



"A City for All Ages"

**City of Port St. Lucie
Electronic Bid ("eBid")**

**Event Name: Construction of the Northport 24" Force Main on Glades Cutoff Rd.
eBid (Event) Number: 20210116**

1. Introduction

1.1. Purpose of Procurement

Pursuant to the [City of Port St. Lucie Code of Ordinances, Sec. 35.05](#), this electronic ("eBid") is being issued to establish a contract with one or more qualified Contractors who will provide **Construction of the Northport 24" Force Main on Glades Cutoff Rd.** to the City of Port St. Lucie (hereinafter, "City") as further described in this eBid.

A descriptive overview of the City of Port St. Lucie can be found at <https://www.cityofpsl.com/discover-us/about-psl>. Please visit the City's website to familiarize yourself with how our city is structured and operates. Please contact the Issuing Officer with any questions.

1.2. Restrictions on Communicating with Staff

From the issue date of this eBid until a City generated Purchase Order is submitted to the contracted contractor (or the eBid is officially cancelled), contractors are not allowed to communicate for any reason with any City staff or elected officials except through the Issuing Officer named herein, or during the Bidders/Offerors' conference (if any), or as defined in this eBid or as provided by existing work agreement(s). This is commonly known as a cone of silence during the procurement process as identified in the [City Code of Ordinances, Section 35.13](#). Prohibited communication includes all contact or interaction, including but not limited to telephonic communications, emails, faxes, letters, or personal meetings, such as lunch, entertainment, or otherwise. The City reserves the right to reject the response of any contractor violating this provision. Further information of this topic can be found on the Cone of Silence and eBid Communication Document.

1.3. eBid Scope of Requested Commodities

The City of Port St. Lucie desires to obtain quotations from qualified individuals, firms, and legal entities relative to the Construction of the Northport 24" Force Main Project on Glades Cutoff Road. The Contract period is estimated at three hundred and thirty (330) calendar days with no renewal options.

It is the intent of the City to enter into a unit price contract with one (1) qualified Contractor to provide all the labor, supervision, equipment, machinery, tools, materials, permits, transportation, utilities, and other incidentals required to complete the work in accordance with the Contract Documents.

The Contractor must have all required licenses and certifications necessary to perform this work. The approved license for this work includes a State of Florida General Contractor License and Underground Utility License. A copy of said certification is to be submitted with the Bid Documents. It is the Contractor's responsibility to verify with the City of Port St. Lucie Building Department that their current license allows them to perform this work prior to submitting a bid.

Scope of Work

The Northport 24" Force Main Project on Glades Cutoff Road in Port St. Lucie consists of a 24" force main that starts at Glades Cutoff Road south of Midway Road near Canal 105. From there it will proceed south to connect with an existing 24" force main on Glades Cutoff Road at the intersection with Commerce Centre Parkway. The project includes approximately 8,240 linear feet of 24" main, two 24" x 16" stub-outs for future connections, a 24" x 24" stub-out for a future connection, 24" line stops, 24" tapping sleeve and valve, 24" plug valves, air release valves, piping fittings, replacement of sidewalks, roads and restoration of sod, and all other necessary appurtenances. It also includes a directional bore of 1,790 linear feet under Interstate Highway I-95. All work shall be in accordance with the Technical Specifications and Construction Plans prepared by Kimley Horn consisting of pages 1 – 28 (Attachment A).

1.4. Overview of the eBid Process

The objective of the eBid is to select one qualified Contractor (as defined by Section 1.1 "Purpose of the Procurement") to provide the goods and/or services outlined in this eBid to the City. This eBid process will be conducted to gather and evaluate responses from Contractor for potential award. All qualified Contractors are invited to participate by submitting responses, as further defined below. After evaluating all Contractor's responses received prior to the closing date of this eBid and resolution of any contract exceptions, the preliminary results of the eBid process will be publicly announced, by the City Clerk's office, including the names of all participating Contractors and the evaluation results. Subject to the protest process, final contract award(s) will be publicly announced thereafter.

NOTE TO CONTRACTORS: The general instructions and provisions of this document have been drafted with the expectation that the City may desire to make one award or multiple awards. For example, this document contains phrases such as "contract(s)" and "award(s)". Please refer to Section 1.1 "Purpose of the Procurement" and Section 6.4 "Selection and Award" for information concerning the number of contract awards expected.

1.5. Schedule of Events

The schedule of events set out herein represents the City's best estimate of the schedule that will be followed. However, delays to the procurement process may occur which may necessitate adjustments to the proposed schedule. If a component of this schedule, such as the close date, is delayed, the rest of the schedule may be shifted as appropriate. Any changes to the dates up to the closing date of the eBid will be publicly posted prior to the closing date of this eBid. After the close of the eBid, the City reserves the right to adjust the remainder of the proposed dates, including the dates for evaluation, award and the contract term on an as needed basis with or without notice.

| Description | Date | Time |
|--|--|---------------|
| Release of eBid | October 1, 2021 | 10:00 a.m. ET |
| Bidders/Offerors' Conference Location: City Hall, Building A 121 SW Port St. Lucie Blvd. Port St. Lucie, FL 34984 PMD, 3 rd Floor Suite 390 Attendance is: Non-Mandatory | October 7, 2021 | 10:00 a.m. ET |
| Deadline for written questions sent via email to the Issuing Officer referenced in Section 1.5. | October 12, 2021 | 5:00 p.m. ET |
| Responses to Written Questions | October 15, 2021 | 5:00 p.m. ET |
| Bids Due/Close Date and Time | November 1, 2021 | 3:00 p.m. ET |
| Finalize Contract Terms | 2 to 3 Weeks after Closing | N/A |
| Notice of Intent to Award* [NOIA] (on or about) | 3 Weeks after Closing to be Published by the City Clerk's Office | N/A |
| Notice of Award [NOA] (on or about) | Date of Executed Contract to Contractor | N/A |

The City reserves the right to proceed to award without further discussions after receipt of the initial proposals, in which case, evaluation committee reviews, negotiations and Proposal Revisions may not be required.

*In the event the estimated value of the contract is less than \$75,000, the City reserves the right to proceed directly to contract award without posting a Notice of Intent to Award.

1.6. Official Issuing Officer (Procuring Agent)

Name: Shelby Dolan, Procurement Agent II

Email: sdolan@cityofpsl.com

1.7. Definition of Terms

Please review the following terms:

Contractor(s) – companies desiring to do business with the City (Also called “Bidder”, “Proposer”, or “Offeror”.)

City of Port St. Lucie (City) – the governmental entity identified in Section 1.1 “Purpose of Procurement” of this eBid.

Immaterial Deviation- does not give the contractor a substantial advantage over other contractors.

Material Deviation- gives the contractor a substantial advantage over other contractors and thereby restricts or prevents competition

Procurement Management Division (PMD)- The City department that is responsible for the review and possible sourcing all publicly sourced solicitations.

Responsible- means the contractor, whether a company or an individual, has appropriate legal authority to do business in the City, a satisfactory record of integrity, appropriate financial, organizational and operational capacity and controls, and acceptable performance on previous governmental and/or private contracts, if any.

Responsive- means the contractor, whether a company or an individual, has submitted a timely offer which materially conforms to the requirements and specifications of the solicitation.

Sourcing Platform- [DemandStar](#)

Any special terms or words which are not identified in this eBid Document may be identified separately in one or more attachments to the eBid. Please download, save and carefully review all documents in accordance with the instructions provided in Section 2 “Instructions to Contractors” of this eBid.

1.8. Contract Term

The initial term of the contract(s) is for three hundred and thirty calendar days from the execution of the Contract. The City shall have no option(s) to renew, which options shall be exercisable at the sole discretion of the City. Renewal will be accomplished through the issuance of a contract amendment from the City’s Procurement Management Division. In the event that the contract(s), if any, resulting from the award of this eBid shall terminate or be likely to terminate prior to the making of an award for a new contract for the identified products and/or services, the City may, with the written consent of the awarded Contractor(s), extend the contract(s) for such period of time as may be necessary to permit the City’s continued supply of the identified products and/or services. The contract(s) may be amended in writing from time to time by mutual consent of the parties. Unless this eBid states otherwise, the resulting award of the contract(s) does not guarantee volume or a commitment of funds.

1.7.1 Hours of Service

All work done within right-of-way shall be done Monday through Friday, 8:00 AM – 5:00 PM, excluding County observed holidays and County closures, unless otherwise approved by the County Engineer and City Engineer. Any work performed after hours shall be supervised by a County Inspector, for which the Contractor shall reimburse the County at the current Inspector rate. Contractor will need to obtain right-of-way permits from the County for any work done in the rights-of-way.

All night, Saturday, Sunday, and/or Holiday work in the City must be authorized by the City and requires that the Contractor obtain a noise permit from the City Police Department. All night work within the City's rights-of-way requires a minimum forty-eight (48) hour prior notice to the City. This clause shall not pertain to crews organized to perform maintenance work on equipment or to operate and maintain special equipment such as dewatering pumps, which may be required to work twenty-four (24) hours per day.

2. Instructions to Contractors

2.1. General Information and Instructions

2.1.1. Familiarity with Laws and Regulations

Responding Contractors are assumed to be familiar with all Federal, State and local laws, ordinances, rules and regulations that may affect the work. Ignorance on the part of the Awarded Contractor will in no way relieve them from contract responsibility.

2.1.2. Submitting Questions

All questions concerning this eBid must be submitted in writing via email to the Issuing Officer identified in Section 1.5 "Issuing Officer" of this eBid. No questions other than written will be accepted. No response other than written will be binding upon the City. All Contractors must submit questions by the deadline identified in the Schedule of Events for submitting questions. Contractors are cautioned that the City may or may not elect to entertain late questions or questions submitted by any other method than as directed by this section. All questions about this eBid must be submitted in the following format:

Company Name

Question #1 Question, *Citation of relevant section of the eBid*

Question #2 Question, *Citation of relevant section of the eBid*

2.1.3. Attending Bidders/Offerors' Conference

The Bidders/Offerors' Conference or any other information session (if indicated in the schedule of events) will be held at the offices referred to in Section 1.4 "Schedule of Events" of this eBid. Unless indicated otherwise, attendance is not mandatory; although Contractors are strongly encouraged to attend. However, in the event the conference has been identified as mandatory, then a representative of the Contractor must attend the conference in its entirety to be considered eligible for contract award. The Contractor is strongly encouraged to allow ample travel time to ensure arrival in the conference meeting room prior to the beginning of any mandatory conference. The City reserves the right to consider any representative arriving late to be "not in attendance." Therefore, all contractors are strongly encouraged to arrive early to allow for unexpected travel contingencies.

2.1.4. The City's Right to Request Additional Information – Contractor's Responsibility

Prior to contract award, the City must be assured that the selected contractor has all of the resources to successfully perform under the contract. This includes, but is not limited to, adequate number of personnel with required skills, availability of appropriate equipment in sufficient quantity to meet the on-going needs the City, financial resources sufficient to complete performance under the contract, and experience in similar endeavors. If, during the evaluation process, the City is unable to assure itself of the contractor's ability to perform, if awarded, the City has the option of requesting from the contractor any information deemed necessary to determine the contractor's responsibility. If such information is required, the contractor will be so notified and will be permitted approximately seven business days to submit the information requested.

2.1.5. Failing to Comply with Submission Instructions

Responses received after the identified due date and time or submitted by any other means than those expressly permitted by the eBid will not be considered. The Contractor's response must be complete in all respects, as required in each section of this eBid.

2.1.6. Rejection of Proposals; The City's Right to Waive Immaterial Deviation

The City reserves the right to reject any or all responses, to waive any irregularity or informality in a Contractor's response, and to accept or reject any item or combination of items, when to do so would be to the advantage of the City. The City reserves the right to waive mandatory requirements provided that all of the otherwise responsive proposals failed to meet the mandatory requirements and/or doing so does not otherwise materially affect the procurement of requested commodities and/or services. It is also within the right of the City to reject responses **that do not contain all elements and information requested in this eBid**. A Contractor's response will be rejected if the response contains any defect or irregularity and such defect or irregularity constitutes a material deviation from the eBid requirements, which determination will be made by the City on a case-by-case basis.

NOTE: The City reserves the right to reject the Bid of any Contractor who has previously failed in the performance of an award or to deliver contracts of a similar nature on time or who is not in a position to perform properly under this award. This includes the firm, employees and financial or legal interests. The City will not enter into a contract or conduct business with any firm or any personnel that is listed on the Federal, State, or other local government agencies' Excluded Parties List, Suspended List or Debarment List. Please see [Florida Statute 287.133](#) for further information regarding business transactions with companies that have been convicted of public entity crimes.

2.1.7. The City's Right to Amend and/or Cancel the eBid

The City reserves the right to amend this eBid. All revisions must be made in writing prior to the eBid closing date and time. If a responding entity discovers any ambiguity, conflict, discrepancy, omission or other error in the eBid, they shall immediately notify the City of such error in writing and request modification or clarification of the document. Any modification made to this eBid will be issued as an addendum. Written notice will be posted to DemandStar without divulging the source of the request. If a responding entity fails to notify the City prior to the date and time fixed for submission of an error or ambiguity in the eBid known to them, or an error or ambiguity that reasonably should have been known to them, they shall not be entitled to additional time by reason of the error/ambiguity or its late resolution. By submitting a response, the contractor shall be deemed to have accepted all terms and agreed to all requirements of the eBid (including any revisions/additions made in writing prior to the close of the eBid whether or not such revision occurred prior to the time the contractor submitted its response) unless expressly stated otherwise in the contractor's response. **THEREFORE, EACH CONTRACTOR IS INDIVIDUALLY RESPONSIBLE FOR REVIEWING THE REVISED eBID AND MAKING ANY NECESSARY OR APPROPRIATE CHANGES AND/OR ADDITIONS TO THE CONTRACTOR'S RESPONSE PRIOR TO THE CLOSE OF THE eBID.** All Notice(s) of Intent to Award (NOIAs) will be posted as referenced in Section 6.7 of this document. **Contractors are encouraged to frequently check the solicitation documentations and embedded URLs for additional information. Finally, the City reserves the right to amend or cancel this eBid at any time.**

2.1.8. Use of Subcontractor

Except as may be expressly agreed to in writing by the City, Contractor shall not subcontract, assign, delegate or otherwise permit anyone other than Contractor or Contractor's personnel to perform any of Contractor's obligations under this Contract or any of the work subsequently assigned under this Contract. No subcontract which Contractor enters into with respect to performance of obligations or work assigned under the Contract shall in any way relieve Contractor of any responsibility, obligation or liability under this Contract and for the acts and omissions of all Subcontractors, agents, and employees. All restrictions, obligations and responsibilities of the Contractor under the Contract shall also apply to the Subcontractors. Any contract with a Subcontractor must also preserve the rights of

the City. The City shall have the right to request the removal of a Subcontractor from the Contract with or without cause.

2.1.9. Proposal of Addition Services

If a Contractor indicates an offer of services in addition to those required by and described in this eBid, these additional services may be added to the original contract at the sole discretion of the City.

2.1.10. Protest Process

Proposers should familiarize themselves with the procedures set forth in [City Ordinance 20-15 Sec. 35.14.](#)

2.1.11. Costs for Preparing Responses

Each Contractor's response should be prepared simply and economically, avoiding the use of elaborate promotional materials beyond those sufficient to provide a complete presentation. The cost for developing the response and participating in the procurement process (including the protest process) is the sole responsibility of the Contractor. The City will not provide reimbursement for such costs.

2.1.12. Public Access to Procurement Records

Solicitation opportunities will be publicly advertised as required by city ordinances and state and federal laws. Any material that is submitted in response to this eBid, including anything considered by the Contractor to be confidential or a trade secret, will become a public document pursuant to [Chapter 119 of the Florida Statutes](#). Any claim of confidentiality is waived upon submission, effective after the City's opening of the proposals pursuant to Section 119.07, Florida Statutes. Therefore, the Contractor is hereby cautioned to NOT submit any documents that the Contractor does not want to be made public. The City is allowed to assess a reasonable charge to defray the cost of reproducing documents. A City employee must be present during the time of onsite inspection of documents. PLEASE NOTE: Even though information (financial or other information) submitted by a Contractor may be marked as "confidential", "proprietary", etc., the City will make its own determination regarding what information may or may not be withheld from disclosure. Contractors should review [Chapter 119 of the Florida Statutes](#) for all updates before requesting exceptions from Florida Statutes Chapter 119.

2.2. Submittal Instructions

Submittal Instructions to DemandStar

Listed below are key action items related to this eBid. The Schedule of Events in Section 1.4 identifies the dates and time for these key action items. This portion of the eBid provides high-level instructions regarding the process for reviewing the eBid, preparing a response to the eBid and submitting a response to the eBid.

2.2.1. eBid Released

The release of the eBid is only communicated through the posting of this eBid as an event in [DemandStar](#). This eBid is being conducted through DemandStar an online, electronic tool, which allows a contractor to register, logon, select answers and type text in response to questions, and upload any necessary documents. Each contractor interested in competing to win a contract award must complete and submit a response to this eBid using [DemandStar](#). Therefore, each contractor MUST carefully review the submittal instructions on DemandStar's website and following the submittal guidance that is provided in Section 2.2 of this eBid document.

2.2.2. eBid Review

The eBid (or "Sourcing Event") consists of the following: this document, entitled "City's eBid Document", and any and all information included in the Sourcing Event, as posted to DemandStar, including any and all documents provided by the City as attachments to the Sourcing Event or links contained within the Sourcing Event or its attached documents.

Please carefully review all information contained in the Event, including all documents available as attachments or available through links. Any difficulty accessing the Event or opening provided links or documents should be reported immediately to the Issuing Officer (See Section 1.5). Attached documents may be found as follows:

2.2.3. Preparing a Response

When preparing a response, the Contractor must consider the following instructions:

1. Use the provided worksheets to prepare your response. Enter your responses directly into the worksheet. Unless otherwise directed, do not insert "see attached file" (or similar statements) in the worksheet to reference separate documents.
2. Answer each question in sufficient detail for evaluation while using judgment with regards to the length of response.
3. Proofread your response and make sure it is accurate and readily understandable.
4. Label any and all uploaded files using the corresponding section numbers of the eBid as specified by the City.
5. Use caution in creating electronic files to be uploaded. If the City is unable to open an electronic file due to a virus or because the file has become corrupted, the Contractor's response may be considered incomplete and disqualified from further consideration.
6. Use commonly accepted software programs to create electronic files. The City has the capability of viewing documents submitted in the following format: Microsoft Office 2007 and portable document format file (PDF). Unless the eBid specifically requests the use of another type of software or file format than those listed above, please contact the Issuing Officer prior to utilizing another type of software and/or file format. In the event that the City is unable to open an electronic file because the City does not have ready access to the software utilized by the contractor, the contractor's response will be considered incomplete and disqualified from further consideration.

2.2.4. Submitting, Reviewing, Revising or Withdrawing a Submitted Response

After the response has been submitted, the contractor may view and/or revise its response by logging into DemandStar. Please take note of the following:

1. **BID SUBMISSION.** All bids shall be submitted by completing and returning all required documents. All submittals are required to be electronic and be contained in **two (2) files TOTAL.** No hard copies will be accepted.
 - Upload the Excel Bid Reply Sheet- Schedule A in **Excel Format only.** (Save as File #1).
 - Upload in one file and in the following order: Contractor's General Information Worksheet, Cone of Silence and Communication Document, Contractor's Code of Ethics, E-Verify Form, Non-Collusion Affidavit, Drug Free Workplace Form, copy of Bid Bond, W-9, copy of Certificate of Insurance, and any license or certifications required for project. (Save as File #2).
2. **REVIEW AND REVISE.** In the event the Contractor desires to revise a previously submitted response, the Contractor may revise the response. If the revisions cannot be completed in a single work session, the Contractor should save its progress." Once revisions are complete, the Contractor **must resubmit** its corrected response. Please permit adequate time to revise and then resubmit the response. Please note submission is not instantaneous and may be affected by several events, such as the contractor temporarily losing a connection to the Internet.
3. **WITHDRAW.** A Contractor may withdraw the proposal by removing all documents from DemandStar prior to the deadline. In the event a Contractor desires to withdraw its response after the closing date and time, the Contractor must submit a request in writing to the Issuing Officer.

3. General Insurance, Bonding, and Permit Requirements

This section contains general business requirements. By submitting a response, the Contractor is certifying its agreement to comply with all of the identified requirements of this section and that all costs for complying with these general business requirements are included in the Contractor's submitted pricing.

3.1. Standard Insurance Requirements

The Contractor agrees to indemnify, defend, and hold harmless the City, its officers and employees, from liabilities, damages, losses and costs, including but not limited to, reasonable attorney's fees, to the extent caused by the negligent act, recklessness, or intentional wrongful misconduct of the Contractor and persons employed or utilized, including any independent contractors or subcontractors by the Contractor in the performance of this contract.

The Contractor shall, on a primary basis and at its sole expense, agree to maintain in full force and effect at all times during the life of this Contract, insurance coverage, limits, including endorsements, as described herein. The requirements contained herein, as well as City's review or acceptance of insurance maintained by Contractor are not intended to and shall not in any manner limit or qualify the liabilities and obligations assumed by Contractor under the Contract.

The parties agree and recognize that it is not the intent of the City of Port St. Lucie that any insurance policy/coverage that it may obtain pursuant to any provision of this Contract will provide insurance coverage to any entity, corporation, business, person, or organization, other than the City of Port St. Lucie and the City shall not be obligated to provide any insurance coverage other than for the City of Port St. Lucie or extend its sovereign immunity pursuant to Section 768.28, Florida Statutes, under its self insured program. Any provision contained herein to the contrary shall be considered void and unenforceable by any party. This provision does not apply to any obligation imposed on any other party to obtain insurance coverage for this project, any obligation to name the City of Port St. Lucie as an additional insured under any other insurance policy, or otherwise protect the interests of the City of Port St. Lucie as specified in this Contract.

1. Workers' Compensation Insurance & Employer's Liability: The Contractor shall agree to maintain Workers' Compensation Insurance & Employers' Liability in accordance with Section 440, Florida Statutes. Employers' Liability and must include limits of at least \$100,000.00 each accident, \$100,000.00 each disease/employee, \$500,000.00 each disease/maximum. A Waiver of Subrogation endorsement shall be provided. Coverage shall apply on a primary basis. Should scope of work performed by Contractor qualify its employee for benefits under Federal Workers' Compensation Statute (example, U.S. Longshore & Harbor Workers Act or Merchant Marine Act), proof of appropriate Federal Act coverage must be provided.
2. Commercial General Liability Insurance: The Contractor shall agree to maintain Commercial General Liability insurance issued under an Occurrence form basis, including Contractual liability, to cover the hold harmless agreement set forth herein, with limits of not less than:

| | |
|---|-----------------------|
| Each occurrence | \$1,000,000 |
| Personal/advertising injury | \$1,000,000 |
| Products/completed operations aggregate | \$2,000,000 |
| General aggregate | \$2,000,000 |
| Fire damage | \$100,000 any 1 fire |
| Medical expense | \$10,000 any 1 person |

3. Additional Insured: An Additional Insured endorsement **must** be attached to the certificate of insurance and must include coverage for on-going and Completed Operations (should be ISO CG2037 & CG2010) under the General Liability policy. Products & Completed Operations coverage to be provided for a minimum of five (5) years from the date of possession by City or completion of contract. Coverage is to be written on an occurrence form basis. Coverage shall apply on a primary and non-contributory basis. A per project aggregate limit endorsement should be attached. Defense costs are to be in addition to the limit of liability. A waiver of subrogation shall be provided in favor of the City. Coverage for the hazards of explosion, collapse and underground property damage (XCU) must also be included when applicable to the work performed. No exclusion for mold, silica or respirable dust or bodily injury/property damage arising out of heat, smoke, fumes, or hostile fire shall apply. Coverage shall extend to independent contractors and fellow employees. Contractual Liability is to be included.

Coverage is to include a cross liability or severability of interests provision as provided under the standard ISO form separation of insurers clause.

Except as to Workers' Compensation and Employers' Liability, said Certificate(s) and policies shall clearly state that coverage required by the Contract has been endorsed to include the City of Port St. Lucie, a municipality of the State of Florida, its officers, agents and employees as Additional Insured added to its Commercial General Liability policy and Business Auto policy. The name for the Additional Insured endorsement issued by the insurer shall read "**City of Port St. Lucie, a municipality of the State of Florida, its officers, employees and agents and shall include Contract #20210116 Construction of Northport 24' Force Main Project be listed as additionally insured.**". The Policies shall be specifically endorsed to provide thirty (30) day written notice to the City prior to any adverse changes, cancellation, or non-renewal of coverage thereunder. In the event that the statutory liability of the City is amended during the term of this Contract to exceed the above limits, the Contractor shall be required, upon thirty (30) days written notice by the City, to provide coverage at least equal to the amended statutory limit of liability of the City. Copies of the Additional Insured endorsements including Completed Operations coverage shall be attached to the Certificate of Insurance.

4. Automobile Liability Insurance: The Contractor shall agree to maintain Business Automobile Liability at a limit of liability not less than \$1,000,000.00 each accident covering any auto, owned, non-owned and hired automobiles. In the event, the Contractor does not own any automobiles; the Business Auto Liability requirement shall be amended allowing Contractor to agree to maintain only Hired & Non-Owned Auto Liability. This amended requirement may be satisfied by way of endorsement to the Commercial General Liability, or separate Business Auto Coverage form. Certificate holder must be listed as additional insured. A waiver of subrogation shall be provided. Coverage shall apply on a primary non-contributory basis.
5. Waiver of Subrogation: The Contractor shall agree by entering into this Contract to a Waiver of Subrogation for each required policy. When required by the insurer, or should a policy condition not permit an Insured to enter into a pre-loss Contract to waive subrogation without an endorsement then Contractor shall agree to notify the insurer and request the policy be endorsed with a Waiver of Transfer of Rights of Recovery Against Others, or its equivalent. This Waiver of Subrogation requirement shall not apply to any policy where a condition to the policy specifically prohibits such an endorsement, or voids coverage should Contractor enter into such a Contract on a pre-loss basis.
6. Deductibles: All deductible amounts shall be paid for and be the responsibility of the Contractor for any and all claims under this Contract. Where an SIR or deductible exceeds \$5,000, the City of Port St. Lucie reserves the right, but not obligation, to review and request a copy of the bidder's most recent annual report or audited financial statement.

It shall be the responsibility of the Contractor to ensure that all independent contractors and/subcontractors comply with the same insurance requirements as listed herein, including Products & Completed Operations coverage for a minimum of five (5) years from the date of possession by City or completion of contract. It will be the responsibility of the Contractor to obtain Certificates of Insurance from all contractors and subcontractors listing the City as an Additional Insured, without the language when required by written contract. If contractor, independent contractor or subcontractor maintain higher limits than the minimums shown above, the City requires and shall be entitled to coverage for the higher limits maintained by contractor/independent contractor/subcontractor.

The Contractor may satisfy the minimum limits required above for either Commercial General Liability, Business Auto Liability, or Employers' Liability coverage under Umbrella or Excess Liability. The Umbrella or Excess Liability shall have an Aggregate limit not less than the highest "Each Occurrence" limit for either Commercial General Liability, Business Auto Liability, or Employers' Liability. When required by the insurer, or when Umbrella or Excess Liability is written on Non-Follow Form," the City shall be endorsed as an "Additional Insured."

The City, by and through its Risk Management Department, reserves the right, but not obligation, to review, modify, reject, or accept any required policies of insurance including limits, coverages or endorsements, herein from time to time throughout the term of this contract. All insurance carriers must have an AM Best rating of at least A:VII or better.

A failure on the part of the contractor to execute the contract and/or punctually deliver the required insurance, and other documentation may be cause for annulment of the award.

Contractor must review the City's Standard Contract for further details and coverage requirements.

Within ten (10) business days of award, the awarded contractor must procure the required insurance and provide the City with an executed Certificate of Insurance. Certificates must reference the contract number and the City as the additional Insured party. The Contractor's submitted pricing must include the cost of the required insurance. No contract performance shall occur unless and until the required insurance certificates are provided.

3.2. Bonds and/or Letter of Credit

Bid Bond

Each responding Contractor must supply a Bid Bond or Bid Deposit (certified check, cashier's check, bank money order, bank draft of any national or state bank), in a sum of not less than **5% of the total contract amount** made payable to the City. As a **Mandatory Requirement**, the Bid Bond or Bid Deposit must be scanned and uploaded into [DemandStar](#) along with all other required documents, thus showing evidence that a Bid Bond or Bid Deposit was obtained. Responding Contractors must send the Original Bid Bond or Bid Deposit to the City within five (5) days after the eBid Due Date as reflected above in Section 1.4. The responding Contractor's bid will be considered non-responsive if the Bid Bond or Bid Deposit is not received within the specified time frame. Responding Contractors must submit a Bid Bond or Bid Deposit made payable to the City in a sealed envelope to:

Shelby Dolan
121 S.W. Port St. Lucie Blvd.
Port St. Lucie, FL 34984
Attn: Procurement Management Department

Bonds must be issued by a Surety authorized to do business in the State of Florida, in order to guarantee that the contractor will enter into a contract to deliver products and/or related services outlined in this solicitation, strictly within the terms and conditions stated in the contract.

Payment and Performance bonds must be in a form acceptable to the City and must remain in full force and effect for a minimum of one (1) year after the work has been completed and final acceptance of the work is issued by the City.

Payment Bond

The awarded contractor(s) shall be required to furnish a recorded bond to secure payment of all claims for materials furnished and/or labor performed. The payment bond shall be in amount equal to the contract price.

Performance Bond/Letter of Credit

The awarded contractor(s) shall be required to furnish a recorded performance bond or an irrevocable letter of credit to the City for the faithful performance on the contract in an amount equal to **the awarded contract total**. The bond shall be issued by a Corporate Surety authorized to do business with the State of Florida. The performance bond/letter of credit must be submitted to the City within ten (10) calendar days of the date the contract is approved by city council, but in any event, prior to the beginning of any contract performance by the awarded contractor.

3.2.1 Proposal Certification

By responding to this solicitation, the Contractor understands and agrees to the following:

1. That this electronically submitted proposal constitutes an offer, which when accepted in writing by the City, and subject to the terms and conditions of such acceptance, will constitute a valid and binding contract between the Contractor and the City; and

2. That the Contractor guarantees and certifies that all items included in the Contractor's response meet or exceed any and all of the solicitation's identified specifications and requirements except as expressly stated otherwise in the Contractor's response; and
3. That the response submitted by the Contractor shall be valid and held open for a period of **one hundred and twenty (120) days** from the final solicitation closing date and that the Contractor's offer may be held open for a lengthier period of time subject to the Contractor's consent; and
4. That the Contractor's response is made without prior understanding, agreement, or connection with any corporation, firm, or person submitting a response for the same materials, supplies, equipment, or services and is in all respects fair and without collusion or fraud. Contractor understands and agrees that collusive bidding is a violation of city ordinance, state and federal laws and can result in fines, prison sentences, and civil damage awards.

3.3. Permits

The selected Contractor shall be responsible for obtaining all permits, licenses, certifications, etc., required by federal, state, county, and municipal laws, regulations codes, and ordinances for the performance of the work required in these specifications and to conform to the requirements of said legislation. Certain aspects of construction may not be allowed to occur until after these permits have been obtained. All building permits, licenses and certificates of inspection issued in connection with the work shall be delivered to the Engineer and the City with successful Contractor(s) application for final payment. Permit fees can be found on the [City's Building Department Website](#). All permit fees shall be included in the contract amount and paid by the successful Contractor(s).

4. eBid Bid Factors

This section contains the detailed technical requirements and related services for this Sourcing Event. The City has determined that it is best to define its own needs, desired operating objectives, and desired operating environment. The City will not tailor these needs to fit a particular solution a contractor may have available; rather, the Contractors shall propose to meet the City's needs as defined in this eBid. All claims shall be subject to demonstration. Contractors are cautioned that conditional responses/bids, based upon assumptions, may be deemed non-responsive.

Unless requested otherwise, all responses must be provided within the provided forms/Excel worksheets included with this Sourcing Event. Except as otherwise indicated, all requested forms and documents must be submitted electronically via the sourcing tool as an uploaded document to the contractor's response.

4.1. Introduction

All of the items described in this section are service levels and/or terms and conditions that the City expects to be satisfied by the selected Contractor. Each Contractor must indicate its willingness and ability to satisfy these requirements in the Contractor's submitted response.

Unless otherwise specified, references to brand name or trade name/mark products are intended to be descriptive, but not restrictive, and are used to indicate the quality and characteristics of products that may be offered. Other products may be considered for award if such products are clearly identified and are determined by the City to meet its needs in all respects. Each Contractor's response must indicate the brand name and model, or series number of the product offered and include such specifications, catalog pages, or other data that will provide an adequate basis for determining the quality and functional capabilities of the product offered.

4.2. Contractor's General Information

Each contractor must complete all of the requested information in the electronic purchasing system entitled **Contractor's General Information Worksheet** for inclusion with their bid response.

4.3. Mandatory Requirements

As noted in the preceding section, this eBid contains mandatory requirements (e.g. product specifications, service or quality levels, staff requirements, experience or license requirements, etc.) which must be met by

the Contractor in order for the Contractor to be considered “responsive” and, therefore, eligible for contract award. These mandatory requirements will be defined in one or more of the following ways:

1. Requirements in this eBid document.
2. Requirements contained in any attachment to the Sourcing Event, such as a Mandatory Requirements Worksheet and the cost worksheet.
3. Copy of Current Insurance Certificate, Licenses, required Certifications, etc.

A Pass/Fail evaluation will be utilized for all mandatory requirements. Please review the Sourcing Event and its attachments carefully and respond as directed.

Some requirements may require a “Yes” or “No” response. Ordinarily, to be considered responsive, responsible and eligible for award, all requirements identified as mandatory must be marked “YES” to pass. There may be rare instances in which a response of “NO” is the correct and logical response in order to meet the mandatory requirement (e.g. responding “NO” that the Contractor does not possess any conflicts of interest). Otherwise, any mandatory questions marked “NO” will fail the technical requirements and will result in disqualification of the Contractor’s response, except as otherwise provided in Section 6 “Evaluation and Award” of this eBid. Please note some requirements may require the Contractor to provide product sheets or other technical materials.

It is strongly encouraged that all Contractor’s review all documents that are electronically attached to this eBid. Reviewing the documentation ensures that Contractor understands the full scope of the City’s request.

