilities are complete in place and concrete cured. All piping shall be thoroughly cleaned prior to testing to clear the lines of all foreign matter (see next section for cleaning requirements). Lines shall be flushed with water prior to lamping to aid in the detection of dips in the line. Lines which have dips, which retain equal to or greater than ½ inch of water shall be dug up and replaced at no cost to FPUA. The use of Fernco couplings shall not be allowed during the adjustment.

- B. Television Inspection and Testing:** All main lines and manholes must be cleaned using a high-velocity jet cleaning system (hydro-cleaning) prior to televised inspection. High-Velocity jet (hydro-cleaning) equipment shall follow manufacturer's specification for ease and safety of operation. The jet nozzles shall be capable of producing a scouring action from 15-45 degrees in all sizes designated to be cleaned. The equipment will have a minimum working pressure of 2000 psi at 60 gpm. Equipment shall also include a high-velocity gun for washing and scouring manhole walls, troughs and benches.

Subsequent to the high-velocity cleaning and before any of the following tests can be performed on the sewer system, ample water must be reintroduced into the system to replace the water displaced during the cleaning process. This shall be performed using a 5-gallon bucket of suitably clean water to be poured into the upstream manhole in sufficient quantity to confirm flow through the downstream manhole. After this step is acknowledged, wait for 5-10 minutes to allow all the excess water to transverse through pipe segment prior to starting the CCTV inspection.

Sequence of CCTV Inspection. After cleaning, the pipe sections shall be visually inspected by means of closed-circuit television. The inspection will be done manhole-to-manhole section at a time and the flow in the section being inspected will be suitably controlled as specified. At the beginning and end of each sanitary inspection, a video inspection of the manhole must be provided. Each phase and/or project shall be recorded on a separate DVD/CD. For any TV Inspection which is redone at the direction of FPUA, the re-inspection will be added at the end of the DVD/CD with a separate entitlement labeled "RETV'D Manhole ___ to Manhole ___".

Direction. The direction of the camera travel shall be in the direction of flow in the pipe unless access to the upstream manhole is not possible, or the camera cannot pass through the pipe from end-to-end in the direction of flow, in which case a reverse set-up will be allowed only through the prior approval of the Utilities Engineer.

Picture Clarity. Video documentation shall be furnished on Digital format, in color, and of suitable clarity and quality for good definition. If, during the inspection, the camera lens becomes soiled or fogged, the camera should be shut down and the lens cleaned, even if this requires removing the camera from the line. If the camera is removed

WASTEWATER COLLECTION SYSTEM

(Section 02730)

for lens cleaning, the camera shall be returned to the point where acceptable by the FPUA representative.

Camera Travel. The camera shall be moved through the line at a moderate rate, stopping when necessary to permit the proper documentation of the pipeline's condition, see CCTV Narration and Documentation Requirements. When a defect or other feature is encountered, the progress of the camera should be slowed and stopped for a minimum of 15 seconds or as needed so that the observation can be panned with the camera, the data recorded, narration made and a still picture captured, if required. In no case will the television camera be allowed to transverse through the pipe at a speed greater than 30 feet per minute. If it is determined that this speed is in excess because the camera is displacing the water in the dips, a slower speed must be used.

CCTV Inspection Recording. The purpose of the CCTV inspection shall be to supply visual and audio record of the pipeline condition. Recording shall be in color with suitable clarity and quality for good definition. Each pipe segment must be included in a SINGLE FILE.

The following information must be provided as screen text on the video recording:

- Purpose of CCTV
- Job /Project name
- Location(if required)
- Date and time of day
- Upstream and downstream manhole numbers
- Direction of the camera travel
- CCTV company
- Operator's name

This text should be clearly displayed on a contrasting background. The text should be displayed for 15 seconds or for the duration of the start-up narration, whichever is longer. If an inspection is being performed on consecutive pipe segments with the same setup, this information must be provided at the start of each pipe segment.

During the CCTV, the running screen must include the following information. The display of this information must in no way obscure the central focus of the pipe being inspected.

- Running footage(distance traveled)
- Upstream and downstream manhole numbers

The end point of the inspected pipe segment should be indicated with the screen text for @ 15 seconds. The ending screen text should indicate:

- Ending footage
- Date and time of day
- Upstream and downstream manhole numbers.

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CCTV Narration and Documentation Requirements. The CCTV video recordings should not contain inappropriate language, idle chatter, background noise and/or discussions between the operator and other crew members. A Voice narration must be included in the video recording. All video narration must be live by the CCTV operator. Digital voice-overs are not allowed and will constitute a reinspection.

The narration must include the following information at the beginning of each pipe segment:

- Purpose of CCTV
- Job /Project name
- Location(if required)
- Date and time of day
- Upstream and downstream manhole numbers
- Pipe size
- Pipe material
- Direction of the camera travel
- CCTV company
- Operator's name

ALL observations along the length of the pipe must be narrated and documented with a description of the observation and clock position, if required. This is to include:

- All lateral sizes (either entering the main line through a T-wye connection or connected through an inline manhole), location and orientation
- Any debris or discoloration discovered.
- Each and every joint encountered.
- Depth and length (beginning and end) of ALL sags/dips found in the line that meet or exceed ½ inch.
- Any other deficiency or abnormal situation that may or may not meet FPUA Details or Specifications.

DVD/CD labels. Diskette labels shall identify the project name, project phase number, date of inspection, purpose of inspection, utility contractor name and CCTV company name. All labels shall be typed or computer generate. **Hand written labels are not acceptable.**

C. Deflection Testing: All new wastewater gravity mains are subject to deflection testing. Tests will be conducted using a 92.5% mandrel. The mandrel shall be pulled through the sewer

line by hand, using a 150-pound test line. If the mandrel cannot traverse the pipe as such, then the deficiency must be corrected. The intent is to require testing of all lines.

D. Infiltration/Exfiltration Testing: When required by Utilities Engineer, all infiltration/exfiltration testing shall be performed per the appropriate ASTM specification: C828 for clay pipe and F 1417 for plastic pipe.

END OF SECTION

WATER DISTRIBUTION SYSTEMS
(Section 02715)

PART 1- GENERAL

1.01 GENERAL:

This section sets forth the general requirements for design and installation of water distribution systems for potable service.

The relevant provisions specified in Division 2, "Technical Specifications", shall be applicable to this section unless otherwise indicated herein or changed in writing by the Utilities Engineer.

SPECIAL NOTE: Due to recent amendments to Section 1417 of the Safe Water Drinking Act, effective immediately, FPUA is requiring that all water works brass installed in water distribution system meet the requirements of Senate Bill 3874/House Bill 5289 (Lead Free).

1.02 DESIGN STANDARDS:

A. Required Reference: The plans shall comply with the design and installation requirements as specified by the "Ten States Standards for Water Works", unless otherwise indicated herein or approved by the Utilities Engineer.

B. System Design:

1. **Normal Flow Demands: Flow demands for design shall be calculated on the basis of full ultimate development as shown in the following table.**

<u>Design Flow – Residential</u>	<u>Estimated Flow</u>
Single-Family Unit – Normal 3br/2bath gpd	300
Multifamily Unit – Normal type	210 gpd

Note: All other units not specified above will be assessed on a case-by- case basis.

Maximum-day demand to be used for design shall be computed by using peak factors of 1.67 for individual customers. Flow demands for commercial, industrial, or other special developments shall be established from existing records or by estimated projections, using the best available data.

2. Fire Flow: Minimum system requirements for fire flow rates and duration (time) for total flow shall be as set forth by local ordinance.

WATER DISTRIBUTION SYSTEMS

3. System Size Computation: The minimum design for water distribution systems shall provide for at least 100% of the combined maximum-day demand rate and required fire flow for said rate, with special provisions for the peak flows in excess thereof. The allowable minimum service pressure under said design condition shall not be less than 20 pounds per square inch. Design computation shall be by the "Kypipe" procedure for developments larger than 250 units, or other applicable methods, as dictated by the system configuration. Design flows and method of computation shall be subject to review and approval by the Engineer.

4. Valve Locations: Valves shall be provided for all branch connections, loop ends, fire hydrant stubs, or other locations, as required to provide an operable, easily maintained and repaired water distribution system. Valves are to be placed so that the maximum allowable length of water main required to be shut down for repair work shall be no more than 1,000 feet. Water mains ending as stub-outs, intended for future expansion, shall terminate with a line size gate valve and temporary blow-off, so designed that water service is not interrupted during future tie-in. Valve locations shall be so marked as specified in Section 02600. A blue magnetic ball locator as manufactured by 3M Corporation, or approved equal, shall temporarily mark valve boxes during construction.

PART 2 – PRODUCTS

2.01 STANDARD REQUIREMENTS:

- A. General: The materials of construction and general installation procedures, with the exception of fire hydrants (Paragraph C Section 1 and 2, following), shall comply with the specific applicable standards set forth under the section "Utility Excavation, Trenching and Back-filling", the section "Casing Pipe – Boring and Jacking," and the section "DIP and PVC Pipe Fittings, Valves and Appurtenances," as well as "Standard Details – Water Distribution Systems."

- B. Approved Pipe, Fittings, and Valves: The types tabulated below, within the size range indicated and for the applicable service, are approved for water distribution system construction:

<u>Pipe and Fittings</u>	<u>Size Range</u>
Ductile Iron (DI), Class 50 Pipe & Fittings – Cement Mortar Lined	No limit
Polyvinyl Chloride (PVC) Pipe AWWA C-900, DR-18 AWWA C-905, DR-18	12 Inches or Less Larger than 12 Inches
Polyethylene Pipe Fittings	Service Connections, Brass Blow Offs, and

WATER DISTRIBUTION SYSTEMS

(LEAD FREE)

Bacteriological
Sample Points

HDPE Pipe and Fittings
(Shall be approved
by Utilities Engineer)

No Limit

Valves

Size Range

Gate Valves (GV) –
EPDM Wedge

24 Inches Maximum

Butterfly Valves (BFV)

30 Inches and Above

Corporation Stops &
Curb Stops

Service Connections

C. Fire Hydrants: Hydrant spacing shall be as required per local ordinance. Fire hydrants must be installed on minimum-sized water mains as follows:

- Commercial area – eight inch
- Residential area – six inch

1. **Fire Hydrant Requirements:** Fire hydrants shall conform to AWWA C-502 and shall be of the compression, traffic model type. Hydrants shall be designed for 150 psi working pressure. The hydrant shall be equipped with two 2-1/2 inch type nozzles and one 4-1/2 inch pumper nozzle. Threads shall be National Standard. Hydrants shall be furnished with a sealed oil or grease reservoir located in the bonnet so that all threaded and bearing surfaces are automatically lubricated when the hydrant is operated. The hydrant will be designed for disassembly by use of a short disassembly wrench or the hydrant shoe having integral cast tieback lugs on the main valve to permit the main valve assembly and valve seat to be removed without digging earth or disassembling the hydrant barrel. Hydrants shall be furnished with a breakaway feature that will break cleanly upon impact. This shall consist of a two-part breakable safety flange with a breakable stem coupling. The upper and lower barrels shall be fluted and ribbed above and below the safety flange or have an extra strength lower barrel. The hydrant internal valve shall be 5-1/4 inch minimum. The pentagonal operating nuts and the cap nuts shall be 1-1/2 inch point to flat. The hydrants shall open counter clockwise and the direction of opening shall be cast on the top.

WATER DISTRIBUTION SYSTEMS

Ground flange shall be located approximately 6 inches above finished grade. The hydrant shall be equipped with a 6-inch mechanical joint base inlet. The hydrant assembly shall consist of the fire hydrant, pipe connecting of the hydrant to the water main, the gate valve and box between the hydrant and the water main, the tee at the main, the restraining devices, and the bedding material. Fire hydrants shall be Mueller Super Centurion 250 or American Darling B-84-B-5. Hydrants owned by the Fort Pierce Utilities Authority shall be painted Carnival Red from factory, not field painted; privately owned hydrants shall be painted yellow from factory, not field painted.

2. Fire Hydrant Installation: Hydrants shall be located in a manner to provide complete accessibility and so that possibility of damage from vehicle, or injury to pedestrians will be minimized. Connect hydrant to main with a 6-inch PVC or ductile iron branch controlled by an independent 6-inch gate valve. The connecting pipe shall have the same depth or cover as the main. All pipe, valve, and points from the hydrant to the main shall be restrained. When placed behind the curb, the hydrant barrel shall be set so that portion of the pumper or hose nozzle cap will not be less than 12 inches nor more than 18 inches from the gutter face of the curb. When set in the space between the curb and the sidewalk, or between the sidewalk or property line, no portion of the hydrant or nozzle cap shall be within 6 inches of the sidewalk or property line. At all times, hydrants shall be no more than 15 ft. from the curb of roadways or from the edge of pavement. Clearances of seven and one half feet (7ft-6in.) in front of and to the sides of fire hydrants, with a four-foot (4 ft.) clearance to the rear of hydrants shall be maintained. Hydrants shall stand plumb and true and shall have their nozzles parallel with or at right angles to the curb, with the pumper nozzle facing the curb. Hydrants shall be set to the established grade, with nozzles at least 18 inches above the ground.
- D. Restraining Joints: Pressure piping fittings and other items requiring restraint shall be braced with mechanical restraining assemblies, as specified under Section 02600. Said restraining devices shall be designed for the maximum pressure condition (testing) and the safe bearing loads for horizontal thrust.
- E. Pipe Depth and Protection: The standard minimum cover for water distribution systems shall be three feet from the top of the pipe to finish grade. However, should this design not be feasible, protective concrete slabs may be required over the pipe within the limits of the lesser cover. Where waterways, canals, ditches, or other cuts are crossed, protective concrete slabs may also be required across and to ten feet each side of the bottom. Additionally, approved utility crossing signs shall be placed on the pipe alignment at each side of the canal, etc. Signs shall be approved by FPUA and the Agency having jurisdiction over said waterway.
- F. Connections at Structures: When it is necessary to extend water pipes into or through structures, flexible joints shall be provided at the wall face. If the structure is used to remedy a conflict, a ductile iron casing will be provided (casing size per Section 02315)

WATER DISTRIBUTION SYSTEMS

and casing spacers used to support loading per manufacturers specifications. This design must be submitted to FPUA for review and approval prior to constructing.

- G.** Special Exterior Protection for Corrosion: Extra protection shall be provided for underground cast or ductile iron pipe and fittings within areas of severe corrosive conditions (i.e. the islands, Indian River Flood Plain and areas east of U.S. Highway 1), as described in ANSI/AWWA C116/A21.16. The soil-test evaluation to determine the necessity for extra protection in suspect areas shall be as set forth in ANSI Standard A21.5. Additionally, where other existing utilities are known to be cathodically protected, cast or ductile iron pipe crossing said utility shall be protected for a distance of 20 feet to each side, and when installed parallel to and within ten feet of, protection shall also be provided. Steel pipe shall not be installed in severe corrosion areas.
- H.** Air Venting and Blow-Offs: Where the water main profile is such that air pockets or entrapment could occur, resulting in flow blockage, methods for air releases shall be provided. Air venting capabilities shall be provided for distribution mains by appropriately placing fire hydrants, blow-offs or other manual devices. At critical points on major mains, air release assemblies shall be installed, with valves as specified under Section B. Special care shall be taken to preclude any cross-connection possibility in the design of automatic air release valve application. All dead-end water mains, temporary or permanent, shall be equipped with a manually operated blow-off at the terminal.
- I.** Service Connections: Connections to water mains shall be made by installing of service saddles. A corporation stop shall be placed at the saddle or fitting, with the service line extended to the property line, perpendicular to said line, and terminating with a lockable curb stop, pending meter installation (Re: Section 02600 for material specifications and Detail Sheet for "Typical Water Service Connection Details"). Contractor shall be responsible for installation of meter boxes for all 5/8-inch x 3/4-inch meters. These boxes shall be manufactured by DFW Plastics, Inc product number DFW1219-10-AF3MF SMALL, with a black polymer body and blue polymer anti-float lid.
- J.** Water Meters: All water meters shall be purchased by FPUA in accordance with established procurement requirements. FPUA shall hold water meters until the water main and/or the service line has been installed, inspected, pressure tested, approved by the appropriate regulatory agency, and all fees have been paid. Water meter assemblies shall be installed by FPUA.
1. A compound meter would normally be specified for the following applications:
- (a) Residential (Multi-family general service)
 - (b) Light commercial
 - (c) Shopping centers and malls

WATER DISTRIBUTION SYSTEMS

(d) Adult congregate living facilities

(e) Apartment complexes

(f) Condominiums

2. A turbine meter would normally be specified for the following applications:

(a) Industrial plants

(b) Hospitals

(c) Any facility requiring high, constant flow rates.

K. Backflow Prevention:

1. Backflow Prevention Enforcement, New Services: All potable water connections to any residential, commercial, or industrial establishment will require the installation of the appropriate backflow prevention device as established in Resolution 82-15, or as amended, as a component of the customer's installation unless this requirement is specifically waived in writing by the Utilities Engineer.

2. Backflow Prevention Devices: All backflow prevention devices installed for the purpose of protecting the distribution system shall meet or exceed the FPUA's backflow prevention device specifications. FPUA shall be sole judge of product quality and conformity to applicable standards and shall maintain a current list of approved devices which shall be available to the public. All backflow prevention devices shall meet the requirements of UA Resolution 82-15 or as amended. Only the following will be considered acceptable backflow prevention devices: Air gap, reduced pressure principle backflow preventers, and double check valve assembly backflow preventer, dual check valve assemblies are authorized for single family residential installations.

3. Location: Normally meters/backflow preventers shall be located on private property in areas designed by FPUA Engineering Department, parallel and adjacent to the property being served. Selection of an appropriate site for the larger meter/backflow preventer installation is dependent upon accessibility, landscaping, visibility and overall dimensions. All factors must be taken into consideration for appropriate location of the installation. All aboveground meters/backflow preventers shall be landscaped by the Contractor as required by City or County Ordinances.