5. Cost/Pricing

Each Contractor is required to submit pricing as part of its response.

5.1. General Pricing Rules

By submitting a response, the Contractor agrees that it has read, understood, and will abide by the following instructions/rules:

1. The submitted pricing must include all costs of performing pursuant to the resulting contract; and
2. All quantities and/or estimates are for information or tabulation purposes only and;
3. No warranty or guarantee is expressed or implied on the volume of products and/or services that the City may require through the negotiated contract period and;
4. Bids containing a minimum order/ship quantity or dollar value, unless otherwise called for in the eBid, will be treated as non-responsive and may not be considered for award; and
5. The Contractor is required to provide net prices. In the event there is discrepancy between a Contractor’s unit price and extended price, the unit price shall govern;
6. In the event there is a discrepancy between (1) the Contractor’s pricing as quoted on an uploaded, detailed cost sheet such as an Excel Worksheet (if any) and (2) the Contractor’s pricing as quoted by the Contractor in one or more single line entries directly into the Sourcing Event screen, the former shall govern; and
7. The prices quoted and listed in the response shall be firm throughout the term of the resulting contract, unless otherwise noted in the eBid or contract; and
8. Unless otherwise specified in any terms and conditions attached to the eBid, all product deliveries will be F.O.B. destination and all shipping charges must be included in the quoted cost; and
9. Unless expressly permitted by the eBid, responses containing provisions for late or interest charges cannot be awarded a contract. Contractors must “~~strikethrough~~” any such provisions in printed forms and initial such revisions prior to submitting a response to the City; and
10. Contractor responses requiring prepayment and/or progress payment requirements may be determined non-responsive unless otherwise permitted by the eBid; and
11. Unless permitted by the eBid, responses requiring payment from the City in less than thirty (30) days will be considered non-responsive; and
12. The City is exempt from certain taxes and no provision for such taxes should be included in the contractor’s response.

5.2 Cost Structure and Additional Instructions

The City's intent is to structure the cost format in order to facilitate comparison among all Contractors and foster competition to obtain the best market pricing. Consequently, the City requires that each Contractor's cost be structured as directed in the eBid. Additional alternative cost structures will not be considered. Each Contractor is hereby advised that failure to comply with the eBid instructions, submission of an incomplete offer, or submission of an offer in a different format than the one requested may result in the rejection of the Contractor's response.

Enter all information directly into the cost sheet(s). Enter numbers on each cost sheet in "number" (two-place decimal), not "currency" or other format unless otherwise stated. That is, omit dollar signs, commas, and any other non-essential symbols. (e.g., \$7.90 should be entered as 7.90) Prices must be in US Dollars. Enter "n/a" to indicate not available or "0" if there is no charge. Cells left blank will be interpreted as "no offer".

Download the cost worksheet (if any), complete the worksheet and then upload the worksheet by following the instructions in DemandStar

5.3 Payment by City's Visa Card Program

The City currently utilizes the State of Florida [Visa Program](#). The awarded Contractor can take advantage of this program and in consideration, receive payment within several days instead of NET 30 terms. Any percentage off the quoted bid price for the acceptance of payment by Visa will be taken into account for consideration of the best value to the City. If no percentage is provided in the cost proposal, the City shall assume zero (0) percent discount applies.

6. Evaluation and Award

All timely responses will be evaluated in accordance with the following steps. The objective of the evaluation process is to identify the most competitive bid. Once the evaluation process has been completed, the apparent successful Contractor(s) will be required to enter into discussions with the City to resolve any exceptions to the City's contract. The City will announce the results of the eBid as described further in Section 6.7 "Public Award Announcement."

6.1. Administrative/Preliminary Review

First, the responses will be reviewed by the Issuing Officer to determine compliance with the following requirements:

1. Response was submitted by deadline via in accordance with Section 2
2. Response is complete and contains all required documents

6.2. Evaluating Bid Factors (Section 4)

If the Contractor's response passes the Administrative/Preliminary Review, the Contractor's responses to Section 4 "eBid Bid Factors" will be evaluated. Responses to mandatory requirements will be evaluated on a pass/fail basis. If a response fails to meet a mandatory requirement, the City will determine if the deviation is material. A material deviation will be cause for rejection of the response. An immaterial deviation will be processed as if no deviation had occurred.

6.3. Evaluating Cost

The City may utilize lowest cost, lowest total cost, and total cost of ownership (TCO) or greatest savings to determine the most competitive pricing. Submitted pricing may be evaluated/scored on an overall basis or at the category/subcategory/line level (as applicable) relative to other responses/bids.

6.4. Selection and Award

The City reserves the right to: (a) waive minor irregularities, variances or non-material defects in a response; (b) reject any and all responses, in whole or in part; (c) request clarifications from Contractors; (d) request resubmissions from all Contractors; (e) award in whole, in part; or by line item and (f) take any other action as permitted by law. The City reserves the right to provide for similar and/or additional services from other

companies if the City so deems necessary. If the City elects to exercise this right, the contract awarded under this solicitation shall remain in effect as for to all terms, agreements, and conditions without penalty or diminution of ongoing services as contained therein. Contractor agrees and understands that any contract awarded pursuant to this solicitation shall not be construed as an exclusive arrangement and further agrees that the City may, at any time, secure similar or identical services, or award more than one contract under this solicitation, at its sole option.

Single Award

Any contract award resulting from the eBid will be made to the Responsive and Responsible Contractor with the best value as evaluated in Section 6.3 with whom the City has reached agreement on all contract terms and conditions.

6.5. Local Preference in Purchasing or Contracting ([Sec. 35.12, Ord. No. 10-26](#))*

Except where otherwise provided by federal or state law or other funding source restrictions or as otherwise set forth in the purchasing policy, the City of Port St. Lucie shall give preference to local businesses in the following manner:

1. In purchasing of, or letting of contracts for procurement of, personal property, materials, contractual services, and construction of improvements to real property or existing structures for which a request for proposals is developed with evaluation criteria, a local preference of the total score may be assigned as follows:
 - a. Local businesses which meet all of the criteria for a local business as set forth in this section, shall be given a preference in the amount of five percent (5%) of the total quoted price of the local business.
 - b. The City Procurement Management Division shall have the sole discretion to determine if a Contractor meets the definition of a "local business."
2. Limitations:
 - a. The provisions of this section shall apply only to procurements which are above the formal bid threshold as set forth in the City Code and the City of Port St. Lucie Purchasing Manual.
 - b. The provisions of this ordinance shall not apply to any purchase exempted from the provisions of the City of Port St. Lucie Purchasing Manual.
 - c. The provisions of this ordinance shall not apply to contracts made under the [Contractors Competitive Negotiation ACT \(CCNA\), Section 287.55, Florida Statutes](#).

* Please review ([Sec. 35.12, Ord. No. 10-26](#)) for the full governing ordinance

6.6. Site Visits, Samples, and Oral Presentations

The City reserves the right to conduct site visits, request product/work samples, or to invite Contractors to present their product(s) and or service solutions to the evaluation team. Unless prohibited by federal, state, county, or local laws and/or ordinances, all Contractor requested presentations shall be performed in an in-person meeting. An oral presentation or product demonstration is not a negotiation and Contractors are not permitted to revise their responses as part of the presentation and/or demonstration. Samples of items, when required, must be furnished free of expense and, if not destroyed, will upon request, be returned at the Contractor's expense. Request for the return of samples must be made within thirty (30) days following opening of bids. Each individual sample must be labeled with Contractor's name, bid number, and item number. Failure of Contractor to either deliver required samples or to clearly identify samples as indicated may be reason for rejection of the bid. Unless otherwise indicated, samples should be delivered to the Procurement Management Department.

6.7. Public Award Announcement

The preliminary results of the evaluation will be announced through the public posting of a Notice of Intent to Award by the City Clerk's Office, pending final approval by the City Council at a publicly noticed meeting. The Notice of Intent to Award ("NOIA") is not notice of an actual contract award; instead, the NOIA is notice of the

City's expected contract award(s) pending resolution of the protest process period pursuant to City Code of Ordinances, Section 35.14. The NOIA (if any) will identify the apparent successful contractor(s), unsuccessful contractor(s), and the reasons why any unsuccessful contractors were not selected for contract award. NO CONTRACTOR SHOULD ASSUME PERSONAL NOTICE OF THE NOTICE OF INTENT TO AWARD ("NOIA") WILL BE PROVIDED BY THE CITY. INSTEAD, ALL CONTRACTORS SHOULD FREQUENTLY CHECK [THE CITY CLERK'S WEBSITE](#) FOR NOTICE OF THE NOIA DURING A CITY COUNCIL MEETING.

7. Contract Terms and Conditions

The contract that the City expects to award as a result of this eBid will be based upon the eBid, the successful Contractor's final response as accepted by the City and the contract terms and conditions, which terms and conditions can be downloaded from [DemandStar](#). The "successful Contractor's final response as accepted by the City" shall mean: the response submitted by the awarded Contractor, written clarifications, and any other terms deemed necessary by the City, except that no objection or amendment by a Contractor to the eBid requirements or the contract terms and conditions shall be incorporated by reference into the contract unless the City has explicitly accepted the Contractor's objection or amendment in writing.

Please review the [City's contract terms and conditions](#) prior to submitting a response to this eBid. Contractors should plan on the contract terms and conditions contained in this eBid being included in any award as a result of this eBid. Therefore, all costs associated with complying with these requirements should be included in any pricing quoted by the Contractors. The contract terms and conditions may be supplemented or revised before contract execution and are provided to enable Contractors to better evaluate the costs associated with the eBid and the potential resulting contract.

Exception to Contract

By submitting a response, each Contractor acknowledges its acceptance of the eBid specifications and the contract terms and conditions without change except as otherwise expressly stated in the submitted proposal. If a Contractor takes exception to a contract provision, the Contractor must state the reason for the exception and state the specific contract language it proposes to include in place of the provision. Any exceptions to the contract must be uploaded and submitted as an attachment to the Contractor's response. Proposed exceptions must not conflict with or attempt to preempt mandatory requirements specified in the eBid.

In the event the Contractor is selected for potential award, the Contractor will be required to enter into discussions with the City to resolve any contractual differences before an award is made. These discussions are to be finalized and all exceptions resolved within the period of time identified in the schedule of events. Failure to resolve any contractual issues will lead to rejection of the Contractor's response. The City reserves the right to proceed to discussions with the next best ranked Contractor.

The City reserves the right to modify the contract to be consistent with the apparent successful offer, and to negotiate other modifications with the apparent successful Contractor. Exceptions that materially change the terms or the requirements of the eBid may be deemed non-responsive by the City, in its sole discretion, and rejected. Contract exceptions which grant the Contractor an impermissible competitive advantage, as determined by the City, in its sole discretion, will be rejected. If there is any question whether a particular contract exception would be permissible, the Contractor is strongly encouraged to inquire via written question submitted to the Issuing Officer prior to the deadline for submitting written questions as defined by the Schedule of Events.

This eBid and the proposal response documents submitted shall be incorporated into the final contract by reference. Therefore, all requirements in the eBid not specifically addressed in an exception statement in the proposal and accepted in the contract documents, shall stand as contractual responsibilities of the proposal respondent. The Contract shall be the controlling document over the Proposal response and the eBid; the eBid shall be the ruling document over the Proposal response for all requirements in the eBid not specifically addressed in an exception statement in the proposal. Statement and requirements in the eBid shall rule over the Proposal document.

Order of Preference

In the case of any inconsistency or conflict among the specific provisions of the executed contract (including any amendments accepted by both the City and the Contractor attached hereto), the eBid (including any subsequent addenda and written responses to bidders' questions), and the Contractor's Response, any inconsistency or conflict shall be resolved as follows:

- (i) First, by giving preference to the specific provisions of the executed contract.
- (ii) Second, by giving preference to the specific provisions of the eBid.
- (iii) Third, by giving preference to the specific provisions of the Contractor's Response, except that objections or amendments by a contractor that have not been explicitly accepted by the City in writing shall not be included in this Contract and shall be given no weight or consideration.

8. Payment

To ensure proper payment the awarded Contractor must:

1. The City shall have not less than 30 days to pay for any products and/or services.
2. Invoices must clearly show the description of products and/or services to include the number of each product or line item fulfilled.
3. All invoices must reference the Contract Number as established by the City.
4. Under no circumstance, will interest of any kind be required as payment to the Awarded Contractor.
5. All charges, e.g., set up costs, must be included in the cost proposal. No charges will be allowed unless specified in the eBid and agreed upon by the City.
6. Any discrepancies noted by the City must be corrected by the Awarded Contractor within 48 hours.
7. The payment amount due on invoices shall not be altered by the City personnel. Once disputed items are resolved, the Awarded Contractor must submit an amended invoice, or a credit memorandum for the disputed amount.
8. The City will not make partial payments on an invoice where there is a dispute.
9. The City will only make payments on authorized transactions.
10. All invoices must be sent to: apnotifications@cityofpsl.com

9. List of eBid Attachments

The following documents make up this eBid. Please see Section 2.2.2 "eBid Review" for instructions about how to access the following documents. Any difficulty locating or accessing the following documents should be immediately reported to the Issuing Officer.

- ❖ PSL eBid (this document)

Attachments:

- A. Construction Plans, pages 1-28 (Attached)
- B. Technical Specifications, pages 1-203 (Attached)
- C. Location Map (Attached)
- D. Excel Bid Reply- Schedule A from Section 5 of this eBid- Must be uploaded to DemandStar (Mandatory Document) (Must be uploaded at File #1)
- E. Sample Contract (Attached)
- F. Other Mandatory Documents- Must be uploaded to DemandStar: (Must be uploaded at File #2)
 - Contractor's General Information Worksheet/ Questionnaire
 - Cone of Silence and Communication Document from Section 2.1.2 of this eBid
 - Contractor's Code of Ethics
 - E-Verify Form
 - Non-Collusion Affidavit
 - Drug Free Workplace Form
 - Trench Safety Compliance Form

**Any documents indicated in Section 4.3 of this eBid must be returned in the system as a part of the response by the Contractor. Failure to supply the completed document(s) will deem the Contractor as non-responsive.



TECHNICAL SPECIFICATIONS

GLADES CUTOFF RD. 24" FORCE MAIN EXTENSION PHASE 3

Prepared For:

**Port St. Lucie Utility Systems
July 2021**



Kimley»Horn

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CITY OF PORT ST LUCIE
GLADES CUTOFF ROAD
24" FORCE MAIN EXTENSION PHASE 3

SPECIFICATIONS

DIVISION 1 - GENERAL REQUIREMENTS

- 01010 SUMMARY OF WORK
- 01050 MEASUREMENT AND PAYMENT
- 01060 REGULATORY REQUIREMENTS AND NOTIFICATIONS
- 01090 REFERENCE STANDARDS
- 01152 APPLICATIONS FOR PAYMENT
- 01153 CHANGE ORDER PROCEDURES
- 01200 PROJECT MEETINGS
- 01300 SUBMITTALS AND PROGRESS SCHEDULES
- 01410 TESTING LABORATORY SERVICES
- 01570 TRAFFIC REGULATION
- 01600 MATERIAL AND EQUIPMENT
- 01700 CONTRACT CLOSE-OUT
- 01720 PROJECT RECORD DOCUMENTS
- 01740 WARRANTIES AND BONDS

DIVISION 2 - TECHNICAL SPECIFICATIONS

- 02016 EXISTING UTILITIES AND UNDERGROUND STRUCTURES
- 02110 CLEARING AND GRUBBING
- 02150 DEWATERING
- 02200 EARTHWORK, EXCAVATION, AND BACKFILL
- 02270 EROSION AND SEDIMENTATION CONTROL
- 02485 GRASSING
- 02510 PAVING AND SURFACING
- 02580 PAVING MARKINGS
- 02660 PRESSURE PIPE SYSTEMS AND APPURTENANCES
- 02665 DIRECTIONAL BORING OF PIPE
- 02670 FLUSHING AND TESTING

DIVISION 3 – CONCRETE

- 03200 CONCRETE REINFORCEMENT
- 03400 STRUCTURAL PRECAST CONCRETE

APPENDICES

APPENDIX A – GEOTECHNICAL REPORT

APPENDIX B - PERMITS

- i. FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
(Permit No. 0226637-058-DWC-CG)
- ii. FLORIDA DEPARTMENT OF TRANSPORTATION
(Permit No. 2021-H-490-00119)
- iii. CITY OF PORT ST. LUCIE RIGHT-OF-WAY USE
(Permit No. TBD, Contractor to apply for this permit)

SECTION 01010

SUMMARY OF WORK

PART I - GENERAL

1.01 WORK COVERED BY THESE CONTRACT DOCUMENTS

The Contractor shall furnish all labor and materials necessary to perform the force main extension, 8,240 LF of 24" PVC pipe with a 24" fusible PVC directional bore of I-95 as shown on the plans. The project shall include all piping, fittings, couplings, accessories and appurtenances, site restoration, testing, flushing, pressure testing of the forcemain, obtaining all required permits, compliance with permit conditions, maintenance of traffic in accordance with City of Port St. Lucie Standards/County/FDOT, paving, restoration and any other items depicted on the drawings and described in these documents and reference materials.

The contractor will be required to comply with the permits that have been acquired by the engineer from the following regulatory agencies:

1. Florida Department of Environmental Protection (FDEP)
2. Florida Department of Transportation (FDOT)

The contractor will be required to apply for and acquire a Right-of-Way Permit from the City of Port Saint Lucie Public Works Department.

Contractor's Duties:

1. Except as specifically noted, provide and pay for:
 - a. Mobilization and demobilization
 - b. Labor, materials, and equipment
 - c. Tools, construction equipment, and fuel
 - d. Water and utilities required for construction
 - e. Temporary utilities, provisions, and controls
 - f. Freight and sales tax
 - g. Maintenance of traffic
 - h. Surveying and field engineering
 - i. Locating and protecting existing utilities
 - j. Compliance with all of the conditions of the permits issued and required to be obtained by the Contractor for this project.

1.02 CONTRACTS

- A. Construct the Work under a Unit Price or Lum Sum basis per the bid.
- B. Subcontractors (when used) shall be supervised by and work directly for the contractor.

1.03 WORK BY OTHERS AND FUTURE WORK

- A. The Owner reserves the right to add to the work in accordance with the City Contract Terms and Conditions.

1.04 CONTRACTOR-FURNISHED PRODUCTS AND RESPONSIBILITIES

- A. Products furnished to the site and paid for by the Contractor:
 - 1. All products necessary to complete the work described herein these contract documents and specifications.
- B. Contractor's Responsibilities:
 - 1. Review and incorporate Owner-reviewed shop drawings, product data, and samples into the construction of the project.
 - 2. Prepare, apply for, and obtain permits that are specified/required to be obtained by the Contractor.
 - 3. Receive and unload products at site; inspect for completeness or damage jointly with Owner.
 - 4. Repair or replace items damaged after receipt.
 - 5. Arrange and pay for product delivery to site.
 - 6. Handle, store, install, and delivered products.
 - 7. Submit claims for transportation damage and replace damaged, defective, or deficient items.
 - 8. Arrange for manufacturers' warranties, inspections, and service.

1.05 CONTRACTOR'S USE OF THE PREMISES

- A. All work shall be within the limits of the federal, state and city rights-of-way (ROW) and easements to the greatest extent practical. The Contractor shall be responsible for maintenance of traffic when working within the public ROW. This project will require close coordination between the FDOT and City of Port St. Lucie during construction. At least three (3) working days' notice is required before commencing any work outside the ROW limits.

- B. The Contractor shall be fully responsible for the safety and security of the construction area including any temporary measures required to maintain its protection. The Contractor will be responsible for any damages or theft incurred to his tools, equipment, machinery, and new work in-place not yet been fully accepted by the Owner.
- C. Contractor shall be responsible for maintenance of traffic when working within the public ROW.
- D. The Contractor shall maintain vehicular and pedestrian access to the driveway entrances to the greatest extent practical.
- E. If the contractor deems it necessary to encroach onto private property to facilitate the construction of these improvements, it shall be the contractor's responsibility to acquire approval from these private property owners.

PART 2 – PRODUCTS

NOT USED.

PART 3 – EXECUTION

NOT USED.

END OF SECTION

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SECTION 01050

MEASUREMENT AND PAYMENT

PART 1 - GENERAL

1.01 DESCRIPTION

This section defines the method which will be used to determine the quantities of work performed, materials supplied and establishes the basis upon which payment will be made.

- A.** The Unit Cost Prices stated in the Contract shall be considered payment in Full for the completion of all work. Payment shall be made under each item only for work as it is not specifically included under other items.
- B.** The Contractor shall furnish all labor, equipment and material required to complete the construction and testing of the raw watermain extension and associated appurtenances.
- C.** The following explanation of the Measurement and Payment for the bid items is provided; however, the omission of reference to any item shall not alter the intent of the Bid Form or relieve the Contractor of the necessity of constructing a complete project under this Contract.

1.02 ESTIMATED QUANTITIES

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

1.03 MEASUREMENT STANDARDS

All work completed under the Contract shall be measured according to United States Standard Methods.

1.04 METHOD OF MEASUREMENT

Measurement of Length - Unless otherwise specified for the particular items involved, all measurements of distance for items to be paid for on the basis of length shall be taken horizontally or vertically.

Measurement of Area - In the measurement of items paid for on the basis of area of finished work, the lengths and/or widths to be used in the calculations shall be the actual dimensions measured along the surface of the completed work within the neat lines shown or designated. At intersections, the measurement used for length of side area will be

measured from the outside edge of the width allowed along the main trench.

1.05 PAYMENT

Lump Sum Items - Where payment for items is shown to be paid for on a lump sum basis, no separate payment will be made for any item of work required to complete the lump sum item.

Unit Price Items - Where payment for items is shown to be paid for on a unit price basis, separate payment will be made for the items of work described herein and listed on the Bid Form. Any related work not specifically listed, but required for satisfactory completion of the Work, shall be considered to be included in the scope of the appropriate listed work items.

1.06 COSTS INCLUDED IN PAYMENT ITEMS

No separate payment will be made for the following items and the cost of such work shall be included in the applicable pay items of work.

- Trench excavation, including necessary pavement removal, except as otherwise specified.
- Structural fill, backfill, density testing and grading.
- Site cleanup.
- Foundation and borrow materials, except as hereinafter specified.
- Stormwater pollution prevention plan.
- Survey layout and as built.
- Testing and placing system in operation.
- Any material and equipment required to be installed and utilized for tests.
- Maintaining the existing quality of service during construction.
- Appurtenant work as required for a complete and operable system.
- Cost for security (if special circumstances apply, approval must be received by the Engineer, in writing).
- Material storage areas.
- Disposal of excess fill and debris.
- Scheduling and calling for utility locates.
- Dewatering.
- Preconstruction site videos.
- Preparation of record drawings.
- Mechanical joint restraint systems (to be included in the unit cost of the DI fittings).

Site cleanup - Contractor's attention is called to the fact that cleanup is considered a part of the work of construction. No payment will be made until cleanup is essentially complete.

Work Outside Authorized Limits – No final payments will be made for work constructed outside the authorized limits of work.

1.07 APPLICATIONS FOR PAYMENT

Applications for Payment shall be prepared by the Contractor and submitted to the Engineer in accordance with the schedule established by the City's Contract, Section V Compensation.

Applications for Payment shall be submitted in the number and form established by the Engineer at the Preconstruction Conference. The form shall be completely filled out and executed by an authorized representative of the Contractor. Supporting data such as schedules of stored materials shall be attached to each copy of the Application.

1.08 CHANGE ORDER PROCEDURE

As defined in the City Contract, Section VI, Work Changes, a Change Order is a written order to the Contractor signed by the county authorizing an addition, deletion or revision in the Work, or an adjustment in the Contract Price or the Contract Time which is issued after the execution of the Contract.

The following procedure shall be used in processing Change Orders:

For Additions to the Work – The City shall issue a written order to the Contractor directing him to accomplish the additional work. The Contractor shall review the order and if they feel that the additional work entitles him to additional payment or additional time, they may submit a claim as prescribed in the Contract.

For Deletions from the Work – The City shall issue a written order to the Contractor directing him to make the change. If the county feels that the contract price should be reduced as a result of the change, the county shall make a claim for the reduction as provided in the Contract.

A. GENERAL CONDITIONS

1. BONDS AND INSURANCE

- a. Measurement and Payment: A lump sum amount not exceeding 2.0 percent of the Grand Total Bid Amount.

2. MOBILIZATION AND DEMOBILIZATION

- a. Measurement and Payment: A lump sum amount not exceeding 5.0 percent of the Grand Total Bid Amount (excluding the Allowances), to include, but not be limited to: videos/photos, clearing and grubbing, site cleanup, project setup, sanitary facilities, labor associated with permit acquisition, construction staging area preparation and closure, project signage and project coordination/management. The lump sum amount shall be paid as noted below

| <u>Construction % Complete for each Sequence Area</u> | <u>Allowable % of Lump Sum for Mobilization/Demobilization</u> |
|---|--|
| 5% | 25% |
| 10% | 50% |
| 25% | 75% |
| 100% | 100% |

3. MAINTENANCE OF TRAFFIC

- a. Measurement and Payment: A lump sum amount to include, but not be limited to: all signage, temporary striping, flagmen, barricades, temporary asphalt, temporary stabilized access around the construction equipment, notification to businesses, assistance to provide garbage collection, mail/package delivery and daily access (if needed) of other utility support vehicles, all in accordance with Section 01570, Traffic Regulation.

B. FORCEMAIN EXTENSION

1. PVC FORCEMAIN: Pipe will be measured per linear foot along the centerline of the pipe installed for the size of pipe installed. No deduction will be made for the length of valves and fittings installed in the line. Where the measurement terminates at a valve, bend, tee or other fittings, the centerline of the valve or fitting shall be the point of termination. All dewatering, surveying, pigging of the main and all other testing (with any temporary fittings/valves/piping/pumps required), along with the preparation of record drawings shall be included in the unit cost of the pipe. The cost to adjust other utilities (electric, cable, telephone, etc.) if required, and the coordination with that utility, shall also be included in the pipe cost.
2. PLUG VALVES WITH BOXES: Measurement shall be on the basis of furnishing and installing each type of valve and size of valve required including the valve box as noted per City standard.
3. TAPPING SLEEVE AND VALVE: Measurement shall be on the basis of furnishing and installing a tapping sleeve and valve assembly for the size noted. The cost shall include all setup and testing.
4. DI FITTINGS: Measurement of DI fittings shall be on the basis of weight (pounds) per the contractors supplied shop drawing cut sheets. The use of mechanical restraints (megalugs, bell restraints, tie rods, etc) shall be included in the unit price of the DI fitting.
5. DIRECTIONAL BORE: Measurement shall be based upon a complete bore as shown on the plans with the size as noted. Payment shall be based upon the linear foot of bore from each point (surface to surface) including all MOT, rig site preparation work, carrier pipe and casing (if noted), dual pull wires for locates, preparation/submittal of a frac out plan, submittal of a bore plan with personnel experience and bore rig to be used along with site

cleanup.

6. ARV ASSEMBLIES: Measurement shall be by each complete installation of the ARV Assembly and associated piping, valving and enclosures as noted on the plans and supplied per the details.

7. FM CONNECTION TO EXISTING: Measurement shall be based upon the complete connection to the City's existing 16-inch force main at Sta 105+74. Cost shall include all coordination with City staff and Engineer, work on off hours (if needed), City assistance on existing valve closures, pipe modifications, couplings/adapters, excavation and backfill, vac truck on-site, cleanup of any spills, observation of connection at line pressure and site restoration. All associated fittings and restraints (on new pipe and existing pipe) shall be paid for under the DI Fitting pay item.

8. MISCELANEOUS ITEMS
 - A. SWALE REGRADING: Measurements shall be based upon the length (in linear feet) of swale regrading completed and accepted under the terms of the contract. Payment shall include all necessary survey to place the swale back in its original condition, rough and final grading and post survey grade elevations. All required sodding shall be paid for under the related sod pay item.

 - B. CLEARING AND GRUBBING: Measurements shall be based upon the number of square yards of clearing and grubbing completed and accepted under the terms of the contract except that the maximum width to be used in the computation shall be twenty (20) feet. Payment shall include all necessary tree, bushes and under growth encountered along the force main route. All material cleared should be removed and disposed of under this pay item. All required sodding shall be paid for under the related sod pay item.

- C. BARB WIRE FENCE WITH WOOD POSTS: Measurements shall be based upon the length (in linear feet) of barb wire fence that is replaced (to include the wooden posts) and completed and accepted under the terms of the contract. Payment shall include all necessary survey to fence back in its original location and height.

- D. 3" WATER SERVICE RELOCATION: Measurement shall be made on a lump sum basis for the complete relocation of this water service due to a conflict with the proposed force main installation. The pay item shall include all pipe material, connections, fittings/couplings, removal of the existing water service and notifications to the property owner. All required sodding shall be paid for under the related sod pay item.

- E. 42" RCP MITERED END AND PIPE, REMOVE/REPLACE: Measurement shall be made on a lump sum basis for the complete removal and replacement of the 42" RCP pipe and concrete mitered end section that is in conflict with the proposed force main. The pay item shall include all pipe and concrete mitered end, new pipe material, new concrete mitered end, connections to existing pipe, fittings/couplings, additional survey to place the system back in its original condition and disposal of all removed items. All required sodding shall be paid for under the related sod pay item.

- F. CANAL CROSSING SIGN: Measurement shall be based upon the complete installation each crossing signs as shown on the details and location noted on the plans.

9. MISCELLANEOUS RESTORATION

- A. ASPHALT DRIVEWAY: Measurement shall be on a square yardage basis for the installation of new asphalt driveway to the limits shown. Contractor shall confirm with Engineer on limits in the field prior to performing the work. The cost includes all saw cutting, disposal of existing, grading, compaction, densities, and placement/finishing the new asphalt driveway.

- B. CONCRETE DRIVEWAY: Measurement shall be on a square yardage basis for the installation of new concrete driveway to the limits shown. Contractor shall confirm with Engineer on limits in the field prior to performing the work. The cost includes all saw cutting, disposal of existing, grading, compaction, densities, wire mesh or steel (match existing) and placement/finishing the new concrete sidewalk.

- C. CONCRETE SIDEWALK: Measurement shall be on a square yardage basis for the installation of new concrete sidewalk to the limits shown. Contractor shall confirm with Engineer on limits in the field prior to performing the work. The cost includes all saw cutting, disposal of existing, grading, compaction, densities, wire mesh or steel (match existing) and placement/finishing the new concrete sidewalk.

- D. BAHIA SOD: Measurements shall be based upon the number of square yards of sod (for the type of sod noted/match existing/or as directed by the Engineer) completed and accepted under the terms of the contract except that the maximum width to be used in the computation shall be sixteen(16) feet. Payment shall include all necessary soil preparation, topsoil and sod (pegged as required).

- E. SEED AND MULCH: Measurements shall be based upon the number of square yards of sod (for the type of sod noted/match existing/or as directed by the Engineer) completed and accepted under the terms of the contract except that the maximum width to be used in the computation shall be twenty (20) feet. Payment shall include all necessary soil preparation and sod (pegged as required).

END OF SECTION

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SECTION 01060

REGULATORY REQUIREMENTS AND NOTIFICATIONS

PART 1 - GENERAL

1.01 GENERAL REQUIREMENTS

- A. Obtain and pay for all permits and licenses as required for construction of the project.
- B. Schedule all inspections and obtain all written approvals of the agencies required by the permits and licenses.
- C. Comply with all conditions specified in each of the permits and licenses.
- D. The Contractor shall keep a copy of all permits and easements complete with conditions, attachments, exhibits, and modifications at the work site and provide copies of the permits to the appropriate subcontractors. The Contractor is responsible for ensuring that the permit conditions are explained to the appropriate construction personnel.

1.02 PERMITS OBTAINED BY OWNER

The Owner will apply and pay for the following permits. The permits for the project have been obtained by the Owner. A copy of the permits has been included in the Appendix. The contracts shall conform to the conditions of this permit as part of this contract.:

- 1. Florida Department of Environmental Protection (FDEP)
- 2. Florida Department of Transportation (FDOT)
- 3. City of Port St. Lucie Public Works (to be applied for by Contractor)

1.03 PERMITS OBTAINED BY CONTRACTOR

- A. The Contractor shall prepare and pay for the Notice of Intent (NOI) to use the Generic Permit for Stormwater Discharge from Construction Activity, which will include Stormwater Pollution Prevention Plan (SWPPP) as required by F.A.C. 62-621.300(4) and the Environmental Protection Agency (EPA) as part of the National Pollutant Discharge Elimination System (NPDES).
- 1. Contractor shall prepare, submit and obtain the appropriate dewatering permits and/or any temporary stormwater discharge permits from the South

Florida Water Management District (SFWMD) and/or Florida Department of Environmental Protection (FDEP).

1.04 NOTIFICATION

- A. The Contractor is required to notify the Owner and any applicable permitting agency who requires notification as part of their permit condition within the timeframe stated on the permit. If no time exists, notification shall be a minimum of 48 hours prior to initiating construction.
- B. Utility Companies: Contractor shall notify the Sunshine State One Call of Florida (SSOCF) service at 811, 48 hours prior to digging for direct bury and 10 days prior to digging or initiating construction of underwater construction activities, as required by Florida Statutes Chapter 556 throughout the duration of the construction project.
- C. The Contractor shall give the Engineer not less than seven (7) calendar days notice of the time and place (or places) where they will start the work.

1.05 PERMIT CONDITIONS

- A. Contractor shall comply with and furnish all items necessary to satisfy any general or specific conditions that are a part of the Owner obtained permits.

PART 2 – PRODUCTS

NOT USED

PART 3 – EXECUTION

NOT USED

END OF SECTION

SECTION 01090

REFERENCE STANDARDS

PART 1 - GENERAL

1.01 REQUIREMENTS INCLUDED

Abbreviations and acronyms used in Contract Documents to identify reference standards.

1.02 QUALITY ASSURANCE

- A. Application: When a standard is specified by reference, comply with requirements and recommendations stated in that standard, except when requirements are modified by the Contract Documents, or applicable codes establish stricter standards.
- B. Publication Date: The publication in effect on the date of issue of Contract Documents, except when a specific publication date is specified.
- C. For Products or workmanship specified by association, trade, or other consensus standards, comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.
- D. Conform to reference standard by date of issue current on bid date.
- E. Obtain copies of standards when required by the Contract Documents.
- F. Maintain copy at project site during submittals, planning, and progress of the specific work, until Substantial Completion.
- G. Should specified reference standards conflict with Contract Documents, request clarification from the Engineer before proceeding.
- H. Neither the contractual relationship, duties, nor responsibilities of the parties in Contract nor those of the Engineer shall be altered by the Contract Documents by mention or inference otherwise in any reference document.

1.03

ABBREVIATIONS, NAMES, AND ADDRESSES OR ORGANIZATIONS

- A. Obtain copies of reference standards direct from publication source, when needed for proper performance of work, or when required for submittal by Contract Documents.
- B. The following, as appropriate to project, is a list of referenced standards and their mailing addresses for requesting copies of standards:

| | |
|---------|---|
| AA | Aluminum Association 818 Connecticut Avenue, NW Washington, D.C. 20006 |
| AABC | Associated Air Balance Council 1000 Vermont Avenue, NW Washington, D.C. 20005 |
| AASHTO | American Association of State Highway and Transportation Officials 444 North Capitol Street, NW Washington, D.C. 20001 |
| ACI | American Concrete Institute Box 19150 Redford Station Detroit, MI 48219 |
| ADC | Air Diffusion Council 435 North Michigan Avenue Chicago, IL 60611 |
| AI | Asphalt Institute Asphalt Institute Building College Park, MD 20740 |
| AISC | American Institute of Steel Construction 1221 Avenue of the Americas New York, NY 10020 |
| AISI | American Iron and Steel Institute 1000 16 th Street, NW Washington, D.C., 20036 |
| AMCAAir | Movement and Control Association 30 West University Drive |

Arlington Heights, IL 60004

| | |
|--------|--|
| ANSI | American National Standards Institute 1430 Broadway New York, NY 10018 |
| ARI | Air Conditioning and Refrigeration Institute 1815 North Fort Myer Drive Arlington, VA 22209 |
| ASHRAE | American Society of Heating, Refrigeration and Air Conditioning Engineers 345 East 47 th Street New York, NY 10017 |
| ASME | American Society of Mechanical Engineers 345 East 47 th Street New York, NY 10017 |
| ASPA | American Sod Producers' Association Association Building Ninth and Minnesota Hastings, NE 68901 |
| ASSE | American Society of Sanitary Engineers 960 Illuminating Building Cleveland, OH 44113 |
| ASTM | American Society for Testing and Materials 1916 Race Street Philadelphia, PA 19103 |
| AWI | Architectural Woodwork Institute 2310 South Walter Reed Drive Arlington, VA 22206 |
| AWPA | American Wood-Preservers Association 7735 Old Georgetown Road Bethesda, MD 20014 |
| AWS | American Welding Society 2501 NW 7 th Street Miami, FL 33125 |
| AWWA | American Water Works Association 6666 W. Quincy Avenue |

Denver, CO 80235

| | |
|-------|--|
| CDA | Copper Development Association 57 th Floor, Chrysler Building 405 Lexington Avenue New York, NY 10017 |
| CLFMI | Chain Link Fence Manufacturers Institute 1101 Connecticut Avenue Washington, D.C. 20036 |
| CRSI | Concrete Reinforcing Steel Institute 180 North LaSalle Street, Suite 2110 Chicago, IL 60601 |
| FBC | 2004 Florida Building Code Florida Department of Community Affairs Building Codes and Standards 2555 Shumard Oak Boulevard Tallahassee, Florida 32399-2100 |
| FDEP | Florida Department of Environmental Protection 3900 Commonwealth Boulevard M.S. 49 Tallahassee, FL 32399 |
| FDOT | Florida Department of Transportation Haydon Burns Building 605 Suwannee Street Tallahassee, FL 32301 |
| FM | Factory Mutual System 1151 Boston-Providence Turnpike Norwood, MA 02062 |
| FS | Federal Specifications General Services Administration Specifications and Information Distribution Section (WFSIS) Washington Navy Yard, Bldg. 197 Washington, D.C. 20407 |
| GA | Gypsum Association 1603 Orrington Avenue Evanston, IL 60201 |
| MLSFA | Metal Lath / Steel Framing Association |

221 North LaSalle Street
Chicago, IL 60601

- NAAMM National Association of Architectural Metal
Manufacturers
221 North LaSalle Street
Chicago, IL 60601
- NEC National Electric Code
National Fire Protection Association (NFPA)
1 Batterymark Park
Quincy, MA 02169
- NEBB National Environmental Balancing Bureau
8224 Old Courthouse Road
Vienna, VA 22180
- NEMA National Electrical Manufacturers Association
2101 L Street, NW
Washington, D.C. 20037
- NFPA National Fire Protection Association
470 Atlantic Avenue
Boston, MA 02210
- NFPA National Forest Products Association
1619 Massachusetts Avenue, NW
Washington, D.C. 20036
- NSF National Sanitation Foundation
NSF Building
3475 Plymouth Road
Ann Arbor, MI 48106
- NSWMA National Solid Waste Management Association
1120 Connecticut Avenue, NW
Washington, D.C. 20036
- PCA Portland Cement Association
5420 Old Orchard Road
Skokie, IL 20076
- PCI Prestressed Concrete Institute
20 North Wacker Drive
Chicago, IL 60606

| | |
|---------------------------------------|--|
| PS | Product Standard U.S. Department of Commerce Washington, D.C. 20203 |
| PSL Minimum Design Standards | Port St. Lucie Utility Systems Department 900 SE Ogden Lane Port St. Lucie, FL 34983 |
| SDI | Steel Door Institute 712 Lakewood Center North Cleveland, OH 44107 |
| SMACNA | Sheet Metal and Air Conditioning Contractors National Association 8224 Old Courthouse Road Vienna, VA 22180 |
| TCA Institute | Technical Aid Series Construction Specifications 1150 Seventeenth Street, NW Washington, D.C. 20036 |
| UL | Underwriters Laboratories, Inc. 333 Pfingston Road Northbrook, IL 60062 |

PART 2 - PRODUCTS

Not Used

PART 3 - EXECUTION

Not Used

END OF SECTION

SECTION 01152

APPLICATIONS FOR PAYMENT

PART 1 - GENERAL

1.01 REQUIREMENTS INCLUDED

Submit Applications for Payment to Engineer in accordance with the schedule established by Conditions of the contract and Contract between Owner and Contractor.

1.02 RELATED REQUIREMENTS

- A. Specified in Other Sections:
 - 1. Section 01010: Summary of Work
 - 2. Section 01700: Project Closeout
 - 3. Contract, Section V Compensation

1.03 FORMAT AND DATA REQUIRED

- A. Submit itemized applications typed in a format approved by Engineer. All applications for payment must be numbered, dated, and signed by the Contractor.
- B. Provide itemized data on payment application (format, schedules, line items and values accepted by Engineer).

1.04 PREPARATION OF APPLICATION FOR EACH PROGRESS PAYMENT

- A. Application Form:
 - 1. Fill in required information, including that for Change Orders executed prior to the date of submittal of application
 - 2. Fill in summary of dollar values
 - 3. Execute certification with the signature of a responsible officer of the contract firm
 - 4. Have resident project representative review and sign application prior to submission to Engineer

1.05 SUBSTANTIATING DATA FOR PROGRESS PAYMENTS

- A. When the Owner or the Engineer requires substantiating data, Contractor shall submit suitable information, with a cover letter identifying:
 - 1. Project
 - 2. Application number and date
 - 3. Detailed list of enclosures
 - 4. For stored products:
 - a. Item number and identification
 - b. Description of specific material
- B. Submit one copy of data and cover letter for each copy of application.

1.06 PREPARATION OF APPLICATION FOR FINAL PAYMENT

- A. Application for payment is required for progress payments
- B. Only one application will be acceptable in any one month

1.07 SUBMITTAL PROCEDURE

- A. Submit Applications for Payment to Engineer at the time stipulated in the Agreement
- B. Number: Four copies of each progress Application
- C. When Engineer finds the Application properly completed and correct, he will transmit the applications for payment to the Owner
- D. Amount of Retainage shall be 10% unless otherwise stated in the Agreement or supplementary conditions between Owner and Contractor.

PART 2 - PRODUCTS

Not applicable

PART 3 - EXECUTION

Not applicable

END OF SECTION

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SECTION 01153

CHANGE ORDER PROCEDURES

PART 1 - GENERAL

1.01 REQUIREMENTS INCLUDE

- A. Promptly implement Change Order Procedures
 - 1. Provide full written data required to evaluate changes.
 - 2. Maintain detailed records of work done on a time-and-material/force account basis.
 - 3. Provide full documentation to Engineer on request.

- B. Designate in writing the member of Contractor's organization:
 - 1. Who is authorized to accept changes in the Work.
 - 2. Who is responsible for informing others in the contractor's employ of the authorization of changes in the Work.

- C. Owner will designate in writing the person who is authorized to execute Change Orders.

1.02 RELATED REQUIREMENTS

- A. The amount of established unit prices.

- B. Conditions of the Contract:
 - 1. Methods of determining cost or credit to owner resulting from changes in Work made on a time-and-materials basis.
 - 2. Contractor's claims for additional costs.

- C. City Contract: Section VI Work Changes

- D. Section 01152: Applications for payment.

- E. Section 01300: Submittals.

- F. Section 01720 : Project Record Documents.

1.03 DEFINITIONS

- A. Change Order/Work Changes: See City Contract

1.04 PRELIMINARY PROCEDURES

- A. Owner or Engineer may initiate changes by submitting a proposal Request to Contractor. Request will include the following:
 - 1. Detailed description of the Change, Products, and location of the change in the Project.
 - 2. Supplementary or revised Drawings and Specifications.
 - 3. The projected time span for making the change, and a specific statement as to whether overtime work is, or is not, authorized.
 - 4. A specific period of time during which the requested price will be considered valid.
 - 5. Such request is for information only, and is not an instruction to execute the changes, nor to stop work in progress.
- B. Contractor may initiate changes by submitting a written notice to Engineer, containing:
 - 1. Description of the proposed changes
 - 2. Statement of the reason for making the changes.
 - 3. Statement of the effect on the Contract Sum and the Contract Time.
 - 4. Statement of the effect on the work of separate contractors.
 - 5. Documentation supporting any changes in Contract Sum or Contract Time, as appropriate.

1.05 CONSTRUCTION CHANGE AUTHORIZATION

- A. In lieu of Proposal Request, Engineer may issue a “Work Directive Change” for Contractor to proceed with a change for subsequent inclusion in a Change Order.
- B. Authorization will describe changes in the work, both additions and deletions, with attachments of revised Contract Documents to define details of the change.

- C. Owner and Engineer will sign and date the Work Directive Change as authorization for the Contractor to proceed with the Changes.

1.06 DOCUMENTATION OF PROPOSALS AND CLAIMS

- A. Support each quotation for a lump sum proposal, and for each unit price which has not previously been established, with sufficient substantiating data to allow Engineer to evaluate the quotation.
- B. On request, provide additional data to support time and cost computation including the following:
 - 1. Labor required.
 - 2. Equipment required.
 - 3. Products required:
 - 4. Recommended source of purchase and unit cost.
 - 5. Quantities required.
 - 6. Taxes, insurance bonds.
 - 7. Credit for work deleted from Contract, similarly documented.
 - 8. Overhead and profit.
 - 9. Justification for any change in Contract Time.
- C. Document requests for substitutions for Products as specified in Section 00800.

1.07 PREPARATION OF CHANGE ORDERS

- A. Engineer will prepare each Change Order.
- B. Form: Change Order format provided in the Contract Documents.
- C. Change Order will describe changes in the Work, both additions and deletions, with attachments of revised Contract Documents to define details of change.
- D. Change Order will provide an accounting of the adjustment in the Contract Sum and in the Contract Time.

1.08 LUMP SUM / FIXED PRICE CHANGE ORDER

- A. Content of Change Orders will be based on either:
 - 1. Engineer's Proposal Request and Contractor's responsible Proposal as mutually agreed upon between Owner and Contractor.
 - 2. Contractor's Proposal for a change, as recommended by Engineer.
- B. Owner and Engineer will sign and date the Change Order as authorization for the contractor to proceed with the changes.
- C. Contractor shall sign and date the Change Order to indicate agreement with the terms therein.

1.09 UNIT PRICE CHANGE ORDER

- A. Content of Change Orders will be based on, either:
 - 1. Engineer definition of the scope of the required changes.
 - 2. Contractor's Proposal for a change, as recommended by Engineer.
 - 3. Survey of completed work
- B. The amount of the unit prices shall be:
 - 1. Those stated in the Agreement.
 - 2. Those mutually agreed upon between Owner and Contractor.
- C. When quantities of each of the items affected by the Change Order can be determined prior to start of the work:
 - 1. Owner and Engineer will sign and date the Change Order as authorization for Contractor to proceed with the changes.
 - 2. Contractor shall sign and date the Change Order to indicate agreement with the terms therein.
- D. When quantities of the items cannot be determined prior to start of the work:
 - 1. Engineer or Owner will issue a Change Order directing Contractor to proceed with the change on the basis of unit prices and will cite the applicable unit prices.

2. At completion of the change, Engineer will determine the cost of such work based on the unit prices and quantities used.
 - a. Contractor shall submit documentation to establish the number of units of each item and any claims for a change in Contract Time.
3. Engineer will sign and date a second Change Order to establish the change in Contract Sum and in Contract Time.
4. Owner and Contractor will sign and date the second Change Order to indicate their agreement with the terms therein.

1.10 TIME AND MATERIAL / WORK CHANGE DIRECTIVE / CONSTRUCTION AUTHORIZATION

- A. Engineer, with Owner's written authorization may issue a Work Change Directive directing Contractor to Proceed with the changes on a time-and-material / force account basis, with a not to exceed estimated price.
- B. At completion of the change, Contractor shall submit itemized accounting and supporting data as provided in the Article "Documentation of Proposals and Claims" of this section.
- C. Engineer will determine the allowable cost of such work, as provided in General Conditions and Supplementary Condition.
- D. Engineer will sign and date the Work Directive Change to establish the change in Contract Sum and in Contract Time.
- E. Owner and Contractor will sign and date the Work Directive Change to indicate their agreement therein.

1.11 CORRELATION WITH CONTRACTOR'S SUBMITTALS

- A. Contractor shall periodically revise Schedule of Values and Request for Payment forms to record each change as a separate item of Work, and to record the adjusted Contract Sum.
- B. Contractor shall periodically revise the Construction Schedule to reflect each change in Contract Time.
 1. Revise sub-schedules to show changes for other items of work affected by the changes.

- C. Upon completion of work under a Change Order, enter pertinent changes in Record Documents.

PART 2 - PRODUCTS

Not Applicable

PART 3 - EXECUTION

Not Applicable

END OF SECTION

SECTION 01200
PROJECT MEETINGS

PART 1 – GENERAL

1.01 DESCRIPTION

- A. Owner shall schedule and administer preconstruction meetings, public involvement meetings/communications, and specially called meetings throughout the progress of the work. Owner shall:
 - 1. Distribute written notice of each meeting.
 - 2. Make physical arrangements for meetings.
 - 3. Preside at meetings.
 - 4. Record the minutes, include all significant proceedings and decisions.
 - 5. Reproduce and distribute copies of minutes:
 - a. To all participants in the meeting.
 - b. To all parties affected by decisions made at the meeting.

- B. Contractor shall schedule and administer progress meetings. Contractor shall:
 - 1. Distribute written notice of each meeting.
 - 2. Make physical arrangements for meetings.
 - 3. Preside at meetings.
 - 4. Record the minutes, include all significant proceedings and decisions.
 - 5. Reproduce and distribute copies of minutes:
 - a. To all participants in the meeting.
 - b. To all parties affected by decisions made at the meeting.

- C. Representatives of the Contractor, subcontractors and suppliers attending the meetings shall be qualified and authorized to act on behalf of the entity each represents.

1.02 RELATED REQUIREMENTS SPECIFIED ELSEWHERE

- A. Drawings and general provisions of the Contract, including the City of Port St Lucie Contract Terms and Conditions Sections I thru XXX and Division 1 Specification sections, apply to this section.

- B. Specified in other Sections:
 - 1. Section 01010: Summary of Work
 - 2. Section 01060: Regulatory Requirements and Notifications

1.03 PRE-CONSTRUCTION MEETING

- A. To be held prior to the Notice to Proceed.
- B. Location: The project site, or as designated by the Owner/Engineer.
- C. Attendance:
 - 1. Owner's Representative
 - 2. Engineer's Representative
 - 3. Contractor
 - 4. Contractor's Superintendent
 - 5. Major Subcontractors, if requested by the Engineer
 - 6. Others as appropriate
- D. Agenda:
 - 1. Record of Attendance (sign-in sheet)
 - 2. Project Summary Description
 - 3. Local Utilities to be affected
 - a. Water lines
 - b. Sewer lines
 - c. Storm lines
 - d. Gas lines
 - e. Telephone lines
 - f. Cable TV lines
 - g. Electric lines
 - h. Property Owner/ Businesses
 - i. Roadways
 - 4. Contractor Responsibilities:
 - a. Start date
 - b. Completion date
 - c. Work schedule
 - d. Notification Requirements
 - e. Regulatory Permit Requirements
 - f. Testing
 - g. Space utilization
 - h. Rights-of-Way occupancy
 - i. Progress Meetings
 - j. Progress Payment Application
 - k. As-builts (Records/Drawings)
 - l. Photographs
 - m. Shop drawings

- n. Subcontractors
 - o. Project coordination
5. Owner Responsibilities:
- a. Progress Meeting Attendance
 - b. Special meetings
 - c. Partial and final payment
 - d. Change Orders
 - e. Public announcements and public relations
 - f. Project acceptance
6. Engineer Responsibilities:
- a. Technical representative of Owner
 - b. Interpreter of contract documents
 - c. Periodic inspections of job progress
 - d. Reviews partial and final payment applications
 - e. Reviews Change Orders
 - f. Checks and approves shop drawings
 - g. Reviews record drawings
 - h. Prepares Health Department Clearance Package
 - i. Performs final inspection and issues certificate of completion
7. Resident Inspector Responsibilities:
- a. Owner's representative on site
 - b. Review materials and work and reports any deficiencies to Owner/Engineer
 - c. Reviews applications for payment
 - d. Works with Contractor on public notification of work items
 - e. Attends progress meetings
 - f. Observes testing work
 - g. Maintains daily diary of work tasks
 - h. Furnishes reports to Owner/Engineer as deemed advisable.

1.04 PROGRESS MEETINGS

- A. Contractor shall hold periodic meetings as required by progress of the work.
- B. Location of the meetings: Project site, or as designated by the Owner or Engineer.
- C. Attendance:
 - 1. Owner's Representative

2. Engineer's Representative
3. Subcontractors as appropriate
4. Suppliers/Others as appropriate

1.05 EMERGENCY MEETINGS

- A. May be called by Owner, Engineer or Contractor with a minimum of three (3) hours notice to resolve conditions of an emergency nature.

1.06 PUBLIC INVOLVEMENT MEETINGS/COMMUNICATIONS

- A. There may will be public involvement meetings and communications for the project. The Contractor shall participate in these meetings and communications as deemed necessary by the Owner.

PART 2 – PRODUCTS

NOT USED

PART 3 – EXECUTION

NOT USED

END OF SECTION

SECTION 01300

SUBMITTALS AND PROGRESS SCHEDULES

PART 1 - GENERAL

1.01 WORK INCLUDED

- A. Submit to the Owner and Engineer, as applicable, shop drawings, estimated construction progress schedule, project data, and samples required by specification sections.

1.02 RELATED WORK

- A. City Contract
- B. Specified in other Sections:
 - 1. Section 01010: Summary of Work

1.03 SCHEDULES

- A. Promptly after award of contract, prepare and submit to the Engineer estimated construction progress schedules for the work, including a separate schedule listing dates for submission and dates reviewed shop drawings, project data, and samples will be needed for each product.

1.04 FORM OF SCHEDULES

- A. Prepare schedules in suitable format with dated schedule printout. A horizontal bar chart should be used as additional illustration and for revised progress schedules.
 - 1. Provide separate horizontal bar for each trade or operation
 - 2. Horizontal time scale: Identify the first workday of each week.
 - 3. Scale and spacing: To allow space for notations and future revisions.
 - 4. Minimum sheet size: 11" x 17"
- B. Format of listings: The chronological order of the start of each item of work.
- C. Identification of listings: By major specification section numbers.

1.05 CONTENT OF SCHEDULES

- A. Construction Progress Schedule shall:

1. Show the complete sequence of construction by activity.
 2. Show the dates for the beginning and completion of each major element of construction; specifically, list:
 - a. Mobilization / Demobilization
 - b. Subcontractor work
 - c. Watermain construction. Provide specific timelines for expected completion of each project area. Dates of connections and phasing should be included.
 - d. Testing
 - e. Restoration
 3. Show projected percentage of completion for each item, as of the first day of each month.
- B. Submittals Schedule for Shop Drawings, Product Date and Samples. Show:
1. The dates for Contractor's submittals.

1.06 PROGRESS REVISIONS

- A. Indicate progress of each activity to date of submission of schedule.
- B. Show changes occurring since previous submission of schedule.
1. Major changes in scope.
 2. Activities modified since previous submission.
 3. Revised projections of progress and completion.
 4. Other identifiable changes.
- C. Provide a narrative report as needed to define:
1. Problem areas, anticipated delays, and the impact on the schedule.
 2. Corrective action recommended, and its effect.
 3. The effect of changes on schedules of other contractors working in the area.

1.07 SUBMISSIONS

- A. Submit initial schedules within 7 days after award of Contract.
1. Engineer will review schedules with Owner and return review copy within 5 days after receipt.
 2. If required, resubmit within 2 days after return of review copy.

- B. Submit updated progress schedules with each application for payment.

1.08 DISTRIBUTION

- A. Distribute copies of the reviewed schedules to:
 - 1. Job site file.
 - 2. Subcontractors.
 - 3. Other concerned parties.
- B. Instruct recipients to report promptly to the Contractor, in writing, any problems anticipated by the projections shown in the schedules.

PART 2 - PRODUCTS

2.01 SHOP DRAWINGS

- A. Original drawings, prepared by Contractor, Subcontractor, Supplier or Distributor, which illustrate some portion of the Work; showing fabrication, layout, setting, or erection details including, but not limited to the following:
 - 1. Forcemain Piping, Valves, Fittings, and Appurtenances
 - 2. Directional Bore setup area/Pilot hole alignment
 - 3. Asphalt Mix Design
 - 4. Pavement Base Course
 - 5. ARV Assemblies
- B. Shop drawings shall be prepared by a qualified detailer.
- C. Identify details by reference to sheet and detail numbers shown on Contract Drawings.

2.02 PROJECT DATA

- A. Manufacturer's standard schematic drawings
 - 1. Modify drawings to delete information which is not applicable to project.
 - 2. Supplement standard information to provide additional information application to project.
- B. Manufacturer's catalog sheets, brochures, diagrams, schedules, performance charts, illustrations and other standard descriptive data.

1. Clearly mark each copy to identify pertinent materials, products or models.
2. Show dimensions and clearances required.
3. Show performance characteristics and capacities.
4. Show wiring diagrams and controls.

2.03 SAMPLES

- A. Physical examples to illustrate materials, equipment or workmanship, and to establish standards by which completed work is judged.
- B. Office samples of sufficient size and quantity to clearly illustrate:
 1. Functional characteristics of product or material, with integrally related parts and attachment devices.
 2. Full range of color samples.

2.04 PAY REQUESTS

- A. Pay Requests shall be made in accordance with the requirements of the Agreement between Owner and Contractor.

PART 3 - EXECUTION

3.01 CONTRACTOR RESPONSIBILITIES

- A. Review Shop Drawings, Project Data and Samples prior to submission. Contractor's approval stamp shall be on each submittal when received by the Engineer. Unstamped submittals will not be reviewed and will be returned as "rejected" to the Contractor.
- B. Verify
 1. Field measurements.
 2. Field construction criteria.
 3. Catalog numbers and similar data.
- C. Coordinate each submittal with requirements of Work and the Contract Documents.
- D. Contractor's responsibility for errors and omissions in submittals is not relieved by Engineer's review of submittals.

- E. Contractor's responsibility for deviations in submittals from requirements of Contract Documents is not relieved by Engineer's review of submittals, unless Engineer gives written acceptance of specific deviations.
- F. Notify Engineer, in writing at the time of submission, of deviations in submittals from requirements of Contract Documents.
- G. Begin no work which requires submittals until return of submittals with Engineer's stamp and initials or signature indicating review.
- H. After Engineer's review, distribute copies.

3.02 SUBMISSION REQUIREMENTS

- A. Schedule submissions at least 14 days before dates reviewed submittals will be needed.
- B. Submit number of copies of Shop Drawings, Project Datum and Samples, which Contractor requires for distribution, plus 4 copies which will be retained by Engineer.
- C. Accompany submittals with transmittal letter, in duplicate, containing:
 - 1. Date.
 - 2. Project title and number.
 - 3. Contractor's name and address.
 - 4. Notification of deviations from Contract Documents.
 - 5. Other pertinent data.
- D. Submittals must include:
 - 1. Date of submittal and revision dates.
 - 2. Project title and number.
 - 3. The names of:
 - a. Engineer.
 - b. Contractor.
 - c. Subcontractor.
 - d. Supplier.
 - e. Manufacturer.
 - f. Separate detailer when pertinent.
 - 4. Identification of product or material.
 - 5. Relation to adjacent structure or materials.
 - 6. Field dimensions clearly identified as such.
 - 7. Identification of deviations from Contract Documents.

8. Contractor's stamp, initialed or signed, certifying review of submittal, verification of field measurements and compliance with Contract Documents.

3.03 RESUBMISSION REQUIREMENTS

- A. Shop Drawings.
 1. Revise initial drawings as required and resubmit as specified for initial submittal.
 2. Indicate on drawings any changes which have been made other than those requested by Engineer.
- B. Project Data and Samples:
 1. Submit new datum and samples as required for initial submittal.

3.04 DISTRIBUTION OF SUBMITTALS AFTER REVIEW

- A. Distribute copies of Shop Drawings and Project Datum which carry Engineer's stamp to:
 1. Contractor's file.
 2. Job site file.
 3. Record Documents file.
 4. Other prime contractors.
 5. Subcontractors.
 6. Supplier.
 7. Fabricator.

END OF SECTION

SECTION 01410

TESTING LABORATORY SERVICES

PART 1 - GENERAL

1.01 REQUIREMENTS INCLUDED

- A. Contractor will employ and pay for the services of an independent testing laboratory to perform certain specified testing. All testing described in the Contract Documents shall be paid for by the Contractor.
- B. Owner may employ and pay for the services of an independent testing laboratory to perform certain specified testing in addition to what is called for in the Contract Documents.
 - 1. Contractor shall cooperate with the laboratory to facilitate the execution of its required services.
 - 2. Employment of a laboratory by the Owner shall in no way relieve Contractor's obligations to perform the work of the Contract.
- C. Inspection, Sampling and Testing is required for:
 - 1. Densities and Proctors (for soil compaction)
 - 2. Concrete Strength
 - 3. Any water quality monitoring as required by the project permits
 - 4. Other operations specified in these specifications or as required by the Engineer or Owner.

1.02 RELATED REQUIREMENTS

- A. Drawings and general provisions of the Contract, including the City of Port St Lucie Contract Terms and Conditions Sections I thru XXX and Division 1 Specification sections, apply to this section.

1.03 QUALIFICATION OF LABORATORY

- A. Meet "Recommended Requirements for Independent Laboratory Qualification," published by American Council of Independent Laboratories.

- B. Meet basic requirements of ASTM E329, "Standards of Recommended Practice for Inspection and Testing Agencies for Concrete and Steel as Used in Construction."
- C. Authorized to operate in the City and State in which the Project is located.
- D. Submit copy of report of inspection of facilities made by Materials Reference Laboratory of National Bureau of Standards during the most recent tour of inspection, with memorandum of remedies of any deficiencies reported by the inspection.
- E. Testing Equipment:
 - 1. Calibrated at reasonable intervals by devices of accuracy traceable to either:
 - a. National Bureau of Standards
 - b. Accepted values of national physical constants.

1.04 LABORATORY DUTIES

- A. Cooperate with Engineer and Contractor; provide qualified personnel after due notice.
- B. Perform specified inspections, sampling, and testing of materials and methods of construction:
 - 1. Comply with specified standards
 - 2. Ascertain compliance of materials with requirements of Contract Documents.
- C. Promptly notify Engineer and Contractor of observed irregularities or deficiencies of work or products.
- D. Promptly submit written report of each test and inspection; one copy each to Engineer, Owner, and Contractor, and one copy to Record Documents File. Each report shall include:
 - 1. Date issued
 - 2. Project title and number
 - 3. Testing laboratory name, address, and telephone number
 - 4. Name and signature of laboratory inspector
 - 5. Date and time of sampling or inspection
 - 6. Record of temperature and weather conditions

7. Date of test
8. Identification of product and specification section
9. Location of sample or test in the Project
10. Type of inspection or test
11. Results of tests and compliance with Contract Documents
12. Interpretation of test results, when requested by Engineer

E. Perform additional tests as required by Engineer or the Owner

1.05 LIMITATIONS OF AUTHORITY OF TESTING LABORATORY

A. Laboratory is not authorized to:

1. Release, revoke, alter, or enlarge on requirements of Contract Documents
2. Approve or accept any portion of the work
3. Perform any duties of the Contractor

1.06 CONTRACTOR'S RESPONSIBILITIES

- A. Cooperate with laboratory personnel and provide access to work and to manufacturer's facilities.
- B. Secure and deliver to the laboratory adequate quantities of representative samples of materials proposed to be used and which require testing.
- C. Provide to the laboratory the preliminary design mix proposed to be used for concrete, and other material mixes which require control by the testing laboratory.
- D. Provide to the laboratory a representative proctor sample of the materials to be used for backfilling throughout the project.
- E. Furnish copies of product test reports as required.
- F. Furnish incidental labor and facilities:
 1. To provide access to work to be tested
 2. To obtain and handle samples at the project site or at the source of the product to be tested
 3. To facilitate inspections and tests
 4. For storage and curing of test samples
- G. Notify laboratory, in advance of operations to allow for laboratory assignments of personnel and scheduling of tests.

H. Pay for services of the Testing Laboratory to perform additional inspections, sampling and testing required:

1. For Contractor's convenience.
2. When initial tests indicate Work does not comply with Contract Documents.

Such payment shall be made directly by the Contractor.

I. Contractor will be responsible for payment for all failing tests.

PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTION

NOT USED

END OF SECTION

SECTION 01570

TRAFFIC REGULATION

PART 1 – GENERAL

1.01 REQUIREMENTS

- A. Provide, operate, and maintain equipment, services, and personnel with traffic controls and protective devices, as required to expedite vehicular traffic flow around the construction area in accordance with FDOT and City of Port St. Lucie standards and the approved project traffic control plan.
- B. Remove temporary equipment and facilities when no longer required, restore grounds to original, or to specified conditions.

1.02 RELATED REQUIREMENTS

- A. Drawings and general provisions of the Contract, including the City of Port St Lucie Contract Terms and Conditions Sections I thru XXX and Division 1 Specification sections, apply to this section.

1.03 REFERENCES

- A. Traffic Control shall be in accordance with FDOT Roadway and Traffic Design Standards Series 600, Latest Edition, Manual on Uniform Traffic Control Devices, Latest Ed., and FDOT Standard Specifications, latest Ed. and the project permits.

1.04 TRAFFIC CONTROL PLAN

- A. The Contractor is to prepare a traffic control plan for the entire length of the project. The traffic control plan will need to be approved by FDOT and City of Port St. Lucie for work within their applicable Rights-of-Way as part of the Right-of-Way permit application process.

1.05 SIGNS AND TRAFFIC SIGNALS

- A. Provide and operate traffic control and directional signals required to direct and maintain an orderly flow of traffic in all areas under Contractor's control or affected by Contractor's operations.
- B. All existing traffic signs shall remain visible throughout construction activities unless superseded by required construction signing or as directed by the Owner.

1.06 FLAG PERSONS

- A. Provide qualified and suitably flag persons to regulate traffic when construction operations or traffic encroach on public traffic lanes.

1.07 FLARES, LIGHTS, AND DAY SHAPES

- A. Provide lights as required for implementation of the Traffic Control Plan, and:
 - 1. To clearly delineate traffic lanes and to guide traffic as required.
 - 2. For use by flagmen in directing traffic.
- B. Provide illumination of critical traffic and parking areas as required. Use flares and lights during hours of low visibility to delineate project limit.

1.08 CONSTRUCTION PARKING CONTROL

- A. Control vehicular parking to preclude interference with public traffic or parking, private property, business, access by emergency vehicles, or construction operations.
- B. Monitor parking of construction personnel's private vehicles.

1.09 CONSTRUCTION VEHICLES

- A. All slow-moving construction vehicles shall have a slow-moving sign visible from the rear of the vehicle.
- B. All vehicles used for construction activities shall have audible back-up warning devices.

1.10 ROAD CLOSURES

- A. No road shall be closed prior to receiving approval from the City of Port St. Lucie.
- B. At least fourteen (14) days prior to a proposed road closure, the Contractor shall submit to the applicable jurisdiction a complete traffic control plan. This plan shall include the following minimum information:
 - 1. Sketch of work site and all area roads, streets and mark driveways.
 - 2. Proposed detour route.
 - 3. All necessary traffic control devices to be used.

4. Emergency Contractor contact person name and phone to be available 24 hours a day.
 5. Estimated time/dates of road closure.
- C. The Contractor shall notify affected property owners and tenants (if applicable) at least 48 hours prior to a proposed driveway closing.

1.11 REMOVAL

- A. Remove equipment and devices when no longer required.
- B. Repair damage caused by installation.

PART 2 – PRODUCTS

- A. All traffic control devices shall meet or exceed FDOT/City of Port St. Lucie certification standards where applicable. Post mounted traffic-control and informational signs shall conform with FDOT and City of Port St. Lucie.
- B. All traffic signs shall have high intensity reflective face material.

PART 3 – EXECUTION

- A. Upon notification by the Owner either verbally or in writing, the Contractor shall correct any noted MOT deficiencies within one hour.
- B. Inspection of all traffic control items shall be accomplished at least twice per day by the Contractor. One of these inspections shall be at the end of the workday or at night.