4. Fire Service: All commercial sprinkler systems will require, as a minimum, a double detector check valve assembly backflow preventer when connected to a

WATER DISTRIBUTION SYSTEMS

potable water system. The manufacturer's cut sheets shall be submitted for FPUA approval before purchasing and shall conform to the following:

<u>Manufacturer</u>	<u>Size Range</u>
AMES Series 3000B1	2-inch
AMES Colt Series C300	4 – 10-inch
WATTS Series 757	4 – 10-inch

Note: Assemblies must contain silicone rubber check internals and EDPM OS&Y gates originally installed by the manufacturer.

Once all required testing has been completed, the fire suppression contractor shall install the assembly in the presence of an FPUA Inspector. After all DDC testing is complete, the FPUA Inspector will lock the OS&Y valves in the closed position until such time as the water mains are approved by the appropriate regulatory agency, all fees have been paid, and closeout items received.

- Irrigation Systems: All irrigation systems will require the appropriate backflow preventer device as established in Resolution 82-15, or as amended.

PART 3 – EXECUTION

3.01 DISINFECTION:

- Disinfection of water mains shall be conducted in accordance with AWWA C-651. Advance notice of 48 hours shall be provided to the Department before disinfecting procedures start. The FPUA Inspector shall not be responsible for obtaining approved results and the analysis shall be conducted at no cost to the Fort Pierce Utilities Authority. Mains shall not be put into service until after the necessary bacteriological samples have been approved by the applicable regulatory agencies. Samples and analysis shall be collected in accordance with standard sampling procedures and performed by a certified laboratory. Evidence that two consecutive bacteriological samples are in compliance with established regulations must be provided. Copies of approved results must be received by the FPUA Inspector.
- Before disinfection, all mains 4-inch diameter and larger shall have a line size swab passed thru the entire length of the line to flush out all foreign material from the pipeline. Hoses, fittings, and temporary pipes in ditches shall be provided as required to dispose of flushing water without damage to adjacent properties. Flushing velocities shall be at least 2.5 feet per second.
- Disinfection mixture shall be a chlorine-water solution having a free chlorine residual of at least 50 ppm, but no more than 200 ppm. The disinfection mixture shall be prepared by

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injecting a calcium hypochlorite mixture into the pipeline at a measured rate while fresh water is allowed to flow through the pipeline at a measured rate so that the chlorine water solution is of the specified strength. Using the water main diameter and length (see attached chart), the weight of H.T.H. (calcium hypochlorite) or other approved chlorine containing chemical, quantity is determined and mixed in 50-gallon drums. Because of the solubility, not more than 5 pounds of chemical can be dissolved in one drum. Thus, a drum of water is used for each successive 5 pounds of dry chlorine (H.T.H.) used.

DISINFECTANT PREPARATION DATA

Total Pounds of 65% Calcium Hypochlorite (H.T.H.)
Needed to Dose at 200 MG/L

**Size of
Pipe
(Inches)**

**Length of Pipe
(Feet)**

	100	200	300	400	500	600	700	800	900	1000
2	.04	.08	.13	.17	.21	.25	.29	.33	.38	.42
4	.17	.33	.50	.67	.84	1.00	1.17	1.34	1.51	1.67
6	.38	.75	1.13	1.51	1.88	2.26	2.64	3.01	3.39	3.77
8	.67	1.34	2.01	2.68	3.35	4.02	4.69	5.36	6.03	6.70
10	1.05	2.09	3.14	4.19	5.23	6.28	7.32	8.37	9.42	10.47
12	1.51	3.01	4.52	6.03	7.54	9.04	10.55	12.06	13.57	15.08
16	2.68	5.36	8.04	10.72	13.40	16.08	18.76	21.44	24.12	26.80
18	3.39	6.78	10.18	13.57	16.96	20.35	23.74	27.14	30.53	33.92
20	4.19	8.37	12.56	16.75	20.94	25.13	29.31	33.50	37.69	41.88

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GALLONS OF WATER PER EACH FOOT

Pipe Sizes	<u>(Inches)</u>	<u>Volume Water (Gallons)</u>
	2	.16
	4	.65
	6	1.47
	8	2.61
	10	4.08
	12	5.88
	16	10.44
	18	13.22
	20	16.32

NOTE: Value listed in the table above are based on 65% available chlorine producing a 200 mg/l solutions.

For a solution (calcium hypochlorite, sodium hypochlorite) with available chlorine other than 65%, multiply the table above by the ratio of 65% to percentage of the available chlorine.

For a disinfectant solution required less than 200 mg/l, multiply the table above by the ratio of required design strength to 200 mg/l.

- D. Point of Application: The chlorine mixture shall be injected into the pipeline to be treated at the beginning of the line through a corporation stop or suitable tap in the top of the pipeline. Water from the existing system or other approved source, shall be controlled so as to flow slowly into the newly laid pipeline during the application of chlorine. The rate of chlorine mixture flow shall be in such proportion to the rate of water entering the pipe that the combined mixture shall contain 50 ppm of free available chlorine, but no more than 200 ppm of free available chlorine. Valves shall be manipulated so that the strong chlorine solution in the line being treated will not flow back into the line supplying the water. Backflow preventers shall be used if necessary.

- E. Retention Period: Treated water shall be retained in the pipeline long enough to destroy all nonspore-forming bacteria. At the end of a twenty-four hour period, the disinfecting mixture shall have strength of at least 10 ppm of free chlorine. Following disinfection, water shall be flushed from the line until the water through the line is equal chemically and bacteriologically to the permanent source of supply. Disinfecting water shall not be allowed to flow into a waterway without adequate dilution or other satisfactory method of reducing chlorine concentrations to a safe level.

- F. The Contractor shall furnish all equipment and materials and perform the work necessary for the disinfecting procedures, including additional disinfection as required.

3.02 TESTING:

WATER DISTRIBUTION SYSTEMS

- A.** The Contractor shall perform hydrostatic testing of all water distribution systems, as set forth in the following, and shall conduct said tests in the presence of representatives of the Engineer and FPUA, with 48 hours advance notice provided. Prior to the pressure and leakage testing, the water mains shall be disinfected in accordance with AWWA C-651.
- B.** Testing shall not proceed until all restraining devices have been installed. All piping shall be thoroughly cleaned and flushed prior to testing to clear the lines of all foreign matter. While the piping is being filled with water, care shall be exercised to permit the escape of air from extremities of the test section, with additional release cocks provided, if required. Filling of the main shall be under supervision of FPUA. Each valve section of the pipe shall be filled with water, slowly, and the specified test pressure shall be applied.
- C.** Hydrostatic testing shall be performed at 150 pounds per square inch pressure, unless otherwise approved by the Utilities Engineer for a period of not less than two hours. Maximum distance to test must be less than 3000 feet or as allowed by the Utilities Engineer. Testing shall be in accordance with the applicable provisions as set forth in Section 13 of AWWA Standard C600. The allowable rate of leakage shall be less than the number of gallons per hour determined by the following formula:

$$L = \frac{SD [(P) \frac{1}{2}]}{148,000}$$

L = allowable leakage in gallons per hour

S = length of pipe tested, feet

D = nominal diameter of the pipe in inches

P = average test pressure maintained during the leakage test in pounds per square inch gauge.

Note: Pressure testing must be completed by 12:00 noon due to thermal expansion.

- D.** The testing procedure shall include the continued application of the specified pressure to the test system for the two-hour period by way of a pump taking supply from a container suitable for measuring the volume displaced from said container. Any exposed pipe, fittings, valves, hydrants, and joints shall be examined during the test. Any damaged or defective pipe fittings, valves or hydrants that are discovered following the pressure test shall be repaired or replaced with sound material, and all tests shall be repeated.
- E.** The pressure shall not vary by more than +5 psi from the required pressure for the duration of the test. If at any point during the test the pressure loss exceeds 5 psi, the test is considered failed. Should the test fail, necessary repairs shall be accomplished by the Contractor and the test repeated until within the established limits. The Contractor shall furnish the necessary labor, water, pumps, gauges, and all other items required to conduct the required water distribution system testing and perform necessary repairs.

END OF SECTION

DIP AND PVC PIPE, FITTINGS, VALVES AND APPURTENANCES

(Section 02600)

PART 1 – GENERAL

1.01 DESCRIPTION OF WORK:

- A. This section includes the material and installation standards for pipe, fittings, valves, and appurtenances, as applicable to wastewater and water installations.
- B. The data included herein generally makes no reference to the service utilization for the item specified and are to be used as the standards for approved materials indicated under specific facility installations, as set forth in other sections.
- C. Required specialty items not included under this section shall be high quality and consistent with approved standards of the industry for the applicable service installation.

PART 2 – PRODUCTS

2.01 PIPE AND FITTINGS:

- A. Identification: All pipe and fittings shall be clearly marked with the name or trademark of the manufacturer, the batch number, the location of the plant, and strength designation, as applicable. All water main pipe, force main pipe and reuse pipe shall be marked by the use of a continuous multi-strand wire, 10 gauge THHN, blue in color for water mains, green in color for force mains, and purple in color for reuse mains, for the entire length of the pipe. The wire shall be affixed to the top of the pipe by identification tape. In situations where identification tape will not adhere to the pipe, the marking wire shall be wrapped around the pipe. Where splices are required, they shall be in accordance with FPUA Standards. Identification tape shall be buried 18" below finish grade directly above all mains and shall clearly identify the location and type of main buried below. All mains shall have locator boxes installed a minimum of every 1,000 feet. When utilities are installed in easements or right-of-ways, located in open fields or desolate areas of the FPUA service territory, a vertical fiberglass utility marker shall be placed alongside each corresponding locator box.
 - 1. PVC or DIP *water main* shall be blue in color and have "WATER MAIN" permanently printed in three locations equally spaced around the circumference of the pipe for the entire length of the pipe. Identification tape with the words "WATER MAIN" must be attached to the top of the pipe in such a way as to affix the locator wire to the pipe.
 - 2. PVC or DIP *force main* shall be green in color and have the words "FORCE MAIN" permanently printed in three locations equally spaced around the circumference of the pipe for the entire length of the pipe. Identification tape with the words "FORCE MAIN" must be attached to the top of the pipe in such a way as to affix the locator wire to the pipe.

DIP AND PVC PIPE, FITTINGS, VALVES AND APPURTENANCES

(Section 02600)

3. PVC or DIP *reuse main* shall be purple in color. The words "REUSE MAIN" shall be permanently printed in three locations equally spaced around the circumference of the pipe for the entire length of the pipe. Identification tape with the words "REUSE MAIN" must be attached to the top of the pipe in such a way as to affix the locator wire to the pipe.
- B. **Corrosive Environments:** All fittings, valves, and appurtenances, for use in corrosive environments shall have exterior epoxy coatings conforming to ANSI/AWWA C116/A21.16 and all associated hardware shall be 316 Stainless Steel. Additionally, valves that are installed in corrosive environments shall be supplied with a cast bronze valve stem and 2-inch operating nut. Corrosive environments are defined as any location that is in close proximity to salt water (for example, the beach or the Indian River flood plain.)
- C. **Ductile Iron, General:**
1. **Pipe:** Pipe shall be in accordance with ANSI/AWWA C151/A21.51, Class 250 (minimum), unless heavier class is required for conditions.
 2. **Fittings:** Ductile iron pipe fittings shall conform to ANSI/AWWA C110/A21.10 and ANSI/AWWA C153/A21.53, Class 250 minimum.
 3. **Joints:**
 - (a) "Push On" and mechanical joints shall be in accordance with ANSI/AWWA C111/A21.11.
 - (b) Restrained joint assemblies with mechanical joint pipe shall be the "Flex-Ring," "Lok-Ring," or mechanical joint coupled as manufactured by American Cast Iron Pipe Company, "Mega-Lug," Stargrip Series 3000/4000 or approved equal.
 - (c) Flanged pipes and connections, including all bolts, nuts and gaskets, shall be in accordance with ANSI/AWWA C115/A21.15.
 4. **Coatings and Linings:**
 - (a) Ductile iron pipe and fittings for used water shall have an exterior asphaltic coating and shall be cement mortar lined with a bituminous sealed coated in accordance with ANSI/AWWA C151/A21.51 and ANSI/AWWA C104/A21.4.

DIP AND PVC PIPE, FITTINGS, VALVES AND APPURTENANCES

(Section 02600)

- (b) All Ductile Iron pipe and fittings used for wastewater shall have an exterior asphaltic coating and an interior ceramic epoxy coating (Protecto 401).
- (c) Machined surfaces shall be cleaned and coated with a suitable rust-preventive coating at the shop immediately after being machined.
- (d) Joint Restraints shall be supplied with the following coatings: EBAA – Mega-Bond Coating, StarGrip – Star Bond Coating and Ford Meter Box Company – Epoxy Coating (E-Coat)

D. Polyvinyl Chloride (PVC) Water Pipe and Wastewater Force Main:

- 1. PVC will be acceptable for wastewater force mains and water mains up to and including 30-inch diameter pipe.
- 2. PVC pipe must meet requirements as set forth in AWWA C900 and C905 and bear the National Sanitation Foundation seal for potable water pipe. Provisions must be made for contraction and expansion at each joint with a rubber ring and integral thickened ball as part of each joint. Pipe and fitting must be assembled with nontoxic lubricant.
- 3. Design working pressure:
Water Main & Force Main:

C900, DR-18 (Pressure Class 235) 4" to 12"	C905, DR-18 (Pressure Rating 235) 14" to 30"
--	--
- 4. Connections for pipe two inches or greater in diameter shall be rubber compression ring-type. Pipe shall be extruded with integral thickened wall bells without increase in dimension ratio (DR). Rubber ring gaskets shall consist of synthetic compounds meeting the requirements of ASTM D1869 and suitable for the designated service.

E. Polyvinyl Chloride (PVC) Wastewater Gravity Pipe:

- 1. ASTM D1734 and ASTM D1784 Specifications for Rigid Polyvinyl Chloride Pipe Compounds.
- 2. ASTM D3034 and ASTM D789 Specifications for (PVC) Plastic Pipe (SDR-26) Bell and Spigot.
- 3. ASTM D3212 flexible gasket joints for PVC sewer compression-type. The gasket shall comply with ASTM F477

DIP AND PVC PIPE, FITTINGS, VALVES AND APPURTENANCES

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F. Polyethylene Services:

1. All main line taps to be made using either stainless steel double strap service saddles with iron pipe threads or full circle brass service saddles (when approved by Utilities Engineer).
2. Corporation stops to be provided with all service saddles and taps. Corporation stops shall be manufactured of brass alloy in accordance with ASTM B62 (latest edition) as approved by Utilities Engineer. Inlet thread shall be AWWA taper thread in all sizes in accordance with AWWA C800. Outlet connections shall have a compression-type fitting.
3. Polyethylene tubing for 1 and 2-inch water services shall conform to AWWA C901 subject to the following design criteria: Standard Code Designation PE3408, Pipe Class 200, and Dimension Ratio (DR) 9.

Tubing shall bear identification markings, which shall remain legible during normal handling, storage, and installation, and which have been applied in a manner that will not reduce the strength of the product or otherwise damage the tubing. Marking on the tubing shall include the following and shall be applied at intervals of not more than 5 feet: nominal size, material code designation, dimension ratio, pressure class, manufacturer's name or trademark and production record code, and seal (mark) of the testing agency that certified the suitability of the tubing material for potable water products.

4. Joints for polyethylene tubing shall be of the compression type utilizing a totally confined grip seal and coupling nut. Stainless steel inserts shall also be used for all tubing services.
5. All service lines crossing under any road rights-of-way or permanently paved or concrete areas to be provided with a schedule 40 PVC casing. Casing shall extend a minimum of five feet beyond either side of pavement. Casing ends shall be sealed with Permagum duct seal, no duct tape shall be allowed.

<u>Service Line (Inch)</u>	<u>PVC Casing (Inch)</u>
1	2
2	3

6. All fittings and stops to be high quality water works brass and equipped with compression-type connections.
7. Straight ball meter valves shall be Ford Grip Joint or Mueller (lockwing), double locking or approved equal.

DIP AND PVC PIPE, FITTINGS, VALVES AND APPURTENANCES

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8. 5/8 – inch x 3/4 – inch and 1 – inch meter installations shall be placed in boxes. These boxes shall be manufactured by DFW Plastics, Inc product number DFW1219-10-AF3MF SMALL, with a black polymer body and blue polymer anti-float lid.
9. Water meters and backflow preventers shall be purchased by the customer and installed by FPUA in accordance with established procurement requirements.

G. Special Items:

1. Expansion Joints: Pipe expansion joints shall be suitable for the applicable service with a minimum 150 psi working pressure and shall be Style No. 500, as manufactured by Mercer Rubber Company, or approved equal.
2. Tapping Sleeves and Crosses: Tapping sleeve shall be split-type stainless steel with flanged outlet for connection to tapping valve. Body shall be constructed of Grade 18-8 type 304 stainless steel to provide corrosion protection. Flange shall be 18-8 type 304 stainless steel and conform to AWWA C207 class D ANSI 150 lb. drilling. Bolts and nuts are to have 18-8 stainless steel threads, and capable of being torqued to 150 ft lbs. for high sealing capability. Tapping sleeves are to be Ford Fast Tapping Sleeve, JCM or approved equal.
3. Service Saddles: Saddles for PVC or ductile iron pipe shall be stainless steel double strap service saddles with iron pipe threads and the iron body must be epoxy or nylon coated or otherwise approved by the Utilities Engineer. Sealing gaskets shall be suitable for the applicable service and straps shall be corrosion resistant alloy steel.
4. Polyethylene Encasement: Encasements shall comply with ANSI/AWWA C105/A21.5, "Polyethylene Encasement for Ductile Iron Pipe Systems."

2.02 VALVES:

A. GENERAL

1. The valve type, size, rating, flow direction arrow, if applicable, and manufacturer shall be clearly marked on each unit. Valves shall open left (counterclockwise), with an arrow cast in the metal of operating hand wheels and nuts indicating the directions of opening.
2. Valves shall open counterclockwise. Operators shall comply with AWWA C504 with 2-inch square operating nut. Operators shall be fully gasketed and grease-packed to withstand an external water pressure of 10 psi. Valve operators for valves 24 inch and smaller shall be traveling nut or worm gear type fully field adjustable stops so the operator does not have to be disassembled for valve seat

DIP AND PVC PIPE, FITTINGS, VALVES AND APPURTENANCES

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adjustment. Valves larger than 24-inch shall be equipped with worm gear type operators. Appurtenances shall be furnished by the valve manufacturer.

B. GATE VALVES (GV)

1. Underground Service (General): Valves two inches and larger shall be iron body, bronze mounted, conforming to AWWA C509, EPDM resilient wedge, non-rising stem type, and shall be equipped with two-inch square cast iron wrench nuts. Gate valves shall be Mueller, Kennedy, American, or approved equal.
2. Above Ground Service (General): Valves shall be iron bodied, bronze mounted EPDM resilient wedge, conforming to AWWA C509. Valves shall be OS&T, rising stem type. Valves shall be as manufactured by Mueller, Clow, Kennedy, American, or approved equal.
3. Tapping Valves: Valves shall conform to the specifications set forth under Paragraphs 1 and 2 (proceeding), for the applicable service conditions. Additionally, units shall be compatible with the connecting sleeve or saddle and specially designed for wet tapping installation operations. Tapping valves shall be Mueller, Kennedy, and American or approved equal.
4. Actuators: Valves 16 inches and larger shall be equipped with approved gearing actuators, with sealed enclosures for buried or submerged service, and shall be furnished by the valve manufacturer. Position indicators shall be furnished as required.

C. PLUG VALVES (Force main application ONLY):

1. General Service: All plug valves must be bi-directional interior epoxy coated cast iron, ductile iron or steel bodied eccentric-type with resilient faced plugs capable of drip-tight shutoff at rated pressure when applied to either side of the valve, conforming to AWWA C517. All valves up to and including 24-inch, shall be designed for minimum working pressure of 150 psi. Larger valves shall be designed for a minimum working pressure of 120 psi. The port area of the valve shall be the largest area available for the size valve being installed or specified for installation by the Utilities Engineer. Valves shall be as manufactured by Val-Matic, Dezurik, Clow, or approved equal.
2. Actuators: Valves shall be equipped with an approved gear actuator sized appropriately for the valve size specified. Buried and submerged services will be installed with sealed enclosures with a 2-inch actuating nut attached to the actuator, unless otherwise approved by the Utilities Engineer. Actuator bearings must be constructed of heavy-duty bearings capable of resisting corrosion and prevent binding.

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D. CHECK VALVES (CV):

1. General Service: Water valves shall be iron body, bronze mounted, outside lever and weight, and equipped with removable inspection covers. Check valves 6 to 12 inches shall have a minimum working pressure of 175 psi, and units 16 to 24 inches shall be rated for 150 psi minimum working pressure and shall permit full flow area equal to that of the connecting pipe. Valves shall be as manufactured by Clow, M&H, American, or approved equal.
2. Valves 2-Inches and Smaller: Valves shall be bronze body and disc, swing check-type, with removable inspection covers, and rated for 150 psi minimum working pressure. For two-inch grinder pump applications, a Flomatic Model 208T ball check valve will be required, or approved equal.

E. CORPORATION STOPS AND CURB STOPS:

Units shall be brass equipped with connections compatible with the connecting service pipe-type; must have grip joint type or compression connections for polyethylene tubing with locking collars and stainless steel inserts.

F. AIR RELEASE VALVES – AIR AND VACUUM VALVES:

Water (Vent Only): Valves shall be cast iron or bronze body, suitable for domestic water service, rated for a minimum 150 psi working pressure. Automatic air release valves shall be 2-inch valves as manufactured by APCO or Val-Matic or approved equal.

Wastewater: Valves shall be nylon bodied, with a 2-inch NPT threaded connection and designed to sustain an air gap separation under pressure up to 150 psi. Automatic air release valve shall be manufactured by A.R.I., D-025 "SAAR" combination air valve for sewage.

G. SPECIAL ITEMS

1. Valve Boxes: Units shall be adjustable, cast iron, two-piece screw-type with minimum interior diameter of five inches, and a LOCKABLE cast cover with the applicable inscription in legible lettering on the top: "SEWER", "REUSE" or "WATER." Boxes shall be suitable for the applicable surface loading and valve size, and shall be as manufactured by Davis Meter and Supply Division, or approved equal. Valve boxes for treated effluent systems shall be marked accordingly. Extension pieces, if required, shall be the manufacturer's standard screw-type for use with the valve box.
2. Extension Stem for Valve Operators: Where the depth of the operating nut is more than 3 feet, operating extensions shall be provided to bring the operating nut to a point 12 inches below finished grade. The extension shall be steel construction

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and permanently attached to the operating nut on the valve. The use of setscrews will not be allowed.

PART 3 - EXECUTION

3.01 INSTALLATION:

A. GENERAL REQUIREMENTS:

1. Piping, fittings, valves, and appurtenances shall be installed in accordance with these Standards and in general with the manufacturer's recommendations for the applicable service. All aforementioned items are to be inspected by a FPUA representative in place, before backfilling to ensure the accuracy and quality of the installation and parts.
2. Piping shall be installed along straight line and grade between fittings, manholes, or other defined points, unless other definite lines of alignment deflection or grade change have been established. Modification to approved alignment or grade during construction shall receive prior approval from the Utilities Engineer, and all resulting design conflicts shall be resolved by the Utilities Engineer prior to proceeding.
3. Materials shall be cleaned and maintained clean, with all coatings protected from damage. The interior of the pipe shall be free of dirt and debris, and when work is not in progress; all open ends shall be plugged.
4. Underground piping shall not be driven to grade by striking it. When the pipe has been properly bedded, enough compacted backfill shall be placed to hold the utility in correct alignment. If necessary, precaution shall be taken to prevent flotation.
5. Joining shall be by the manufacturer's approved method and shall not require undue force to accomplish full satisfactory seating and assembly. Connections at structures shall be cut accurately and worked into place without forcing and shall align with the connecting point. Flanged joints shall be made up tight, but with care taken to prevent undue strain upon equipment or other items. Suitable flange filler rings shall be installed where required to provide suitable joints. The installation shall be permanently watertight, with no visible leakage at joints, connections with structures or other locations, under operational or testing conditions. Material that in jointing does not remain completely seated and/or watertight shall be rejected.
6. Underground pressure piping systems shall be securely anchored by acceptable means at all tees, plugs, caps, bends and valves, and at all other locations where unbalanced forces exist or as directed by the Utilities Engineer. Restrained joints shall be used in accordance with manufacturer's recommendations.

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7. FPUA will accept Uni-Flange, Mega-Lug, and Stargrip Series 3000/4000 or approved equal, restraining systems. The Contractor shall supply to the Utilities Engineer a shop drawing of every typical fitting assembly within the project, which reflects the restraint detail proposed for use (including length of pipe restraint). Said shop drawing shall specify the particular system to be utilized and no substitutions will be allowed after approval without re-submittal of shop drawings and written approval by the Utilities Engineer.
8. Exposed systems shall be supported as necessary to hold the piping and appurtenances in a firm, substantial manner to the required lines and grades indicated, with no undue piping stresses transmitted to equipment or other items. Piping within buildings shall be adequately supported from floors, walls, ceilings, or beams. Supports from the floor shall be by suitable saddle stands or piers. Piping along walls shall be supported by satisfactory wall brackets, or saddles, or by wall brackets with adjustable hanger rods. For piping supported from the ceiling, approved rod hangers of a type capable of screw adjustment after erection of the piping shall be used. Pipe aboveground outside of buildings shall be supported on concrete supports or pre-manufactured adjustable pipe supports.
9. Proper provision for exposed expansion or contraction shall be provided by installation of expansion joints or other suitable methods. Additionally, flexible connections shall be provided to expedite equipment or piping system removal.
10. Sub aqueous pipe laying may be permitted where conditions make it impractical to lay pipe "in the dry," provided the Contractor submits his plans for laying pipe under water to the Engineer and obtains advance approval thereof. All sub aqueous crossings shall be made in accordance with all approved permits.

B. DUCTILE IRON (DI) PIPE:

Installation shall be performed in accordance with the applicable provisions of AWWA Standard C600. The opening cut in the pipe wall for installation of tapping saddles and sleeves shall be made by a special tapping machine designed for this specific service. All pipe cutting shall be accomplished by power operated abrasive wheel or saw cutter, or other methods approved by the pipe manufacturer. Where required, Polyethylene Encasement shall be installed as set forth under AWWA C105.

C. INSPECTION CRITERIA OF (DI) PIPE AND FITTINGS:

All pipe, valves, fittings, or other items shall be inspected prior to installation and *shall be rejected* if any of the following conditions exist:

1. Interior Surfaces:

DIP AND PVC PIPE, FITTINGS, VALVES AND APPURTENANCES

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- (a) The interior cement or ceramic epoxy lining is damaged, broken or severely cracked.
 - (b) The interior cement or ceramic epoxy lining is found to be excessively non-uniform.
 - (c) Protruding materials are found in the rubber seal location (Gasket Raceway). If this condition is minor, it may be field corrected and recoated as required.
 - (d) **ANY** interior surface that is rusted with pits or other corrosive damage. Surface rust may be corrected and recoated at the discretion of the Utilities Engineer.
2. Exterior Surfaces:
- (a) Surfaces show visual defects.
 - (b) Exterior surface is rusted with pits or other corrosive damage. Surface rust may be corrected and recoated as required.
 - (c) **ANY** surface rust on ductile iron fitting that has been epoxy coated for corrosion resistance in harsh soil environments.
 - (d) **ANY** pipe or fitting which has received a severe blow that may have caused an incipient fracture, even though not visible.
3. Marking of Rejected Fittings: Fittings that have obvious casting defects or other imperfections that affect the structural integrity of the fitting may be marked with paint. These fittings shall not be allowed for use in FPUA under any circumstances. Fittings that fail for cosmetic reasons, (surface rust, coating problems, etc.) shall be tagged and identified to the Contractor or distributor. The problem must be corrected by the Contractor or distributor to the inspector's satisfaction prior to installation in FPUA system.

D. POLYVINYL CHLORIDE (PVC) PIPE:

Lubrication used for pipe and fitting joints shall be nontoxic (NSF approved for potable water) and recommended for use by the pipe manufacturer. The use of vegetable oil, and lard type (Crisco) cooking matter shall not be allowed under any circumstances. For all installations, ensure the provisions of AWWA Manual M-23 are followed.

E. VALVES:

1. General: Valves shall be carefully inspected, opened wide, and then tightly closed prior to installation, and all the various nuts and bolts thereon shall be tested for

DIP AND PVC PIPE, FITTINGS, VALVES AND APPURTENANCES

(Section 02600)

tightness, per manufacturer specifications. Special care shall be taken to prevent joint materials, stones, or other substances from becoming lodged in the valve seat. Valves, unless otherwise required, shall be set with their stems vertically above the centerline of the pipe. Any valve that does not operate correctly shall be adjusted to operate properly or removed and replaced.

2. Buried valves shall be installed vertically where depth of cover permits. Where depth of cover does not permit, side operators shall be used. Extension stems shall be provided on all buried valves when the operating nut is deeper than three feet below the final grade, with sufficient stem extension to place the nut not more than three feet below grade. Where extension stems are required within valve boxes, approved insert stem guides shall be provided. All valve locations are to be marked by use of a reflective marker (RPM) attached to the pavement or concrete pad near the valve box per Detail M-6 and at the edge of pavement. Blue RPMs shall be used for water, green for force mains and purple for reuse mains.
3. Valve boxes shall be carefully centered over the operating nuts of underground valves to permit a valve wrench to be easily fitted to the nut. The tops of valve boxes shall be set to the required grade. The valve box **SHALL NOT** transmit surface loads directly to either the pipe or valve. Care shall be taken to prevent earth and other material from entering the valve boxes. Any valve box that becomes out of alignment or is not to grade shall be dug out and adjusted. Concrete pads will be provided around boxes, in accordance with the typical gate valve and valve box detail.

END OF SECTION



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BID FORM
PROPOSAL TO
THE CITY OF FORT PIERCE
FOR
KINGS LANDING OFFI-SITE WATER MAIN UPGRADE – AVENUE B AND INDIAN RIVER DRIVE

NAME OF BIDDER: _____

MAILING ADDRESS: _____

STREET ADDRESS: _____ (Zip Code)

PHONE NUMBER: _____

To the: City of Fort
Pierce

Pursuant to and in compliance with your notice inviting sealed proposals (Call for Bids), Instructions to Bidders, and the other documents relating thereto, the undersigned bidder, having familiarized himself with the terms of the Contract Documents, local conditions affecting the performance of the contract, and the cost of the Work at the place where the Work is to be done, hereby proposes and agrees to perform within the time stipulated in the Contract, including all of its component parts and everything required to be performed, and to provide and furnish any and all utility and transportation services necessary to perform the contract and complete in a workmanlike manner, all of the Work required in connection with the construction of said Work, all in strict conformity with the plans and/or details, specifications and other related Contract Documents included herein.

The undersigned Bidder acknowledges receipt of the following Addenda, which have been considered in preparation of this Bid:

No. _____	Dated _____	No. _____	Dated _____
No. _____	Dated _____	No. _____	Dated _____
No. _____	Dated _____	No. _____	Dated _____

The undersigned Bidder agrees that the Work shall be achieved final construction within 150 calendar days according to the schedule and the Notice to Proceed set forth in these Documents.

The undersigned Bidder further agrees to pay liquidated damages as described herein and engineering and field inspection expenses, due to overtime work and avoidable delays, which shall be in addition to such other amounts for actual delay damages.

Bidder has stated all prices in numerals in accordance with Section 11.2 of the Instruction to Bidders in the blank space(s) provided for that purpose. Bidder has completed all portions of the Bid to avoid disqualification.

The undersigned, as Bidder, declares that the Bid is made in good faith; that this proposal is made without collusion with any person, firm, or corporation; and he proposes and agrees, if the proposal is accepted, that he will execute a contract with the City in the form set forth in the Contract Documents;

that he will furnish the Contract Security Insurance Certificates; that he is aware that failure to properly comply with the requirements set out in the INSTRUCTIONS TO BIDDERS and elsewhere in the Contract Documents may result in a finding that the Bidder is non-responsive and a forfeiture of the Bid Security.

The undersigned Bidder agrees to furnish the required bonds and insurance and to enter into a contract within 10 days after receipt of Notice of Award and further agrees to complete the Work within the time period specified in the Notices to Proceed for each individual project.

The undersigned declares that he has had prior experiences in the type of Work required and has the necessary finances, personnel, working organization, and equipment available to execute the proposed Work.

Bids shall only be considered from those Bidders who have obtained these Contract Documents directly from the City either electronically or from Demand Star.

LIST OF MAJOR SUBCONTRACTORS

1. If awarded a contract as a result of this Bid, the major subcontractors used in the prosecution of the Work will be those listed below, and
2. The following list includes all subcontractors who will perform Work, and
3. The Bidder represents that the subcontractors listed below are financially responsible and are qualified to do the Work required, and
4. 4
0% of Work must be done by the General Contractor's entity.

If no major subcontractors are to be used, so state on this form

Notice to Proceed shall be issued by the City with the specified Work to be completed as described in Section 8 of the General Conditions, within the number of days stated when each Project Contract Time begins to run as specified in the Notice to Proceed.

Work shall be completed, ready for final payment in accordance with Section 8 and 9 of the General Condition
S.

Time is of the essence of this Contract and Contractor recognizes that the City will suffer financial loss if the Work, or portions authorized, is not completed within the number of days stated above. Accordingly, Contractor agrees to pay City the liquidated damages stated in the Agreement for each day after the time specified above that the Work is not complete in accordance with Sections 8 and 9 of the General Conditions and with the Agreement.

These liquidated damages are cumulative and additive and represent a reasonable estimate of City's expenses for extended delays. Furthermore, Contractor agrees to pay City expenses for inspection, engineering services, and administrative costs associated with such delay.

In addition to these amounts, there may be additional other amounts for delay damages incurred by City as a result of delays by Contractor. These actual delay damages will include, but not be limited to, delay damage settlements or awards, penalties, and professional fees incurred in connection with such settlements, awards, or penalties and fines imposed by regulatory agencies, contract damages, and loss of use.

ACCOMPANYING THIS PROPOSAL IS

(Insert the word(s) "cashier's check," "bidder's bond," "certified check," or other security as provided by law, as the case may be), in an amount equal to at least 10% of the total amount of the bid, payable to the CITY OF FORT PIERCE the undersigned deposits above-named security as a proposal guarantee and agrees that it shall be forfeited to the City as liquidated damages in case this proposal is accepted by the City and the undersigned fails to execute a contract with the City as specified in the Contract Documents, accompanied by the required payment and faithful performance bonds, with sureties satisfactory to the City, and accompanied by the required certificates of insurance coverage and endorsements. Should the City be required to engage the services of an attorney in connection with the enforcement of this bid, bidder promises to pay City reasonable attorneys' fees and costs (including attorneys' fees and costs on appeals), incurred with or without suit.

The Work shall be performed under a State of Florida Contractor's License. Contract shall not be awarded unless proof of valid license(s) is provided, and license shall be appropriate for the nature of the Work.

The Bidder certifies that the following documents are included in the Bid and are complete:

1. Bid form, list of Addenda received, and authorized signatures.
2. Bid Bond with Power of Attorney attached.
3. Affidavit of Non-Collusion.
4. Trench Safety Act Form.

The Bidder further certifies that he will submit within ten (10) days of notification of the Apparent Successful Bidder:

- 1. List of Major Subcontractors
- 2. Payment Bond
- 3. Performance Bond
- 4. Agreement
- 5. Certificates of Insurance

NOTE: If bidder is a corporation, the legal name of the corporation shall be set forth below, together with signature(s) of the officer or officers authorized to sign contracts on behalf of the corporation and corporate seal; if bidder is a partnership, the true name of the firm shall be set forth below with the signature(s) of the partner or partners authorized to sign contracts in behalf of the partnership; and if the bidder is an individual, his signature shall be placed below.