END OF SECTION

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SECTION 01600

MATERIAL AND EQUIPMENT

PART 1 - GENERAL

1.01 REQUIREMENTS INCLUDED

- A. Products
- B. Workmanship
- C. Manufacturer's Instructions
- D. Transportation and Handling
- E. Storage and Protection
- F. Substitutions and Product Options

1.02 RELATED REQUIREMENTS

- A. Drawings and general provisions of the Contract, including the City of Port St Lucie Contract Terms and Conditions Sections I thru XXX and Division 1 Specification sections, apply to this section.
- B. Specified in other Sections:
 - 1. Section 01010: Summary of Work
 - 2. Section 01090: Reference Standards
 - 3. Section 01300: Submittals and Progress Schedules
 - 4. Section 01740: Warranties and Bonds

1.03 PRODUCTS

- A. Products include materials, products, equipment and systems.
- B. Comply with specifications and referenced standards as minimum.
- C. DO NOT provide used materials and products, except as specifically allowed by notation or indication in Contract Documents.

1.04 WORKMANSHIP

- A. Comply with industry standards except when more restrictive tolerances or specified requirements indicate more rigid standards or more precise workmanship.
- B. Perform work by persons qualified to produce workmanship of specified quality.
- C. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, and rocking.

1.05 MANUFACTURER'S INSTRUCTIONS

- A. When work is specified to comply with manufacturer's printed instructions, obtain and distribute copies to persons involved, and maintain one set at job site in field office.
- B. Perform work in accordance with manufacturer's instructions and specified requirements.
- C. Should a conflict exist between Specifications and manufacturer's instructions, consult with Engineer.

1.06 TRANSPORTATION AND HANDLING

- A. Arrange deliveries of products in accordance with construction schedules; coordinate to avoid delay of progress, conflict with work and with conditions at the site.
- B. Transport products by methods to avoid product damage; deliver dry in an undamaged condition in manufacturer's unopened containers or packaging.
- C. Provide equipment and personnel to handle product by methods to prevent soiling or damage.
- D. Promptly inspect shipments to assure that products comply with requirements, quantities are correct, and products are undamaged.

1.07 STORAGE AND PROTECTION

- A. Store products in accordance with manufacturer's instructions, with seals and labels intact and legible.

- B. Store sensitive products in weather-tight enclosures; maintain within temperatures and humidity ranges recommended/required by manufacturer's instructions. PVC pipe shall not be stored in a place where it can be exposed to ultraviolet light.
- C. For exterior storage of fabricated products, place on sloped supports above ground. Cover products subject to deterioration with impervious sheet covering; provide ventilation to avoid condensation.
- D. Store loose granular materials on solid surfaces in a well-drained area; prevent mixing with foreign matter.
- E. Arrange storage to provide access for inspection. Periodically inspect to assure products are undamaged and are maintained under required conditions.
- F. After installation, provide coverings to protect products from damage from traffic and construction operations, remove when no longer needed.

1.08 PRODUCT OPTIONS

- A. Within 30 days after date of Contract, submit complete list of major products proposed, with name of manufacturer, trade name, and model.
- B. Options:
 - 1. Products specified only by reference standard: Any product meeting that standard.
 - 2. Product specified by naming several manufacturers: Product of any named manufacturer meeting specifications.
 - 3. Products specified by naming one or more manufacturers and "or equivalent": Submit a request for substitution for any manufacturer not specifically named. See bid documents for specific instructions regarding substitution requests.

1.09 SUBSTITUTIONS

- A. Substitutions will be considered during the bidding process. See the instructions to bidders for more information on how to propose a substitution. Subsequent to the bidding process, substitutions will be considered only when a product becomes unavailable due to no fault of the Contractor.
- B. Document each request with five (5) sets of complete data, drawings, and samples as appropriate, substantiating compliance of proposed substitution with Contract Documents including:

1. General information about the proposed substitution:
 - a. For Products:
 - 1) Product identification, including manufacturer's name and address.
 - 2) Manufacturers' literature:
 - a) Product description.
 - b) Performance and test data.
 - c) Reference standards.
 - 3) Samples
 - 4) Name and address of similar projects on which product was used, and date of installation.
 - b. For construction methods:
 - 1) Detailed description of proposed method.
 - 2) Drawings illustrating methods
 2. Comparison of the qualities of the proposed substitution with the specified.
 3. Changes required in other elements of the work because of the substitution.
 4. Effect on the construction schedule.
 5. Cost data comparing the proposed substitution with the product specified.
 6. Any required license fees or royalties
 7. Availability of maintenance service, and the source replacement materials.
- C. Request constitutes a representation that Contractor:
1. Has investigated proposed product and determined that it meets or exceeds, in all respects, specified product.
 2. Will provide the same warranty for substitution as for specified product.
 3. Will coordinate installation and make other changes which may be required for work to be complete in all respects.
 4. Waives claims for additional costs which may subsequently become apparent.
- D. Substitutions will not be considered when they are indicated or implied on Shop Drawing or Product Data submittals without separate written request, or when acceptance will require significant revision of the Contract Documents.
- E. Engineer will review to determine acceptability of proposed substitution and will notify Contractor of acceptance or rejection in writing within a reasonable time.

PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTION

NOT USED

END OF SECTION

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SECTION 01700
CONTRACT CLOSE-OUT

PART 1 - GENERAL

1.01 REQUIREMENTS INCLUDED

- A. Drawings and general provisions of the Contract, including the City of Port St Lucie Contract Terms and Conditions Sections I thru XXX and Division 1 Specification sections, apply to this section.
- B. Specified in other Sections:
 - 1. Section 01720: Project Record Documents
 - 2. Section 01740: Warranties and Bonds

1.02 SUBSTANTIAL COMPLETION

- A. When Contractor considers his work is substantially complete, he shall submit to Engineer:
 - 1. A written notice that the work, or designated portion thereof, is substantially complete.
 - 2. A list of items to be completed or corrected.
- B. Within a reasonable time after receipt of such notice, Engineer will review the work to determine the status of completion.
- C. Should Engineer determine that the work is not substantially complete:
 - 1. Engineer will promptly notify the Contractor, in writing, giving the reasons.
 - 2. Contractor shall remedy the deficiencies in the work, and shall send a second written notice of substantial completion to Engineer
 - 3. Engineer will re-review the work
- D. When Engineer concurs that the work is substantially complete, he will:
 - 1. Prepare a Certificate of Substantial Completion, accompanied by a list of items to be completed or corrected

2. Submit the Certificate to Owner and Contractor for their written acceptance of the responsibilities assigned to them in the certificate.

1.03 FINAL INSPECTION

- A. 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 Owner's representative and are operational
 5. Work is completed and ready for final inspection
- B. Engineer will review the work to verify the status of completion with reasonable promptness after receipt of such certification.
- C. Should Engineer consider that the work is incomplete or defective:
 1. 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 Engineer that the work is complete.
 3. Engineer will re-review the work
- D. When Engineer finds that the work is acceptable under the Contract Documents, he shall request the Contractor to make close-out submittals.

1.04 RE-INSPECTION FEES

- A. 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, the Contractor will compensate Engineer/Owner for such additional services.

1.05 ADDITIONAL SERVICES

- A. Should Engineer be required to provide representation at the site for the administration of the Contract for Construction more than thirty days after the specified Date of Substantial Completion of the work, the Contractor will compensate Engineer for such additional services.

1.06 CONTRACTOR'S CLOSE-OUT SUBMITTALS TO ENGINEER

- A. Evidence of compliance with requirements of governing authorities.
- B. Project Record Documents: To requirements of Section 01720 and the General Conditions and Terms of the Contract.
- C. Warranties and Bonds: To requirements of Section 01740 and the General Conditions and Terms of the Contract.
- D. Evidence of Payment and Release of Liens: To requirements of the General Conditions and Terms of the Contract.
- E. Certificate of Insurance for Products and Completed Operations.
- F. One (1) Year Maintenance Bond
- G. Certificate of Operation from equipment manufacturers

1.07 FINAL ADJUSTMENT OF ACCOUNTS

- A. Submit a final statement of accounting to the Engineer.
- B. Statement shall reflect all adjustments to the Contract Sum:
 - 1. The original Contract Sum
 - 2. Additions and deductions resulting from:
 - a. Previous change orders
 - b. Allowances
 - c. Unit prices
 - d. Deductions for uncorrected work
 - e. Deductions for liquidated damages
 - f. Deductions for re-inspection payments
 - g. Other adjustments
 - 3. Total Contract sum, as adjusted
 - 4. Previous payments

5. Sum remaining due

C. Engineer will prepare a final change order, reflecting approved adjustments to the Contract sum which were not previously made by change order.

1.08 FINAL APPLICATION FOR PAYMENT

A. Contractor shall submit the final Application for Payment in accordance with procedures and requirements stated in the Conditions of the Contract.

PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTION

NOT USED

END OF SECTION

SECTION 01720

PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.01 REQUIREMENTS INCLUDED

- A. Contractor shall maintain at the site for the Owner one (1) record copy of the following:
 - 1. Drawings
 - 2. Specifications
 - 3. Addenda
 - 4. Change orders and other modifications to the Contract
 - 5. Engineer field orders or written instructions
 - 6. Approved shop drawings, product data, and samples
 - 7. Field test records
- B. Drawings and general provisions of the Contract, including the City of Port St Lucie Contract Terms and Conditions Sections I thru XXX and Division 1 Specification sections, apply to this section.
- C. City of Port St. Lucie Standards
- D. Specified in other Sections:
 - 1. Section 01300: Submittals
 - 2. Section 01700: Project Close-out

1.02 MAINTENANCE OF DOCUMENTS AND SAMPLES

- A. Contractor shall store documents and samples in the field office apart from documents used for construction.
 - 1. Provide files and racks for storage of documents.
 - 2. Provide locked cabinet or secure storage space for storage of samples.
- B. File documents and samples in accordance with Specifications – Table of Contents.
- C. Maintain documents in a clean, dry, legible condition and in good order. Do not use record documents for construction purposes.

- D. Make documents and samples available at all times for inspection by Engineer and City of Port St. Lucie. Record drawing information shall be maintained concurrently with Pay Requests.

1.03 MARKING DEVICES

- A. Provide felt tip marking pens for recording information in the color red.

1.04 RECORDING

- A. The Contractor shall provide record drawings for all pay applications, partial releases and final release submittals. With each submittal provide survey data, signed and sealed by the Contractor's Surveyor, to support elevation information depicted on the record drawings.
- B. Label each document "PROJECT RECORD" in neat large printed letters.
- C. Record information concurrently with construction progress. DO NOT conceal or backfill any work until required information is recorded.
- D. Drawings-General: The Record Drawings shall correctly and accurately be drawn to record actual construction. Legibly mark to record actual construction:
 - 1. Horizontal location of pipes and other improvements shall be provided any time the pipe passes a permanent surface reference point. Permanent surface reference points must be permanent structures, such as, manholes, catch basins, concrete sidewalk or concrete curbs. Edge of pavement and road intersections may not be used without the Engineer's approval. Any deviations from the alignment shown on the drawings must be noted.
 - 2. Existing utilities that are not shown on the plans that are found in the field are to be noted and recorded on the record drawings. Actual locations of all utilities shall be noted and recorded on the record drawings.
 - a. Field changes of dimension and detail.
 - b. Drainage and Control Structure inverts and weir elevations. Roadway, sidewalk, planters, parking area, and site perimeter elevations.
 - c. Sanitary manhole rim and invert elevations

- d. Changes made by Work Change Directives or by Change Order.
 - e. Details not on original Contract Drawings
 - f. Limits of work including temporary storage equipment area
 - g. All information required by the City Standards.
- E. Drawings – General Requirements for Pressure Mains. Record Drawings shall legibly and accurately depict record actual construction and showing the following, as a minimum:
- 1. Material used to construct mains.
 - 2. Location and top of pipe elevation of all fittings, including sleeves and valves, by stationing and offsets
 - 3. Top of pipe elevation at every 50 feet and at every change of direction.
 - 4. Length of restrained pipe
 - 5. All elevations and horizontal control of all storm sewers, gravity sewers including laterals, electric cables, television cables, telephone cables, force mains, and watermains which are crossed or exposed.
 - 6. Locations and elevations as required to define major horizontal/vertical pipe deflections/conflicts. Data shall include beginning and end of deflection/conflicts, all changes in elevations and alignment, and the location and elevation of subject conflict item.
 - 7. Location and elevation of all connections to existing systems.
 - 8. Locations and elevations as required to describe all other improvements.
- F. Drawings – Specific Requirements for Pressure Mains
- 1. General - FOR ALL LAYERS:
 - a. All references to "proposed" and "plan" are to be removed from the Final Record Drawings
 - b. All lines, structures, and other items that are relocated will be removed and shown in the proper location (handwritten notes and "x"ing out will not be allowed)
 - c. All record drawings will be signed and sealed by Certified Land Surveyor or Professional Engineer licensed to practice in the State of Florida. If certified by a Surveyor, P.E. will sign off stating that the record drawings were checked by the engineer, verifying that they inspected the work

- d. Clearly mark existing infrastructure which is to remain.
- e. Clearly mark existing infrastructure which has been abandoned, and how it was abandoned.
- f. Station, length, width and depth of flowable fill used.
- g. Record Drawings shall not be greater than 1" - 30' in scale
- h. All Detail sheets shall be included with each record drawing
- i. Location by station and elevation, width, depth and length of flowable fill used for all uses.
- j. Supply all surveys of the project and or property.

2. Force mains - TO BE SHOWN ON ONE LAYER:

Wastewater Utility Record Drawings shall conform with the requirements of the City. Records shall include locations (horizontal and vertical) of all pipelines, structures, fittings, valves, and appurtenances and all utility crossings (including sanitary laterals) for proposed mains in accordance with City requirements. Force main record drawings shall include at a minimum:

- a. Pressure class and material of proposed pipe
- b. Top of Pipe elevations and horizontal location every 100 feet
- c. Locations and elevation of all fittings including bends, tees, gate valves, air release valves, etc. All tie-ins to existing lines shall be as built
- d. Limits of restrained joints on proposed and existing main
- e. Locations of joint deflections

3. Water/Sanitary/Storm Pipe Crossings and Separations - PART OF WATER, SANITARY, AND/OR STORM LAYER

- a. Pipe types, sizes, and material
- b. Crossings: Top and bottom elevations of pipes crossing each other and the distance between the outside of the two lines
- c. Separation: Distance between the OD of the two lines

4. Conflict Storm/Water/Sanitary Structures - PART OF EACH APPLICABLE LAYER:

- a. Top and bottom of casing
- b. All info asked for in storm or sanitary manhole descriptions with the addition of top of all pipes.

5. Casings - PART OF EACH APPLICABLE LAYER:
 - a. Material and thickness
 - b. Top of and invert of casing
 - c. Length and station and offset of ends
 - d. If used, station and offset for vent, including tap location, and fittings

G. Specifications and Addenda: Legibly mark each section to record:

1. Manufacturer, trade name, catalog number and supplier of each product and item of equipment actually installed.
2. Changes made by field order or by change order.

H. Photographs:

1. Manufacturer, trade name, catalog number, and supplier of each product and item of equipment actually installed.
2. Changes made by field order or by change order.

1.05 SUBMITTAL

A. Record drawings shall be submitted to the Engineer with pay applications and partial and final releases in the following formats:

1. All incoming as-built survey AutoCAD drawing files shall be received on CD-ROM in a jewel case and in state plane coordinates. The disk label shall include the following:
 - a. Engineering and/or Survey Company Name with prepared by statement
 - b. Project Name
 - c. Date the data is burned onto disk
 - d. Designate "Record Drawings", "Preliminary Record Drawings", or "Final Record Drawings"
2. Four (4) - 24" by 36" hard copies, signed and sealed.
3. An electronic PDF of the record drawing.
4. AutoCAD Files must be submitted in DWG format, latest AutoCAD version.
5. Each file should be for one section of development and one layer as described in 1.04. Multiple sections will not be accepted in one file.
6. Tie into section corners in the Florida State Plane Coordinate System to insure proper orientation at each end of baseline. Section corner tie sheets can be obtained from the City of Port St. Lucie Surveyor's web page

- B. At Contract close-out, deliver Record Documents to Engineer for the Owner.
- C. Accompany submittal with transmittal letter in duplicate, containing:
 - 1. Date
 - 2. Project title and number
 - 3. Contractor's name and address
 - 4. Title and number of each Record Document
 - 5. Signature of Contractor or his authorized representative

1.06 AS-BUILT SURVEYS

- A. CONTROL INFORMATION FOR AS-BUILT UTILITY SURVEY WORK
 - 1. All as-built drawings shall state in 1" lettering "AS-BUILT RECORD SURVEY" located in the bottom right hand side of the drawing original and/or copies, along with the as-built date.
 - 2. All as-built surveys shall meet the minimum requirements of the Chapter 61G17, Florida Administrative Code Pursuant to Section 472 of the Florida Statutes. All surveys shall be based on a minimum horizontal control Third Order, "Class 2."
 - 3. All state plane coordinates shall be based on the Florida State Plane Horizontal Data (East Zone); Florida High Precision Geodetic Network (Superstation) and NAD 83/1990 – final adjustment.
 - 4. State plane coordinates shall be physically tied to a minimum of two known state plane coordinate benchmarks that utilize number 3 above. State plane coordinates shall be shown on survey at benchmarks used.
 - 5. The Contractor shall provide the Engineer and Owner with record drawings in NAVD 88.
 - 6. All record data shall be digitally positioned on the design drawings prepared by the engineer of record. Said design drawings shall be complete and include both plan and profile views of the infrastructure.
 - 7. All as-builts shall clearly depict as-built utility lines that were constructed along with all easements.
 - 8. All as-builts shall include the information required by City of Port St. Lucie Standards.

PART 2 – PRODUCTS

NOT USED

PART 3 – EXECUTION

NOT USED

END OF SECTION

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SECTION 01740

WARRANTIES AND BONDS

PART 1 - GENERAL

1.01 REQUIREMENTS INCLUDED

- A. Compile specified warranties and bonds.
- B. Compile specified service and maintenance contracts.
- C. Co-execute submittal when so specified.
- D. Review submittals to verify compliance with Contract Documents
- E. Submit to Engineer for review and transmittal to Owner

1.02 RELATED REQUIREMENTS

- A. Drawings and general provisions of the Contract, including the City of Port St Lucie Contract Terms and Conditions Sections I thru XXX and Division 1 Specification sections, apply to this section.
- B. Specified in other Sections:
 - 1. Section 01700: Contract Close-Out
- C. Each respective section of Specifications shall have Warranties and Bonds required for specific products.
- D. Provisions of Warranties and Bonds, Duration: The respective section of specification which specifies the product.

1.03 SUBMITTAL REQUIREMENTS

- A. Assemble warranties, bonds, and service and maintenance contracts executed by each of the respective manufacturers, suppliers, and subcontractors.
- B. Table of Contents: Neatly typed, in orderly sequence. Provide complete information for each item.
 - 1. Product or work item
 - 2. Firm, with name of principal, address, and telephone number.

3. Scope
4. Date of beginning of warranty, bond, or service and maintenance contract.
5. Duration of warranty, bond, or service maintenance contract.
6. Provide information for Owner's personnel:
 - a. Proper procedure in case of failure
 - b. Instances which might affect the validity of warranty bonds.
7. Contractor, name of responsible principal, address, and telephone number.

1.04 FORM OF SUBMITTALS

- A. Prepare in duplicate packets.
- B. Format:
 1. Size 8-1/2" X 11" punched sheets for 3-ring binder
 - a. Fold larger sheets to fit into binders
 2. Cover: Identify each packet with typed or printed title "WARRANTIES AND BONDS." List:
 - a. Title of project
 - b. Name of Contractor
- C. Binders: Commercial quality, three-ring, with durable and cleanable plastic cover.
- D. Provide one electronic Adobe Acrobat format copy of warranties, bonds, and service maintenance contract on Compact Disc.

1.05 TIME OF SUBMITTALS

- A. Make submittals within ten days after Date of Substantial Completion, prior to final request for payment.
- B. For items of work where acceptance is delayed materially beyond the Date of Substantial Completion, provide updated submittal within ten days after acceptance, listing the date of acceptance as the start of the warranty period.

1.06 SUBMITTALS REQUIRED

- A. Submit warranties, bonds, and service and maintenance contracts as specified in the respective sections of Specifications, as appropriate.

PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTION

NOT USED

END OF SECTION

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SECTION 02016

EXISTING UTILITIES AND UNDERGROUND STRUCTURES

PART 1 – GENERAL

1.01 GENERAL

- A. The plans depict the approximate location of the existing utilities. The locations of those facilities (horizontal and vertical) were obtained from survey information, Utility Atlas and Record Drawings provided by the applicable Utility Owners, and a limited amount of utility soft dig information.
- B. Existing utilities shown are located according to the information available to the Engineer at the time of the topographic survey. Guarantee is not made that all existing underground utilities are shown or that the location of those shown are entirely accurate. Finding the actual location of any existing utilities is the Contractor's responsibility and shall be done before he commences and work in the vicinity. Furthermore, the Contractor shall be fully responsible for any and all damages due to the Contractor's failure to exactly locate and preserve any and all underground utilities.

1.02 CONTRACTOR'S RESPONSIBILITIES

- A. Contractor shall notify the Sunshine State One Call of Florida (SSOCF) service (811) 48 hours prior to digging for direct bury, as required by Florida Statutes Chapter 556 throughout the duration of the construction project.
- B. Locate the cables, ducts, conduit, pipeline, etc. in advance of the proposed construction.
- C. Notify Engineer of any substantial changes and/or conflicts that would require a deviation in the plans. Late discovery of existing underground utilities does not constitute "required" deviations should early discovery prevent them.
- D. Repair any damage done to existing utilities at no additional expense to the Owner.
- E. Remove or modify those utilities scheduled to be removed or modified on the plans.
- F. Provide support of existing utilities that are to remain and be protected while uncovered during installation of the new improvements or removal of existing items required to be removed.

1.03 PRECONSTRUCTION VIDEO

- A. At least one (1) week prior to the start of construction, the Contractor shall have video recordings taken of the entire project area. This area includes, but is not limited to, the entire length of the utility work and all locations where work may occur on or near private property. Such recordings shall be provided to the Owner and Engineer before the commencement of construction. These recordings shall serve as record of the conditions as they existed prior to the start of the work. They will be used in the event of a dispute that arises from restoration or damage claims from property owners along the project corridor. The Contractor shall pay particular attention to existing damage on public and private property near the work area and ensure that these items are documented on the video.

- B. Video tapes are to be delivered to the Owner and Engineer on a DVD in a standard video format that is able to be viewed on a Windows operating system. All video tapes shall become the property of the Owner.

PART 2 – PRODUCTS

NOT USED

PART 3 – EXECUTION

NOT USED

END OF SECTION

SECTION 02110

CLEARING AND GRUBBING

PART 1 - GENERAL

1.01 SCOPE

- A. The work to be performed under this item shall consist of either the clearing of or the clearing and grubbing of the area of construction as designated on the drawings.
- B. Clearing - Where only clearing is required it shall consist of the cutting and removal of all trees, stumps, bush, logs, hedges, and the removal of all fences, concrete, debris, asphalt, and other loose or projecting material from the designated area. The grubbing of stumps and roots will be required.
- C. Clearing and Grubbing - Clearing and grubbing shall consist of clearing the surface of the ground of the designated areas of all trees, stumps, down timber, logs, snags, brush, undergrowth, hedges, heavy growth of grass or weeds, fences, structures, debris, and rubbish of any nature, natural obstructions or such material which, in the opinion of Engineer, is unsuitable, including grubbing of stumps, roots, matter roots, foundations, and disposal from the project of all spoil materials resulting from clearing and grubbing by burning or otherwise.

1.02 REFERENCES

- A. Florida Department of Transportation Standard Specifications for Road and Bridge construction (F.D.O.T.), latest edition.

PART 2 - MATERIALS

2.01 MATERIALS FOR REPLACEMENT

- A. All materials required to be brought on to the site for filling of holes caused by grubbing or otherwise shall be as specified in Section 02200 – Earthwork, Excavation and Backfill.

PART 3 - EXECUTION

3.01 SCHEDULE

- A. Contractor shall schedule the clearing or clearing and grubbing work at a satisfactory time in advance of the project improvement construction operation.

3.02 SPOIL MATERIALS REMOVAL

- A. All materials to be disposed of by removal from the site shall be disposed of off site in a legal manner by the Contractor at the Contractor's expense. The manner and location of disposal of materials shall be subject to review by Engineer and shall not create an unsightly or objectionable view.

3.03 CLEARING

- A. Clear the area of all objectionable materials. Trees and other debris unavoidably falling outside the specified limits must be cut up, removed, and disposed of in a satisfactory manner. Preserve and protect from injury all trees not to be removed. The trees, stumps, and brush shall be cut to a height of not more than 12-inches above the ground. The grubbing of stumps and roots will be required.
- B. On site burning of debris will not be allowed.

3.04 CLEARING AND GRUBBING

- A. In areas designated to be cleared and grubbed, all stumps, roots, buried logs, brush, grass, and other unsatisfactory materials shall be removed.
- B. All holes remaining after the grubbing operation in embankment areas shall have the sides broken down to flatten out the slopes, and shall be filled with acceptable material, moistened, and properly compacted in layers to the density required in Section 02200. The same construction procedure shall be applied to all holes remaining after grubbing in excavation areas where the depth of holes exceeds the depth of the proposed excavation.

END OF SECTION

SECTION 02150

DEWATERING

PART 1 – GENERAL

1.01 SECTION INCLUDES

- A. The work covered by this Section consists of furnishing all permits, labor, equipment, appliances, and materials, and performing all operations required for dewatering all excavations, if required, complete.

1.02 RELATED SECTIONS

- A. Drawings and general provisions of the Contract, including the City of Port St Lucie Contract Terms and Conditions Sections I thru XXX and Division 1 Specification sections, apply to this section.
- B. Specified in other Sections:
 - 1. Section 01060: Regulatory Requirements and Notifications
 - 2. Section 02200: Earthwork, Excavation, and Backfill.

PART 2 - PRODUCTS

2.01 TEMPORARY FACILITIES

- A. All materials and equipment shall be suitable and adequate to function continuously as a dewatering system.
- B. All material and equipment used in the dewatering system remain the property of the Contractor and shall be removed off-site when dewatering is completed.
- C. All dewatering equipment shall conform with the noise standards set forth in the City of Port St. Lucie Code of Ordinances.

2.02 SUBMITTALS

- A. Submit the dewatering method or plan in accordance with Submittal specifications prior to commencing dewatering if it is determined by the Contractor that dewatering beyond that allowed by a no-notice dewatering permit is required to construct the project.

- B. The Contractor shall prepare and submit the necessary permit applications and supporting documents for the purposes of obtaining a dewatering permit from the South Florida Water Management District and any other required agencies.

PART 3 - EXECUTION

3.01 METHODS

- A. The method of dewatering is to be selected by the Contractor and may include:
 - 1. Wellpoints
 - 2. Sump/Trash pumps
 - 3. Bedding rock
 - 4. Dewatering wells
 - 5. Other approved items.

3.02 DISCHARGE

- A. The Contractor shall provide all labor, materials, tools and equipment necessary to properly control the quality of the discharge from his dewatering operations as described herein. The Contractor shall comply with all applicable laws, rules, and regulations governing the discharge of water from his dewatering operations.
- B. Contractor shall not discharge water in any manner that will:
 - 1. Adversely affect water quality of nearby water bodies.
 - 2. Violate Federal, State or local laws or regulations.
 - 3. Allow discharge to flow onto private property.
 - 4. Hamper movement of traffic.
 - 5. Damage portions of the work previously constructed.
 - 6. Damage portions of existing facilities or structures.
 - 7. Violate the conditions of the SFWMD Dewatering Permit.
 - 8. Violate the conditions of the Stormwater Pollution Prevention Plan.
- C. Contractor shall obtain and pay for any permits required to discharge the dewatering waters.
- D. Contractor shall coordinate and pay for any water quality monitoring program that may be required by the applicable dewatering permit(s).

END OF SECTION

SECTION 02200

EARTHWORK, EXCAVATION, AND BACKFILL

PART 1 - GENERAL

1.01 SECTION INCLUDES

The work covered by this section consists of furnishing all labor, equipment, and materials, and performing all earthwork operations to include:

- A. Excavation and backfill of structures, foundations, and pavements.
- B. Surface preparation for structures, foundations, and pavements.
- C. Excavation and backfill of pipe trenches.
- D. Roadway area grading.
- E. Soil compaction and stabilization requirements for pipe trenches and roadway areas.
- F. Soil testing for pipe trenches and parking areas.

1.02 REFERENCES

- A. Florida Department of Transportation Standard Specifications for Road and Bridge Construction, Latest Edition.
- B. American Society for Testing and Materials (ASTM)
 - D698 Moisture-Density Relationship of Soils.
 - D1556 Standard Method of Test for Density of Soil in Place by Sand Cone Method.
 - D1557 Method for Test for Moisture-Density Relations of Soils Using a 10-Pound Rammer and 18-Inch Drop.
 - D2487 Classification of Soils for Engineering Purposes.
 - D6938 Density of Soil and Soil-Aggregate in Place by Nuclear Methods

1.03 RELATED SECTIONS SPECIFIED ELSEWHERE

- A. Drawings and general provisions of the Contract, including the City of Port St Lucie Contract Terms and Conditions Sections I thru XXX and Division 1 Specification sections, apply to this section.
- B. Specified in other Sections:
 - 1. Section 01410: Testing Laboratory Services
 - 2. Section 02016: Existing Utilities and Underground Structures
 - 3. Section 02150: Dewatering
 - 4. Section 02510: Paving and Surfacing
 - 5. Section 02660: Pressure Pipe Systems
- C. City of Port St. Lucie Utility Standards Manual
- D. FDOT Utility Accommodation Manual

1.04 FIELD MEASUREMENTS AND COORDINATION

- A. Verify that survey benchmark, control point, and intended elevations for the work are as shown on the Drawings.
- B. Verify that work associated with lower elevation utilities is complete before placing higher elevation utilities.

1.05 SUBSURFACE SOILS DATA

- A. Owner and Engineer make no representations or statements as to site or soil conditions, and therefore do not assume any responsibility for actual site or soil conditions. It shall be Contractor's responsibility to determine for himself existing site and/or soil conditions.

PART 2 - PRODUCTS

2.01 EXCAVATION

- A. All excavation is unclassified. Complete all excavation regardless of the type, nature, or condition of the materials encountered.

2.02 SOURCE QUALITY CONTROL

- A. If tests for a material type fail three times, the Engineer may reject the source supplier and require the Contractor to submit a new source for approval, at no additional cost to the Owner. The in-situ material is considered acceptable material and may be used, provided it meets the specified requirements.

- B. Quality control of the work shall be the Contractor's responsibility and the Contractor shall make every effort to produce the best quality work as specified on the Drawings and in these Specifications.

2.03 STRUCTURAL FILL AND BACKFILL

- A. Fill and backfill under and around all structures shall be suitable on-site excavated material or approved imported material. Material shall be free of organic material, shall not have more than 10 percent by dry weight passing the U.S. Standard No. 200 sieve, and shall have no rocks larger than 3 inches in size. On-site Fine Sand (SP), without roots or other deleterious materials, is suitable material. Imported material may be provided by the Contractor at no additional cost to the Owner.
- B. On site soils with more than 10% by dry weight passing the U.S. Standard No. 200 sieve and/or particle sizes larger than 3 inches are not suitable for use as fill under pavements or structures.
- C. Backfill behind walls shall be as specified above except that they shall not have more than 4% by dry weight passing the U.S. Standard No. 200 sieve.

2.04 EARTHFILL

- A. On-site excavated material free from roots, trash, and rocks larger than 3 inches.

2.05 FLOWABLE FILL

- A. Provide and place flowable fill in accordance with the requirements of Section 121 of the Florida Department of Transportation Standard Specifications for Road and Bridge Construction, Latest Edition.

2.06 WATER FOR COMPACTION

- A. Contractor shall furnish potable water, as required. Contractor may coordinate with the City to arrange for a hydrant meter for water during construction. Costs associated with the hydrant meter shall be paid for by the Contractor. Water trucks shall be used as required.

2.07 EQUIPMENT

- A. All equipment shall be suitable and adequate to perform the work specified. Compaction equipment shall be vibratory type. It is recommended that the Contractor perform a pre-construction assessment of existing adjacent structures and monitor those structures for settlement during the construction period. Contractor shall notify Owner of any settlements that occur at

existing adjacent structures.

PART 3 – EXECUTION

3.01 PREPARATION

- A. Identify required lines, levels, contours, and datum locations. Protect benchmarks, survey control points, sidewalks, paving, and curbs from excavating equipment and vehicular traffic.
- B. Locate, identify, and protect utilities that remain from damage.

3.02 STRIPPING TOPSOIL

- A. See Section 02110, Clearing and Grubbing. Stripping of topsoil shall be performed prior to any cutting, excavation, removal and/or replacement or fill materials.
- B. Strip topsoil from designated areas within boundaries of proposed construction lines to a depth of approximately 6 inches to 8.5 inches. The top materials stripped shall be removed and disposed of off site, unless authorized for use on the site landscaping areas by the Engineer or Owner. Top materials shall not be used under roadway or parking areas.
- C. Stripping of topsoil shall ensure the entire site is stripped and scraped clean of all brush, weeds, grass, roots, vegetation, etc.

3.03 CUTTING

- A. Except as otherwise specified, after stripping of topsoil, all site areas which are above elevation required shall be cut to subgrades required by drawings.

3.04 FILLING

- A. Except as otherwise specified, after stripping of topsoil, all site areas which are below elevation required shall be compacted as specified and then over such areas clean granular fill placed and compacted in layers not exceeding 6 inches in uncompacted thickness. Each layer of fill shall be compacted to at least 95% of the modified proctor maximum dry density (ASTM D1557). Filling and compaction shall continue until subgrades required for various areas are reached. All holes and depressions caused from removal of trees, stumps, etc. shall be filled and compacted. Fill shall be good clean material as previously specified.