Bidder: _____
(Type or Print)

By: _____

Name: _____

Title: _____

Dated: _____, 2024

(Corporate Seal)

Attest
If Corporation

By: _____
(Signature)

Name: _____

Title: _____

Witnesses: _____

(Signature)

(If partnership
Or individual) _____
(Signature)

Contractor's License (State, Number, Expiration Date, Type of License)

END OF SECTION

BID BOND

KNOW ALL MEN BY THESE PRESENTS, that _____
we,

_____, as Principal, and
_____, as Surety,

are held and firmly bound unto the City of Fort Pierce, hereinafter called the City, in
the penal sum of _____

_____ Dollars (\$_____), lawful money of the United
States, for the payment of which sum well and truly to be made, we bind ourselves, our
heirs, executors, administrators, and successors, jointly and severally, firmly by these
presents. The Bid Bond amount shall be ten (10) percent of the Base Bid amount as
entered on the Bid Form.

The condition of this obligation is such that whereas the principal has submitted the
accompanying bid dated _____ 2024, for the

NOW, THEREFORE, if the Principal shall not withdraw said bid within the period of time
set forth in the Contract Documents, and shall within ten (10) calendar days after receipt
of the Notice of Award enter into a written contract with the City in accordance with the
bid as accepted, and if the Principal shall give the required bonds with good and sufficient
sureties for the faithful performance and proper fulfillment of such contract and for the
protection of subcontractors, laborers and material men, and if the Principal has provided
the required evidence of insurance as set forth in the Contract Documents and complied
with the Florida Department of Environmental Protection certifications and requirements,
and all other contract provisions, or in the event of withdrawal of said bid within the periods
specified, or the failure to enter into said contract, or failure to comply with FDEP
requirements, or otherwise, if the Principal shall within sixty (60) days after request by
the City to pay to the City the difference between the amount specified in said bid and the
amount for which the City may procure the required work, if the latter amount be in excess
of the former, then the above obligation shall be void and of no effect, otherwise to remain
in full force and effect.

It is further agreed that if the City is required to utilize legal counsel to recover on this
bond, it may also recover its costs relating thereto, including a reasonable amount for
attorneys' fees and costs, including attorneys' fees and costs in appellate proceedings.

BID FORMS

IN WITNESS WHEREOF, the above parties have executed this instrument under their several seals this _____ day of _____, 2024, the name and corporate seal of each corporate party being hereto affixed, and these presents duly signed by its undersigned representative pursuant to authority of its governing body.

WITNESSES
(If individual or partnership)

PRINCIPAL

By: _____
(Signature)

Name: _____

Title: _____

ATTEST (If corporation)

By: _____
(Signature)

Name: _____

Title: _____
(Corporate Seal)

SURETY

By: _____
(Signature)

Name: _____

Title: _____

(Surety Seal)

BID FORMS

Attach a certified copy of Power of Attorney appointing individual Attorney-in-Fact for execution of Bid Bond on behalf of Surety.

Any Claims under this bond may be addressed to:

Name of Surety _____

Mailing Address _____

Street Address _____

Name and Mailing and Street _____

Address of Agent or _____

Representative in Florida _____

(if different than above) _____

Telephone Number of Surety _____

and Agent or Representative _____

in Florida _____

END OF SECTION

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS: that

(Name of Contractor)

(Address of Contractor)

a _____
(Corporation, Partnership, or Individual)

Hereinafter called Principal, and _____
(Name of Surety)

(Address of Surety)

Hereinafter called Surety, are held and firmly bound unto:

City of Fort Pierce
(Name of Owner)

100 North U.S. Highway 1, Fort Pierce, Florida 34950
(Address of Owner)

Hereinafter called OWNER, in the penal sum of _____

Dollars, (\$ _____),

in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, our successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the Principal entered into a certain contract with the Owner, dated the _____ day of _____, 2024, a copy of which is hereto attached and made a part hereof, **for Kings Landing Off-Site Water Main Upgrade – Avenue B and Indian River Drive.**

This Bond is being entered into to satisfy the requirements of Section 255.05, Florida Statutes, as the same may be amended. The Surety shall be bound by any and all arbitration awards to the same extent as Contractor is bound.

NOW, THEREFORE, the condition of this obligation is such that if Principal:

1. Promptly and faithfully performs its duties, all the covenants, terms, conditions,

Agreements of said Contract and remedies without cost to City any defects which may develop during a period of one (1) year from the date of the issuance of the final certificate of completion of each portion of the Work performed under said Agreement, and

2. Pays Owner all losses, damages (liquidated or actual), expenses, costs and attorneys' fees including costs and attorneys' fees on appeal that Owner sustains resulting directly or indirectly from any breach or default by Principal under the Contract, and

3. Satisfies all claims and demands incurred under the Contract, and fully indemnifies and holds harmless the Owner from all costs and damages which it may suffer by reason of failure to do so, then this bond is void; otherwise, it shall remain in full force and effect.

In the event that the Principal shall fail to perform any of the terms, covenants, and conditions of the Contract during the period in which this Performance Bond is in effect, the Surety shall remain liable to the Owner for all such loss or damage (including reasonable attorneys' fees and costs and attorneys' fees on appeal) resulting from any failure to perform up to the amount of the Penal Sum.

In the event that the Surety fails to fulfill its obligations under this Performance Bond, then the Surety shall also indemnify and hold the Owner harmless from any and all loss, damage, cost and expense, including reasonable attorneys' fees and costs for all trial and appellate proceedings, resulting directly or indirectly from the Surety's failure to fulfill its obligations hereunder. This paragraph shall survive the termination or cancellation of this Performance Bond.

The Surety, for value received, hereby stipulates and agrees that its obligations hereunder shall be direct and immediate and not conditional or contingent upon Owner's pursuit of its remedies against Principal, and shall remain in full force and effect notwithstanding (i) amendments or modifications to the Contract entered into by Owner and Principal without the Surety's knowledge or consent, (ii) waivers of compliance with or any default under the Contract granted by Owner to Principal without the Surety's knowledge or consent, or (iii) the discharge of Principal from its obligations under the Contract as a result of any proceeding initiated under the Bankruptcy Code of 1978, as the same may be amended, or any similar state or federal law, or any limitation of the liability of Principal or its estate as a result of any such proceeding.

Any changes in or under the Contract Documents (which include the Plans, Drawings, and Specifications), and compliance or noncompliance with any formalities connected with the Contract or the changes therein shall not affect Surety's obligations under this Bond, and Surety hereby waives notice of any such changes. Further, Principal and Surety acknowledge that the Penal Sum of this bond shall increase or decrease in accordance with approved changes or other modifications to the Contract Documents.

IN WITNESS WHEREOF, this instrument executed in _____
(Number)
counterparts, each of which shall be deemed an original, this _____ day of _____,
2024.

ATTEST:

Principal

(Principal) Secretary

By: _____

Name _____
(Type)

Name _____
(Type)

Title _____
(Corporate Seal)

(Address)

Witness as to Principal

Witness as to Principal

ATTEST:

Surety

(Surety) Secretary

By _____
Attorney-in-Fact

Name _____
(Type)

Name _____
(Type)

(Corporate Seal)

(Address)

Witness as to Surety

Witness as to Surety

NOTE: Date of BOND must not be prior to date of Contract. If Contractor is a Partnership, all partners should execute BOND.

IMPORTANT: Surety companies executing BONDS must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the State where the Project is located, unless otherwise specifically approved in writing by City.

ATTACH: A certified copy of Power of Attorney appointing individual Attorney-in-Fact for execution of Performance Bond on behalf of Surety.

(The Performance Bond and the Payment Bond and the covered amounts of each are separate and distinct from each other.)

END OF SECTION

PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS: that

(Name of Contractor)

(Address of Contractor)

a _____
(Corporation, Partnership, or Individual)

Hereinafter called Principal, and

(Name of Surety)

(Address of Surety)

Hereinafter called Surety, are held and firmly bound unto

City of Fort Pierce

(Name of Owner)

100 North U.S. Highway 1, Fort Pierce, Florida 34950

(Address of Owner)

Hereinafter called Owner, in the penal sum of _____

_____ Dollars, (\$ _____), in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, our successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the Principal entered into a certain contract with the Owner, dated the _____ day of _____, 2024, a copy of which is hereto attached and made a part hereof, **to furnish Kings Landing Off-Site Water Main Upgrade – Avenue B and Indian River Drive, Bid No. 2024-016.** (Date to be filled in by Owner)

The Surety shall be bound by any and all arbitration awards to the same extent as Contractor is bound. All dates to be filled in by Owner.

NOW, THEREFORE, the condition of this obligation is such that if Principal shall promptly make payments to all claimants as defined in Section 255.05(1), Florida Statutes, supplying Principal with labor, materials, or supplies, used directly or indirectly by Principal in the prosecution of the Work

provided for in the Contract, then this obligation shall be void; otherwise, it shall remain in full force and effect, subject, however, to the following conditions:

1. This bond is furnished for the sole purpose of complying with the requirements of Section 255.05, Florida Statutes, as the same may be amended.

2. It is a specific condition of this bond that a claimant's right of action on the bond is limited to the provisions of Section 255.05, Florida Statutes, including, but not limited to, the one-year time limitation within which suits may be brought.

Therefore, a claimant, except a laborer, who is not in privity with the Contractor and who has not received payment for his labor, material, or supplies shall, within forty-five (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 ninety (90) days after performance of the labor or completion of delivery of the materials or supplies, 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 bond after one (1) year from the performance of the labor or completion of the delivery of the materials or supplies.

3. The Surety, for value received, hereby stipulates and agrees that its obligations hereunder shall remain in full force and effect notwithstanding (i) amendments or modifications to the Contract entered into by Owner and Principal without the Surety's knowledge or consent, (ii) waivers of compliance with or any default under the Contract granted by Owner to Principal without the Surety's knowledge or consent, or (iii) the discharge of Principal from its obligations under the Contract as a result of any proceeding initiated under the Bankruptcy Code of 1978, as the same may be amended, or any similar state or federal law, or any limitation of the liability of Principal or its estate as a result of such proceeding.

4. Any changes in or under the Contract Documents (which include the Plans, Drawings, and Specifications) and compliance or noncompliance with any formalities connected with the Contract or the changes therein, shall not affect Surety's obligations under this Bond, and Surety hereby waives notice of any such changes. Further, Principal and Surety acknowledge that the Penal Sum of this bond shall increase or decrease in accordance with approved changes or other modifications to the Contract Documents.

IN WITNESS WHEREOF, this instrument executed in _____ (Number) counterparts, each of which shall be deemed an original, this ___ day of ____, 2024.

ATTEST:

(Principal) Secretary

Name _____
(Type)
(Corporate Seal)

Witness as to Principal

Witness as to Principal

ATTEST:

(Surety) Secretary

Name _____
(Type)
(Corporate Seal)

Witness as to Surety

Witness as to Surety

Principal

By _____

Name _____
(Type)

Title _____

(Address)

Surety

By _____

Attorney-in-Fact

Name _____
(Type)

(Address)

NOTE: Date of BOND must not be prior to date of Contract. If Contractor is a Partnership, all partners should execute BOND.

IMPORTANT: Surety companies executing BONDS must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the State where the Project is located, unless otherwise specifically approved in writing by City.

ATTACH: A certified copy of Power of Attorney appointing individual Attorney-in-Fact for execution of Performance Bond on behalf of Surety.

(The Performance Bond and the Payment Bond and the covered amounts of each are separate and distinct from each other.)

END OF SECTION

NOTICE OF AWARD

Date: _____

To: _____

Bid Proposal: Kings Landing Off-Site Water Main Upgrade – Avenue B and Indian River Drive

Date of Bid Opening: 3:00 PM, Tuesday, February 20, 2024

Award Amount: Not to Exceed \$_____

You are hereby notified that you are the Lowest and Best Bidder on the Bid Proposal noted above. Upon compliance with the conditions precedent to be fulfilled by you within the time specified, the Agreement will be executed and delivered to you. Enclosed are the following:

Item

Notice of Award
Agreement between City and Contractor
Performance Bond
Payment Bond

Please take the following actions:

1. Execute Agreement and Notice of Award.
2. Have your insurance company complete bond forms, and attach notarized Acknowledgment of Authorized Representative.
3. Have your insurance company complete Certificates of Insurance and Endorsements.
4. Form CG 20 10: Please provide a copy of the actual endorsement issued to the policy, Form CG 20 10, which affords the required additional insured coverage. Please return all documents with acceptance of award.
5. Return two (2) copies of documents enclosed within fifteen (15) days after receipt to:

Mailing Address:

Attn: Purchasing Division
100 North U.S. #1
Fort Pierce, FL 34950 - 4205

Delivery Address:

Attn: Purchasing Division
100 North U.S. #1
Fort Pierce, FL 34950

The contract documents must be signed by one of the officers registered with the State of Florida on the attached list; if not on list, provide a letter or copy of corporate resolution authorizing the individual to sign contract documents on behalf of the corporation.

We will return a fully executed copy of the Contract Documents and the Notice to Proceed at the Pre-Construction Conference.

OWNER:

CITY OF FORT PIERCE
100 North U.S. Highway 1
Fort Pierce, Florida 34950

BY: _____
Gelencia Carter, Purchasing Manager

Date: _____

ACKNOWLEDGE RECEIPT OF NOTICE:

CONTRACTOR:

BY: _____

TITLE: _____

DATE: _____

END OF SECTION

NOTICE TO PROCEED

Date: _____

To: _____

Contractor.

Notice to Proceed on Project: Kings Landing Off-Site Water Main Upgrade – Avenue B and Indian River Drive

Cost of Project based on Unit Prices by Agreement: \$_____

You are hereby notified to proceed with the Work on the subject Project on or before _____, 2024 and to obtain Substantial completion within 90 calendar days and Final completion within 120 calendar days. Find attached four (4) sets of the subject project drawings.

The completion date for **this project** work shall be: _____, **2024**.

OWNER:

CITY OF FT. PIERCE, FLORIDA
100 NORTH U.S. HIGHWAY 1
FT. PIERCE, FL 34950

BY:

John R. Andrews, P.E.
City Engineer

ACKNOWLEDGE RECEIPT OF NOTICE

By: _____
Contractor

Date

END OF SECTION

CHANGE ORDER FORM
CITY OF FORT PIERCE

PROJECT: **Kings Landing Offsite Water Main Upgrade – Avenue B and Indian River Drive**

DATE: _____ CONTRACTOR: _____

OWNER: CITY OF FORT PIERCE AGREEMENT DATE: _____

CHANGE ORDER REQUESTED BY: City _____ Contractor _____

THE FOLLOWING CHANGES ARE MADE TO THE CONTRACT DOCUMENTS:

CONTRACT AMOUNT AND CONTRACT TIME:

Original CONTRACT AWARD AMOUNT \$ _____

Current CONTRACT AMOUNT ADJUSTED
by Previous CHANGE ORDER(S) \$ _____

Net (Increase) (Decrease) of CONTRACT
AMOUNT resulting from this CHANGE
ORDER \$ _____

Current CONTRACT AMOUNT Including
this CHANGE ORDER \$ _____

ORIGINAL CONTRACT TIME _____ Calendar Days

Current CONTRACT TIME ADJUSTED
by Previous CHANGE ORDER _____ Calendar Days

Net (Increase) (Decrease) Resulting
from this CHANGE ORDER _____ Calendar Days

Current CONTRACT COMPLETION DATE
including this CHANGE ORDER _____

(Change Order No. _____, Page 1 of 2)

CHANGES ORDERED:

I. GENERAL: This CHANGE ORDER is necessary to cover changes in the Work to be performed under the Contract Documents. General Conditions, Supplementary Conditions as applicable, Specifications, and all parts listed in Article 1, Definitions, of the General Conditions, apply to and govern all Work under this CHANGE ORDER.

II. REQUIRED CHANGES:

III. JUSTIFICATION:

IV. PAYMENT:

Payment for the above listed items shall be made according to the Agreement.

V. APPROVAL AND CHANGE AUTHORIZATION:

Acknowledgments: The aforementioned change(s), and work affected thereby, is subject to all provisions of the original Agreement not specifically changed by this Change Order; and it is expressly understood and agreed that the approval of this Change Order shall have no effect on the original Agreement other than matters expressly provided herein.

RECOMMENDED BY:

By: _____
Signature

Date: _____

ACCEPTED BY:

Contractor: _____

By: _____
Signature

Name: _____

Date: _____

APPROVED BY: City of Ft. Pierce

By: _____
Signature & Title

Date: _____

END OF CHANGE ORDER

APPLICATION FOR PAYMENT

Application for payment forms will be issued at the Pre-construction Conference.

CERTIFICATE OF OWNER'S ATTORNEY

PROJECT: _____

I, the undersigned, _____
(Name of Attorney)

the duly authorized and acting legal representative of _____

_____,do hereby certify as follows:
(Owner)

I have examined the attached contract(s) and surety bonds and the manner of execution thereof, and I am of the opinion that each of the aforesaid agreements has been duly executed by the proper parties thereto acting through their duly authorized representatives; that said representatives have full power and authority to execute said agreements on behalf of the respective parties named thereon; and that the foregoing agreements constitute valid and legally binding obligations upon the parties executing the same in accordance with terms, conditions, and provisions thereof.

Attorney

Date

END OF SECTION

BIDDER'S QUALIFICATIONS QUESTIONNAIRE

All questions must be answered, and the data given must be clear and comprehensive. This statement must be notarized. If necessary, questions may be answered on separate attached sheets. The Bidder may submit any additional information he desires. Qualifications Questionnaire must be submitted with the Proposal.

1. Name of Bidder.
2. Permanent Main Office address.
3. When organized?
4. If a corporation, where incorporated?
5. How many years have you been engaged in construction under this present firm or trade name?
6. Contracts on hand: (Schedule of these, showing gross amount of each contract and the appropriate anticipated dates of completion.)
7. General character of work performed by you.
8. Have you ever failed to complete any work awarded to you? If so, where and why?
9. Have you ever defaulted on a contract? If so, where and why?
10. List the more important contracts recently completed by you, stating approximate gross costs of each and the month and year completed. Include the name and telephone number of contact in company for which you provided work.
11. List your major equipment available for this contract.
12. Experience in general construction work similar in scope to this project. (If additional space is needed or required, it may be attached to this sheet.)
13. Background and experience of the principal members of your company, including the officers.
14. Give bank reference.
15. You will furnish a detailed financial statement and, upon request, any other information that may be required by the City of Fort Pierce.
16. The Undersigned hereby authorizes and requests any person, firm, or corporation to furnish any information requested by the City of Fort Pierce in the County of St. Lucie in verification of the recitals comprising this Bidder's Qualifications Questionnaire.

Dated at _____ this _____ day of _____, 2024.

Contractor:

By _____

(Name & Title)

County of _____
State of _____

_____, being duly sworn, deposes and says that he is _____ of _____, and that the answers to the foregoing questions and all statements contained therein are true and correct.

Subscribed and sworn to before me this _____ day of _____, 2024.

Notary Public

My Commission Expires:

_____ (Seal)

END OF SECTION

NON-COLLUSION AFFIDAVIT

STATE OF _____

COUNTY OF _____

_____, being first duly sworn, deposes and says:

That he/she is _____
(a partner or officer of the firm of, etc.)

the party making the foregoing proposal or bid, that such proposal or bid is genuine and not collusive or sham; that said bidder has not colluded, conspired, connived or agreed directly or indirectly with any bidder or person, to put in a sham bid or to refrain from bidding, and has not in any manner, directly or indirectly sought by agreement or collusion, or communication or conference with any person, to fix the bid price of affiant or of any other bidder, or to fix any overhead, profit or cost element of said bid price, or of that of any other bidder, or to secure any advantage against the City of Fort Pierce, of the County of St. Lucie, or any person interested in the proposed contract; and that all statements in said proposal or bid are true.

(Firm Name)

By: _____

Title: _____

Subscribed and sworn to before me this _____
day of _____, 2021

Notary Public

My Commission expires: (Seal) _____

END OF SECTION

PUBLIC ENTITY AFFIDAVIT

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

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

1. This sworn statement is submitted with Bid No. 2024-016 for Kings Landing Off-Site Water Main Upgrade – Avenue B and Indian River Drive.
2. This sworn statement is submitted by _____
_____(name of entity submitting sworn statement)
whose business address is _____
and (if applicable) its Federal Employer Identification Number (FEIN) is _____
(If the entity has no FEIN, include the Social Security Number of the individual signing this sworn statement: _____.)
3. My name is _____ my relationship to the entity
(please print name of individual signing)
named above is _____.
4. I understand that a "public entity crime" as defined in Paragraph 287.133(1)(g), Florida Statutes, means a violation of any state or federal law by a person with respect to and directly related to the transaction of business with any public entity or with an agency or political subdivision of any other state or with the United States, including, but not limited to, any bid or contract for goods or services to be provided to any public entity or an agency or political subdivision of any other state or of the United States and involving antitrust, fraud, theft, bribery, collusion, racketeering, conspiracy, or material misrepresentation.
5. I understand that "convicted" or "conviction" as defined in Paragraph 287.133(1)(b), Florida Statutes, means a finding of guilt or a conviction of a public entity crime, with or without an adjudication of guilt, in any federal or state trial court of record relating to charges brought by indictment or information after July 1, 1989, as a result of a jury verdict, nonjury trial, or entry of a plea of guilty or nolo contendere.
6. I understand that an "affiliate" as defined in paragraph 287.133(1)(a), Florida Statutes, means:
 1. A predecessor or successor of a person convicted of a public entity crime: or
 2. An entity under the control of any natural person who is active in the management of the entity and who has been convicted of a public entity crime. The term "affiliate" includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in the management of an affiliate. The ownership by one person of shares constituting a controlling interest in another person, or a pooling of equipment or income among persons when not for fair market value under an arm's length agreement, shall be a prima facie case that one person controls another person. A person who knowingly enters into a joint venture with a person who has been convicted of a public entity crime in Florida during the preceding 36 months shall be considered an affiliate.

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

8. Based on information and belief, the statement which I have marked below is true in relation to the entity submitting this sworn statement.
(Please indicate which statement applies.)

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

_____ The entity submitting this sworn statement, or one or more of the officers, directors, executives, partners, shareholders, employees, members, or agents who are active in management of the entity, or an affiliate of the entity has been charged with and convicted of a public entity crime subsequent to July 1, 1989, AND **(Please indicate which additional statement applies.)**

_____ There has been a proceeding concerning the conviction before a hearing officer of the State of Florida, Division of Administrative Hearings. The final order entered by the hearing officer did not place the person or affiliate on the convicted vendor list. **(Please attach a copy of the final order.)**

_____ The person or affiliate was placed on the convicted vendor list. There has been a subsequent proceeding before a hearing officer of the State of Florida, Division of Administrative Hearings. The final order entered by the hearing officer determined that it was in the public interest to remove the person or affiliate from the convicted vendor list. **(Please attach a copy of the final order.)**

_____ The person or affiliate has not been placed on the convicted vendor list. **(Please describe any action taken by or pending with the Department of General Services.)**

Signature: _____

Date: _____

STATE OF _____

COUNTY OF _____

PERSONALLY APPEARED BEFORE ME, the undersigned authority,

_____ who, after first being sworn by me, affixed his/her signature in (name of individual signing) the space provided above on this _____ day of _____, 2024

NOTARY PUBLIC SEAL:

My commission expires: _____

END OF SECTION

CERTIFICATION OF NON-SEGREGATED FACILITIES

The Bidder certifies that he does not maintain or provide for his employees any segregated facilities at any of his establishments, and that he does not permit his employees to perform their services at any location, under his control where segregated facilities are maintained. The Bidder certifies further that he will not maintain or provide for his employees any segregated facilities at any of his establishments, and that he will not permit his employees to perform their services at any location under his control where segregated facilities are maintained. The Bidder agrees that a breach of this certification will be a violation of the Equal Opportunity clause in any contract resulting from acceptance of this Bid. As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, restrooms and washrooms, restaurants, and other eating areas, time clocks, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated on the basis of race, color, religion, or national origin, because of habit, local custom, or otherwise. The Bidder agrees that (except where he has obtained identical certification from proposed subcontractors for specific time periods) he will obtain identical certifications from proposed subcontractors, exempt from the provisions of the Equal Opportunity clause, and that he will retain such certification in his files.

NOTE: The penalty for making false statements in offers is prescribed in 18 U.S.C. 1001.

DATE: _____, 2024

Official Address
(Including Zip Code):

By: _____

(Title)

END OF SECTION

TRENCH SAFETY ACT COMPLIANCE STATEMENT

Bid No. 2024-016

Instructions:

Chapter 90-96 of the Laws of Florida requires all contractors engaged by the City of Fort Pierce to comply with Occupational Safety and Health Administration Standard 29 C.F.R. s. 1926.650 Subpart P. All prospective contractors are required to sign the compliance statement and provide compliance cost information where indicated below. The costs for complying with the Trench Safety Act must be incorporated into this project's base bid.

Certify this form in the presence of a notary public or other officer authorized to administer oaths.

Certification:

1. I understand that Chapter 90-96 of the Laws of Florida (The Trench Safety Act) requires me to comply with OSHA Standard 29 C.F.R. s. 1926.650 Subpart P. I will comply with The Trench Safety Act and I will design and provide trench safety systems at all trench excavations in excess of five feet in depth for this project.

2. The estimated cost imposed by compliance with The Trench Safety Act will be:

_____ Dollars _____
(Written)

(Figures)

3. The amount listed above has been included within the Base Bid.

Certified: _____
(Company-Contractor)

By: _____
(President's Signature)

(President's Typed or Printed Name)

Notarization:

Sworn to and subscribed before me in _____ County, Florida on the _____ day of _____, 2024.

Notary Public: _____ (affix seal)

My Commission Expires: _____

END OF SECTION

DRUG-FREE WORK PLACE FORM

The undersigned vendor in accordance with Florida Statute 287.087 hereby certifies that _____ does:

(Name of Business)

1. Publish 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. Inform 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. Give each employee engaged in providing the commodities or contractual services that are proposed a copy of the statement specified in subsection (1).
4. In the statement specified in subsection (1), notify 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. Impose a sanction on or require 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. Make a good faith effort to continue to maintain a drug-free workplace thorough implementation of this section.

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

Proposer's Signature

Date

END OF SECTION

BID RESPONSE FORM
Bid No. 2024-016

Kings Landing Off-site Water Main Upgrade – Avenue B and Indian River Drive					
ITEM NO.	ITEM	QTY	UNIT	UNIT COST	COST
1	Mobilization (Water)	1	LS	\$	\$
2	Construction Layout/Record Drawings (Water)	1	LS	\$	\$
3	Maintenance of Traffic	1	LS	\$	\$
4	2" Water Service	42	LF	\$	\$
5	2" Poly (DR-9) Water Main	26	LF	\$	\$
6	6" C900 (DR-18) Water Main	70	LF	\$	\$
7	8" C900 (DR-18) Water Main	970	LF	\$	\$
8	Fire Hydrant Assembly	1	EA	\$	\$
9	2" Gate Valve	1	EA	\$	\$
10	6" Gate Valve	2	EA	\$	\$
11	8" Gate Valve	5	EA	\$	\$
12	8" Water Main Tie-In on PROPOSED Utilities at Indian River DR (2" Tapping Saddle & Valve)	1	LS	\$	\$
13	8" Water Main Tie-In at N 2 ND St (8" Tapping Sleeve & Valve)	1	LS	\$	\$
14	8" Water Main Tie-In at Indian River Drive	1	LS	\$	\$
15	Fittings	1	TN	\$	\$
16	6" & 8" Bell Restraints	1	LS	\$	\$
17	6" & 8" Megalugs	1	LS	\$	\$
18	Bacteriological Sample Points	2	EA	\$	\$
19	6" CIP Pipe Removal	829	LF	\$	\$
20	Grout 6" HDPE Water Main (Across Indian River Drive)	60	LF	\$	\$
21	Thrust Block	2	EA	\$	\$
22	Dewatering	1	LS	\$	\$
23	Remove 15" PVC Sewer Pipe	40	LF	\$	\$
24	Plug Sewer Manhole	1	EA	\$	\$
25	Miscellaneous Restoration at service crossings (Sod, sidewalk, curb)	1	LS	\$	\$
26	Asphalt Repair	540	SF	\$	\$
GRAND TOTAL					\$

CONTRACTOR VERIFICATION FORM

FORT PIERCE, FLORIDA
SEALED BID NO. 2024-016

**PROJECT TITLE: KINGS LANDING OFFSITE WATER MAIN UPGRADE
AVENUE BE AND INDIAN RIVER DRIVE**

THE FOLLOWING IS TO COMPLETED BY PRIME BIDDER:

Name of firm: _____

Corporate Title: _____

Address: _____

_____ (Zip Code)

By: _____ (Print name) (Print title)

_____ (Authorized Signature)

Telephone: () _____

Fax: () _____

State License # _____ (ATTACH COPY)

County License # _____ (ATTACH COPY)

City License: (ATTACH PROOF OF REGISTRATION WITH THE CITY)

Type of License:

Unlimited _____(yes/no)

If "NO", Limited to what trade? _____

END OF SECTION

E-VERIFY
FORT PIERCE, FLORIDA

PROJECT: KINGS LANDING OFF-SITE WATER MAIN UPGRADE – AVENUE B AND INDIAN RIVER DRIVE

Bid No.: 2024-016

Project Description: Replacing an existing 6-inch cast iron water main with a new 8-inch PVC water main to include services, fire hydrants, valves and appurtenances on Avenue B and Indian River Drive per the construction plans.

Vendor/Consultant acknowledges and agrees to the following:

1. Vendor/Consultant shall utilize the U.S. Department of Homeland Security's E-Verify system to verify the employment eligibility of all new employees hired by the Vendor/Consultant during the term of the contract; and
2. shall expressly require any subcontractors performing work or providing services pursuant to this contract to likewise utilize the U.S. Department of Homeland Security's E-Verify system to verify the employment eligibility of all new employees hired by the subcontractor during the contract term.

Company/Firm: _____

Authorized Signature: _____

Title: _____

Date: _____

END OF SECTION

**GENERAL CONDITIONS
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SECTION 1 - CONTRACT DOCUMENTS

1.1 DEFINITIONS

1.1.1 THE CONTRACT DOCUMENTS

The Contract Documents consist of the Owner-Contractor Agreement, including Invitation for Bid, Instruction to Bidders, Contractor's Bid (including documentation accompanying the Bid and any documentation submitted prior to the Notice of Award), Performance Bond, Payment Bond, Bid Bond, Insurance Certificates and Endorsements, and copies of policies, Notice of Award, Notice to Proceed, these General Conditions, Special Supplemental Conditions, and any Modifications. A Modification is:(1) a written amendment to the Contract signed by both parties, (2) a Change Order, (3) a written interpretation issued by the City Engineer pursuant to Subparagraph 2.2.8, or (4) a written order for a minor change in the Work for each project issued by the City Engineer pursuant to Paragraph 12.3.

1.1.2 THE CONTRACT

The Contract Documents form the Contract for Construction. This Contract represents the entire and integrated agreement between the parties hereto and supersedes all prior negotiations, representations, or agreements, either written or oral. The Contract may be amended or modified only by a Modification as defined in Subparagraph 1.1.1. Nothing contained in the Contract Documents shall create any contractual relationship between the Owner and any Subcontractor or Sub-subcontractor.

1.1.3 THE WORK

The Work comprises the completed construction required by the Contract Documents and includes all labor necessary to produce such construction, and all materials and equipment incorporated or to be incorporated in such construction.

1.1.4 THE PROJECT

The Project is the total construction of which the Work performed under the Contract Documents may be the whole or a part.

1.1.5 ADDENDA

Written or graphic instruments issued prior to the Award of the Contract which modify or interpret the Contract Documents by additions, deletions, corrections, or clarifications.

1.1.6 ACCEPTANCE, FINAL ACCEPTANCE

The formal action by the City accepting the Work as being complete, after certification by the City Engineer of final completion.

1.1.7 AGREEMENT

The written agreement between the City and the Contractor covering the Work to be performed also designated as the Contract.

1.1.8 APPARENT LOWEST AND BEST BIDDER

The Bidder submitting the lowest and best Bid at the Bid Opening without correction of numerical discrepancies or determination of responsiveness and responsibility.

1.1.9 APPLICATION FOR PAYMENT

The form furnished in the Contract Documents which is to be used by the Contractor in requesting progress payments and an affidavit of the Contractor that progress payments theretofore received from City on account of the Work have been applied by the Contractor to discharge in full all of the Contractor's obligations stated in prior Applications of Payment. The application includes such supporting documentation as required by the Contract Documents.

1.1.10 BID

The offer or proposal of the Bidder submitted in the prescribed manner on the prescribed forms to perform the contemplated Work in accordance with the Contract Documents.

1.1.11 BIDDER

Any individual, partnership, corporation, joint venture, or other legal entity or combination thereof submitting a Bid for the Work, acting directly or through an authorized representative.

1.1.12 BONDS

Instruments of security furnished by the Contractor and his surety in accordance with the Contract Documents including Bid, Performance, and Payment Bonds.

1.1.13 CHANGE ORDER

A written order to the Contractor, approved by the City, complying with the change order procedure established in the Contract Documents, authorizing an addition, deletion, or revision in the Work, or an adjustment in the Contract Price or Contract Time, or both.

1.1.14 CITY

The City of Fort Pierce: The Owner.

1.1.15 CONTRACT PRICE/AMOUNT

The total monies payable to the Contractor under the terms and conditions of the Contract Documents.

1.1.16 DAY

A calendar day of 24 hours lasting from midnight one day to midnight the next day.

1.1.17 DEFECTIVE

An adjective which, when modifying the word Work, refers to Work that is unsatisfactory, faulty, or deficient, or does not conform to the Contract Documents, or does not meet the requirements of any inspection, test, or approval referred to in the Contract Documents, or has been damaged prior to Final Payment.

1.1.18 DRAWINGS, PLANS

The drawings, plans, or reproductions thereof, which show location, character, dimensions, and details of the Work to be done, which are included in the Contract Documents.

1.1.19 EFFECTIVE DATE OF 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 by the last of the two parties to sign.

1.1.20 FIELD ORDER

A written order issued by the City Engineer to the Contractor during construction effecting a minor change in the Work not involving an adjustment in the Contract Price or an extension of the Contract Time.

1.1.21 LOWEST AND BEST BIDDER

The lowest responsive, responsible Bidder.

1.1.22 MODIFICATION

A written amendment of the Contract Documents signed by both parties, and work

directives including but not limited to Change Orders and Field Orders. A modification may only be issued after the effective date of the Agreement.

1.1.23 NOTICE OF AWARD

The written notice of the acceptance of the Bid from the City to the Lowest and Best Bidder.

1.1.24 NOTICE TO PROCEED

Written communication issued by the City to the Contractor authorizing him to proceed with the Work and establishing the date of commencement of the Work.

1.1.25 OWNER

The City of Fort Pierce: The Owner.

1.1.26 PAYMENT BOND

The security furnished by the Contractor and its Surety in the form contained in the Contract Documents as a guarantee that the Contractor will pay in full all bills.

1.1.27 PERFORMANCE BOND

The Security furnished by the Contractor and its surety as a guarantee that the Contractor will perform all of its contractual obligations in accordance with the terms of the Contract Documents; the covered amount of the Performance Bond is separate and distinct from the covered amount of the Payment Bond.

1.1.28 REQUEST FOR INFORMATION

Contractor's inquiries for information shall be submitted to the City Engineer.

1.1.29 ENGINEERING INSPECTOR

The authorized representative of the City Engineer who is assigned to the site inspection or any part thereof.

1.1.30 SAMPLE

Samples are physical examples or work including, but not limited to, the following items: Partial sections of manufactured or fabricated work, small cuts or containers of materials, complete units of repetitively-used materials; Swatches showing color, texture, and pattern, color range sets, or units of work to be used for independent inspection and testing.

1.1.31 SHOP DRAWINGS

All drawings, diagrams, illustrations, brochures, schedules, and other data which are prepared by the Contractor or for the Contractor to demonstrate how the Contractor specifically intends to comply with the Contract Documents.