3.05 EXCAVATION UNDER STRUCTURES AND PAVEMENT AREAS

- A. Excavation shall be performed to elevations and dimensions required by drawings with suitable allowance made for construction operations and inspections. Excavation carried to depths below required elevations shall be replaced in loose layers a maximum of 6 inches in depth and compacted in a manner to achieve a minimum density of 98% as determined by a modified proctor in accordance with ASTM D-1557. Contractor may place additional concrete in lieu of replacing and compacting excess excavation as specified above to fill excess cut. Correction of excess cut shall be responsibility of Contractor at no additional cost to Owner.
- B. Compact disturbed load bearing soil in direct contact with foundations to achieve a minimum density of 98% as determined by a modified proctor in accordance with ASTM D-1557.
- C. Verify that the specified density extends to 2 feet below the bottom of the structure or pavement base course to be installed.
- D. Slope banks with machine to angle of repose or provide necessary shoring.
- E. Do not interfere with 45 degree bearing splay of existing foundations without providing adequate means of shoring protection.
- F. Grade top perimeter of excavating to prevent surface water from draining into excavation.
- G. Notify Engineer of unexpected subsurface conditions and discontinue affected work in area until notified to resume work.
- H. Correct areas over excavated in accordance with this section.
- I. Remove excavated material unsuitable for backfill from site.
- J. When muck or other deleterious materials is encountered in the excavation, it shall be completely removed within the area of the structure or pavement and to a depth where acceptable material is encountered. After removal of all muck or other deleterious material, the area shall be backfilled with approved fill material to the specified grade.

3.06 TRENCH EXCAVATION AND PREPARATION

- A. Excavation: Excavate as required for the installation of all piping, utilities, conduits, and appurtenances.
- B. Trench Width: Cut trenches sufficiently wide to enable installation, compaction

and inspection. The maximum width will not be limited except where excessive trench width would cause damage to adjacent structures or piping.

- C. Grade: Excavate the bottom of the trench to the line and grade shown, or as established by the Engineer with proper allowance for pipe bedding.
- D. All trench work shall comply with OSHA Standards and the Trench Safety Act of 1990, with latest revisions.
- E. Piping shall be installed in a dry trench.
- F. When acceptable material is encountered in the trench, the bottom shall be excavated and graded to the depth required so as to provide a uniform and continuous bearing and support for the pipe on solid and undisturbed ground at every point between bell holes.
- G. Bell holes shall be provided at each joint to permit the joint to be made properly. At no time shall the bells support the pipe when in the trench.
- H. When muck or other deleterious materials is encountered in the trench, it shall be completely removed for the width of the trench at the pipe and to a depth where acceptable material is encountered. After removal of all muck or other deleterious material, the trench shall be backfilled with bedding material to the bottom of pipe grade.

3.07 MAINTENANCE OF EXCAVATION

- A. The excavation shall be maintained at a dry condition at all times.
- B. All side slopes shall be such that material will not slide into the bottom of the excavation and any material doing so shall be immediately removed. Trench side slopes shall be in accordance with local codes, OSHA requirements, and the Trench Safety Act.
- C. All excavated material shall be piled in a manner that will not endanger the work and that will avoid obstructing sidewalks and driveways. Hydrants under pressure, valve pit covers, valve boxes, curb stop boxes, fire and police call boxes, or other utility controls shall be left unobstructed and accessible until the work is completed.
- D. Trees, shrubbery, fences, poles, bollards, and all other property and surface structures shall be protected unless their removal is shown on the drawings or authorized by the Engineer. When it is necessary to cut roots and tree branches, such cutting shall be done under the supervision and direction of the Engineer.

- E. The attention of the Contractor is drawn to the fact that during excavation at the project site, the possibility exists of the Contractor encountering various utilities (water, chemical, electrical, gas, or other) not shown on the drawings. The Contractor shall exercise extreme care before and during excavation to locate and flag these lines so as to avoid damage to the existing lines. Should damage occur to an existing line, the Contractor shall repair the line at no cost to the Owner.
- F. It is the responsibility of the Contractor to ensure that all utility or other poles, the stability of which may be endangered by the close proximity of excavation, are temporarily stayed in position while the work proceeds in the vicinity of the pole and that the utility or other companies concerned be given reasonable advance notice of any such excavation by the Contractor.

3.08 BACKFILL UNDER STRUCTURES AND PAVEMENT AREAS

- A. Backfilling of excavated areas under, around, or over building and structural appurtenances and pavement, concrete, or pavers shall be performed with clean fill materials which are free of debris, organics, trash, or other deleterious substances. Suitable compaction equipment shall be used to obtain density described previously for entire depth of backfilling. Each layer of backfill under structures, pavements, and pavers shall be compacted to a minimum of 98% density as determined by a modified proctor in accordance with ASTM D-1557. Each layer of compacted backfill shall not exceed 6 inches in thickness. The completed, compacted surface shall be at the proper final subgrade elevation.
- B. Verify that the specified density extends to 18 inches below the bottom of the structure or pavement base course to be installed.

3.09 TRENCH BACKFILLING

- A. Haunch Backfill: Carefully place Pipe Bedding material so as not to damage the pipe in maximum 6-inch loose lifts and compact to the pipe centerline. Use hand-held compaction equipment.
- B. Pipe Zone: Backfill with Pipe Bedding material in maximum 6-inch loose lifts and compact to a point 12 inches above the pipe crown.
- C. Under Pavement/Concrete/Paver Areas, and Structures: In areas where backfill settlement must be held to a minimum, backfill above the pipe zone with Pipe bedding material in maximum 6 inch loose lifts and compact to a minimum 98% maximum dry density (ASTM D1557) up to the subgrade elevation. Backfilling and compaction within the FDOT Rights of Way shall be in accordance with the FDOT Standard Specifications for Road and Bridge Construction, Latest Edition.

- D. Outside Pavement/Concrete/Paver Areas: In areas where backfill settlement is not critical, backfill above the pipe zone with earthfill material to a density equal to or greater than the soil adjacent to the pipe trench, but not less than 95% of the maximum dry density (ASTM D1557), to final grade.
- E. No material shall be used for backfilling which contains muck or other deleterious material or material with an excessive void content. All backfill shall be composed of select clean granular material.
- F. All trenches and excavation shall be backfilled immediately after all pipe and joints have been investigated and approved by the Engineer or the City, subject to satisfactory pressure and leakage test results, as required.
- G. Backfill, in general, shall be kept up with the rate of pipe laying. No more than 200 feet of pipe trench shall be open at one time at any one project location.

3.10 BACKFILL AROUND STRUCTURES

- A. Obtain Engineer's acceptance of concrete work and attained concrete strength prior to backfilling.
- B. Backfill with Structural Backfill material placed in maximum 6-inch loose lifts and compacted to a minimum 98% of maximum dry density (ASTM D 1557).
- C. Compact backfill adjacent to structures with equipment that will not damage the structure.
- D. Backfill with flowable fill or other material shall be only if reviewed and approved by the Engineer.

3.11 SITE GRADING

- A. Fill and contour site areas with earthfill material to elevations shown and as required to prepare the site for landscape grading and sodding.
- B. Place materials in maximum 6-inch loose lifts and compact as required to limit subsequent settlement.

3.12 COMPACTION TESTING

- A. In-situ compaction testing shall be performed by a certified laboratory.
- B. Compaction testing shall be done by nuclear density equipment or other approved methods. (ASTM D-2937, D-1557, D-6938)

- C. Density testing shall be performed as follows:
 - 1. Pipe Trenches: 1 test per lift per 100 feet of pipe.
 - 2. Fill Under/Around Structures: 1 test per lift under each structure or 1 backfill test per lift per drainage or sanitary structure installed.
 - 3. Fill Under Pavement Areas: 1 test per lift per 2,000 square feet of compacted surface area.
- D. Test results in a specific location are only representative of a larger area if the Contractor has used consistent compaction means and methods and the soils are practically uniform throughout. If it is determined by the Owner/Engineer that there are variations in the compaction methods and/or soil uniformity, additional testing may be required.

3.13 FINAL AND FINISH GRADING

- A. Using clean topsoil, perform all final and finish grading in all yard and planting areas indicated on drawings. Topsoil shall be placed to a minimum of 4-inch thickness, rototilled to a minimum depth of 8 inch, leveled and finish graded in all areas. No pavement base course material or broken asphalt will be allowed as topsoil materials in landscaping areas.
- B. Final grading shall be performed, and grades shaped to finished elevations indicated. Finish grades (top of the soil) shall be approximately 1-1/2 inch below edges of pathways, curbs and other paved or concrete slabs. After sod installation, the top of the sod shall not be more than 1/2 inch below or shall be flush with the grade established by any adjacent paved or curbed surface.
- C. The Contractor shall verify that all finish subgrades are correct prior to beginning installation of sod and planting materials. Upon completion of the project work, the Contractor shall prepare "record drawings" verifying that all finish grades are in accordance with the contract documents and shall submit same to the Engineer for review and acceptance prior to requesting final inspection of the project. The "record drawings" shall be prepared by a surveyor registered in the State of Florida.
- D. Upon project completion, all areas of site within immediate construction and adjacent areas shall be completely cleaned of all debris occasioned by this construction. Particular attention is called to any cement, mortar, masonry drippings and plaster which shall be completely removed from planting and lawn areas and shall be disposed of off site.
- E. All areas adjacent to site and all areas not within contract construction areas shall be left in reasonably same condition as they were found prior to commencement of construction.

- F. Any damage to the existing adjacent facilities including adjacent lakes or roads, and related areas such as, but not limited to, finish grades, slopes, grass sod, structures, pipe, etc. shall be repaired and restored to a proper and appropriate condition acceptable to the Owner and Engineer.

3.14 EXCESS MATERIAL

- A. Remove all excess suitable material from the site and dispose of at Contractor's expense.
- B. Unsuitable materials shall also be removed and disposed of off-site at Contractor's expense.

END OF SECTION

SECTION 02270

EROSION AND SEDIMENTATION CONTROL

PART 1 - GENERAL

1.01 DESCRIPTION

- A. The work specified in this Section consists of measures required to control erosion on the project and in areas outside the project area where work is accomplished in conjunction with the project, so as to prevent pollution of water, detrimental effects of public or private property adjacent to the project area, and damage to work on the project. These measures will consist of construction and maintenance of temporary erosion control features or, where practical, the construction and maintenance of permanent erosion control features.

1.02 RELATED REQUIREMENTS

- A. Drawings and general provisions of the Contract, including the City of Port St Lucie Contract Terms and Conditions Sections I thru XXX and Division 1 Specification sections, apply to this section.
- B. Specified in other Sections:
 - 1. Section 02485: Grassing
 - 2. Section 01060: Regulatory Requirements and Notifications

1.03 START OF WORK

- A. Do not start work until erosion control measures are in place.

PART 2 - PRODUCTS

2.01 GENERAL

- A. No testing of materials used in construction of temporary erosion control features will be required.
- B. Materials used for the construction of the temporary erosion and sedimentation control measures not to be incorporated into the completed project may be new or used.

PART 3 - EXECUTION

3.01 GENERAL

- A. Construct temporary and permanent erosion and sediment control measures to prevent the pollution of adjacent water ways in conformance with the laws, rules, and regulations of Federal, State, and local agencies and the conditions.
- B. Temporary erosion control features shall consist of, but are not limited to, temporary grassing, temporary sodding, temporary mulching, spoil containment pits, sandbagging, slope drains, sediment basins, artificial coverings, berms, baled hay or straw, floating silt barriers, staked silt barriers, and staked silt fences.
- C. Incorporate permanent erosion control features into the project within seven (7) days of any construction activity. Correct conditions, using temporary measures, that develop during construction to control erosion prior to the time it is practical to construct permanent control features.
- D. The Contractor will be required to prepare, submit, and obtain a Notice of Intent (NOI) to use Generic Permit for Stormwater Discharge from the Florida Department of Environmental Protection which will include a Stormwater Pollution Prevention Plan (SWPPP) prepared by the Contractor as required by F.A.C. 62-621.300(4) and the Environmental Protection Agency (EPA) as part of the National Pollutant Discharge Elimination System (NPDES) prior to beginning work.

3.02 INSTALLATION

- A. Temporary Grassing: This work shall consist of furnishing and placing grass seed in accordance with Section 02485, Grassing.
- B. Baled Hay or Straw:
 - 1. This work shall consist of construction of baled hay or straw dams to protect against downstream accumulations of silt. The baled hay or straw dams shall be constructed in accordance with the details shown in FDOT's Roadway and Traffic Design Standards.
 - 2. The dam shall be placed so as to effectively control silt dispersion under conditions present on this project. Alternate solutions and usage of materials may be used if approved.
- C. Temporary Silt Fences and Staked Silt Barriers: This work shall consist of furnishing, installing, maintaining, and removing staked turbidity barriers in accordance with the manufacturer's directions, these specifications,

conditions of the project permits, and the details as shown in FDOT's Roadway and Traffic Design Standards.

3.03 REMOVAL OF TEMPORARY EROSION CONTROL FEATURES

- A. In general, remove or incorporate into the soil any temporary erosion control features existing at the time of construction of the permanent erosion control features in such a manner that there will be no detrimental effect.

3.04 MAINTENANCE OF EROSION CONTROL FEATURES

- A. General: Provide routine maintenance of permanent and temporary erosion control features until the project is completed and accepted.
- B. Maintenance of erosion control measures shall be in strict accordance with condition of the applicable NPDES, FDOT, and City of Port St. Lucie requirements.

3.05 PROTECTION DURING SUSPENSION OF CONTRACT TIME

- A. In the event that it is necessary that the construction operations be suspended for any appreciable length of time, shape the top of the earthwork in such a manner as to permit runoff of rainwater and construct earth berms along the top edges of embankments to intercept runoff water. Should such preventive measures fail, immediately take such other action as necessary to effectively prevent erosion and siltation.

END OF SECTION

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SECTION 02485

GRASSING

PART 1 - GENERAL

1.01 DESCRIPTION OF WORK

The Contractor shall furnish all labor, equipment, and materials necessary for grassing all areas disturbed by his operations and any other areas on the plans indicated to receive grassing. It is the intent of this specification that damaged areas are to be replaced in kind with sod to be used for all maintained yard areas. Engineer shall also designate the type of sod to be used in each area. Contractor shall take all steps practical to minimize the area required to be sodded. All grassing shall be in accordance with Section 570-1 through 570-9 of the FDOT Standard Specifications for Road and Bridge Construction, Latest Edition, except as modified herein.

1.02 STORAGE OF MATERIALS

The Contractor shall provide space for storage of sod prior to placement in a manner that will not endanger or restrict pedestrian or vehicular traffic or interfere with other aspects of the work.

PART 2 - PRODUCTS

2.01 SOD

- A. Types: Sod shall be St. Augustine, Floratam, Argentine Bahia depending on type of existing sod in adjacent area to be matched. Sod shall be well matted with roots. Where sodding will adjoin, or be in sufficiently close proximity to private lawns, types of sod other than those listed above may be used if desired by the affected property owners and approved by the Engineer. Sod shall be delivered in commercial-size rectangles, preferably 12-inch by 24-inch or larger.
- B. Condition: The sod shall be sufficiently thick to secure a dense stand of live grass. The sod shall be live, fresh, and uninjured at the time of planting. It shall have a soil mat of sufficient thickness adhering firmly to the roots to withstand all necessary handling. It shall be reasonably free of weeds and other grasses. It shall be planted as soon as possible after being dug and shall be kept moist from the time it is planted.

2.02 MULCH

The mulch material used shall normally be dry mulch. Dry mulch shall be straw or hay, consisting of oat, rye, of wheat straw, or of pangola, peanut, coastal Bermuda, or Bahia grass hay. Only deteriorated mulch which can readily be cut into the soil shall be used.

2.03 GRASSING EQUIPMENT

- A. Equipment for Cutting Mulch into Soil: The mulching equipment shall be of a type capable of cutting the specified materials uniformly into the soil, and to the required depth. Harrows will not be allowed.
- B. Rollers: A cultipacker, traffic roller, or other suitable equipment will be required for rolling the grassed areas.

PART 3 - EXECUTION

3.01 GENERAL CONSTRUCTION METHODS

Mulching operations will not be permitted when wind velocities exceed 15 miles per hour. Whenever a suitable length of right-of-way or adjacent area has been graded, it shall be made ready, when directed by the Engineer, and grassed in accordance with these specifications. Grassing shall be incorporated into the project at the earliest practical time.

3.02 SODDING

- A. Preparation of Area to be Sodded: The ground which is to receive sod shall have been graded to proper elevations (2" below sodded grade) to match pre-construction conditions or proposed grades. All disturbed swales and ditches shall have been restored to their pre-construction condition or better. The pre-construction grade shall be maintained, and the prepared soil shall be loose and reasonable smooth. It shall be reasonably free of large clods, roots, patches of existing grass, and other material which will interfere with the sod-laying operations or subsequent mowing and maintenance operations.
- B. Laying of Sod: Sod shall be installed in all areas so designated by Engineer. Sod shall be carefully placed so that each piece abuts flush to all surrounding sod, regardless of whether surrounding sod is new or existing. Where new sod is to be placed adjacent to existing sod, the new sod must be cut in to match the elevation of the existing sod. Uneven sod which might cause mowing problems will be rejected. New sod laid on top of existing sod will also be rejected. All sod placed on steep slopes (greater than 1:1) shall be pinned with a wooden pin to keep it in place.

- C. Rolling: Immediately after completion of the sod laying, the entire sodded area shall be rolled thoroughly with the equipment specified. At least two trips over the entire area will be required.
- D. Watering: Newly sodded areas are to be watered by Contractor as necessary to keep sod alive until the Contract is closed out. Dead sod shall be replaced by Contractor prior to contract closeout.

3.03 MULCHING

- A. Sequence of Operations: The operations involved in the work shall proceed in the following sequence: preparation of the ground and cutting in mulch.
- B. Preparation of Area to be Mulched: The ground over which the mulch is to be laid shall be prepared by disk-harrowing and thoroughly pulverizing the soil to a suitable depth. The prepared soil shall be loose and reasonably smooth. It shall be reasonable free of large clods, roots, and other material which will interfere with the work or subsequent mowing and maintenance operations.
- C. Mulching: When mulching is called for, approximately two inches, loose thickness, of the mulch material shall then be applied uniformly over the area, and the mulch material cut into the soil with the equipment specified, so as to produce a loose mulched thickness of three to four inches. Care shall be exercised that the materials are not cut too deeply into the soil. No artificial watering of the mulch shall be done before it is applied.
- D. Rolling: Immediately after completion of the mulching, the entire grassed or mulched area shall be rolled thoroughly with the equipment specified. At least two trips over the entire area will be required.
- E. Operations on Steep Slopes: On steep slopes when mulching is called for, the mulch material may be anchored down in lieu of being cut into the soil by use of a machine. Anchoring may be done by either of the following methods:
 - 1. Placing a layer of soil, approximately two inches thick by nine inches wide, along the upper limits of the mulch, and spotting soil piles over the rest of the area at a maximum spacing of four feet.
 - 2. Spreading a string net over the mulch, using stakes driven flush with the top of the mulch, at six-foot centers, and stringing parallel and perpendicular, with diagonals in both directions.
- F. Maintenance: The Contractor shall, at his expense, maintain the planted areas in a satisfactory condition until final acceptance of the project. Such

maintenance shall include the filling, leveling, and repairing of any washed or eroded areas, as may be necessary. The Engineer, at any time, may require replanting of any areas in which the establishment of the grass stand does not appear to be developing satisfactorily. If a planted area must be replanted due to the Contractor's negligence, carelessness, or failure to provide routine maintenance of such areas, such replacement shall be at the Contractor's expense. If replanting is necessary due to factors determined to be beyond the control of the Contractor, payment for replacement will be made under the appropriate contract pay items.

END OF SECTION

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SECTION 02510

PAVING AND SURFACING

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. The work covered by this section of the Specifications consists of furnishing all labor, materials, equipment, and supplies, and performing all operations for the construction of pavements under this Contract.

1.02 RELATED REQUIREMENTS

- A. Drawings and general provisions of the Contract, including the City of Port St Lucie Contract Terms and Conditions Sections I thru XXX and Division 1 Specification sections, apply to this section.
- B.
- B. Specified in other Sections:
 - 1. Section 01410: Testing Laboratory Services
 - 2. Section 02200: Earthwork, Excavation and Backfill
 - 3. Section 02580: Pavement Markings

1.03 REFERENCED SPECIFICATIONS

- A. Florida Department of Transportation (FDOT) Standard Specifications for Road and Bridge Construction, Latest Edition. Referred to in this section as DOT Std. Specs.
- B. City of Port St. Lucie Utility Standards, referred to in these documents as "City Standards."

1.04 SUBMITTALS

- A. Submit name of all material sources to the Engineer. Provide materials from the same approved source throughout the project. All material sources shall be FDOT approved.
- B. Submit proposed job-mix design to the Engineer for review.
- C. Submit written certifications that each material conforms to these specifications.

PART 2 - PRODUCTS

2.01 BASE MATERIAL

- A. Limerock material shall meet the requirements of the City Standards for base material placed within City of Port St. Lucie rights-of-way. If no standard existing, Limerock material shall meet the requirements of Section 911 of the FDOT specifications.
- B. Crushed Concrete may be used upon review and approval by the Engineer. Crushed Concrete shall meet the Sections 204-2.2.2 and 204-2.2.3 of the FDOT requirements for Reclaimed Concrete Aggregate Base Materials. Crushed concrete is not approved for use in City right-of-way.
- C. Contractor to bid and use only one base material throughout the City right-of-way. Contractor can reuse existing base to the greatest extent practical if it is found to be suitable as a base material.

2.02 PRIME AND TACK COATS

- A. The materials used for prime and tack coats shall meet the requirements of Section 300 of the DOT Std. Specs and the City Standards, as applicable.

2.03 ASPHALTIC CONCRETE

- A. Type S-III Asphaltic Concrete shall be used within City of Port St. Lucie right-of-way and shall meet the requirements of Section 331 of the DOT Std. Specs (2000 Edition).

2.04 EQUIPMENT

- A. All equipment associated with the operations of pavement placement and related work shall be entirely suitable for the applicable operations performed and shall be maintained in good condition.

2.05 QUALITY CONTROL

- A. Quality control of the work shall be the Contractor's responsibility and said Contractor shall make every effort to produce the best quality work as specified on the Plans and in these Specifications.
- B. Density tests on the compacted subgrade and base shall be performed by an independent testing laboratory at locations designated by the Engineer.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Verify underground utilities are completed and inspected.
- B. Verify that compacted subgrade is dry and ready to support paving and imposed loads.
- C. Verify gradients and elevations of base are correct.

3.02 SUBGRADE AND SHOULDER STABILIZATION (TYPE C)

- A. The pavement subgrade and roadway shoulders within City of Port St. Lucie right-of-way shall be prepared, graded, stabilized, and compacted to the lines and grades as shown on the Plans in accordance with Type C Stabilization in Section 160 of the DOT Std. Specs. Both shoulder and subgrade to provide minimum 75 lb. Florida Bearing Value or a minimum limerock bearing ratio of 40. Subgrade shall be compacted to not less than 98 percent of the maximum dry density as determined by the modified proctor test (ASTM D1557).

3.03 BASE

- A. Base shall be prepared, graded and compacted to the lines and grades as shown on the Plans and in accordance with Section 200 of the DOT Std. Specs. Base shall be compacted to not less than 98 percent of the maximum dry density as determined by the modified proctor test (ASTM D1557).

3.04 PRIME AND TACK COAT

- A. Base shall receive a prime coat with cover material in accordance with Section 300 of the DOT Std. Specs.
- B. Pavement overlays shall receive a tack coat in accordance with Section 300 of the DOT Std. Specs.

3.05 ASPHALTIC CONCRETE SURFACE COURSE

- A. Asphaltic concrete surface course shall be constructed to a minimum thickness as specified on the Plans and be placed in a minimum of two (2) lifts.
- B. Asphaltic concrete surface course shall be constructed in accordance with Sections 320 and 330 of the DOT Std. Specifications.

- C. All existing exposed edges which abut to new Asphaltic Concrete Surface Course shall be saw cut in a straight and neat appearing line.
- D. All asphaltic concrete surface course pavement replacement shall be placed by mechanical spreading and screeding equipment as specified in Article 320-6.1 of the DOT Std. Specifications unless otherwise indicated. This will require at least an 8 feet width for surface course placement unless specialty equipment is used which has received prior approval of the Engineer.

3.06 FIELD QUALITY CONTROL

- A. Section 01410 - Testing Laboratory Services: Contractor to provide field inspection and testing for compaction densities.

3.07 PROTECTION

- A. Immediately after placement, protect pavement from mechanical injury until surface temperature is less than 140 degrees F (60 degrees C).

END OF SECTION

SECTION 02580

PAVEMENT MARKINGS

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. The work included in this Section consists of applying pavement markings as required for new pavement areas and to restore disturbed pavement areas. Work shall adhere to City of Port St. Lucie or FDOT standards, where applicable.

1.02 RELATED REFERENCES

- A. All markings shall conform to the requirements of the Manual of Uniform Traffic Control Devices and FDOT Roadway and Traffic Design Standards.
- B. Thermoplastic shall conform to the requirements of the FDOT Standard Specifications for Road and Bridge Construction (Section 711), Latest Edition.
- C. Paint shall conform to the requirements of the FDOT Standard Specifications for Road and Bridge Construction (Section 710), Latest Edition.

1.03 RELATED REQUIREMENTS SPECIFIED ELSEWHERE

- A. Drawings and general provisions of the Contract, including the City of Port St Lucie Contract Terms and Conditions Sections I thru XXX and Division 1 Specification sections, apply to this section.

PART 2 - PRODUCTS

2.01 THERMOPLASTIC

- A. Stop bars, centerlines, crosswalk striping, directional arrows and any other markings within the right-of-way to be Alkyd thermoplastic only.
- B. All other markings, including striping designating parking and loading spaces, to be paint type as shown on the plans.

2.02 TEMPORARY MARKINGS

- A. Temporary markings on final asphalt shall be only backed construction tape. Lower asphalt lifts may be marked with paint or any other approved marking material.

2.03 REFLECTIVE PAVEMENT MARKERS (RPM'S)

- A. RPM's shall meet FDOT Class B Specifications.
- B. One blue RPM shall be installed in the center of any roadway adjacent to a fire hydrant.

PART 3 - EXECUTION

3.01 APPLICATION

- A. Thermoplastic shall not be installed on roadway until thirty (30) calendar days after final lift of asphalt has been completed.
- B. If existing marking material is not compatible with Alkyd thermoplastic, it shall be removed prior to installation of new markings.

END OF SECTION

SECTION 02660

PRESSURE PIPE SYSTEMS AND APPURTENANCES

PART 1 - GENERAL

1.01 DESCRIPTION OF WORK

- A. The work covered by this section consists of providing all labor, material, and equipment, and performing all construction required to install the force main, fittings, valves, and accessories as specified and shown on the drawings.

1.02 SUBMITTALS

- A. Reports on pressure tests/leakage tests will be prepared and submitted by the Contractor.
- B. Record drawings must be submitted in accordance with the City of Port St. Lucie Department Standards.
- C. Submit product data for all pipe, service connections, fittings, valves, accessories, and other appurtenances in accordance with Division 1 specifications.

1.03 REFERENCE STANDARDS

- A. Water system components which come into contact with drinking water must conform with ANSI/NSF Standard 61-1991, Drinking Water Components.
- B. All system components shall be supplied and installed per the applicable FDEP and City of Port St. Lucie Standards. Refer to City of Port St. Lucie Standards for a list of qualified products and submittal procedures.
- C. ANSI/ASTM D2466 - Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 40.
- D. ANSI/AWWA C104 – Standard for Cement-Mortar Lining for Ductile-Iron Pipe and Fittings for Water.
- E. ANSI/AWWA C105 – Standard for Polyethylene Encasement for Ductile-Iron Pipe Systems
- F. ANSI/AWWA C110 – Standard for Ductile-Iron and Gray-Iron Fittings, 3 in. through 48 in. for Water and Other Liquids.

- G. ANSI/AWWA C111 – Standard for Rubber-Gasket Joints for Ductile-Iron Pressure Pipe and Fittings.
- H. ANSI/AWWA C115 – Standard for Flanged Ductile-Iron Pipe with Ductile-Iron or Gray Iron Treaded Flanges.
- I. ANSI/AWWA C150 – Standard for the Thickness Design of Ductile-Iron Pipe.
- J. ANSI/AWWA C151 – Standard for Ductile-Iron Pipe, Centrifugally Cast, for Water or Other Liquids.
- K. ANSI/AWWA C153 – Standard for Ductile-Iron Compact Fittings, 3 in. through 24 in. and 54 in. through 64 in. for Water Service.
- L. AWWA C517– Standard for Resilient Seated Plug Valves.
- M. AWWA C509 – Standard for Resilient-Seated Gate Valves for Water Supply Service.
- N. AWWA C512 – Standard for Air-Release, Air/Vacuum, and Combination Air Valves for Waterworks Service.
- O. AWWA C600 – Standards for Installation of Ductile-Iron Water Mains and Their Appurtenances.
- P. AWWA C605 – Standard for Underground Installation of Polyvinyl Chloride (PVC) Pressure Pipe and Fittings for Water.
- Q. AWWA C606 – Standard for Grooved and Shouldered Joints.
- R. AWWA C900 – Standard for Polyvinyl Chloride (PVC) Pressure Pipe, 4 in. through 12 in. for Water Distribution.
- S. AWWA C901 – Standard for Polyethylene (PE) Pressure Pipe and Tubing, ½ in. through 3 in. for Water Services.
- T. AWWA C906 - Polyethylene (PE) Pressure Pipe and Fittings, 4 in. (100 mm) Through 63 in. (1600 mm), for Water Distribution and Transmission
- U. ASTM D1785 - Poly (Vinyl Chloride) (PVC) Plastic Pipe, Schedules 40, 80, and 120.
- V. ASTM D2152 – Test Method for Degree of Fusion of Extruded Poly Vinyl Chloride (PVC) Pipe and Molded Fittings

- W. ASTM D2855 - Making Solvent-Cemented Joints with Poly (Vinyl Chloride) (PVC) Pipe and Fittings.
- X. ASTM D2922 - Test Methods for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth).
- Y. ASTM D3035 - Standard Specification for Polyethylene (PE) Plastic Pipe (DR-PR) Based on Controlled Outside Diameter
- Z. ASTM D3139 - Joints for Plastic Pressure Pipes using Flexible Elastomeric Seals.
- AA. ASTM D3261 - Standard Specification for Butt Heat Fusion Polyethylene (PE) Plastic Fittings for Polyethylene (PE) Plastic Pipe and Tubing
- BB. ASTM D3350 - Standard Specification for Polyethylene (PE) Plastic Pipe and Fitting Materials
- CC. ASTM F437-82 - Threaded Chlorinated Poly Vinyl Chloride (CPVC) Plastic Pipe Fittings, Schedule 80.
- DD. ASTM F439-87 - Standard Specification for Socket - Type Chlorinated Poly Vinyl Chloride (CPVC) Plastic Pipe Fittings, Schedule 80.
- EE. ASTM F714- Standard Specification for Polyethylene (PE) Plastic Pipe (SDR-PR) Based on Outside Diameter
- FF. ASTM 493-85 - Solvent Cements for Chlorinated Poly Vinyl Chloride (CPVC) Plastic Pipe and Fittings.
- GG. ASTM 2164 - Standard Practice for Field Leak Testing of Polyethylene (PE) and Crosslinked Polyethylene (PEX) Pressure Piping Systems Using Hydrostatic Pressure
- HH. NSF-14 - Plastics Piping System Components and Related Materials
- II. NSF-61 - Drinking Water System Components--Health Effects
- JJ. ASME/ANSI B16.5 –1996 – Pipe Flanges and Flanged Fittings.
- KK. ASME/ANSI B 31.3 – 1996 – ASME Code for Pressure Piping.
- LL. ASME/ANSI B 16.9 – Pipe Fittings.

1.04 RELATED REQUIREMENTS

- A. Drawings and general provisions of the Contract, including the City of Port St Lucie Contract Terms and Conditions Sections I thru XXX and Division 1 Specification sections, apply to this section.
- B. City of Port St. Lucie Standards
- C. FDOT Standards
- D. Specified in other Sections:
 - 1. Section 02150: Dewatering
 - 2. Section 02200: Earthwork, Excavation and Backfill
 - 3. Section 02670: Flushing and Testing

1.05 SUBMITTALS

- A. Submit under provisions of Section 01300.
- B. Product Data: Provide data on pipes, casings, pipe fittings, valves, and accessories.
- C. Manufacturer's Certificate: Certify that pipe, fittings, and valves meet or exceed respective ANSI, AWWA, and/or NSF Standards.

PART 2 - PRODUCTS

2.01 GENERAL

- A. Although they may not be specifically shown on the drawings or called for elsewhere in within these Technical Specifications, the Contractor shall include the cost of all fittings, piping supports, and miscellaneous appurtenances needed to provide a secure, working pipe and valve system. Piping shall be supported by mechanical thrust restraints and tie rods as necessary to ensure a stable installation.

2.02 APPROVED PRODUCTS

- A. All products that come shall be as specified by the City Standards.
- B. PVC PIPE
- C. DI Pipe and Fittings

D. Valves and appurtenances

See specification section 02660, Section 2.02A. If no standard exists, the following shall be used:

1. AWWA C900 PVC Pipe
 - a. All PVC pipe shall meet AWWA C-900 Standards and NSF requirements for potable water application. PVC pipe 4" and larger shall be class 150, DR 18 pipe conforming to AWWA C900.
 - b. Fittings used in conjunction with the C900 PVC pipe shall be ductile iron, compact fittings, as detailed on the drawings, mechanical joint.
 - c. PVC forcemain pipe shall be green in color.
2. Schedule 40 PVC Pipe
 - a. Rigid PVC (polyvinyl chloride) compound used in the manufacturer of schedule 40 pipe shall be Type I, grade 1 as identified in ASTM D1784. The pipe shall be NSF rated for potable water.
 - b. PVC schedule 40 shall meet the requirements of ASTM standard D1785 for physical dimensions and tolerances.
 - c. The marking on PVC Schedule 40 pipe shall meet the requirements of ASTM D1785 and state the material designation code, nominal pipe size, schedule of pipe, pressure rating in psi for water at 73° F, the ASTM designation number D1785 and the NSF seal for potable water.
 - d. Fittings used shall be PVC Schedule 40 and solvent welded in accordance with ASTM D1785.

C. FUSIBLE POLY VINYL CHLORIDE (FPVC) PIPE

This section applies to FPVC pressure pipe only. See specification section 02660, Section 2.02A. If no standard exists, the following shall be used:

1. Fusible PVC pipe shall be ASTM D2241, AWWA C900 for municipal piping systems. The pipe manufacturer shall verify that the dimension ratio (DR) is capable of withstanding all forces and pressures that may be applied to the pipe before, during, and after installations of all FPVC piping. The pipe for this project shall be DR-18 at a minimum. Any increases in wall thickness that may be determined as required for the project by the pipe manufacturer and shall be provided by the contractor at no additional cost.