1.1.32 SPECIFICATIONS

Those portions of the Contract Documents consisting of written or graphic technical descriptions of materials, equipment, construction systems, standards and workmanship as applied to the Work and certain administrative details applicable there.

1.1.33 SPECIAL SUPPLEMENTAL CONDITIONS

Modifications, additions, or deletions to the General Conditions.

1.1.34 WORD DEFINITIONS

1. Unless other expressly stated, wherever in the Contract Documents the word "approved," "reviewed," "acceptable," "satisfactory," "directed," "required," "permitted," "ordered," "designated," "prescribed," or words of like import are used, it shall be understood that the action required, reference, or determination rests solely with the City Engineer or his duly authorized representative.

2. Unless otherwise expressly stated, wherever in the Contract Documents the words "as shown" or "as indicated" or words of like import are used, they shall mean as shown or as indicated on the drawings.

3. Unless otherwise expressly stated, wherever in the Contract Documents the word "provide" is used, it shall mean furnished and installed in place, complete and tested.

4. Wherever the word "Product" is used in these Contract Documents, it shall refer to materials, systems, and equipment provided by Contractor.

5. The term "Project Manual" as used in these Contract Documents includes Bidding Requirements, Conditions of the Contract, and Specifications.

1.2 EXECUTION, CORRELATION, AND INTENT

1.2.1 The Contract Documents shall be signed in not less than duplicate by the City and the Contractor.

1.2.2 By executing the Contract, the Contractor represents that he has visited the site, familiarized himself with the local conditions under which the Work is to be

performed, and correlated his observations with the requirements of the Contract Documents.

1.2.3 The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work. The Contract Documents are complementary, and what is required by any one shall be as binding as if required by all. Work not covered in the Contract Documents will not be required unless it is consistent therewith and is reasonable inferable there from as being necessary to produce the intended results. Words and abbreviations which have well-known technical or trade meanings are used in the Contract Documents in accordance with such recognized meanings.

1.2.4 The organization of the Specifications into divisions, sections, and articles and the arrangement of drawings shall not control the Contractor in dividing the Work among Subcontractors or in establishing the extent of Work to be performed by any trade.

1.3 OWNERSHIP AND USE OF DOCUMENTS

1.3.1 All Drawings, Specifications, and copies thereof furnished by the City are and shall remain the property of the City, to be used only with respect to this Project and not to be used on any other project. With the exception of one contract set for each party to the Contract, such documents are to be returned or suitably accounted for to the City on request at the completion of the Work. Submission or distribution to meet official regulatory requirements or for other purposes in connection with the Project is not to be construed as publication in derogation of the City Engineer's common law copyright or other reserved rights.

SECTION 2 - THE CITY ENGINEER

2.1 The City Engineer or his designee is the person authorized by the City Manager to oversee implementation of the Contract Documents.

2.2 The City Engineer or designee will visit the site at intervals to check the quality or quantity of the Work. The City Engineer or designee will not be responsible for and will not have control or charge of construction means, methods, techniques, sequences, or procedures, or for safety precautions and programs in connection with the Work, and he will not be responsible for the CONTRACTOR'S failure to carry out the Work in accordance with the Contract Documents. The City Engineer or designee will not be responsible for or have control or charge over the acts or omissions of the Contractor, Subcontractors, or any of their agents or employees, or any other persons performing any of the Work. The City Engineer or designee shall at all times have access to the Work wherever it is in preparation and progress. The Contractor shall provide facilities for such access so the City Engineer or designee may perform his functions under the Contract Documents.

2.3 The City Engineer will render interpretations necessary for the proper execution of progress of the Work, with reasonable promptness and in accordance with any time limit agreed upon. Either party to the Contract may make written request to the City Engineer for such interpretations.

SECTION 3 - CITY

3.1 DEFINITION

3.1.1 The City is the person or entity identified as such in the Owner-Contractor Agreement and is referred to throughout the Contract Documents as if singular in number and masculine in gender. The term Owner means the City or its authorized representative.

3.2 INFORMATION AND SERVICES REQUIRED OF THE OWNER

3.2.1 The City shall furnish legal limitations for the site of the Project.

3.2.2 Except as provided in Subparagraph 4.7.1 and elsewhere in the Contract and Contract Documents, the City shall secure and pay for necessary approvals, easements, assessments, and charges required for the construction, use, or occupancy of permanent structures or for permanent changes in existing facilities.

3.2.3 Information or services under the City's control shall be furnished by the City with reasonable promptness to avoid delay in the orderly progress of the Work.

3.2.4 Six sets of contract drawings will be furnished to the Contractor free of charge for execution of the Work. Additional sets of documents required by the Contractor will be made available upon payment by Contractor of costs of reproduction.

3.2.5 The foregoing are in addition to other duties and responsibilities of the City enumerated herein and especially those in respect to Work by City or by Separate Contractors, Payments and Completion, and Insurance in Sections 6, 9, and 11, respectively.

3.3. CITY'S RIGHT TO STOP THE WORK

3.3.1 Termination of work shall be in compliance with the Contract Articles 8,10, 14, 15, 16, and 17, and the Contract Documents.

3.4 CITY'S RIGHT TO CARRY OUT THE WORK

3.4.1 If the Contractor defaults or neglects to carry out the Work in accordance with the Agreement or Contract Documents, then the City shall have the right to carry

out the Work in accordance with the Contract and Sections 8, 14, 15, and 16, and as noted in the Agreement and Contract Documents.

SECTION 4 - CONTRACTOR

4.1 DEFINITION

4.1.1 The Contractor is the person or entity identified as such in the Owner-Contractor Agreement and is referred to throughout the Contract Documents as if singular in number and masculine in gender. The term Contractor means the Contractor or his authorized representative.

4.2 REVIEW OF CONTRACT DOCUMENTS

4.2.1 The Contractor shall carefully study and compare the Contract Documents and shall at once report to the Engineer any error, inconsistency or omission he may discover. The Contractor shall not be liable to the City or the City Engineer for any damage resulting from such errors, inconsistencies or omissions in the Contract Documents. The Contractor shall perform no portion of the Work at any time without Contract Documents or, where required, approved Shop Drawings, Product Data, or Samples for such portion of the Work.

4.3 SUPERVISION AND CONSTRUCTION PROCEDURES

4.3.1 The Contractor shall supervise and direct the Work, using his best skill and attention. He shall be solely responsible for all construction means, methods, techniques, sequences and procedures and for coordinating all portions of the Work under the Contract.

4.3.2 The Contractor shall be responsible to the Owner for the acts and omissions of his employees, Subcontractors, and their agents and employees, and other persons performing any of the Work under a contract with the Contractor.

4.3.3 The Contractor shall not be relieved from his obligations to perform the Work in accordance with the Contract Documents either by the activities or duties of the Engineer in his administration of the Contract, or by inspections, tests, or approvals required or performed under Paragraph 7.7 by persons other than the Contractor.

4.4 LABOR AND MATERIALS

4.4.1 Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for all labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for proper execution and completion of the Work, whether

temporary or permanent and whether or not incorporated or to be incorporated in Work.

4.4.2 The Contractor shall at all times enforce strict discipline and good order among his employees and shall not employ anyone unskilled in the task assigned to him.

4.5 WARRANTY

4.5.1 The Contractor warrants to the City and the City Engineer that all materials and equipment furnished under this Contract will be new unless otherwise specified, and that all Work will be of good quality, free from faults and defects, and in conformance with the Contract Documents. All Work not conforming to these requirements may be considered defective. If required by the City Engineer, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment. This warranty is not limited by the provisions of Paragraph 13.2.

4.6 TAXES

4.6.1 Not applicable.

4.7 PERMITS, FEES, AND NOTICES

4.7.1 Unless otherwise provided in the Contract Documents, the Contractor shall secure all City construction permits and secure all other permits and governmental fees and licenses necessary for the proper execution and completion of the Work which are customarily secured after execution of the Contract and which are legally required prior to construction.

4.7.2 The Contractor shall give all notices and comply with all laws, ordinances, rules, regulations, and lawful orders of any public authority bearing on the performance of the Work.

4.7.3 When the Contractor observes that any of the Contract Documents are at variance therewith in any respect, he shall promptly notify the City Engineer in writing, and any necessary changes shall be accomplished by appropriate Modification.

4.7.4 If the Contractor performs any Work knowing it to be contrary to such laws, ordinances, rules and regulations, and without such notice to the City Engineer, he shall assume full responsibility therefore and shall bear all costs attributable thereto.

4.8 ALLOWANCES

4.8.1 Not applicable.

4.9 SUPERINTENDENT

4.9.1 The Contractor shall employ a competent superintendent and necessary assistants who shall be in attendance at the project site during the progress of the Work. The superintendent shall represent the Contractor, and all communications given to the superintendent shall be binding as if given to the Contractor. Important communications shall be confirmed in writing. Other communications shall be so confirmed on written request in each case.

4.9.2 The Contractor shall provide the City Engineer with the name of his Superintendent and the location at which the Superintendent may be reached at all times.

4.10 PROGRESS SCHEDULE

4.10.1 The Contractor, within ten (10) days after Notice of Award, shall prepare and submit an estimated progress schedule for the Work. The progress schedule shall be related to the entire Project to the extent required by the Contract Documents, and shall provide for expeditious and practicable execution of the Work.

4.11 DOCUMENTS AND SAMPLES AT THE SITE

4.11.1 Contractor shall maintain on site one record copy of: Drawings, Specifications, Addenda, Change Orders and other modifications to the Contract, Reviewed Shop Drawings, Product Data, and Samples, Field Test Records, Inspection Certificates, and Manufacturer's Certificates.

4.11.2 At the Contract closeout, deliver record documents and samples to the City Engineer by transmittal letter with Contractor's signature.

4.12 SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES

4.12.1 After checking and verifying all field measurements and after complying with applicable procedures specified in the General Requirements, Contractor shall submit to City Engineer for review and approval, in accordance with the accepted schedule of Shop Drawing submissions and specific requirements of the Specifications, or for other appropriate action if so indicated in the Supplementary Conditions, six copies of all Shop Drawings which will bear a stamp or specific written indication that Contractor has satisfied Contractor's responsibilities under the Contract Documents with respect to the review of the submission. All submissions will be identified as City Engineer may require. The data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials and similar data, to enable City Engineer to review the information as required.

4.12.2 Contractor shall also submit to City Engineer for review and approval with such promptness as to cause no delay in Work, all samples required by the Contract Documents. All samples will have been checked by and accompanied by a specific written indication that Contractor has satisfied Contractor's responsibilities under the Contract Documents with respect to the review of the submission and will be identified clearly as to material, supplier, and pertinent data such as catalog numbers and the use for which intended.

4.12.3 Before submission of each shop drawing or sample, Contractor shall have determined and verified all quantities, dimensions, specific performance criteria, installation requirements, materials, catalog numbers and similar data with respect thereto and reviewed or coordinated each shop drawing or sample with other shop drawings and samples and with the requirements of the Work and the Contract Documents.

4.12.4 At the time of each submission, Contractor shall give City Engineer specific written notice of each variation that shop drawings or samples may have from requirements of Contract Documents, and, in addition, shall cause a specific notation to be made on each shop drawing submitted to City Engineer for review and approval of each such variation.

4.12.5 City Engineer will review and take action within 14 calendar days of receipt of shop drawings and samples, but City Engineer's review and approval will be only for conformance with the design concept of the Project and for compliance with the information given in Contract Documents and shall not extend to means, methods, techniques, sequences or procedures of construction (except where a specific means, method, technique, sequence or procedure of construction is indicated, in or required 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. Contractor shall make corrections required by the City 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 City Engineer on previous submittals.

4.12.6 City Engineer's review and approval of shop drawings or samples shall not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has in writing called City Engineer's attention to each such variation at the time of submission as required by Subparagraph 4.12.3.1 and City Engineer has given written approval of each such variation by a specific written notation thereof incorporated in or a specific written notation thereof incorporated in or accompanying the shop drawing or sample approval; nor will any approval by City Engineer relieve Contractor from responsibility for errors or omissions in the shop drawings or from responsibility for having complied with the provisions of Subparagraph 4.12.3.

4.12.7 Where a shop drawing or sample is required by the Specifications, any related Work performed prior to City Engineer's review and approval of the pertinent submission will be the sole expense and responsibility of Contractor.

4.13 USE OF SITE

4.13.1 The Contractor shall confine operations of the site to areas permitted by law, ordinances, permits, Agreement, and the Contract Documents and shall not unreasonably encumber the site with any materials or equipment.

4.14 CUTTING AND PATCHING OF WORK

4.14.1 The Contractor shall be responsible for all cutting, fitting or patching that may be required to complete the Work or to make its several parts fit together properly.

4.14.2 The Contractor shall not damage or endanger any portion of the Work or the work of the City or any separate contractors by cutting, patching, or otherwise altering any work, or by excavation. The Contractor shall not cut or otherwise alter the work of the City or any separate contractor except with the written consent of the City and of such separate contractor. The Contractor shall not unreasonably withhold from City or any separate contractor his consent to cutting or otherwise altering the Work.

4.15 CLEANING UP

4.15.1 The Contractor at all times shall keep the work site project free from accumulation of waste materials or rubbish caused by his operations. At the completion of the Work he shall remove all his waste materials and rubbish from and about the Project as well as all his tools, construction equipment, machinery, and surplus materials.

4.15.2 If the Contractor fails to clean up at the completion of the Work, the City may do so, and the cost thereof shall be charged to the Contractor.

4.16 COMMUNICATIONS

4.16.1 The Contractor shall forward all communications to the City through the City Engineer.

4.17 ROYALTIES AND PATENTS

4.17.1 The Contractor shall pay all royalties and license fees. He shall defend all suits or claims for infringement of any patent rights and shall save City harmless from loss on account thereof except that City shall be responsible for all such loss when a particular design process or the product of a particular manufacturer or manufacturers is specified, but if the Contractor has reason to believe that the design, process or product specified is an infringement of a patent, he shall be responsible for such loss unless he promptly gives such information to City Engineer.

4.18 INDEMNIFICATION

4.18.1 The Contractor shall agree to indemnify and hold the City harmless against any and all expenses and liabilities as per the Contract, to include Articles 10 and 22, and all Contract Documents.

SECTION 5 - SUBCONTRACTORS

5.1 DEFINITION

5.1.1 A Subcontractor is a person or entity who has a direct contract with the Contractor to perform any of the Work at the site. The term Subcontractor is referred to throughout the Contract Documents as if singular in number and masculine in gender and means a Subcontractor or his authorized representative. The term Subcontractor does not include any separate contractor or his subcontractors.

5.1.2 A Subcontractor is a person or entity who has a direct or indirect contract with a Subcontractor to perform any of the Work at the site. The term Sub-subcontractor is referred to throughout the Contract Documents as if singular in number and masculine in gender and means a Sub-subcontractor or an authorized representative thereof.

5.2 AWARD OF SUBCONTRACTS AND OTHER CONTRACTS FOR PORTIONS OF THE WORK.

5.2.1 Shall comply with the Contract, to include Article 12 and the Contract Documents.

SECTION 6 - WORK BY CITY

6.1 CITY'S RIGHT TO PERFORM WORK AND TO AWARD SEPARATE CONTRACTS

6.1.1 The City reserves the right to perform work related to the Project with his own forces, and to award separate contracts in connection with other portions of the Project or other work on the site under these or similar Conditions of the Contract. If the Contractor claims that delay or additional cost is involved because of such action by the City, he shall make such claim as provided elsewhere in the Contract Documents.

6.1.2 When separate contracts are awarded for different portions of the Project or other work on the site, the term Contractor in the Contract Documents in each case shall mean the Contractor who executes each separate Owner-Contractor Agreement.

6.2 MUTUAL RESPONSIBILITY

6.2.1 The Contractor shall afford the City and separate contractors' reasonable opportunity for the introduction and storage of their materials and equipment and the execution of their work and shall connect and coordinate his Work with theirs as required by the Contract Documents.

6.2.2 If any part of the Contractor's Work depends for proper execution or results upon the work of the City or any separate contractor, the Contractor shall, prior to proceeding with the Work, promptly report to the City Engineer any apparent discrepancies or defects in such other work that render it unsuitable for such proper execution and results. Failure of the Contractor so to report shall constitute an acceptance of the City's or separate contractors' work as fit and proper to receive his Work, except as to defects which may subsequently become apparent in such work by others.

6.2.3 Any costs caused by defective or ill-timed work shall be borne by the party responsible therefore. No time extensions will be granted due to ill-timed work or any other reasons.

6.2.4 Should the Contractor wrongfully cause damage to the work or property of the City, or to other work on the site, the Contractor shall promptly remedy such damage as provided in Subparagraph 10.2.5.

6.2.5 Should the Contractor wrongfully cause damage to the work or property of any separate contractor, the Contractor shall upon due notice promptly attempt to settle with such other contractor by agreement, or otherwise to resolve the dispute. If such separate contractor sues or initiates an arbitration proceeding against the City on account of any damage alleged to have been caused by the Contractor, the City shall notify the Contractor who shall defend such proceedings at the City's expense, and if any judgment or award against the City arises there from, the Contractor shall pay or satisfy it and shall reimburse the City for all attorneys' fees and court or arbitration costs which the City has incurred. Regardless of the outcome, the Contractor will pay all expenses.

6.3 CITY'S RIGHT TO CLEAN UP

6.3.1 If a dispute arises between the Contractor and separate contractors as to their responsibility for cleaning up as required by Section 4.15, the City may clean up and charge the cost thereof to the Contractors as the City Engineer shall determine to be just.

SECTION 7 - MISCELLANEOUS PROVISIONS

7.1 Governing Law

7.1.1 The Contractor shall be governed by the law of the place where the project is located.

7.2 SUCCESSORS

7.2.1 The City and the Contractor each binds himself, his partners, successors, assigns and legal representatives to the other party hereto and to the partners, successors, assigns and legal representatives of such other party in respect to all covenants, agreements and obligations contained in the Contract Documents. Neither party to the Contract shall assign the Contract or sublet it as a whole without the written consent of the other, nor shall the Contractor assign any monies due or to become due to him hereunder, without the previous written consent of the City.