2. All FPVC pipe for pressure pipe shall be in accordance with City of Port St. Lucie Standards.
3. FPVC pipe shall be joined by the heat butt fusion process to produce a homogenous, sealed, leak tight joint unless otherwise noted as a mechanical joint connection. Fusion process shall meet the requirements of ASTM D-3261/D2152. At the point of fusion, the outside diameter and minimum wall thickness shall meet the outside diameter and minimum wall thickness specifications of ASTM F-714. The piping shall be homogenous throughout and free of visible cracks, holes, voids, foreign inclusions, fillers, or other deleterious defects and shall be identical in color, density, melt index, and other physical properties throughout.
4. All fittings for FPVC shall be standard ductile iron fittings as noted in paragraph D.1 thru 4 below.
5. FPVC Pipe shall be color coded GREEN.
6. The manufacturer shall certify that samples of the manufacturer's production pipe have been tested in-house, in accordance with ASTM D-2152. All FPVC pipe shall be manufactured by Underground Solutions, Inc.

D. DUCTILE IRON PIPE

Ductile iron pipe and fittings shall conform to AWWA C150, C151, and C153 and shall be in conformance with the City Utility Standards. Sizes 3" to 12" diameter shall be class 52. Sizes 14" and above shall be class 51. If no standard exists, the following shall be used:

1. Joints: Buried pipe shall be AWWA approved push-on or mechanical joint pipe (AWWA/ANSI C111/C21.11). Exposed joints shall be AWWA approved flanged joint pipe, in accordance with ANSI/AWWA C115, or as detailed on the drawings.
2. Fittings: Buried fittings shall be AWWA approved mechanical joint fittings. Exposed fittings shall be flanged fitting or as detailed on the drawings. Conform to AWWA C153.
3. The internal surface of all piping and fittings in contact with wastewater shall be cement mortar and epoxy lined and seal coated in accordance with AWWA C104, A21, unless other noted.

4. External surfaces of all buried ductile iron pipe and fittings shall be coated with a bituminous coating approximately one mil thick in accordance with AWWA C151/A21.51, latest revision.
5. Restrained joint fittings for 24" and smaller diameter pipe shall be ductile iron, "Flex-Ring" as manufactured by companies listed in the City's Qualified Product List. Restrained joint pipe shall be constructed on all new forcemains adjacent to all bends, crosses, tees, etc., where a change in direction occurs. Refer to the Table on the drawings for restrained pipe lengths.

E. DUCTILE IRON FITTINGS

All products that come into contact with wastewater shall be as specified by the City of Port St. Lucie Standards. If no standard exists, the following shall be used:

1. Wastewater: Ductile iron fittings shall conform to ANSI/AWWA Standard C110 A21.10, latest revision. Fittings 4" and larger shall be cement lined and seal coated in accordance with ANSI/AWWA Standard C104 A21.4, latest revision.

F. DIP PIPE –FORCEMAIN

DIP pipe used for forcemains shall conform to the City of Port St. Lucie Standards and Qualified Materials List. Fittings used in conjunction with the forcemains shall be ductile iron. DIP forcemain pipe shall have a line of green paint or green tape the full length of the new run on top of the pipe and on both sides. Pipe interior and exterior to be coated in accordance with City of Port St. Lucie Qualified Materials List.

G. THRUST RESTRAINT

See specification section 02660, Section 2.02A. If no standard exists, the following shall be used:

1. All bends, tees, crosses, reducers and dead ends shall be restrained through an approved means of joint restraint unless an alternate restraint method is shown on the drawings. All branch valves shall be restrained with joint restraints or approved equal or anchor tees, or anchor couplings. Any line terminated during the construction phase that is a known future extension shall have a plugged valve placed at the end and be restrained. Thrust restraints shall be placed in accordance with the restraint table shown in the construction plans. If

installed cover is less than the depth referenced in the Table, increase restrained length per manufacturer's recommendation. Existing pressure pipes that are modified by the construction or connected to new piping systems shall be restrained by bell restraints, split-ring restraints, or thrust blocks as appropriate.

H. LOCATOR FOR FORCEMAIN PIPE

See specification section 02660, Section 2.02A. If no standard exists, the following shall be used:

1. On all pipe construction, 10 gauge, THHN insulated, solid copper wire shall be laid and secured on top of pipe. Wire shall be continuous from valve box to valve box, wrapped two times around each joint of pipe and extended inside each valve box to enable location devices to be attached without digging up the valve box.
2. Service wire shall be laid in the trench with all services, connected to the main wire and wrapped around the service piping or tubing. Wire for forcemains shall be green in color.
3. All wire connections shall be made with Dri-Splice wire connectors, Imperial Snip-Snap fittings filled with waterproof silicone sealant or approved equal. All splices shall be inspected and tested before burial.
4. A location, per City of Port St. Lucie standards, shall be provided at each fitting and/or every 100 feet of separation.

I. VALVE BOXES

See specification section 02660, Section 2.02A. If no standard exists, the following shall be used:

1. All valve boxes shall be cast iron construction with 5" shafts, equal to Tyler, Star, or Sigma Thickwall. Valve box lids shall have a 1" deep skirt and shall have the words "SEWER", where appropriate, cast in the top. Valve operating nuts shall be brought to within 30" of the surfaces using valve extension rods if required.

J. PLUG VALVES

See specification section 02660, Section 2.02A. If no standard exists, the following shall be used:

1. All plug valves shall cast or ductile iron, non-lubricated, eccentric type with resilient faced plugs. Valve surfaces shall be 90% nickel. Gear actuators for buried installations shall be furnished with sealed enclosures. Valves shall have a 2-inch actuator nut. Port areas for

valves sized 3" through 24" shall be at least 100%, rated at 150psi.

2. Plug valves shall be manufactured by Clow, Homestead, Milliken, Dezurik, Kennedy or Pratt.

K. AIR RELEASE VAVE

See specification section 02660, Section 2.02A. If no standard exists, the following shall be used:

1. All air releases valves shall be combination type air valves, 2-inch in size. The body and cover shall be cast iron, with all internal components being type 316 stainless steel.
2. Air release valves shall be manufactured by Apco, G.A. Industries, ARI or Valmatic.

PART 3 - EXECUTION

3.01 IDENTIFICATION AND COLOR CODING OF PIPE & FITTINGS

A. FORCE MAINS

1. All force main pipe and fittings shall be color coded or marked using Green as a predominant color to differentiate wastewater from reclaimed or other water. Underground plastic pipe shall be solid-wall Green pipe, or shall have a co-extruded Green external skin, with Green stripes incorporated into, or applied to, the external pipe wall.
2. Green Warning tape with SEWER printed on the tape shall be placed in the trench during backfill of the sewer pipe, a vertical distance of 18" above the crown of the pipe.

3.02 MARKING BY MANUFACTURER

- A.** Special markings shall be plainly marked on the applicable pipe indicating the weight, class of pipe, casting period, manufacturer's mark and year pipe was produced.

3.03 EXISTING UTILITIES

- A. The plans depict the approximate location of the known existing subsurface water, sanitary sewer, electric, telephone, gas, cable, and storm water utilities.
- B. Contractor will arrange for underground utilities to be located by appropriate utility owners in advance of the Contractor's operations. Contractor shall pothole all locations where the proposed pipe crosses an existing underground facility to verify that a conflict does not exist.
- C. Notify Engineer of any substantial changes that would require a deviation in the plans.
- D. Repair any damage done to existing utilities at no additional expense to the Owner.

3.04 PREPARATION

- A. Remove scale and dirt, on inside and outside, before assembly.
- B. Prepare pipe connections to equipment with flanges or unions.

3.05 BEDDING

- A. Excavate trench and install pipe bedding as specified in Section 02200, Earthwork, Excavation and Backfill.

3.06 SURFACE CONDITIONS

- A. Inspection
 - 1. Prior to all Work of this Section, carefully inspect the installed work of all other trades and verify that all such work is complete to the point where this work may properly commence.
 - 2. Verify that all equipment may be installed in accordance with all pertinent codes and regulations, the original design, shop drawings, and the reference standards.
- B. Discrepancies
 - 1. In the event of discrepancy, immediately notify the Engineer.
 - 2. Do not proceed with installation in area of discrepancy until all such discrepancies have been fully resolved.

3.07 PIPE-INSTALLATION GENERAL

- A. Take all precautions necessary to ensure that pipe, valves, fittings, and other accessories are not damaged in unloading, handling, and installation. Examine each piece of material just prior to installation to determine that no damage has occurred. Remove any damaged material from the site and replace with undamaged material.
- B. Exercise care to keep foreign material and dirt from entering pipe during storage handling and installation. Close ends of in-place piping at the end of any work period to preclude the entry of animals and foreign material.
- C. Use only those tools specifically intended for cutting the size, material, and type pipe involved. Make cut to prevent damage to pipe or lining and to leave a smooth end at right angles to the axis of the pipe.
- D. Pipe deflection at joints shall be limited to 75% of the manufacturer's maximum deflection tolerance.
- E. No wet taps, line stops, or connections to active mains shall be performed on a Friday without prior permission from the City.
- F. All coupons shall be kept and provided to the City.

3.08 VALVES AND VALVE BOXES

- A. For all valves, install valves for with operator stems in the vertical plane through the pipe axis and out of the plane of flow. Locate valves where shown on Drawings. Thoroughly clean valves before installation. Check valves for satisfactory operation.
- B. Equip all underground valves with gearing or operator switch valve boxes. Set box in alignment with valve stem centered on valve nut. Set the valve box to prevent transmitting shock or stress to the valve. Set the box cover flush with the finished ground surface or pavement.

3.09 THRUST RESTRAINT

- A. Provide retainer gland type or mechanical restrained joint type at all changes in direction of pressure pipelines and as shown on drawings.
- B. Use metal harness restraints as shown on drawings to restrain existing pipe segments.

- C. Where retainer glands are used, extreme care shall be taken so that each set screw is tightened as recommended by the manufacturer before the pipe is backfilled and tested.
- C. Existing piping shall be restrained with bell restraints as required by the thrust restraint table shown on the plans.

3.10 FIELD QUALITY CONTROL

- A. Compaction testing shall be performed in accordance with Section 02200.
- B. If tests indicate Work does not meet specified requirements, remove work, replace, and retest at no cost to Owner.

3.11 CONSTRUCTION CONSTRAINTS

The Contractor shall give special considerations to accommodate the business owners and residents in minimizing downtime and disruption of water services during the entire construction period.

- A. The Contractor will be required to submit as-builts including test results to the Engineer/City after the completion of the work for preparation of Request for Final Release and submission to the FDEP.

The Contractor shall coordinate with City of Port St. Lucie when service shutdowns are required for performance of the work.

END OF SECTION

SECTION 02665

DIRECTIONAL BORING OF PIPE

PART 1 - GENERAL

1.01 DESCRIPTION

- A. This section includes materials, installation standards, and execution for the installation of Fusible PVC (FPVC) pipe for this project by the directional bore installation method. Directional bore may also be referred to as Horizontal Directional Drill (HDD) throughout this and other sections.
- B. The Contractor shall furnish all labor, materials, equipment, and incidentals required for the horizontal direction drill (HDD) installation of pressure pipe, as shown on the Drawings and as specified herein. This includes retaining any specialized personnel required in the event of a frac-out during construction and as required to comply with permit conditions of approval. Contractor shall provide a frac-out plan in accordance with Section 1300.
- C. The Drawings show the Basis of Design for the HDD installations for this project. The entry and exit locations, minimum clearances, and horizontal location shown on the plan and profile drawings must be met by the installed pipe. The Contractor may utilize an alternative drill profile path than is shown on the drawings at no additional cost to the owner. Alternative path must remain within the easements or rights-of-way noted.
- D. Activities required for the HDD installations of pressure pipe, as shown on the Drawings and as specified herein, shall be performed in accordance with the conditions of the project permits complete with conditions, attachments, exhibits, and modifications as described in Section 01060.
- E. The Contractor shall determine if a casing pipe is needed to prevent frac-out or upheaval, settlement, cracking, movement, or distortion of the surface material including roadways, retaining walls, and channel bottom for any portion of the HDD installation. If the Contractor determines that a casing pipe is needed, then the materials and labor for installing the steel casing pipe shall be included in the base bid line item unit cost for the HDD pipeline.
- F. Contractor shall be responsible for all installation processes and procedures associated with the installation by horizontal directional drilling in accordance with this specification.

1.02 SUBMITTALS

- A. Submit shop drawings in accordance with the General Conditions, and Section 01300 and the following:
 - A. The project drilling plan, pullback calculations signed and sealed by a Florida licensed professional engineer, and an emergency contingency plan shall be submitted and approved two weeks prior to the commencement of the directional drilling operations. If night time drilling and/or boring is to occur, the Contractor shall also submit a night-time drilling plan two weeks prior to the commencement of the directional drilling operations.
 - B. Prepare and submit project drilling plans for review by the Engineer. The project drilling plans shall include a list and description of materials and equipment to be used, anticipated noise emanation for all equipment, a description of each drill entry and exit angles, depth of pilot hole at points on a 30-ft interval along the drill, bend radius of the pipe, pullback monitoring plan, fluorescent dye monitoring plan, drill fluid disposal plan, technical information including a MSDS (Material Safety Data Sheet) for the drilling slurry compounds, drill fluid containment plan, and damage prevention provisions. If the Contractor determines that a casing pipe is needed, the drilling plan shall also include information on the materials and equipment to be used for the casing installation. The Contractor shall keep a copy of the drilling plan at the work site.
 - C. The following product data is required from the pipe supplier and/or fusion provider:
 - a. Pipe Size
 - b. Dimensionality
 - c. Pressure Class per applicable standard
 - d. Color
 - e. Locate/Trace wire
 - f. Recommended Minimum Bending Radius
 - g. Recommended Maximum Safe Pull Force
 - h. Fusion technician qualification indicating conformance with this specification
 - D. Pullback and service load calculations have determined that a minimum DR-18 FPVC pipe (as indicated on the project drawings) is the minimum standard Dimensional Ratio for the forcemain pipe. These calculations are based on the conditions shown on the drawings and included within the specifications, including the carrier pipe being filled with water before it is pulled through the bore hole. Pipes shall NOT be thinner or smaller than indicated on the plans. If the contractor proposed installation of the HDD differs significantly

from what is shown on the drawings and described herein, contractor shall provide calculations showing that the DR is adequate for this project, including calculations signed/sealed by an engineer licensed in the State of Florida, demonstrating that a factor of safety of at least 2.0 against buckling, pull back stress, and long term performance stress for the proposed carrier pipe material considering the materials, bore hole path, and equipment to be used for this installation. If it is determined that a thicker pipe material must be used, then the additional cost shall be borne by the contractor.

- E. The Contractor is required to bring to the attention of the Engineer any known design discrepancies with these specifications and the actual drilling methods that the Contractor will be performing. This shall be stated in writing to the Engineer no later than the pre-construction meeting.
- F. The Contractor shall prepare and submit a pilot bore record drawing to the Engineer prior to reaming the pilot bore hole. The Contractor is responsible for updating the pilot bore hole record drawing as work progresses and should submit the pilot bore record drawing to the Engineer within 48 hours of completing the pilot bore. After receiving the bore hole record drawing, the Engineer has 48 hours to state any objections to the pilot bore before the Contractor begins reaming the pilot bore hole.
- G. Submit a flushing and pigging plan for cleaning the pipes after installation, including the specifics of the proposed pig.
- H. Submit pipe fusion procedures, samples, and operator's qualifications as described in the execution part of this section.
- I. Provide shop drawing submittal and sample of pipe, fused joint, and trace wire.
- J. The following record drawings are required from the contractor specifically for the HDD installation in addition to the requirements contained in Section 01720:
 - a. The record plan and profile will reflect the actual installed alignment and reflect the horizontal offset from the baseline and depth of cover.
 - b. A daily project log, along with tracking log sheets, should they be used, shall be provided. Tracking log sheet data, should it be employed, shall include any and all that apply, including inclination, depth, azimuth, and hydraulic pull-back and rotational force measured.

- K. The following record data is required from the contractor and/or fusion provider to the owner or pipe supplier upon request:
 - a. Approved datalogger device reports
 - b. Fusion joint documentation containing the following information:
 - 1. Pipe Size and Thickness
 - 2. Machine Size
 - 3. Fusion Technician Identification
 - 4. Job Identification
 - 5. Fusion Joint Number
 - 6. Fusion, Heating, and Drag Pressure Settings
 - 7. Heat Plate Temperature
 - 8. Time Stamp
 - 9. Heating and Cool Down Time of Fusion
 - 10. Ambient Temperature

PART 2 – MATERIALS AND EQUIPMENT

2.01 PIPE AND FITTINGS

See Section 02660.

2.02 BOLT AND NUTS FOR MECHANICAL JOINT CONNECTIONS AND/OR ADAPTORS

See Section 02660.

2.03 DRILLING SYSTEM EQUIPMENT

A. GENERAL

The directional drilling equipment, as a minimum, shall consist of a directional drilling rig of sufficient capacity to perform the bore(s) and pull-back of the pipe(s), a drilling fluid mixing & delivery system of sufficient capacity to successfully complete the crossing, a guidance system to accurately guide boring operations, and trained and competent personnel to operate the system. All equipment shall be in good, safe operating condition with sufficient supplies, materials, and spare parts on hand to maintain the system in good working order for the duration of this project. All required equipment shall be included in the emergency and contingency plan as submitted per these specifications.

B. DRILL PIPE

Drill pipe shall be steel with sufficient strength to withstand the maximum rated pullback and pushing load of the drilling equipment. Drill pipe and tool

joints shall be flush and capable of transmitting maximum rated torque of the drilling equipment.

C. DRILLING FLUID

Drilling fluid shall be bentonite and water formulated to move cuttings to the surface and lubricate the pipe during pullback. No other additives shall be added to the bentonite mixture without prior approval.

1. The water and additives shall be mixed thoroughly to assure the absence of any clumps or clods.
2. No hazardous additives may be used.
3. Drilling fluid shall be maintained at a viscosity sufficient to suspend cuttings and maintain the integrity of bore wall(s).
4. Drilling fluid shall be disposed of off-site in accordance with local, state and federal requirements and/or permit conditions.

D. DRILLING FLUID MIXING SYSTEM

1. A drilling fluid mixing system shall be of sufficient size to mix and deliver drilling fluid for the project.
2. The mixing system shall be able to ensure thorough mixing of the drilling fluid. The drilling fluid reservoir tank shall be sized for adequate storage of the fluid.
3. The mixing system shall continually agitate the drilling fluid during drilling operations.

E. DRILLING FLUID DELIVERY AND RECOVERY SYSTEM

1. The drilling fluid pumping system shall have a minimum capacity to supply drilling fluid in accordance with the drilling equipment pull-back rating at a constant required pressure.
2. The delivery system shall have filters or other appropriate in-line equipment to prevent solids from being pumped into the drill pipe.
3. Used drilling fluid and drilling fluid spilled during drilling operations shall be contained and properly disposed of. The use of spill containment measures shall be maintained around drill rigs, drilling fluid mixing system, entry and exit pits, and drilling fluid recycling system (if used) to prevent spills into the surrounding environment. Pumps, vacuum truck(s), and/or storage of sufficient size shall be in place to contain excess drilling fluid.

4. A closed-loop drilling fluid system and a drilling fluid cleaning system should be used to whatever extent practical, depending upon project size and conditions. Under no circumstances shall drilling fluid that has escaped containment be reused in the drilling system.

F. DRILLING EQUIPMENT

1. Drilling equipment shall be in good condition and designed to have sufficient power to drill the required length hole, backream, and pull the pipe as shown on the Drawings.
2. The drilling rig hydraulic system shall be of sufficient pressure and volume to power drilling operations. The hydraulic system shall be free from leaks.
3. Mixing, pumping, recycling, and holding/separation tanks shall be capable of delivering mixed drilling fluid to the cutting head. Drilling fluids recycling equipment including baffle tanks, shaker screen, de-sanding and de-silting hydro cyclones shall be utilized and designed to minimize spillage and quantities of drilling fluids necessary for these installations.
4. The machine shall be anchored to withstand the pulling, pushing, and rotating forces required to complete the project.
5. The drilling rig shall have a system to monitor pull-back hydraulic pressure during pull-back operations.

G. DRILL HEAD

1. The horizontal directional drilling equipment shall produce a stable fluid lined tunnel with the use of a steer-able drill head and any subsequent pre-reaming heads.
2. The system must be able to control the depth and direction of the drilling operation.
3. Drill head shall contain all necessary cutters and fluid jets for the operation, and shall be of the appropriate design for the ground medium being drilled.

H. DRILLING CONTROL SYSTEM

1. Calibration of the electronic detection and control system shall be verified prior to the start of the bore.

2. The drilling head shall be remotely steer-able by means of an electronic or magnetic detection system. The drilling head location shall be monitored in three dimensions:
 - a. Offset from the baseline,
 - b. Distance along the baseline, and
 - c. Depth of cover.
3. Point of rotation of the head shall also be monitored.
4. For gravity application and on-grade drilling, sonde/beacon or approved equipment applicable for grade increments of 1/10th of one percent shall be used.

I. DOWNHOLE TOOLS

1. Cutting heads, backreamers, and hole openers shall be suitable for the soil and rock conditions anticipated by the Contractor.
2. Grips, pulling heads, and swivels shall be compatible with the pipe material. Design these components to transmit without distortion the maximum rated pullback force of the equipment used. Grips, pulling heads, and swivels shall be specifically engineered for directional drilling applications.

J. PIPE PULL HEADS

1. Pipe pull heads shall be utilized that employ a positive through-bolt design assuring a smooth wall against the pipe cross-section at all times.
2. Pipe pull heads shall be specifically designed for use with fusible polyvinylchloride (FPVC) pipe, as applicable, and shall be as recommended by the pipe supplier.

K. BREAK-OUT TOOLS

Remote breakout wrenches may either be manual or hydraulic and shall be used to connect or break tool joints forward of the drill rig. Drill rig rotational power shall not be used with remote wrenches to make or break tool joints.

L. REMOTE TRACKING SYSTEM

Tracking equipment shall be capable of determining the location of the cutting head at +/-1% of the depth.

M. EMERGENCY SPILL EQUIPMENT

1. A Vactor Truck and Spill Kit shall be onsite and available at all times.

N. PIPE ROLLERS

1. Pipe rollers, if required, shall be of sufficient size to fully support the weight of the pipe during handling and pullback operations.
2. A sufficient quantity of rollers and spacing, per the pipe supplier's guidelines, shall be used to assure adequate support and excessive sagging of the product pipe.

2.04 CASING PIPE AND INSTALLATION EQUIPMENT

If the Contractor determines, or if the plans depict that a casing pipe is needed, the Contractor shall provide all of the material and equipment for installing the steel casing. The equipment shall be suitable for the soil conditions anticipated by the Contractor.

PART 3 – EXECUTION

3.01 DELIVERY AND OFF-LOADING

- A. Delivery, temporary storage, and handling of the pipe shall be in strict accordance with the recommendations of the manufacturer.
- B. All pipe shall be bundled or packaged in such a manner as to provide adequate protection of the ends during transportation to the site. Any pipe damaged in shipment shall be replaced as directed by the owner or engineer.
- C. Pipe should be loaded, off-loaded, and otherwise handled in accordance with AWWA M23, and all of the pipe supplier's guidelines shall be followed.
- D. Off-loading devices such as chains, wire rope, chokers, or other pipe handling implements that may scratch, nick, cut, or gouge the pipe are strictly prohibited.
- E. During removal and handling, be sure that the pipe does not strike anything. Significant impact could cause damage, particularly during cold weather.
- F. If appropriate unloading equipment is not available, pipe may be unloaded by removing individual pieces. Care should be taken to insure that pipe is not dropped or damaged. Pipe should be carefully lowered, not dropped, from trucks.

3.02 HANDLING AND STORAGE

- A. Any length of pipe showing a crack or which has received a blow that may have caused an incident fracture, even though no such fracture can be seen, shall be marked as rejected and removed at once from the work. Damaged areas, or possible areas of damage may be removed by cutting out and removing the suspected incident fracture area. Limits of the

acceptable length of pipe shall be determined by the owner or engineer.

- B. Before installation of FPVC, check pipe and fittings for cuts, gouges in excess of 10% of the wall thickness, buckling, kinking, or splitting. Remove any pipe section containing defects by cutting out the damaged section in a complete cylinder.
- C. Pipe lengths should be stored and placed on level ground. Pipe should be stored at the job site in the unit packaging provided by the manufacturer. Caution should be exercised to avoid compression, damage, or deformation to the ends of the pipe. The interior of the pipe, as well as all end surfaces, should be kept free from dirt and foreign matter.
- D. Pipe shall be handled and supported with the use of woven fiber pipe slings or approved equal. Care shall be exercised when handling the pipe to not cut, gouge, scratch, or otherwise abrade the piping in any way.
- E. If pipe is to be stored for periods of 1 year or longer, the pipe should be shaded or otherwise shielded from direct sunlight. Covering of the pipe which allows for temperature build-up is strictly prohibited. Pipe should be covered with an opaque material while permitting adequate air circulation above and around the pipe as required to prevent excess heat accumulation.
- F. Pipe shall be stored and stacked per the pipe supplier's guidelines.

3.03 LOCATION AND PROTECTION OF UNDERGROUND UTILITIES

- A. Correct location of all underground utilities that may impact the HDD installation is the responsibility of the Contractor, regardless of any locations shown on the drawings or previous surveys completed.
- B. Utility location and notification services shall be contacted by the Contractor prior to the start of construction.
- C. All existing lines and underground utilities shall be positively identified, including exposing those facilities that are located within an envelope of possible impact of HDD installation as determined for the project specific site conditions. It is the Contractor and HDD system operator's responsibility to determine this envelope of safe offset from existing utilities. This will include, but is not limited to, soil conditions and layering, utility proximity and material, HDD system and equipment, and foreign subsurface material.

3.04 DRILLING LAYOUT AND TOLERANCES

- A. The drill path shall be accurately surveyed with entry and exit areas placed in the appropriate locations within the areas indicated on drawings. If using a magnetic guidance system, drill path will be surveyed for any surface geomagnetic variations or anomalies.
- B. Instrumentation shall be provided and maintained at all times that accurately locates the pilot hole, measures drill-string axial and torsional loads, and

measures drilling fluid discharge rate and pressure.

- C. Entry and exit areas shall be drilled so as not to exceed the bending limitations of the pipe as recommended by the pipe supplier.

3.05 PILOT BORE

- A. Construct a pilot bore at the center line alignment and grade as shown in the drawings. Circulate drilling fluids to maintain an open bore at all times. The Contractor is responsible for updating the pilot bore hole record drawing as work progresses. Reaming shall not commence until successful completion of the path of pilot bore pulled from the end of the HDD path (exit pit) to the beginning location of the HDD path (entry pit). If the pilot bore could not be successfully completed, then do not proceed with the reaming procedure until the Owner, Owner's Representative, Engineer, and Contractor have met to discuss alternative options for the pipeline crossing. The pilot bore and reaming procedure shall be controlled by a magnetic survey system including accelerometers, magnetometers, connector wire, and survey probe. The guidance system shall be capable of measuring depth, location, pitch, and roll of the bore and shall be able to indicate depth up to 120 feet.
- B. The pipe bore shall follow the line and grade shown in the drawings. The pipe exit location shall be at the design location shown on the drawings with a tolerance of ± 3 feet on line and a tolerance of ± 3 feet on grade. The pipe shall remain within the right-of- ways and easements at all times, as shown on the drawings.
- C. Install the pilot bore in a manner that does not cause upheaval, settlement, cracking, movement, or distortion of the surface material.
- D. In the event that the pilot bore does deviate from the bore path, it may require contractor to pull-back and re-drill from the location along bore path before the deviation.
- E. If the Contractor determines that a casing pipe is needed on the pipe entry/exit side, then the casing pipe shall be installed prior to the construction of the pilot bore and the pilot bore shall be constructed to align with the casing pipe below the ground surface.
- F. The Contractor shall limit curvature in any direction to reduce force on the pipe during pull-back. The minimum radius of curvature shall be no less than that specified by the pipe supplier and as indicated on the drawings.

3.06 DRILLING FLUIDS

- A. Contain, clean-up, and dispose of any and all drilling fluid in accordance with state and federal regulations and permit conditions. Install erosion and sedimentation control measures including straw bales to prevent drilling mud from spilling out of the entrance/exit pit. The volume of bentonite in the

drill string shall be monitored at all times during directional drill operations. Limit pressures in order to not buckle the surface of the pipe during installation.

3.07 WIRELINE GUIDANCE SYSTEM

- A. Use a surface monitoring wireline guidance system when conducting each drill. The surface grid shall consist of an energized wire coil laid-out and surveyed on the surface of the ground along the drill paths.
- B. Remove all surface grid coil wires from all drill paths after HDD installations are complete.

3.08 BORE HOLE REAMING AND PIPE INSTALLATION

- A. Upon complete acceptance of the pilot bore, pull the drill pipe back through the bore using an oversized back reamer larger than the proposed pipe to be pulled back through the bore hole. Repeat back reaming as necessary to enlarge the bore to provide sufficient clearance for the pipe.
- B. Multiple reaming passes shall be used at the discretion of the Contractor and shall conform to this specification.
- C. In the event of a drilling fluid fracture, returns loss, or other loss of drilling fluid, the Contractor shall be responsible for restoring any damaged property to original condition and cleaning up the area in the vicinity of the damage or loss.
- D. Attach pulling head and swivel and pull pipe through with closed end. Pull pipe back in one continuous pull to avoid closure of the bore hole. Fill the pipe with water prior to installation.
- E. Pipe shall be fused prior to insertion, if the site and conditions allow, into one continuous length.
- F. The FPVC pipe being pulled shall have two (2) separate locate/tracer wires attached to the pipe prior to being pulled. Each wire shall be No. 10 AWG stranded with a thick protective coating
- G. Contractor shall handle the pipe in a manner that will not over-stress the pipe prior to insertion. Vertical and horizontal curves shall be limited so that the pipe does not bend past the pipe supplier's minimum allowable bend radius, buckle, or otherwise become damaged. Damaged portions of the pipe shall be removed and replaced.
- H. The pipe entry area shall be graded as needed to provide support for the pipe and to allow free movement into the bore hole.

- I. Install the pipe in a manner that does not cause upheaval, settlement, cracking, movement, or distortion of the surface material.
- J. The elevation of the casing and/or carrier pipe at the location of the connection point of the directional bore shall be 36" below the natural grade or at the elevation shown on the construction plans and shall be in a horizontal location for ease of connection to continuing mains. Should this not be possible due to the acute angle of the bore, the contractor shall furnish and install appropriate fittings to provide for a horizontal continuation.
- K. The pipe will be installed in a manner so as not to exceed the recommended bending radius and Safe Pulling Force established by the pipe supplier.
- L. The pipe shall be guided into the bore hole to avoid deformation of, or damage to, the pipe.
- M. The pipe may be continuously or partially supported on rollers or other Owner and Engineer approved friction decreasing implement during joining and insertion, as long as the pipe is not over-stressed or critically abraded prior to or during installation.
- N. A swivel shall be used between the reaming head and the fusible polyvinylchloride pipe to minimize torsion stress on the pipe assembly.
- O. Buoyancy modification shall be at the sole discretion of the Contractor, and shall not exceed the pipe supplier's guidelines in regards to maximum pull force or minimum bend radius of the pipe. Damage caused by buoyancy modifications shall be the responsibility of the Contractor.
- P. The pipe shall be installed in a manner that does not cause upheaval, settlement, cracking, or movement and distortion of surface features. Any damages caused by the Contractor's operations shall be corrected by the Contractor.
- Q. Upon completing the pipe installation, drilling materials inside the pipe shall be removed.
- R. If the Contractor determines that a casing pipe is needed or is called out on the drawings, the FPVC pipe shall be fitted with spacers if required to center the pipe in the annulus between the steel casing pipe and the FPVC pressure pipe. The annulus space shall then be grout-filled at the surface end.

3.09 PIPE FUSION AND LAYOUT - FPVC

- A. Join entire length of pipe to be pulled through bore prior to commencement of pullback operation. The joining method shall be the butt fusion method and shall be performed in strict accordance with the pipe manufacturer's recommendations. Butt fusion joining shall result in a joint weld strength

equal to or greater than the tensile strength of the pipe. Socket fusion shall not be used.

- B. Each operator performing fusion joining pipe shall be qualified in the use of the manufacturer's recommended fusion procedure(s) by appropriate training or experience in the use of the fusion procedure. A sample joint shall be fused according to the procedure that passes the following inspections and tests:
 - 1. The joint shall be visually examined during and after joining and found to have the same appearance as a photograph or sample of an acceptable joint that was joined in accordance with the procedure.
 - 2. The joint shall be tested or examined by one of the following methods:
 - a. Pressure and tensile test as described in 49 CFR 192.283
 - b. Ultrasonic inspection and found to be free of flaws that would cause failure
 - c. Cut into at least three longitudinal straps, each of which is:
 - 1). Visually examined and found to be free of voids or unbonded areas on the cut surface of the joint
 - 2). Deformed by bending, torque, or impact and if failure occurs, it must not initiate in the joint area.
- C. The contractor shall determine the location for laying out the joined fused pipe prior to pullback. Support weight of upland portions of the joined pipe on rollers and guide posts to minimize pullback forces and guide pipeline during pullback.

3.10 TESTING

- A. After completion of the joint fusing and before the pipe pullback, the pipe shall be pressure tested in accordance with Section 02670.
- B. Pullback pipe completely with locate/tracer wire per specs.
- C. After completion of the HDD installation:
 - 1. Flush and test the pipe in accordance with Section 02670.
 - 2. Payment of pipe sections will only be provided for installed and successfully tested pipe.
 - 3. If the pipe does not pass the pressure test after installation, if feasible remove the entire pipe from the bore hole, repair the pipe, and perform pressure testing prior to reinstalling the pipe and again after reinstallation. If it is not feasible to remove the pipe without exceeding the manufacturer's maximum allowable tensile stress for

the pipe, the Contractor shall repeat the installation with another pipe along a similar route approved by the Owner, which meets the requirements of the original design at no additional cost to the Owner.

4. Testing of locate/tracer wire after completion shall demonstrate continuity. Payment contingent upon successful continuity test.