7.3 WRITTEN NOTICE

7.3.1 Written notice shall be deemed to have been duly served if delivered in person to the individual or member of the firm or entity or to an officer of the corporation for whom it was intended, or if last delivered at or sent by registered or certified mail to the last business address known to him who gives the notice.

7.4 CLAIMS FOR DAMAGE

7.4.1 All claims by the Contractor shall be in accordance with Article 11 of the Contract Agreement.

7.5 PERFORMANCE AND PAYMENT BOND

7.5.1 Contractor shall furnish a Performance Bond and a Payment Bond on the forms provided as part of the Contract Documents each in an amount as required by the Contract Documents as security for the faithful performance and payment of all Contractor's obligations under the Contract Documents. Contractor shall also furnish such other Bonds as are required by the Special Supplementary

Conditions. All Bonds shall be in the forms prescribed by the bidding documents or Special Supplementary Conditions and be executed by such Sureties as are licensed to conduct business in the state where the Project is located, and, except as otherwise provided by law, are named in the current list of "Companies Holding Certificates of City as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Audit Staff Bureau of Accounts, U. S. Treasury Department. All Bonds signed by an agent must be accompanied by a certified copy of the authority to act.

7.5.2 If the Surety on any Bond furnished by Contractor is declared a 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 7.5.1, Contractor shall within five (5) days thereafter substitute another Bond and Surety, both of which shall be acceptable to City.

7.6 RIGHTS AND REMEDIES

7.6.1 The duties and obligations imposed by the Contract Documents and the rights and remedies available hereunder shall be in addition to and not a limitation of any duties, obligations, rights and remedies otherwise imposed or available by law.

7.6.2 No action or failure to act by the City, Engineer, or Contractor shall constitute a waiver of any right or duty afforded any of them under the Contract, nor shall any such action or failure to act constitute an approval of or acquiescence in any breach hereunder, except as may be specifically agreed in writing.

7.7 TESTS

7.7.1 When the Contract Documents, laws, ordinances, rules, regulations or orders of any public agency having jurisdiction require any portion of the Work to be inspected, tested or approved, the Contractor shall give the City Engineer timely notice of its readiness so the City Engineer may observe, provide or instruct such inspection, testing or approval. The Contractor shall bear all costs of such inspections, tests or approvals conducted by public agency other than City. Unless otherwise provided, the City shall bear all costs of other inspections, tests or approvals. The City shall pay for soils, compaction, and other testing required by the Contract Documents, to assure compliance with plans and specifications, and the Contractor shall pay for all required retests.

7.7.2 If the Engineer determines that any Work requires special inspection, testing, or approval which Paragraph 7.7.1 does not include, he will instruct the Contractor to order such special instruction, testing or approval, and the Contractor shall give notice as provided in Paragraph 7.7.1. If such special inspection or testing reveals a failure of the Work to comply with the requirements of the Contract Documents, the Contractor shall bear all costs thereof, including compensation for the City's

additional services made necessary by such failure; otherwise the City shall bear such costs, and an appropriate Change Order shall be issued.

7.7.3 Required certificates of inspection, testing or approval from public agencies having jurisdiction over the Project shall be secured by the Contractor and promptly delivered by him to the City Engineer.

SECTION 8 - TIME

8.1 DEFINITIONS

8.1.1 Unless otherwise provided, the Contract Time is the period of time allotted in the Contract Documents for Completion of the Work as defined in Subparagraph 8.1.3, including authorized adjustments thereto.

8.1.2 The date of commencement of the Work is the date established in a Notice to Proceed for each project. If there is no notice to proceed, it shall be the date of the Owner-Contractor Agreement or such other date as may be established therein.

8.1.3 The Date of Completion of the Work is the Date certified by the City Engineer when construction is complete, in accordance with the Contract Documents.

8.1.4 The term day as used in the Contract Documents shall mean calendar day unless otherwise specifically designated.

8.2 PROGRESS AND COMPLETION

8.2.1 All time limits stated in the Contract Documents are of the essence of the Contract.

8.2.2 The Contractor shall begin the work on the date of commencement as defined in Subparagraph 8.1.2. He shall carry the Work forward expeditiously with adequate forces and shall achieve Completion within the Contract Time.

8.3 DELAYS AND EXTENSIONS OF TIME

8.3.1 If the Contractor is delayed at any time in the progress of the Work by any act or neglect of the City or the City Engineer, or by any employee of either, or by any separate contractor employed by the City, or by changes ordered in the Work, or by labor disputes, fire, unusual delay in transportation, adverse weather conditions not reasonably anticipatable, unavoidable casualties, or any causes beyond the Contractor's control, or by delay authorized by the City pending arbitration, or by any other cause which the City Engineer determines may justify the delay, then the Contract Time shall be extended by Change Order for such reasonable time as the City Engineer may determine.

8.3.2 Any claim for extension of time shall be made in writing to the City Engineer not more than twenty (20) days after the commencement of the delay. In the case of a continuing delay only one claim is necessary. The Contractor shall provide an estimate of the probable effect of such delay on the progress of the Work.

8.3.3 If no agreement is made stating the dates upon which interpretations as provided in Subparagraph 8.3.1 shall be furnished, then no claim for delay shall be allowed on account of failure to furnish such interpretations until fifteen (15) days after written request is made for them, and not then unless such claim is reasonable.

8.3.4 This Paragraph 8.3 does not exclude the recovery of damages for delay by either party under other provisions of the Agreement or Contract Documents.

SECTION 9 - PAYMENTS AND COMPLETION

9.1 CONTRACT SUM

9.1.1 The Contract Sum for each project is the sum stated in the project's Notice to Proceed, including authorized adjustments thereto, is the total amount payable by the City to the Contractor for the performance of the Work under the Contract Documents.

9.2.1 Ten (10) days before the first Application for Payment, the City shall submit to the Contractor a schedule of values allocated to the various portions of the Work, in accordance with the Agreement, prepared in such form and supported by such data to substantiate its accuracy. This schedule shall be used only as a basis for the Contractor's Applications for Periodic Payments.

9.3 APPLICATIONS FOR PAYMENT

9.3.1 At least ten (10) days before the date for each progress payment established in the City-Contractor Agreement, the Contractor shall submit to the City and City Engineer an itemized and completed Application for Payment, notarized, supported by such data substantiating the Contractor's right to payment as the City or the City Engineer may require, and reflecting retainage, if any, as provided elsewhere in the Contract Documents.

9.3.1.1 Until Completion of the Work the City will pay ninety-five percent (95%) of the amount due the Contractor on account of progress payments. At Completion and Final Acceptance of the Work by the City Engineer, the City shall pay the retainage, less such amount as the City Engineer shall determine for all incomplete Work, unsettled claims and penalties as provided in the Contract Documents.

9.4 CERTIFICATES FOR PAYMENT

9.4.1 The City Engineer will, within ten (10) days after the receipt of the Contractor's Application for Payment, either approve the application for payment to the Owner, with a copy to the Contractor, for such amount as the City Engineer determines is properly due, or notify the Contractor in writing his reasons for withholding a Certificate as provided in Subparagraph 9.6.1.

9.4.2 The approval of the Application for Payment will constitute only a presentation by the City, based on the City Engineer's observations at the site as provided in Subparagraph 2.1.2 and the data comprising the Application for Payment that the Work has progressed to the point indicated; that to the best of his knowledge, information and belief, the quality of the Work is in accordance with the Contract Documents (subject to an evaluation of the Work for conformance with the Contract Documents upon Completion, to the results of any subsequent tests required by or performed under the Contract Documents, to minor deviations from the Contract Documents correctable prior to completion, and to any specific qualifications stated in his Certificate); and that the Contractor is entitled to payment in the amount certified. However, by issuing a Certificate for Payment, the City Engineer shall not thereby be deemed to represent that he has made exhaustive or continuous on-site inspections to check the quality or quantity of the Work to relieve the Contractor of his responsibilities specified in the Agreement or that he has reviewed the construction means, methods, techniques, sequences or procedures, or that he has made any examination to ascertain how or for what purpose the Contractor has used the monies previously paid on account of the Contract Sum.

9.5 PROGRESS PAYMENTS

9.5.1 After the City Engineer has approved the complete Application for Payment, the City shall make payment in accordance with Article 6 of identified in the Agreement.

9.5.2 The Contractor shall promptly pay each Subcontractor upon receipt of each payment from the Owner, out of the amount paid to the Contractor on account of such Subcontractor's Work, the amount to which said Subcontractor is entitled, reflecting the percentage actually retained, if any, from payments to the Contractor on account of such Subcontractor's Work. The Contractor shall, by an appropriate agreement with each Subcontractor, require each Subcontractor to make payments to his Sub-subcontractors in a similar manner.

9.5.3 The City Engineer may, on request and at his direction, furnish to any Subcontractor information regarding the percentages of completion or the amounts applied for by the Contractor and the action taken thereon by the City Engineer on account of Work done by such Subcontractor.

9.5.4 Neither the City nor the City Engineer shall have any obligation to pay or to see to the payment of any monies to any Subcontractor except as may otherwise be required by law.

9.5.5 No approval for a progress payment, nor any progress payment, nor any partial or entire use or occupancy of the Project by the City, shall constitute an acceptance of any Work not in accordance with the Contract Documents.

9.5.6 No approval for a progress payment shall be approved prior to City Engineer receiving Partial Releases of Liens applicable to previous payments received by Contractor.

9.6 PAYMENTS WITHHELD

9.6.1 The City Engineer may decline to approve payment and may withhold it in whole or in part, to the extent necessary reasonably to protect the City, if in his opinion he is unable to make representations to the City as provided in Subparagraph 9.4.2. If the City Engineer is unable to make representations to the City as provided in Paragraph 9.4.2 and to certify payment in the amount of the Application, he will notify the Contractor as provided in Subparagraph 9.4.1. If the Contractor and the City Engineer cannot agree on a revised amount, the City Engineer will promptly approve the payment for the amount for which he is able to make such representations to the City. The City Engineer also may decline to approve payment or, because of subsequently discovered evidence or subsequent observations, he may nullify the whole or any part of any approval for payment previously issued, to such extent as may be necessary in his opinion to protect the City from loss because of:

1. Defective Work not remedied; or
2. Third party claims filed or reasonable evidence indicating probable filing of such claims, such as Notice; or
3. Failure of the Contractor to make payments properly to Subcontractors for labor, materials or equipment. City Engineer may request Partial Releases of Liens prior to payment; or
4. Reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum; or
5. Damage to the City or other contractor; or
6. Reasonable evidence that the Work will not be completed within the Contract Time; or
7. Persistent failure to carry out the Work in accordance with the Contract

Documents.

9.6.2 When the above grounds in Subparagraph 9.6.1 are removed, payment shall be made for amounts withheld because of them.

9.7 "ELIMINATED"

9.8 FINAL COMPLETION AND FINAL PAYMENT

9.8.1 Upon receipt of written notice that the Work is ready for final inspection and acceptance and upon receipt of a final Application for Payment, the City Engineer will make such inspection and, when he finds the Work acceptable under the Contract Documents and the Contract fully performed, will promptly approve the Application for Payment, stating that to the best of his knowledge, information and belief, and on the basis of his observations and inspections, the work has been completed in accordance with the terms and conditions of the Contract Documents and that the entire balance found to be due the Contractor and noted in said approval is due and payable. The City Engineer's final approval for payment will constitute a further representation that the conditions precedent to the Contractor's being entitled to final payment as set forth in the Agreement and Contract Documents have been fulfilled and the Contractor has met the requirements of the Agreement and Contract Documents.

9.8.2 Neither the final payment nor the remaining retained percentage shall become due until the Contractor submits to the City Engineer: (1) an affidavit that all payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or his property might in any way be responsible, have been paid or otherwise satisfied; (2) consent of surety, if any, to final payment; and (3) other data establishing payment or satisfaction of all such obligations, such as receipts, releases and waivers of liens arising out of the Contract, to the extent and in such form as may be designated by the City. If any Subcontractor, sub-subcontractor, material man, or laborer, refuses to furnish a release, or waiver, required by the City, the Contractor may furnish a bond satisfactory to the City, to indemnify him against any such lien. City may withhold all sums reasonably necessary for the claims of subcontractors, sub-subcontractors, material men, laborers or other who have asserted any claims, even if based upon purported additions, extras, or unexecuted change orders, which sums shall include interest, costs and reasonably anticipated attorneys' fee. If any claim remains unsatisfied after all payments are made, the Contractor shall refund to the City all monies that the latter may be compelled to pay in discharging such lien, including interest, all costs, and reasonable attorneys' fee.

9.8.3 The making of final payment shall constitute a waiver of all claims by the City except those arising from:

1. Unsettled liens, claims or notices of any kind by subcontractors, sub-subcontractors, material men, and laborers; or

2. Faulty or defective Work appearing after Substantial Completion; or
3. Failure of the Work to comply with the requirements of the Contract Documents; or
4. Terms of any special warranties required by the Contract Documents.

9.8.4 The acceptance of final payment shall constitute a waiver of all claims by the Contractor except those previously made in writing and identified by the Contractor as unsettled at the time of the final Application for Payment. By acceptance thereof, Contractor agrees to cooperate with City in disposing of any and all remaining claims of subcontractors, sub-subcontractors, material men, and laborers, and shall indemnify and hold harmless City from all such claims, including attorneys' fees, trial and appellate, and costs and expenses.

SECTION 10 - PROTECTION OF PERSONS AND PROPERTY

10.1 SAFETY PRECAUTIONS AND PROGRAMS

10.1.1 The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work.

10.2 SAFETY OF PERSONS AND PROPERTY

10.2.1 The Contractor shall take all reasonable precautions for the safety of, and shall provide all reasonable protection to prevent damage, injury or loss to:

1. All employees on the Work and all other persons who may be affected thereby;
2. All the Work, and all materials and equipment to be incorporated therein, whether in storage on or off the site, under the care, custody or control of the Contractor or any of his Subcontractors or Sub-subcontractors; and
3. Other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.

10.2.2 The Contractor shall give all notices and comply with all applicable laws, ordinances, rules, regulations and lawful orders of any public authority bearing on the safety of persons or property or their protection from damage, injury or loss.

10.2.3 The Contractor shall erect and maintain, as required by existing conditions and progress of the Work, all reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards, promulgating safety regulations and notifying owners and users of adjacent utilities. Without limiting the generality of the foregoing, the Contractor's ladders, scaffolds, lifts and

other equipment, and those portions of the Contractor's work and temporary work which are utilized by the City and the City Engineer and their employees in the observation of construction shall comply with all applicable laws, ordinances, rules, regulations, standards and orders of any public authority having jurisdiction for the safety of persons or property.

10.2.4 When the use or storage of explosives or other hazardous materials or equipment is necessary for the execution of the Work, the Contractor shall exercise the utmost care and shall carry on such activities under the supervision of properly qualified personnel.

10.2.5 The Contractor shall promptly remedy all damage or loss to any property referred to in Paragraph 10.2, caused in whole or in part by the Contractor, any Subcontractor, any Sub-subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable and for which the Contractor is responsible, except damage or loss attributable to the acts or omissions of the Owner or City Engineer or anyone directly or indirectly employed by either of them, or by anyone for whose acts either of them may be liable, and not attributable to the fault or negligence of the Contractor. The foregoing obligations of the Contractor are in addition to his obligations under the Agreement and the Contract Documents.

10.2.6 The Contractor shall designate a responsible member of his organization at the site whose duty shall be the prevention of accidents. This person shall be the Contractor's superintendent unless otherwise designated by the Contractor in writing to the City and the City Engineer.

10.2.7 The Contractor shall not load or permit any part of the Work to be loaded so as to endanger its safety.

10.3 EMERGENCIES

10.3.1 In any emergency affecting the safety of persons or property, the Contractor shall act, at his discretion, to prevent threatened damage, injury or loss. Any additional compensation or extension of time claimed by the Contractor on account of emergency work shall be determined as provided in Section 12 for Changes in the Work.

10.4 CITY ENGINEER'S STATUS

10.4.1 Without limiting the generality of Subparagraphs 2.2 and 2.3, the City Engineer will not inspect or be responsible for the Contractor's compliance with the requirements of this Section 10.

SECTION 11 - INSURANCE

(SEE CONTRACT DOCUMENTS - ARTICLE 17)

SECTION 12 - CHANGES IN THE WORK

12.1 CHANGE ORDERS

12.1.1 A Change Order is a written order to the Contractor signed by the City Engineer, issued after execution of the Contract, authorizing a change in the Work or an adjustment in the Contract Sum or the Contract Time. The Contract Sum and the Contract Time may be changed only by Change Order. A Change Order signed by the Contractor indicates his agreement therewith, including the adjustment in the Contract Sum or the Contract Time.

12.1.2 The City, without invalidating the Contract, may order changes in the Work within the general scope of the Contract consisting of additions, deletions or other revisions, the Contract Sum and the Contract Time being adjusted accordingly. All such changes in the Work shall be authorized by Change Order, and shall be performed under the applicable conditions of the Contract Documents.

12.1.3 The cost or credit to the City resulting from a change in the Work shall be determined in one or more of the following ways:

1. By mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation;
2. By unit prices stated in the Contract Documents or subsequently agreed upon;
3. By cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee.

12.2 CONCEALED CONDITIONS

12.2.1 Should concealed conditions encountered in the performance of the Work below the surface of the ground differing materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in this Contract be encountered, the Contract Sum may be equitably adjusted by Change Order upon claim by either party made within twenty (20) days after the first observance of the conditions.

12.3 CLAIMS FOR ADDITIONAL COST

12.3.1 If the Contractor wishes to make a claim for an increase in the Contract Sum, he shall give the City Engineer written notice thereof within twenty (20) days after the occurrence of the event giving rise to such claim. This notice shall be given by the Contractor before proceeding to execute the Work, except in an emergency endangering life or property in which case the Contractor shall precede in

accordance with Paragraph 10.3. No such claim shall be valid unless so made. If the Owner and the Contractor cannot agree on the amount of the adjustment in the Contract Sum, it shall be determined by the City Engineer. Any change in the Contract Sum resulting from such claim shall be authorized by Change Order.