3.11 MECHANICAL JOINT ADAPTOR CONNECTIONS

- A. See Sections 02660.

3.12 RESTORATION OF PAVED, IMPROVED AND UNIMPROVED AREAS

- A. The shoulders, ditches, banks, and slopes of roads crossed and paralleled shall be restored to their former condition and properly sodded so that they shall not wash out before becoming consolidated. Restoration shall be as required by the jurisdictional authority and as specified within the Contract Document. Road and crossings and parallel installations are to be continuously maintained until the completion of the work. No direct compensation shall be paid for Contractor's repair or maintenance of crossings and parallel installations.
- B. Within 14 days after completion of the directional drilling operations, the staging area shall be returned to its original condition. Paved surfaces shall be repaired and unpaved surfaces areas shall be restored.

END OF SECTION

SECTION 02670

FLUSHING AND TESTING

PART 1 - GENERAL

1.01 WORK INCLUDED

- A. Flushing and Pressure Testing of systems including, but not limited to, the force mains shown on the Plans.
- B. Contractor shall furnish all necessary pumps, hoses, piping, fittings, meters, gauges, chemicals, and labor to conduct specified testing. Note that all gauges shall read in 2-pound increments and shall be a maximum of 250psi.
- C. Testing shall be repeated at the Contractor's expense until satisfactory results are achieved.

1.02 RELATED REQUIREMENTS SPECIFIED ELSEWHERE

- A. Drawings and general provisions of the Contract, including the City of Port St Lucie Contract Terms and Conditions Sections I thru XXX and Division 1 Specification sections, apply to this section.
- B. Section 02660 – Pressure Pipe Systems
- C. City of Port St. Lucie Utility Standards Manual and Details
- D. FDOT Utility Accommodation Manual

1.03 REFERENCES

- A. ANSI/AWWA C605 – PVC Pipe Installation/Testing

1.04 SUBMITTALS

- A. Test Reports: All required testing shall be completed and submitted on City of Port St Lucie Utilities Standard Forms.
- B. Contractor shall provide a flushing plan, type of poly-pig to be used and a 1-week notice prior to the commencement of any flushing activities. Note that all flushing will occur in City off-peak water usage times.

1.05 QUALITY ASSURANCE

- A. Perform Work in accordance with ANSI/AWWA C605.

1.06 REGULATORY REQUIREMENTS

- A. Conform to applicable FDEP requirements for performing the work of this Section.
- B. Work shall conform to City of Port St. Lucie Utility Standards

PART 2 - PRODUCTS

2.01 FLUSHING AND TESTING

- A. Contractor to provide type and manufacturer of poly-pig to be used.
- B. Contractor to provide schematic of pressure testing apparatus to include piping connections, pressure gauges and water source for filling and testing.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Verify that the installed force main systems have been cleaned, inspected, and tested.
- B. Coordinate testing scheduling activity with the Engineer and City of Port St. Lucie.

3.02 FLUSHING AND PRESSURE TESTING - PIPING

The Contractor shall furnish and install suitable temporary testing plugs or caps for the water lines, all necessary pressure pumps, hose, pipe connections, meters, gauges and other similar equipment, and all labor required, all without additional compensation for conducting pressure and leakage tests and flushing of the new force mains. Flushing and pressure testing shall be in accordance with the City of Port St. Lucie Standards.

- A. Pressure and leakage tests shall be conducted in the presence of the Engineer, or his representative. All pressure mains, fittings, water and appurtenances shall undergo pressure and leakage tests. The Contractor will provide all necessary apparatus including a suitable pressure gauge, pump, measuring device, piping connections, and fittings and the necessary labor to conduct the test. Leakage is defined as the quantity of water added to the

pipe being tested during the test period. The Contractor shall submit to the Engineer the testing pattern he proposes to follow prior to testing for the Engineer's approval. The Contractor shall not test more than 1,500 feet of pipe in a single test without approval from the Engineer.

B. Pressure testing ductile iron and PVC piping systems:

1. The test pressure for the water piping constructed of ductile iron and PVC pipe shall be 150 psi. These pressures shall be maintained for a period of not less than two hours. Tests shall be made between valves and as far as practicable and as approved by the Engineer. Potable water from the distribution system shall be used with required backflow prevention devices. Pressure shall not vary more than five (5) psi for piping during the test periods or as approved by the Engineer. Additionally, allowable leakage shall be computed based on AWWA C-600, C-605 where practical.
2. All leaks evident at the surface shall be uncovered and repaired regardless of the total leakage as indicated by the test, and all pipes, valves, and fittings and other materials found defective under the test shall be removed and replaced at the Contractor's expense. Tests shall be repeated until leakage has been reduced below the allowable amount.
3. Should, in the judgment of the Engineer, it is not practical to follow the foregoing procedures exactly for any reason, modifications in the procedure shall be made as approved by the Engineer and City of Port St. Lucie. In any event, the Contractor shall be responsible for the ultimate water tightness of the plant piping within the preceding requirements.

3.03 CONNECTIONS TO EXISTING MAINS

- A. The Contractor shall make connections to existing mains as shown on the drawings. The connections of new force mains to existing force mains shall be made only after the new mains have passed their pressure and leakage test as mandated by the City of Port St Lucie and FDEP and shall be under the Owner's immediate supervision.

END OF SECTION

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SECTION 03200
CONCRETE REINFORCEMENT

PART 1 — GENERAL

1.01 WORK INCLUDED

- A. Reinforcing steel bars, wire fabric, and accessories for precast concrete.

1.02 RELATED SECTIONS SPECIFIED ELSEWHERE

- A. Section 01300 - Submittals
- B. Section 03300 - Cast-in-Place Concrete

1.03 REFERENCES

- A. ACI 301 - Structural Concrete for Buildings.
- B. ACI 318 – Building Code Requirements for Reinforced Concrete
- C. ACI SP-66 - American Concrete Institute -Detailing Manual.
- D. ANSI/ASTM A82 - Cold Drawn Steel Wire for Concrete Reinforcement.
- E. ANSI/ASTM A185 - Welded Steel Wire Fabric for Concrete Reinforcement.
- F. ANSI/AWS D1.4 - Structural Welding Code for Reinforcing Steel.
- G. ASTM A615 - Deformed and Plain Billet Steel Bars for Concrete Reinforcement.
- H. ASTM A704 - Welded Steel Plain Bar or Rod Mats for Concrete Reinforcement.
- I. AWS D12.1 - Welding Reinforcement Steel, Metal Inserts, and Connections in Reinforced Concrete Construction.
- J. CRSI -Concrete Reinforcing Steel Institute -Manual of Practice.
- K. CRSI 63 -Recommended Practice For Placing Reinforcing Bars.

- L. CRSI 65 - Recommended Practice for Placing Bar Supports, Specifications, and Nomenclature.
- M. 2014 Florida Building Code

1.04 SUBMITTALS

- A. Submit shop drawings under provisions of Section 01300.
- B. Shop Drawings: Indicate bar sizes, spacings, locations, and quantities of reinforcing steel and wire fabric, bending and cutting schedules, and supporting and spacing devices.
- C. Manufacturer's Certificate: Certify that products meet or exceed specified requirements.

1.05 QUALITY ASSURANCE

- A. Perform Work in accordance with ACI 318.
- B. Maintain one copy of document on site.

1.06 QUALIFICATIONS

- A. Welders' Certificates: Submit under provisions of Section 01300 Manufacturer's Certificates, certifying welders employed on the Work, verifying AWS qualification within the previous 12 months.

1.07 COORDINATION

- A. Coordinate with placement of formwork, formed openings, and other Work.

1.08 STORAGE

- A. Reinforcing steel shall be clean, new stock, properly marked and tagged for identification prior to placing. Store reinforcing to avoid excessive rusting or coating with grease, oil, dirt, or other objectionable materials.

PART 2 — PRODUCTS

2.01 REINFORCEMENT

- A. Reinforcing Steel: ASTM A615, 60-ksi yield grade; deformed billet steel bars, unfinished.
- B. Welded Steel Wire Fabric: ASTM A185 Plain Type; in flat sheets. unfini

- C. Ties: Shall be No. 16 gauge minimum, fully annealed, black steel wire.
- D. Hooks and Bends in Reinforcement shall conform to ACI 315 unless otherwise noted on the drawings.

2.02 ACCESSORY MATERIALS

- A. Chairs, Bolsters, Bar Supports, Spacers: Sized and shaped for strength and support of reinforcement during concrete placement conditions including load bearing pad on bottom to prevent vapor barrier puncture.
- B. Special Chairs, Bolsters, Bar Supports, Spacers Adjacent to Weather-exposed Concrete Surfaces: Plastic coated steel or stainless-steel type; size and shape as required.

2.03 FABRICATION

- A. Fabricate concrete reinforcing in accordance with ACI 318.
- B. Locate reinforcing splices not indicated on drawings, at point of minimum stress. Review location of splices with Engineer.

PART 3 — EXECUTION

3.01 PLACEMENT

- A. Fabrication, detailing and placement of reinforcing steel shall conform to CRSI Manual of Standard Practice, ACI 315 and ACI 318. Reinforcement shall be carefully placed, rigidly supported and well tied with bar supports and spacers.
- B. Reinforcement shall be accurately placed and securely tied at intersections with 16-gauge black annealed wire. It shall be maintained in proper position by chairs, bar supports, or other devices approved by the Engineer.
- C. All splices and laps shall be as shown on the drawings, or 36 bar diameters, whichever is greater.
- D. Concrete protection of reinforcing shall be not less than the following or as shown on the drawings if greater:
 - 1. Concrete cast against and permanently exposed to earth or exposed to corrosive environment -- 3 inches.
 - 2. Concrete cast against forms, but exposed to earth or weather:
 - a. No. 6 through No. 11 bars -- 2 inches
 - b. No. 5 bars, or equivalent, and smaller -- 1-1/2 inches.

3. Concrete cast against forms, but not exposed to earth or weather (interior construction):
 - a. Slabs, walls and joists:
 - No. 14 and No. 18 bars -- 1-1/2 inches
 - No. 11 bars and smaller for liquid retaining structures -- 2 inches
 - No. 11 bars and smaller elsewhere -- 3/4 inch
 - b. Beams and Columns, including primary reinforcement, ties, stirrups, and spirals -- 1-1/2 inches.
- E. The clear distance between parallel bars in a layer shall be the nominal diameter of the bar, but not less than one inch. Wherever conduits, piping, inserts or sleeves interfere with the placing of reinforcing steel as shown, the Contractor shall consult with the Engineer before pouring concrete. The bending or field cutting of bars around openings or sleeves will not be permitted.
- F. Clean bars of loose scale, heavy deposits or rust and oil, wax or other coatings that may reduce or destroy bonding, before placing. Check and clean again if necessary, before concrete is poured.
- G. Concrete beam sizes may be increased as required for architectural details or to fit block coursing, subject to Engineer approval.
- H. Reinforcing steel in footings shall be assembled as mats with bars equally spaced and wired together at each intersection before concrete is placed.
- I. Center all footings on wall, pier or column above unless otherwise indicated.
- J. Dowel column and wall reinforcing to footing or pile cap with same size and number of dowels as vertical bars above.
- K. Dowels shall be hooked "L" at bottom and shall be lapped 36 bar diameters with the column or wall reinforcing above.
- L. Concrete columns shall be tied columns unless otherwise indicated.
- M. Provide one layer 6 x 6 - W2.9 x W2.9 WWF in slabs on grade including walkways and sidewalks unless otherwise indicated.

3.02 COORDINATION

- A. Coordinate work with other trades in order to eliminate interference before concrete is poured.

3.03 CLEANUP

- A. In accordance with City Contract.

END OF SECTION

SECTION 03400

STRUCTURAL PRECAST CONCRETE

PART 1 - GENERAL

1.01 WORK INCLUDED

- A. Precast structures.
- B. Connection and supporting devices.

1.02 REFERENCES

- A. ACI 301 - Structural Concrete for Buildings.
- B. ACI 318 - Building Code Requirements for Reinforced Concrete.
- C. ACI 350 - Code Requirements for Environmental Engineering Concrete Structures
- D. ANSI/AWS D1.1 - Structural Welding Code.
- E. ANSI/AWS D1.4 - Structural Welding Code - Reinforcing Steel.
- F. ANSI/ASTM A185 - Welded Steel Wire Fabric for Concrete Reinforcement.
- G. ANSI/ASTM A416 - Uncoated Seven-wire Stress-relieved Strand for Prestressed Concrete.
- H. ASTM A36 - Structural Steel.
- I. ASTM A153 - Zinc Coating (Hot-Dip) on Iron and Steel Hardware.
- J. ASTM A615 - Deformed and Plain Billet-steel Bars for Concrete Reinforcement.
- K. ASTM C150 - Portland cement.
- L. PCI MNL-116 - Manual for Quality Control for Plants and Production of Precast and Prestressed Concrete Products.
- M. PCI MNL-120 - Design Handbook - Precast and Prestressed Concrete.
- N. UL - Underwriters Laboratories.

1.03 RELATED SECTIONS SPECIFIED ELSEWHERE

- A. Drawings and general provisions of the Contract, including the City of Port St Lucie Contract Terms and Conditions Sections I thru XXX and Division 1 Specification sections, apply to this section.
- B. Section 01410 – Testing Laboratory Services
- C. Section 03200 - Concrete Reinforcement

1.04 SUBMITTALS

- A. Submit under provisions of the Division 1 Specifications, Section 01300 - Submittals.
- B. Shop Drawings: Indicate layout, unit locations, fabrication details, unit identification marks, reinforcement, connection details, support items, dimensions, openings, and relationship to adjacent materials.

1.05 QUALITY ASSURANCE

- A. Perform Work in accordance with the requirements of PCI MNL-116.

1.06 QUALIFICATIONS

- A. Fabricator: Company specializing in manufacturing the work of this section with minimum five years documented experience.
- B. Erector: Company specializing in erecting the work of this section with five years documented experience approved by manufacturer.
- C. Design precast concrete members under direct supervision of a Professional Structural Engineer experienced in design of this work and licensed in the State of Florida.
- D. Welder: Qualified within previous 12 months in accordance with ANSI/AWS D1.1.

1.07 REGULATORY REQUIREMENTS

- A. Conform to ACI 318 and applicable local code for design load and construction requirements applicable to work of this Section.

1.08 PRE-INSTALLATION REQUIREMENTS

- A. Verify with Engineer any field cutting required for all openings.

1.09 DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, protect, and handle products to site.
- B. Handle precast members in position consistent with their shape and design. Lift and support only from approved and designated support points.
- C. Lifting or Handling Devices: Capable of supporting member in positions anticipated during manufacture, storage, transportation, and erection.
- D. Protect members to prevent staining, chipping, or spalling of concrete.
- E. Mark each member with date of production and final position in structure.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Cement: Gray Portland, conforming to ASTM C150 Type II, 4,000 psi min. compressive strength.
- B. Aggregate, Sand, Water, and Admixtures: Determined by precast fabricator as appropriate to design requirements and PCI MNL-116.

2.02 REINFORCEMENT

- A. Reinforcing Steel: ASTM A615 Grade 60, deformed steel bars.
- B. Welded Steel Wire Fabric: ASTM A185 Plain Type flat sheets galvanized.

2.03 ACCESSORIES

- A. Connecting and Supporting Devices: ASTM A36 carbon steel Plates, angles, items cast into concrete or items connected to steel framing members, inserts, conforming to PCI MNL-123; unfinished. Do not paint surfaces in contact with concrete or surfaces requiring field welding.
- B. Grout: Non-shrink, Non-metallic, minimum yield strength of 7,000 psi at 28 days.
- C. Bolts, Nuts and Washers: High strength steel type recommended for structural steel joints.
- D. Prime Paint: Zinc-rich alkyd type.

2.04 FABRICATION

- A. Fabrication procedure to conform to PCI MNL-116.
- B. Maintain plant records and quality control program during production of precast members. Make records available upon request.
- C. Ensure reinforcing steel, anchors, inserts, plates, angles, and other cast-in items are embedded and located as indicated on shop drawings.
- D. Tension reinforcement tendons as required to achieve design load criteria.
- E. Provide required openings with a dimension larger than 8 inches and embed accessories provided by other Sections, at indicated locations.

2.05 FINISHES

- A. Ensure exposed-to-view finish surfaces of precast concrete members are uniform in color and appearance.
- B. Cure members under identical conditions to develop required concrete quality and minimize appearance blemishes such as non-uniformity, staining, or surface cracking.
- C. Provide 3/4" chamfer on all exposed concrete edges unless otherwise specified.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Verify that site conditions are ready to receive work and field measurements are as shown on Drawings.

3.02 PREPARATION

- A. Prepare support equipment for the erection procedure, temporary bracing, and induced loads during erection.

3.03 ERECTION

- A. Erect members without damage to structural capacity, shape, or finish. Replace or repair damaged members.

- B. Align and maintain uniform horizontal and vertical joints as erection progresses.
- C. Maintain temporary bracing in place until final support is provided.

3.04 PROTECTION

- A. Protect structures from damage caused by erection operations.

3.05 CLEANING

- A. Clean weld marks, dirt, or blemishes from surface of exposed structures.

END OF SECTION

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APPENDIX A – GEOTECHNICAL REPORT



Geotechnical Engineering Report

**Glades Cut-off Road 24" Force Main Horizontal Directional Drill
St. Lucie County, Florida**

April 6, 2021

Terracon Project No. HD205000

Prepared for:

Kimley-Horn and Associates, Inc.
West Palm Beach, Florida

Prepared by:

Terracon Consultants, Inc.
West Palm Beach, Florida



April 6, 2021

Kimley-Horn and Associates, Inc.
1920 Wekiva Way, Suite 200
West Palm Beach, Florida 33411



Attn: Mr. Thomas Jensen, P.E.
P: (561) 840-0853
E: tom.jensen@kimley-horn.com

Re: Geotechnical Engineering Report
Glades Cut-off Road 24" Force Main Horizontal Directional Drill
Glades Cut-off Road near Interstate 95
St. Lucie County, Florida
Terracon Project No. HD205000

Dear Mr. Jensen:

We have completed the Geotechnical Engineering services for the above referenced project. This study was performed in general accordance with Terracon Proposal No. PHD205000 dated January 26, 2021. This report presents the findings of the subsurface exploration and provides geotechnical recommendations concerning the force main connection using a horizontal directional drill for the proposed project.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning this report or if we may be of further service, please contact us.

Sincerely,

Terracon Consultants, Inc.

A handwritten signature in black ink that reads "Kimberly Roberts".

Kimberly Roberts
Project Manager



4/6/2021

REPORT TOPICS

| | |
|---|---|
| INTRODUCTION..... | 1 |
| SITE CONDITIONS..... | 1 |
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Note: This report was originally delivered in a web-based format. **Orange Bold** text in the report indicates a referenced section heading. The PDF version also includes hyperlinks which direct the reader to that section and clicking on the **GeoReport** logo will bring you back to this page. For more interactive features, please view your project online at client.terracon.com.

ATTACHMENTS

EXPLORATION AND TESTING PROCEDURES
SITE LOCATION AND EXPLORATION PLANS
EXPLORATION RESULTS
SUPPORTING INFORMATION

Note: Refer to each individual Attachment for a listing of contents.

Geotechnical Engineering Report
Glades Cut-off Road 24" Force Main Horizontal Directional Drill
Glades Cut-off Road near Interstate 95
St. Lucie County, Florida
Terracon Project No. HD205000
April 6, 2021

INTRODUCTION

This report presents the results of our subsurface exploration and geotechnical engineering services performed for the proposed force main project located along Glades Cut-off Road near Interstate 95 in St. Lucie County, Florida. The purpose of these services is to provide information and geotechnical engineering recommendations relative to the section of pipeline that will pass under Interstate 95 via horizontal directional drill (HDD).

The geotechnical engineering Scope of Services for this project included the advancement of two (2) test borings to a depth of 40 feet below existing ground surface.

Maps showing the site and boring locations are shown in the **Site Location** and **Exploration Plan** sections, respectively.

SITE CONDITIONS

The following description of site conditions is derived from our site visit in association with the field exploration and our review of publicly available geologic and topographic maps.

| Item | Description |
|------------------------------|---|
| Parcel Information | The project is located within the public right-of-way along the north side of Glades Cut-off Road near Interstate 95 in St. Lucie County, Florida. Latitude: 27.3541° Longitude: -80.4170° See Site Location |
| Existing Improvements | Existing improvements in the vicinity of the planned horizontal direction drill include Glades Cutoff Road adjacent to the south, a man-made lake about 350 feet to the northwest, overhead power transmission lines which transect the planned alignment, the Interstate 95 overpass and embankment, and a business operating as Kauff's Towing-Transportation to the north. |
| Current Ground Cover | Light to moderately vegetated or short grasses. |

Geotechnical Engineering Report

Glades Cut-off Road 24" Force Main Horizontal Directional Drill ■ St. Lucie County, Fla
April 6, 2021 ■ Terracon Project No. HD205000



| Item | Description |
|---------------------------------|---|
| Review of Available Data | <p>A review of available data on the site included USGS Topographic Maps and the USDA/NRCS soil survey. The USGS Topographic Map for the site indicated the ground surface elevation is near +23 feet NGVD.</p> <p>The NRCS soil survey suggests the shallow subsurface conditions generally consist of sand in the upper 4 to 5 feet followed by sandy loam or sandy clay loam to about 7½ feet. Groundwater is expected to be within the upper 18 inches of the ground surface.</p> |

PROJECT DESCRIPTION

Our initial understanding of the project was provided in our proposal and was discussed during project planning. A period of collaboration has transpired since the project was initiated, and our final understanding of the project conditions is as follows:

| Item | Description |
|-----------------------------|---|
| Information Provided | Construction plans for <i>Glades Cutoff Rd 24" Force Main Extension Phase 3</i> , Sheets G1, C1, C14, C15, C16, by Kimley-Horn, dated September 2020; project layout and Phase 3 description. |
| Project Description | The project as it relates to our scope of services consists of the installation of a 24-inch diameter force main utilizing Horizontal Directional Drill methods and fusible PVC pipe. The directional drill segment is approximately 1,800 lineal feet (lf) of the total 6,600 lf of planned force main construction and has a design bottom elevation of about -8 feet NAVD. |

GEOTECHNICAL CHARACTERIZATION

We have developed a general characterization of the subsurface conditions based upon our review of the subsurface exploration, geologic setting, and our understanding of the project. This characterization, termed GeoModel, forms the basis of our geotechnical calculations and evaluation of site preparation and foundation options. Conditions encountered at each exploration point are indicated on the individual logs. The individual logs and GeoModel can be found in the **Exploration Results** section of this report.

As part of our analyses, we identified the following model layers within the subsurface profile. For a more detailed view of the model layer depths at each boring location, refer to the GeoModel.

| Model Layer | Layer Name | General Description |
|-------------|--------------------|--|
| 1 | Sand | Poorly graded fine sand (SP) |
| 2 | Clayey Sand | Poorly graded fine clayey sand, loose to medium dense (SC) |

Geotechnical Engineering Report

Glades Cut-off Road 24" Force Main Horizontal Directional Drill ■ St. Lucie County, Florida
April 6, 2021 ■ Terracon Project No. HD205000



| | | |
|---|---------|---|
| 3 | Sand | Poorly graded slightly silty fine sand, sand to gravel sized shell fragments, some lenses with cemented sand and shell nodules, loose to very dense (SP-SM) |
| 4 | Sand | Poorly graded sand, medium dense (SP) |
| 5 | Hardpan | Poorly graded slightly silty and organically stained fine SAND, moderately well cemented, medium dense (SP-SM) |

Loss of drilling fluid circulation was not experienced in the borings during drilling.

Groundwater

The boreholes were observed during drilling for the presence and level of groundwater. The groundwater levels observed in the boreholes can be found on the boring logs in **Exploration Results** and are summarized below.

| Boring Number | Approximate Depth to Groundwater during Drilling (feet) ¹ | Approximate Groundwater Elevation during Drilling (feet-NAVD) ² |
|---------------|--|--|
| B-1 | 1½ | +22 ½ |
| B-2 | 4 | +19 ½ |

1. Below ground surface

2. Based on elevations shown on the Force Main Plan and Profile, by Kimley-Horn and Associates, Inc., dated September 2020.

Groundwater level fluctuations occur due to seasonal variations in the amount of rainfall, runoff and other factors not evident at the time the borings were performed. Therefore, groundwater levels during construction or at other times in the life of the structure may be higher or lower than the levels indicated on the boring logs. The possibility of groundwater level fluctuations should be considered when developing the design and construction plans for the project.

GEOTECHNICAL OVERVIEW

In general, the borings found relatively clean sands and sands with moderate amounts of silt and clay intermixed with shell fragments to depths up to 40 feet below the existing ground surface (bgs). The sands were mostly loose to medium dense in terms of relative density. Sands in very loose to loose condition were found 13 feet bgs at the location of Boring B-1 and 23 feet bgs at B-2 with thicknesses of about 10 and 5 feet, respectively. A layer of sand with silt and shell fragments was found in dense condition between 23 and 28 feet bgs in Boring B-1; and a very dense layer of sand with shell fragments was found in the bottom of both borings at about 38 feet bgs. Furthermore, at the location of B-2, a 2-foot thick hardpan layer was found at 5 feet bgs. Groundwater was encountered during drilling at elevations of +19.5 and +22.5 feet NAVD, approximately. These materials are generally suitable for the force main installation using the HDD method.

Geotechnical Engineering Report

Glades Cut-off Road 24" Force Main Horizontal Directional Drill ■ St. Lucie County, Florida
April 6, 2021 ■ Terracon Project No. HD205000



The **General Comments** section provides an understanding of the report limitations.

HORIZONTAL DIRECTIONAL DRILL (HDD)

HDD Profile

To assist in our analysis, a plan and profile for the HDD crossing (reference *Glades Cutoff Rd 24" Force Main Extension*, dated September 2020) was provided by Kimley-Horn and Associates, Inc. We understand the HDD for the 24-in force main will pass under power transmission lines and Interstate 95 for a distance of about 1,800 linear feet where it will connect with new force main also planned for construction. The design bottom elevation is about -8 feet NAVD and the plan profile indicates about 58 feet of ground cover within the Florida Department of Transportation (FDOT) right-of-way, i.e. the Interstate 95 embankment, and generally about 30 feet of cover beyond FDOT limits.

LATERAL EARTH PRESSURES

Design Parameters

Soil parameters are shown in the following table and are based on empirical correlations (reference FDOT Soils and Foundations Handbook, 2020) with SPT blow counts (N-Values). An empirical formula (Coduto, 2001) was used to relate the elastic modulus to both N-value and soil type. We then assumed drained conditions and assigned a Poisson's ratio of 0.1 for loose soils, 0.2 for medium dense soils, and 0.3 for dense soils (Rowe, 2000) to calculate the shear modulus.

| GeoModel Layer | USCS Classification | SPT N-Values | Total Weight (pcf) | Submerged Weight (pcf) | Friction Angle (phi) | Cohesion (psf) | Coefficients | | |
|----------------|---------------------|--------------|--------------------|------------------------|----------------------|----------------|--------------|--------------|--------------|
| | | | | | | | Active (Ka) | Passive (Kp) | At-Rest (K0) |
| 1 | SP | HA | 100 | 38 | 29 | 0 | 0.347 | 2.88 | 0.515 |
| 2 | SC | 6 | 105 | 43 | 27 | 0 | 0.376 | 2.66 | 0.546 |
| 2 | SC | 13 | 110 | 48 | 29 | 0 | 0.347 | 2.88 | 0.515 |
| 3 | SP-SM | 3 to 8 | 105 | 43 | 30 | 0 | 0.333 | 3.00 | 0.500 |
| 3 | SP-SM | 19 to 21 | 115 | 53 | 33 | 0 | 0.295 | 3.39 | 0.455 |
| 3 | SP-SM | 35 | 120 | 58 | 37 | 0 | 0.249 | 4.02 | 0.398 |
| 3 | SP | 62 to 63 | 125 | 63 | 38 | 0 | 0.238 | 4.20 | 0.384 |
| 4 | SP | 8 to 12 | 110 | 48 | 31 | 0 | 0.347 | 2.88 | 0.515 |
| 5 | Hardpan | 11 | 105 | 43 | 31 | 0 | 0.347 | 2.88 | 0.515 |

Geotechnical Engineering Report

Glades Cut-off Road 24" Force Main Horizontal Directional Drill ■ St. Lucie County, Fla
 April 6, 2021 ■ Terracon Project No. HD205000



Estimated shear modulus values based on depth are also provided in the following table.

| Boring No. | Depth (feet) | U.S.C.S | Relative Density | N-Value | Average Shear Modulus, G (psf) | | |
|------------|--------------|---------|-----------------------|----------------------|--------------------------------|---------|---------|
| | | | | | Range | | Average |
| B-1 | 0 to 8 | SP/SC | Not measured | 5 to 13 ¹ | 86,000 | 100,000 | 93,000 |
| | 8 to 23 | SP-SM | Loose | 3 to 8 | 89,000 | 133,000 | 111,000 |
| | 23 to 28 | SP-SM | Dense | 35 | 362,000 | | 362,000 |
| | 28 to 33 | SP-SM | Loose | 4 | 89,000 | | 89,000 |
| | 33 to 38 | SP | Medium dense | 12 | 162,000 | | 162,000 |
| | 38 to 40 | SP | Very dense | 62 | 611,000 | | 611,000 |
| B-2 | 0 to 5 | SP | Not measured | 5 ¹ | 100,000 | | 100,000 |
| | 5 to 7 | SP-SM | Medium dense | 11 | 152,000 | | 152,000 |
| | 7 to 8 | SC | Loose | 6 | 55,000 | | 55,000 |
| | 8 to 17 | SP | Loose to medium dense | 8 to 12 | 133,000 | 162,000 | 147,500 |
| | 17 to 23 | SP | Medium dense | 21 | 252,000 | | 252,000 |
| | 23 to 28 | SM | Very loose | 3 | 39,000 | | 39,000 |
| | 28 to 38 | SP | Medium dense | 19 | 232,000 | | 232,000 |
| | 38 to 40 | SP | Very dense | 63 | 620,000 | | 620,000 |

1. An N-Value of 5 was assumed between 0 to 3½ feet in Boring B-1 and between 0 to 5 feet in B-2.

TRENCH BACKFILL RECOMMENDATIONS

- Any open trench (excavation) areas should be accomplished in the dry (i.e. not in saturated or submerged conditions). Dewatering to a depth of 2 feet below the bottom of all excavations should be performed prior to placement of backfill materials.
- Should the excavation bottom become unstable due to persistent moisture or hydrostatic pressure, the bottom should be “over-excavated” a minimum of 12 inches (deep) and replaced with clean gravel (FDOT No. 57 Stone) enveloped in a filter fabric.
- Backfill below the existing groundwater level at the time of construction should consist of relatively clean sands or gravels, with a maximum of 15% passing the U.S. No. 200 sieve and no particle size larger than 1 inch in any dimension. Backfill above the existing groundwater level at the time of construction should consist of sands or gravels with particle sizes of less than 1 inch in any dimension, no more than 35 percent fines, and of low plasticity (i.e. Liquid Limit less than 40 and Plasticity Index less than 10). The fill should be placed in the dry in lifts that do not exceed 12 inches in vertical measure. Each lift should be compacted to at least 95% of the Modified Proctor maximum dry density (ASTM D-1557). Backfill in pavement areas should be compacted to at least 98% density (ASTM D-1557).

- The GeoModel Layer 1, 3, and 4 soils should generally meet the backfill gradation requirement of a maximum of 15% passing the U.S. No. 200 sieve. The GeoModel Layer 2 soils should generally meet the backfill gradation requirement of a maximum of 35% passing the U.S. No. 200 sieve and non-plastic. It should be noted that the GeoModel Layer 2 soils will be difficult to handle, place, and compact at moisture contents greater than +/- 2% of the optimum moisture content as determined from a Modified Proctor test. The GeoModel Layer 5 soils generally do not meet the requirements for re-use as backfill, due to elevated organic content.
- As a minimum, all temporary excavations should be sloped or braced as required by Occupational Health and Safety Administration (OSHA) regulations to provide stability and safe working conditions. Temporary excavations will probably be required during pipe installation operations. The utility contractor, by contract, is usually responsible for designing and constructing stable, temporary excavations and should shore, slope, or bench the sides of the excavations, as required, to maintain stability of both the excavation sides and bottom. All excavations should comply with applicable local, state, and federal safety regulations including the current OSHA Excavation and Trench Safety Standards.

Temporary Dewatering

Dewatering may be needed to facilitate earthwork and underground construction operations for this project. The necessity for dewatering will be dependent on the depth of excavation below existing grade and the groundwater levels at the time of construction. Actual dewatering "means and methods" should be left up to a contractor experienced in installation and operation of dewatering systems. The contractor should provide a dewatering plan for review and approval by the Engineer-of-Record prior to the installation of the dewatering systems.

Also, the dewatering plan should consider the potential impact of lowered groundwater (i.e. increased vertical stress on subsoils which could trigger settlement) on nearby, existing construction.

GENERAL COMMENTS

Our analysis and opinions are based upon our understanding of the project, the geotechnical conditions in the area, and the data obtained from our site exploration. Natural variations will occur between exploration point locations or due to the modifying effects of construction or weather. The nature and extent of such variations may not become evident until during or after construction. Terracon should be retained as the Geotechnical Engineer, where noted in this report, to provide observation and testing services during pertinent construction phases. If variations appear, we can provide further evaluation and supplemental recommendations. If variations are noted in the absence of our observation and testing services on-site, we should be immediately notified so that we can provide evaluation and supplemental recommendations.

Geotechnical Engineering Report

Glades Cut-off Road 24" Force Main Horizontal Directional Drill ■ St. Lucie County, Fla
April 6, 2021 ■ Terracon Project No. HD205000



Our services and any correspondence or collaboration through this system are intended for the sole benefit and exclusive use of our client for specific application to the project discussed and are accomplished in accordance with generally accepted geotechnical engineering practices with no third-party beneficiaries intended. Any third-party access to services or correspondence is solely for information purposes to support the services provided by Terracon to our client. Reliance upon the services and any work product is limited to our client, and is not intended for third parties. Any use or reliance of the provided information by third parties is done solely at their own risk. No warranties, either express or implied, are intended or made.