12.3.2 If the Contractor claims that additional cost is involved because of, but not limited to: (1) any written interpretation pursuant to Subparagraph 2.3; (2) any order by the City to stop the Work pursuant to Paragraph 3.3 where the Contractor was not at fault; (3) any written order for a minor change in the Work issued pursuant to Paragraph 12.4; or (4) failure of payment by the City pursuant to Paragraph 9.7, the Contractor shall make such claim as provided in Paragraph 12.3.1.

12.4 MINOR CHANGES IN THE WORK

12.4.1 The City Engineer will have authority to order minor changes in the Work not involving an adjustment in the Contract Sum or an extension of the Contract Time and not inconsistent with the intent of the Contract Documents. Such changes shall be effected by written order (field order), and shall be binding on the Owner and the Contractor. The Contractor shall carry out such written orders promptly.

SECTION 13 - UNCOVERING AND CORRECTION OF WORK

13.1 UNCOVERING OF WORK

13.1.1 If any portion of the Work should be covered contrary to the request of the City Engineer or to requirements specifically expressed in the Contract Documents, it must, if required by the City Engineer, be uncovered for his observation and shall be replaced at the Contractor's expense.

13.1.2 If any other portion of the Work has been covered which the City Engineer has not specifically requested or required to observe prior to being covered, the City Engineer may request to see such Work and it shall be uncovered by the Contractor. If such Work be found in accordance with the Contract Documents, the cost of uncovering and replacement shall, by appropriate Change Order, be charged to the City. If such Work be found not in accordance with the Contract Documents, the Contractor shall pay such costs unless it is found that this condition was caused by the City or a separate contractor as provided in Section 6, in which event the City shall be responsible for the payment of such costs.

13.2 CORRECTION OF WORK

13.2.1 The Contractor shall promptly correct all Work rejected by the City Engineer as defective or as failing to conform to the Contract Documents whether or not fabricated, installed or completed. The Contractor shall bear all costs of correcting

such rejected Work, including compensation for the City Engineer or his designee's additional services and inspections made necessary thereby.

13.2.2 If, within one year after the Date of Completion of the Work or designated portion thereof or within one year after acceptance by the City of designated Work or within such longer period of time as may be prescribed by law or by the terms of any applicable special warranty required by the Contract Documents, any of the Work is found to be defective or not in accordance with the Contract Documents, the Contractor shall correct it promptly after receipt of a written notice from the City to do so unless the City has previously given the Contractor a written acceptance of such condition. This obligation shall survive termination of the Contract. The City shall give such notice promptly after discovery of the condition.

13.2.3 The Contractor shall remove from the site all portions of the Work which are defective or non-conforming and which have not been corrected under Subparagraphs 4.5.1, 13.2.1, and 13.2.2, unless removal is waived by the City.

13.2.4 If the Contractor fails to correct defective or non-conforming Work as provided in Subparagraphs 4.5.1, 13.2.1, and 13.2.2, the City may correct it in accordance with Paragraph 3.4.

13.2.5 If the Contractor does not proceed with the correction of such defective or non-conforming Work within a reasonable time fixed by written notice from the City Engineer, the City may remove it and replace the materials or equipment at the expense of the Contractor. If the payments then or thereafter due the Contractor are not sufficient to cover such amount, the Contractor shall pay the difference to the City.

13.2.6 The Contractor shall bear the cost of making good all work of the City or separate contractors destroyed or damaged by such correction or removal.

13.2.7 Nothing contained in this Paragraph 13.2 shall be construed to establish a period of limitation with respect to any other obligation which the Contractor might have under the Contract Documents, including Paragraph 4.5 hereof. The establishment of the time period of one year after the Date of Substantial Completion or such longer period of time as may be prescribed by law or by the terms of any warranty required by the Contract Documents relates only to the specific obligation of the Contractor to correct the Work, and has no relationship to the time within which his obligation to comply with the Contract Documents may be sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to his obligations other than specifically to correct the Work.

13.3 ACCEPTANCE OF DEFECTIVE OR NON-CONFORMING WORK

13.3.1 If the City prefers to accept defective or non-conforming Work, he may do so instead of requiring its removal and correction, in which case a Change Order

will be issued to reflect a reduction in the Contract Sum where appropriate and equitable. Such adjustment shall be effected whether or not final payment has been made.

SECTION 14 - TERMINATION OF THE CONTRACT

14.1 TERMINATION BY THE CONTRACTOR

14.1.1 If the Work is stopped for a period of thirty (30) days under an order of any court or other public agency having jurisdiction, or as a result of an act of government, such as a declaration of a national emergency making materials unavailable, through no act or fault of the Contractor or a Subcontractor or their agents or employees or any other persons performing any of the Work under a contract with the Contractor, or if the Work should be stopped for a period of thirty (30) days by the Contractor because the City Engineer has not approved an Application for Payment as provided in Paragraph 9.7 or because the City has not made payment thereon as provided in Paragraph 9.7, then the Contractor may, upon seven (7) additional days' written notice to the City Engineer, terminate the Contract and recover from the Owner payment for all Work executed and for any proven loss sustained upon any materials, equipment, tools, construction equipment and machinery, including reasonable profit and damages.

14.2 TERMINATION BY THE CITY

14.2.1 If the Contractor is adjudged a bankrupt, or if he makes a general assignment for the benefit of his creditors, or if a receiver is appointed on account of his insolvency, or if he persistently or repeatedly refuses or fails, except in cases for which extension of time is provided, to supply enough properly skilled workmen or proper materials, or if he fails to make prompt payment to Subcontractors or for materials or labor, persistently disregards laws, ordinances, rules, regulations or is guilty of a substantial violation of a provision of the Contract Documents, then the Owner, upon certification by the City Engineer that sufficient cause exists to justify such action, may, without prejudice to any right or remedy and after giving the Contractor and his surety, if any, seven (7) days' written notice, terminate the employment of the Contractor and take possession of the site and of all materials, equipment, tools, construction equipment and machinery thereon owned by the Contractor and may finish the Work by whatever method he may deem expedient. In such case the Contractor shall not be entitled to receive any further payment until the Work is finished.

14.2.2 If the unpaid balance of the Contract Sum exceeds the costs of finishing the Work, including compensation for the City Engineer's additional services made necessary thereby, such excess shall be paid to the Contractor. If such costs exceed the unpaid balance, the Contractor shall pay the difference to the City. The amount to be paid to the Contractor or to the City, as the case may be, shall be certified by the City Engineer, upon application, in the manner provided in

Paragraph 9.4, and this obligation for payment shall survive the termination of the Contract.

SECTION 15 - UNFAVORABLE WEATHER AND OTHER CONDITIONS

15.1 During unfavorable weather and other unfavorable conditions, the Contractor shall pursue only such portions of the Work as shall not be damaged thereby. No portions of the Work whose satisfactory quality or efficiency will be affected by an unfavorable condition shall be constructed while these unfavorable conditions exist unless, by special means or precautions approved by the City Engineer, the Contractor shall be able to overcome them.

SECTION 16 - ENGINEERING AND FIELD INSPECTION EXPENSES DUE TO OVERTIME WORK AND UNAVOIDABLE DELAYS

16.1 The City shall charge to the Contractor and may deduct from the periodic and final payment for the Work all engineering and inspection expenses incurred by the City in connection with any overtime work during the contract construction period, including any time extension granted thereof, beyond the regular eight (8) hour day, (normal resident project representative working day), and for any time worked on Saturdays, Sundays, or Holidays.

16.2 In addition, these General Conditions provide for the payment by the Contractor to the City of all engineering and inspection expenses incurred as a result of unavoidable delays or correctness of the Work.

16.3 All engineering and inspection expenses, including direct costs incurred by the City due to the above specified conditions, shall be paid by the Contractor at the City's hourly rates, including all overhead.

SECTION 17 - BEFORE STARTING CONSTRUCTION

17.1 Before undertaking each part of the Work, Contractor shall carefully study and compare the Contract Documents and check and verify pertinent figures shown thereon and all applicable field measurements. Contractor shall promptly report in writing to the City Engineer any conflict, error or discrepancy which Contractor or any of his Subcontractors may discover and shall obtain a written interpretation or clarification from City Engineer before proceeding with any work affected thereby; provided, however, Contractor shall not be liable to City or City Engineer for failure to report any conflict, error or discrepancy unless Contractor or any of his Subcontractors had actual knowledge thereof or should reasonably have known thereof.

17.2 Within ten (10) days after the effective date of the Agreement (unless otherwise specified in the General Requirements), Contractor shall submit to City Engineer for review: (1) a progress schedule indicating the starting and completion dates of the various stages of the Work; (2) a proposed schedule of Shop Drawing Submissions; (3) a schedule of values of the Work; and (4) a listing of the monthly progress payments through the Contract Time. The City Engineer may require the schedule of values to be adjusted if in its opinion the breakdown does not accurately reflect the true distribution of the Contract Price.

17.3 No later than twenty (20) days after the effective date of the Agreement, but before Contractor starts the Work at the site, a conference will be held for review of the schedules to establish procedures for handling Shop Drawings and other submittals and for processing Applications for Payment, and to establish a working understanding among the parties as to the Work. Contractor shall attend such conference and shall require any or all of his Subcontractors, as City Engineer directs, to attend the conference.

SECTION 18 - PRECEDENCE OF CONTRACT DOCUMENTS

18.1 In resolving conflicts and discrepancies between the Contract Documents, precedence shall be given in the following order:

Plans shall control over Technical Specifications; larger scale plans shall control over general plans; large scale details over small scale and figure dimensions; and figure dimensions over scaled dimensions. Addenda and change orders supersede only affected portions of the documents.

SECTION 19 - MEASUREMENT AND PAYMENT

19.1 DESCRIPTION OF REQUIREMENTS

19.1.1 Payment for the WORK, as further specified herein, shall include compensation to be received by the Contractor for furnishing tools, equipment, supplies, and manufactured articles, and for labor, operations, and incidentals appurtenant to the items of work being described, as necessary to complete the various items of the Work in accordance with the requirements of the Contract Documents, including appurtenances thereto, and including all costs of compliance with the regulations of public agencies having jurisdiction, including Safety and Health Requirements of the Occupational Safety and Health Administration of the U. S. Department of Labor (OSHA). No separate payment will be made for any item that is not specifically set forth in the Bid Schedule, and all costs therefore shall be included in the prices named in the Bid Schedule for the various appurtenant items of work.

19.1.2 The total Unit Bid Price shall cover all work required by the Contract Documents. All costs in connection with the proper and successful completion of the work, including furnishing all materials, equipment, supplies, and appurtenances; providing all construction equipment, and tools; and performing all necessary labor and supervision to fully complete the Work, shall be included in the unit and Unit bid prices. All work not specifically set forth as a pay item in the Bid shall be considered a subsidiary obligation of Contractor and all costs in connection therewith shall be included.

19.1.3 Payment for all work done in compliance with the Contract Documents, inclusive of furnishing all manpower, equipment, materials, and performance of all operations relative to construction of this project, will be made under the Unit Bid Price.

19.1.4 The City reserves the right to alter the Drawings, modify incidental work if necessary, and increase or decrease quantities of work to be performed in accordance with such changes, including deduction or cancellation of any one or more of the Items. Changes in the work shall not be considered as a waiver of any conditions of the Contract nor invalidate any provisions thereof. When changes result in changes in the quantities of work to be performed, and proposed change will cause substantial inequity to the City or Contractor the applicable unit prices shall be equitably adjusted by change order.

19.1.5 Quantities necessary to complete the work as shown on the Drawings or as specified herein shall govern over those shown in the Proposal or Bid Documents. The Contractor shall take no advantage of any apparent error or omission in the Drawings or Specifications, and the City Engineer shall be permitted to make corrections and interpretations as may be deemed necessary for fulfillment of the intent of the Contract Documents.

19.1.6 The quantities for payment, other than Final Payment, under this Contract shall be determined for actual measurement of the completed items, in place, ready for service and accepted by the City, in accordance with the applicable method of measurement therefore contained herein. A representative of the Contractor shall witness all field measurements.

SECTION 20 - ESTIMATED QUANTITIES

20.1 All estimated quantities stipulated in the Bid Form or other Contract Documents are approximate and supplied for the sole purpose of providing Bidder with a basis which will be used to determine the Base Bid and to obtain unit prices for approvals of progress payments for the Work done. Actual quantities which will be ordered by City may vary from those on the Bid Form(s).

20.2 The Contractor's attention is directed to the items of work for which no unit price is set. All work shown on the drawings as outlined in the specifications is to

be completed in all respects, and the cost of all miscellaneous and associated work to any specific items shall be included in the Unit Prices.

20.3 All quantities, for the submittal of payments, shall be measured and tabulated by both the City Engineer, or representative, and the Contractor. Requests for payment and supporting data shall be prepared by the Contractor and given to the City Engineer sufficiently in advance of payment date to permit thorough checking of all quantities.

20.4 The Contractor shall furnish the City Engineer whatever assistance is required, laborers, clerks and records that will enable the City Engineer to expeditiously check all estimates and especially the final quantities of the project.

SECTION 21- COORDINATION

21.1 Contractor shall: (1) coordinate scheduling, submittals, and work of the various sections of specifications to assure efficient and orderly sequence of installation of interdependent construction elements; (2) coordinate completion and clean-up of Work of separate sections of specifications in preparation for Substantial Completion; and (3) after City occupancy of premises, coordinate access to site for correction of defective Work and Work not in accordance with Contract Documents, to minimize disruption of City activities.

SECTION 22 - FIELD ENGINEERING

Contractor shall employ a Land Surveyor registered in the State of Florida and acceptable to City Engineer, locate and protect survey control and reference points, control datum for survey that is shown on the Exhibit Drawings, and provide field engineering services and establish elevations, lines, and levels, utilizing recognized engineering survey practices.

SECTION 23

"DELETED"

SECTION 24 - PRECONSTRUCTION CONFERENCE

24.1 City Engineer will schedule a conference after Notice to Award.

24.2 Attendance Required: City, Contractor, Utilities Representatives. (Subcontractors if so requested by City.)

24.3 Agenda:

1. Execution of City-Contractor Agreement;

2. Submission of executed bonds and insurance certificates;
3. Distribution of Contract Documents;
4. Submission of list of Subcontractors, and progress schedule;
5. Designation of personnel representing the parties in Contract, and the City Engineer;
6. Procedures and processing of field decisions, submittals, substitutions, applications for payment, proposal requests, Change Orders and Contract closeout procedures;
7. Scheduling;
8. Scheduling activities of Testing Laboratory.

SECTION 25 - PROGRESS MEETINGS

25.1 City Engineer or Contractor may schedule meetings, at intervals, as required throughout progress of the Work. Each may make arrangements for meetings, prepare agenda with copies for participants, record minutes and distribute copies within 3 days to participants and those affected by decisions made.

25.3 Agenda:

1. Review minutes of previous meetings;
2. Review of Work progress;
3. Field observations, problems, and decisions;
4. Identification of problems which impede planned progress;
5. Review of submittals schedule and status of submittals;
6. Review of off-site fabrication and delivery schedules;
7. Maintenance of progress schedule;
8. Corrective measures to regain projected schedules;
9. Planned progress during succeeding work period;
10. Coordinate of projected progress;
11. Maintenance of quality and work standards;
12. Effect of proposed changes on progress schedule and coordination;
13. Other business relating to Work.

SECTION 26 - CONTRACT CLOSEOUT

26.1 DESCRIPTION

Scope of Work: Comply with requirements stated in Conditions of the Contract and in Specifications for administrative procedures in closing out the Work.

26.2 FINAL COMPLETION & INSPECTION

1. When Contractor considers the Work is complete, he shall submit written certification that: (1) Contract Documents have been reviewed, (2) Work has been inspected for compliance with Contract Documents, (3) Work has been completed

in accordance with Contract Documents, (4) equipment and systems have been tested in the presence of the City's representative and are operational, and (5) Work is completed and ready for final inspection.

2. The Engineer will make an inspection to verify the status of completion with reasonable promptness after receipt of such certification.

3. Should the Engineer consider that the work is incomplete or defective: (1) the Engineer will promptly notify the Contractor in writing, listing the incomplete or defective work, (2) Contractor shall take immediate steps to remedy the stated deficiencies, and send a second written certification to the Engineer that the Work is complete, and (3) the Engineer will re-inspect the Work.

4. When the Engineer finds that the Work is acceptable under the Contract Documents, he shall request the Contractor to make closeout submittals.

26.3 REINSPECTION FEES

Should the Engineer perform re-inspection due to failure of the Work to comply with the claims of status of completion made by the Contractor, (1) the Contractor will compensate the City at their request for such additional inspection services, and (2) the City will deduct the expenses incurred for such inspection services.

26.4 CONTRACTOR'S CLOSEOUT SUBMITTALS

26.4.1 The Contractor shall submit to the Engineer the following documentation:

1. Evidence of compliance with requirements of governing authorities that issued permit or have jurisdiction over Work;
2. Warranties and Bonds;
3. Evidence of Payment and Release of Liens;
4. Project Record Documents that show the final location, by reference to at least two completed, visible improvements or other permanent control points, of the completed improvements for this project, verification of all design dimensions, any revisions to the Plans, and all other information necessary to horizontally and vertically locate and operate the improvements constructed under this Contract. Information to be shown includes the location of the drainage structures, signs, lighting, irrigation system, landscaping, sidewalks, roadway improvements and all culvert pipes, the elevations referenced to NGVD 1929 of the control structure tops, bottom inverts, and the elevations of all pipe inverts. No erasures are permitted. Where changes occur, cross out design information and denote constructed information. Other items to be shown on the Record Drawings include:
 5. Any changes or verifications get marked.
 6. Mark out all "proposed" or "constructs."
 7. Draw in all changes to location of pipe, structures, etc.

8. Draw in a detail box of any substantial changes.
9. Mark location and footage of all culverts.
10. Mark all elevations for grates and pipe inverts.
11. Mark all grades and spot elevations of roadways at 500 feet spacing or less.
12. Canal cross-sections at 500 feet spacing.

The Contractor shall submit four (4) sets of signed and sealed Record Drawing prints, and two electronic As-Built Drawings supplied in digital format (AutoCAD).

END OF SECTION