Site characteristics as provided are for design purposes and not to estimate excavation cost. Any use of our report in that regard is done at the sole risk of the excavating cost estimator as there may be variations on the site that are not apparent in the data that could significantly impact excavation cost. Any parties charged with estimating excavation costs should seek their own site characterization for specific purposes to obtain the specific level of detail necessary for costing. Site safety, and cost estimating including, excavation support, and dewatering requirements/design are the responsibility of others. If changes in the nature, design, or location of the project are planned, our conclusions and recommendations shall not be considered valid unless we review the changes and either verify or modify our conclusions in writing.

ATTACHMENTS

EXPLORATION AND TESTING PROCEDURES

Field Exploration

The field exploration program consisted of the following:

| Number of Borings | Test Method | Boring Depth (feet) | Location |
|-------------------|---------------------------------|---------------------|-----------------------------|
| 2 | Standard Penetration Test (SPT) | 40 | Near Proposed HDD Alignment |

Boring Layout and Elevations: Terracon personnel provided the boring layout. Coordinates were obtained with a handheld GPS unit (estimated horizontal accuracy of about ± 20 feet) and approximate elevations were obtained by plan documents provided to us, dated September 2020. If more precise boring layout and elevations are desired, we recommend the borings be surveyed.

Subsurface Exploration Procedures: The borings were advanced with a truck-mounted rotary drill rig using the Standard Penetration Test (SPT) method. Samples were obtained continuously in the upper 10 feet of each boring and at intervals of 5 feet thereafter. In the SPT sampling procedure, a standard 2-inch outer diameter split-barrel sampling spoon was driven into the ground by a 140-pound automatic hammer falling a distance of 30 inches. The number of blows required to advance the sampling spoon the middle 12 inches of a 24-inch penetration or the last 12 inches of an 18-inch penetration is recorded as the Standard Penetration Test (SPT) resistance value. The SPT resistance values, also referred to as N-values, are indicated on the boring logs at the test depths. We observed and recorded groundwater levels during drilling and sampling. For safety purposes, all borings were backfilled with bentonite chips after their completion.

The sampling depths, penetration distances, and other sampling information was recorded on the field boring logs. The samples were placed in appropriate containers and taken to our soil laboratory for testing and classification by a Geotechnical Engineer. Our exploration team prepared field boring logs as part of the drilling operations. These field logs included visual classifications of the materials encountered during drilling and our interpretation of the subsurface conditions between samples. Final boring logs were prepared from the field logs. The final boring logs represent the Geotechnical Engineer's interpretation of the field logs and include modifications based on observations and tests of the samples in our laboratory.

SITE LOCATION AND EXPLORATION PLANS

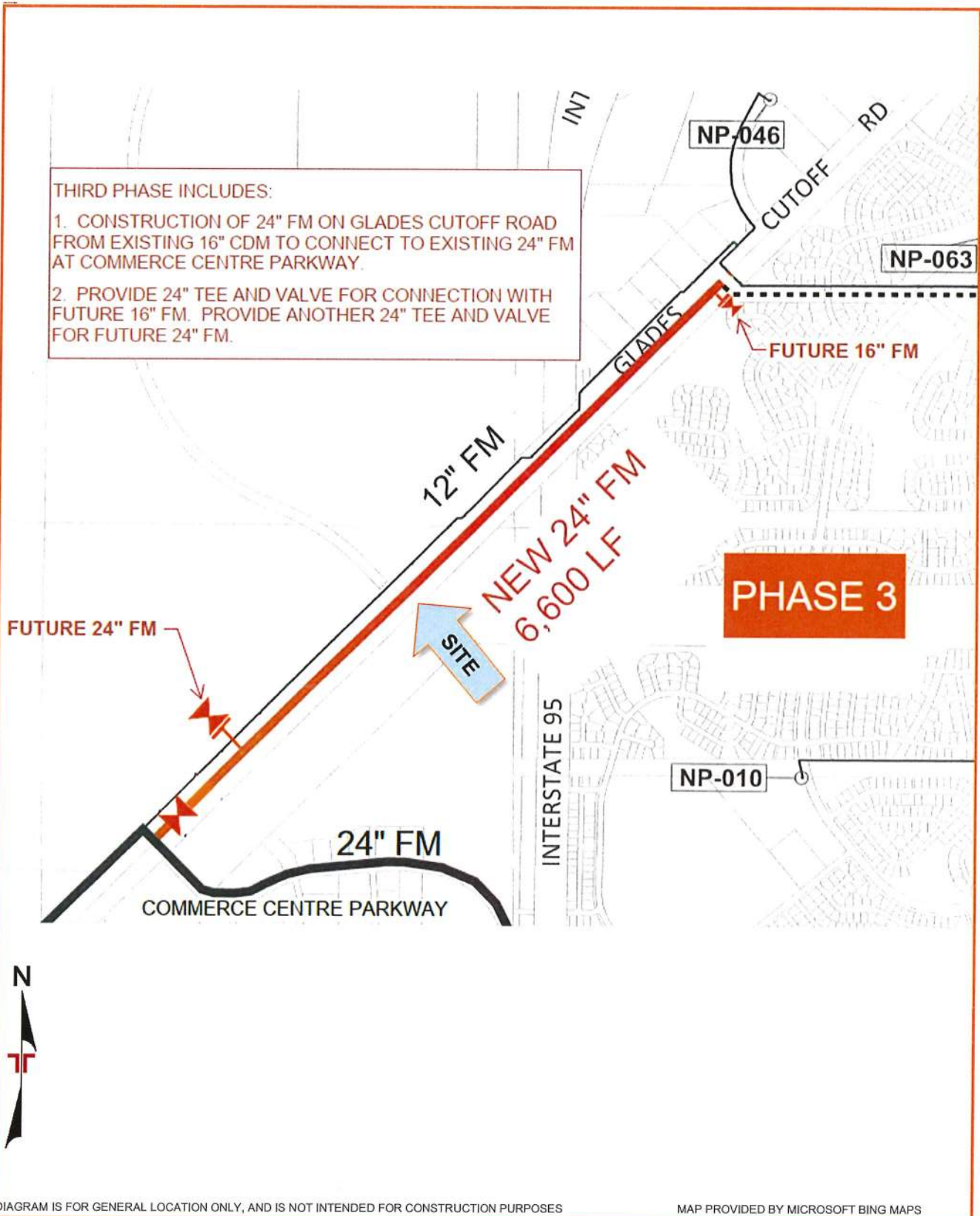
Contents:

Site Location Plan
Exploration Plan

Note: All attachments are one page unless noted above.

SITE LOCATION

Glades Cut-off Road 24" Force Main Horizontal Directional Drill ■ St. Lucie County, Florida
April 6, 2021 ■ Terracon Project No. HD205000



EXPLORATION PLAN

Glades Cut-off Road 24" Force Main Horizontal Directional Drill ■ St. Lucie County, Florida
April 6, 2021 ■ Terracon Project No. HD205000

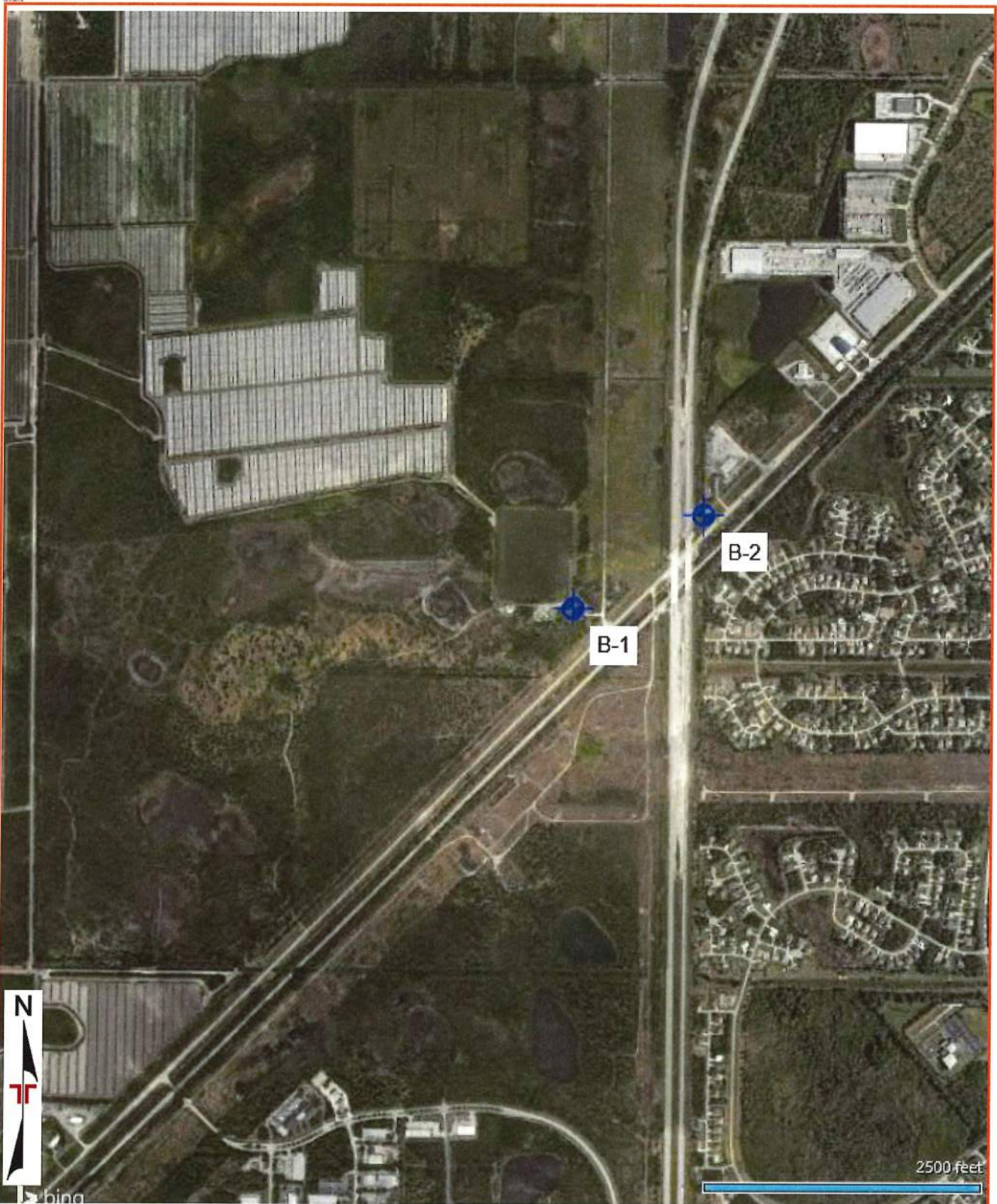


DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

MAP PROVIDED BY MICROSOFT BING MAPS

EXPLORATION RESULTS

Contents:

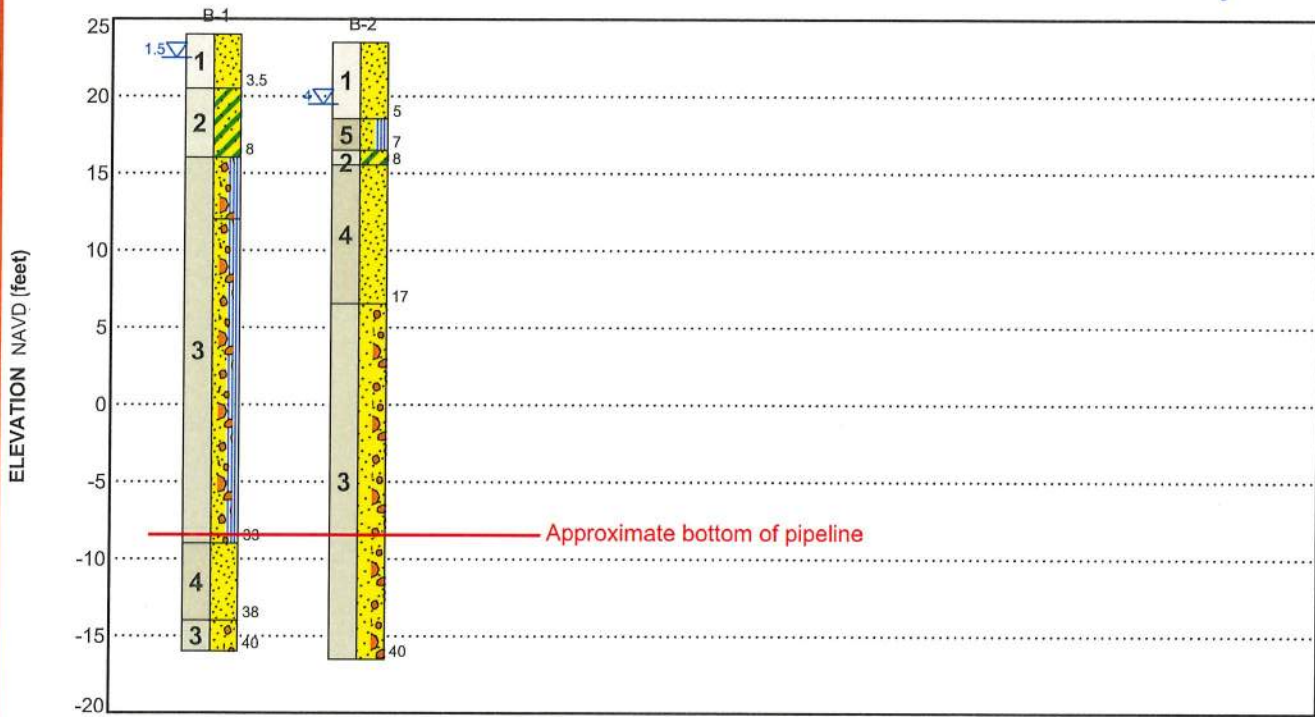
GeoModel

Boring Logs (B-1 and B-2)

Note: All attachments are one page unless noted above.

GEOMODEL

Glades Cutoff Road Force Main ■ Port St. Lucie, FL
Terracon Project No. HD205000



This is not a cross section. This is intended to display the Geotechnical Model only. See individual logs for more detailed conditions.

| Model Layer | Layer Name | General Description |
|-------------|-------------|---|
| 1 | Sand | Poorly graded fine SAND (SP) |
| 2 | Clayey Sand | Poorly graded fine clayey SAND (SC), loose to medium dense |
| 3 | Sand | Poorly graded slightly silty fine SAND, sand to gravel-sized shell fragments, some lenses with cemented sand & shell nodules (SP-SM), loose to very dense |
| 4 | Sand | Poorly graded fine SAND (SP), medium dense |
| 5 | Hardpan | Poorly graded slightly silty and organically stained fine SAND, moderately well cemented (SP-SM), medium dense |

LEGEND

- Poorly-graded Sand
- Clayey Sand
- Poorly-graded Sand with Silt and Gravel
- Poorly-graded Sand with Gravel
- Poorly-graded Sand with Silt

First Water Observation

Groundwater levels are temporal. The levels shown are representative of the date and time of our exploration. Significant changes are possible over time. Water levels shown are as measured during and/or after drilling. In some cases, boring advancement methods mask the presence/absence of groundwater. See individual logs for details.

NOTES:






Layering shown on this figure has been developed by the geotechnical engineer for purposes of modeling the subsurface conditions as required for the subsequent geotechnical engineering for this project. Numbers adjacent to soil column indicate depth below ground surface.

BORING LOG NO. B-1

PROJECT: Glades Cutoff Road Force Main

CLIENT: Kimley-Horn and Associates Inc
West Palm Beach, FL

SITE: Glades Cutoff Road at Commerce Centre Drive
Port St. Lucie, FL

| MODEL LAYER | GRAPHIC LOG | LOCATION See Exploration Plan Latitude: 27.3541° Longitude: -80.4170° Approximate Surface Elev.: 24.0 (Ft.) +/- ELEVATION (Ft.) | DEPTH (Ft.) | WATER LEVEL OBSERVATIONS | SAMPLE TYPE | FIELD TEST RESULTS |
|-------------|---|--|-------------|--------------------------|-------------|-----------------------|
| | | DEPTH | | | | |
| 1 |  | SAND (SP) , fine grained, gray | | ▽ | | |
| | | | 3.5 | | | |
| 2 |  | CLAYEY SAND (SC) , fine grained, brown to gray, medium dense | | | | 3-5-8-14 N=13 |
| | | | 8.0 | | | 4-6-7-7 N=13 |
| | | SAND WITH GRAVEL (SP-SM) , with gravel-sized shell fragments, some lenses with cemented sand and shell nodules, fine grained, light brown, loose | | | | 3-3-5-5 N=8 |
| | | | 12.0 | | | |
| | | SAND WITH SILT AND GRAVEL (SP-SM) , some lenses with sand-sized shell fragments, fine grained, dark gray to gray, very loose to loose | | | | 2-3-2-2 N=5 |
| | | | 12.0 | | | |
| 3 |  | | | | | 2-1-2-2 N=3 |
| | | | 33.0 | | | 11-15-20-24 N=35 |
| | | dense between 23 and 28 feet | | | | 7-3-1-7 N=4 |
| | | | 33.0 | | | |
| 4 |  | SAND (SP) , fine grained, brown, medium dense | | | | WR-WR-12-15 N = 12 |
| | | | 38.0 | | | |
| 3 |  | SAND WITH GRAVEL (SP) , with sand-sized shell fragments, fine grained, gray, very dense | | | | 17-26-36-40 N=62 |
| | | | 40.0 | | | |
| | | Boring Terminated at 40 Feet | -9+/- | | | |
| | | | -14+/- | | | |
| | | | -16+/- | | | |

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Rope and Cathead

Advancement Method:
Mud Rotary
Continuous sampling upper 10 feet
Samples at 5 foot intervals thereafter

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (if any).

Notes:
Begin Mud Rotary at 2 feet
WR equals weight of rods
Elevation shown is in NAVD

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS

▽ 1.5 ft during drilling



Boring Started: 02-25-2021

Boring Completed: 02-25-2021

Drill Rig: Mobile B-57

Driller: P.T.

Project No.: HD205000

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT: GEO SMART LOG-NO WELL HD2050000 GLADES CUTOFF ROA.GPJ TERRACON_DATATEMPLATE.GDT 4/5/21






BORING LOG NO. B-2

PROJECT: Glades Cutoff Road Force Main

CLIENT: Kimley-Horn and Associates Inc
West Palm Beach, FL

SITE: Glades Cutoff Road at Commerce Centre Drive
Port St. Lucie, FL

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL HD205000 GLADES CUTOFF ROA.GPJ TERRACON_DATATEMPLATE.GDT 4/5/21

| MODEL LAYER | GRAPHIC LOG | LOCATION See Exploration Plan Latitude: 27.3565° Longitude: -80.4134° Approximate Surface Elev.: 23.5 (Ft.) +/- ELEVATION (Ft.) | DEPTH (Ft.) | WATER LEVEL OBSERVATIONS | SAMPLE TYPE | FIELD TEST RESULTS |
|-------------|--|--|-------------|--------------------------|-------------|---------------------|
| | | DEPTH | | | | |
| 1 |  | SAND (SP) , fine grained, brown to gray | | ▽ | | |
| | | | 5.0 | | | |
| 5 |  | SAND WITH SILT (SP-SM) , organically stained and moderately well cemented (Hardpan), fine grained, dark brown, medium dense | 7.0 | | | 5-7-4-4 N=11 |
| 2 |  | CLAYEY SAND (SC) , fine grained, gray, loose | 8.0 | | | 3-3-3-4 N=6 |
| | | SAND (SP) , trace clay, fine grained, brown to gray, loose to medium dense | 15.5+/- | | | 5-6-6-6 N=12 |
| 4 |  | | 17.0 | | | 3-3-5-8 N=8 |
| | | SAND WITH GRAVEL (SP) , with gravel-sized shell fragments, fine grained, gray, medium dense to very dense | 6.5+/- | | | 7-11-10-9 N=21 |
| | | very loose silty fine SAND with shell fragments from 23 to 28 feet | | | | 2-1-2-2 N=3 |
| 3 |  | | 40.0 | | | 9-9-10-11 N=19 |
| | | Boring Terminated at 40 Feet | -16.5+/- | | | 8-9-10-10 N=19 |
| | | | | | | 15-28-35-40 N=63 |

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Rope and Cathead

Advancement Method:
Mud Rotary
Continuous sampling upper 10 feet
Samples at 5 foot intervals thereafter

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (if any).

Notes:
Begin Mud Rotary at 4 feet
Elevation shown is in NAVD

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS

▽ 4 ft during drilling



Boring Started: 02-25-2021

Boring Completed: 02-25-2021

Drill Rig: Mobile B-57

Driller: P.T.

Project No.: HD205000

SUPPORTING INFORMATION

Contents:

General Notes

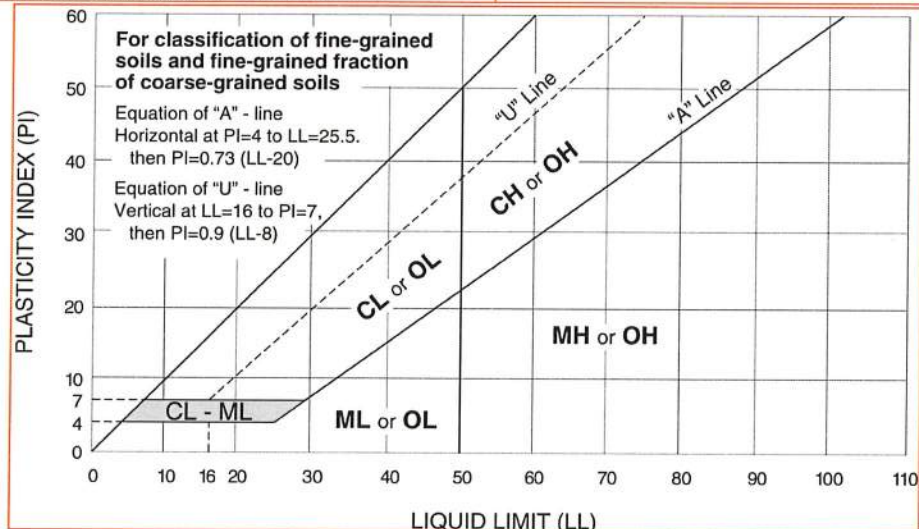
Unified Soil Classification System

Note: All attachments are one page unless noted above.

| Criteria for Assigning Group Symbols and Group Names Using Laboratory Tests ^A | | | | Soil Classification | | |
|--|--|---|---|---|-----------------------------------|------------------------------------|
| | | | | Group Symbol | Group Name ^B | |
| Coarse-Grained Soils: More than 50% retained on No. 200 sieve | Gravels: More than 50% of coarse fraction retained on No. 4 sieve | Clean Gravels: Less than 5% fines ^C | $Cu \geq 4$ and $1 \leq Cc \leq 3$ ^E | GW | Well-graded gravel ^F | |
| | | Gravels with Fines: More than 12% fines ^C | $Cu < 4$ and/or $[Cc < 1$ or $Cc > 3.0]$ ^E | GP | Poorly graded gravel ^F | |
| | | | Fines classify as ML or MH | GM | Silty gravel ^{F, G, H} | |
| | | Sands: 50% or more of coarse fraction passes No. 4 sieve | Clean Sands: Less than 5% fines ^D | $Cu \geq 6$ and $1 \leq Cc \leq 3$ ^E | SW | Well-graded sand ^I |
| | $Cu < 6$ and/or $[Cc < 1$ or $Cc > 3.0]$ ^E | | | SP | Poorly graded sand ^I | |
| | Sands with Fines: More than 12% fines ^D | | Fines classify as ML or MH | SM | Silty sand ^{G, H, I} | |
| | | | Fines classify as CL or CH | SC | Clayey sand ^{G, H, I} | |
| | Fine-Grained Soils: 50% or more passes the No. 200 sieve | Sils and Clays: Liquid limit less than 50 | Inorganic: | $PI > 7$ and plots on or above "A" line | CL | Lean clay ^{K, L, M} |
| $PI < 4$ or plots below "A" line ^J | | | | ML | Silt ^{K, L, M} | |
| Organic: | | | Liquid limit - oven dried | < 0.75 | OL | Organic clay ^{K, L, M, N} |
| | | | Liquid limit - not dried | | | Organic silt ^{K, L, M, O} |
| Sils and Clays: Liquid limit 50 or more | | Inorganic: | PI plots on or above "A" line | CH | Fat clay ^{K, L, M} | |
| | | | PI plots below "A" line | MH | Elastic Silt ^{K, L, M} | |
| | | Organic: | Liquid limit - oven dried | < 0.75 | OH | Organic clay ^{K, L, M, P} |
| | | | Liquid limit - not dried | | | Organic silt ^{K, L, M, Q} |
| Highly organic soils: | Primarily organic matter, dark in color, and organic odor | | | PT | Peat | |

- ^A Based on the material passing the 3-inch (75-mm) sieve.
 - ^B If field sample contained cobbles or boulders, or both, add "with cobbles or boulders, or both" to group name.
 - ^C Gravels with 5 to 12% fines require dual symbols: GW-GM well-graded gravel with silt, GW-GC well-graded gravel with clay, GP-GM poorly graded gravel with silt, GP-GC poorly graded gravel with clay.
 - ^D Sands with 5 to 12% fines require dual symbols: SW-SM well-graded sand with silt, SW-SC well-graded sand with clay, SP-SM poorly graded sand with silt, SP-SC poorly graded sand with clay.
- $$E \quad Cu = D_{60}/D_{10} \quad Cc = \frac{(D_{30})^2}{D_{10} \times D_{60}}$$
- ^F If soil contains $\geq 15\%$ sand, add "with sand" to group name.
 - ^G If fines classify as CL-ML, use dual symbol GC-GM, or SC-SM.

- ^H If fines are organic, add "with organic fines" to group name.
- ^I If soil contains $\geq 15\%$ gravel, add "with gravel" to group name.
- ^J If Atterberg limits plot in shaded area, soil is a CL-ML, silty clay.
- ^K If soil contains 15 to 29% plus No. 200, add "with sand" or "with gravel," whichever is predominant.
- ^L If soil contains $\geq 30\%$ plus No. 200 predominantly sand, add "sandy" to group name.
- ^M If soil contains $\geq 30\%$ plus No. 200, predominantly gravel, add "gravelly" to group name.
- ^N $PI \geq 4$ and plots on or above "A" line.
- ^O $PI < 4$ or plots below "A" line.
- ^P PI plots on or above "A" line.
- ^Q PI plots below "A" line.



APPENDIX B – PERMITS

FDEP PERMIT



FLORIDA DEPARTMENT OF Environmental Protection

Southeast District Office
3301 Gun Club Road, MSC 7210-1
West Palm Beach, FL 33406
561-681-6600

Ron DeSantis
Governor

Jeanette Nuñez
Lt. Governor

Shawn Hamilton
Interim Secretary

July 8, 2021

PERMITTEE:

Bradley E. Macek
Utility Systems Director
City of Port St. Lucie - Utility
900 S.S. Ogden Lane
Port St. Lucie, FL 34983
Email: bmacek@cityofpsl.com

Permit Number: 0226637-058-DWC-CG
County: St. Lucie
Project: Glades Cutoff 24" FM Extension PH3
Date of Issue: July 8, 2021
Expiration Date: July 7, 2026
Connected To: Glades WWTF
Facility #: FLA326321

Dear Mr. Macek:

Thank you for your Notification/Application for Constructing a Domestic Wastewater Collection/Transmission System for the subject project. The Notice was received on July 6, 2021.

This is to advise you that the Department does not object to your use of such General Permit.

Please note the attached requirements apply to your use of this General Permit for constructing the proposed domestic wastewater collection/transmission system.

The Proposed project includes:

- **Approx. 7882 LF of 24" C-900 Sanitary Sewer Forcemain**
- **1791 LF of 24" FPVC Sanitary Sewer Forcemain (Directionally Drilled)**
- **10 LF of 16" C-900 Sanitary Forcemain**

Location: St. Lucie County, Port St. Lucie (Section: 4/9, Township: 37S, Range: 39E)

You are further advised that the construction activity must conform to the description contained in your Notification/Application for Constructing a Domestic Wastewater Collection/Transmission System and that any deviation will subject the Permittee to enforcement action and possible penalties.

If you have any questions, please contact Stephen Boyle at telephone number (561) 681-6715 or by email Stephen.Boyle@FloridaDEP.gov

Sincerely,

Christopher Weller

July 8, 2021

Christopher Weller
Environmental Manager
Permitting and Domestic Wastewater
Southeast District

Date

Electronic copies furnished to:

FDEP: Norva Blandin, Chris Weller, Bradley Akers, Stephen Boyle
Thomas C Jensen P.E., Kimley-Horn & Assoc.; Tom.Jensen@kimley-horn.com
Lauren Smith E.I. , Kimley-Horn & Assoc, Lauren.Smith@kimley-horn.com

FILING AND ACKNOWLEDGMENT

FILED, on this date, under Section 120.52, Florida Statutes, with the designated Deputy Clerk,
receipt of which is hereby acknowledged.

Amita L. Spencer

Clerk

July 8, 2021

Date

**REQUIREMENTS FOR USE OF THE GENERAL PERMIT FOR DOMESTIC
WASTEWATER COLLECTION/TRANSMISSION SYSTEMS:**

1. This general permit is subject to the general permit conditions of Rule 62-4.540, F.A.C., as applicable. This rule is available at the Department's Internet site at: <http://www.dep.state.fl.us/water/wastewater/rules.htm#domestic> [62-4.540].
2. This general permit does not relieve the permittee of the responsibility for obtaining a dredge and fill permit where it is required. [62-604.600(6)(b)1]
3. This general permit cannot be revised, except to transfer the permit. [62-604.600(6)(b)2]
4. Upon completion of construction of the collection/transmission system project, and before placing the facilities into operation for any purpose other than testing for leaks or testing equipment operation, the permittee shall submit to the Department's Southeast District Office Form 62-604.300(8)(b), Request for Approval to Place a Domestic Wastewater Collection/Transmission System into Operation. This form is available at the Department's Internet site at: <http://www.dep.state.fl.us/water/wastewater/forms.htm> [62-604.700(2)]
5. The new or modified collection/transmission facilities shall not be placed into service until the Department clears the project for use. [62-604.700(3)]
6. Abnormal events shall be reported to the Department's Southeast District Office in accordance with Rule 62-604.550, F.A.C. For unauthorized spills of wastewater in excess of 1000 gallons per incident, or where information indicates that public health or the environment may be endangered, oral reports shall be provided to the STATE WARNING POINT TOLL FREE NUMBER (800) 320-0519 as soon as practical, but no later than 24 hours from the time the permittee or other designee becomes aware of the circumstances. Unauthorized releases or spills less than 1000 gallons per incident are to be reported orally to Department's Southeast District Office within 24 hours from the time the permittee, or other designee becomes aware of the circumstances. [62-604.550]

FLORIDA DEPARTMENT OF TRANSPORTATION PERMIT

UTILITY PERMIT

PERMIT NO: 2021-H-490-00119

STATE ROAD INFORMATION

| | | | | |
|-----------------------------|-----------------------------|-------------------------------|---------------------------------------|------------------------------------|
| County: St. Lucie | Section: 94001000 | State Road No: SR 9 | Beginning Mile Post: 27.259 | Ending Mile Post: 27.259 |
|-----------------------------|-----------------------------|-------------------------------|---------------------------------------|------------------------------------|

APPLICANT INFORMATION

The Utility Agency Owner (UAO) shall be identified in this Applicant Information Box. When the UAO is a City or County and desires to have the Utility Builder make a joint permit applicant, as prescribed in Section 2.1(4) of the 2017 Utility Accommodation Manual (UAM), the Utility Builder shall also be identified in this Applicant Information Box. A Utility Builder alone cannot apply for a utility permit without the City or County adding them as a joint applicant.

| | | | |
|-----------------------------------|--|---|-------|
| Utility Agency/Owner (UAO) | | Utility Builder (only applicable when the UAO is a City or County) | |
| Name: | <u>City of Port St Lucie Utility Systems</u> | Name: | _____ |
| Contact Person: | <u>City of Port St Lucie Utility Systems</u> | Contact Person: | _____ |
| Address: | <u>900 SE Ogden Lane</u> | Address: | _____ |
| City: | <u>Port St Lucie</u> | City: | _____ |
| State: | <u>Florida</u> | State: | _____ |
| Zip: | <u>34983</u> | Zip: | _____ |
| Telephone: | <u>(772) 873-6400 ext. _____</u> | Telephone: | _____ |
| Email: | <u>BMacek@cityofPSL.com</u> | Email: | _____ |

WORK DESCRIPTION

The Applicant(s) requests permission from the Florida Department of Transportation (FDOT) to construct, operate, and maintain the utilities as described below and as depicted in the incorporated documentation.

The City is constructing an extension to their force main system, and this project entails a 24-inch force main along the Glades Cutoff Road. This permit request is for the crossing of I-95, approximately 250 LF north of the Glades Cutoff Road, via a directional bore. Note, a TCP is not anticipated since work is outside the I-95 ROW.

Utility Work No: _____

Additional sheets are attached and are incorporated into this permit Yes No

For FDEP certification, the FDOT agency report is attached in accordance with UAM Section 2.4.1 (13) Yes No

TRAFFIC CONTROL (TCP)

The TCP will comply with the following 600 series index(es) 600

A TCP has been attached and incorporated into this permit application in compliance with UAM Section 2.4.2.

MOT Technician's contact information (may be supplied at the two (2) business day notification to FDOT):

Name: _____ Telephone: _____ Email: _____

COMMENCEMENT OF WORK

The UAO and/or Utility Builder shall commence actual construction in good faith within sixty (60) calendar days after approval of the permit application. If the beginning date is more than sixty (60) calendar days from the date of approval, the UAO and/or Utility Builder must review the permit with the FDOT Approving Engineer listed to make sure no changes have occurred to the transportation facility that would affect the permit's continued approval. The UAO and/or Utility Builder shall make good faith efforts to expedite the work and complete the work within the calendar days indicated.

Anticipated Start Date: 12/15/2021

Calendar days needed to completed: 45

Florida Department of Transportation
UTILITY PERMIT

PERMIT NO: 2021-H-490-00119

APPLICANT SIGNATURE

By the below signature(s) the UAO and/or Utility Builder agree(s) to construct, operate, and maintain the work as noted in the above Work Description, shown in plans and incorporated documents, in compliance with the UAM, all instructions noted in the FDOT Special Instructions Box, and special instructions incorporated into this permit. The UAO and/or Utility Builder declares, the location of all existing utilities that it owns or has an interest in, both aerial and underground, are accurately shown on the plans of the work areas. In accordance with UAM Section 2.8, the UAO and/or Utility Builder further declares that a letter of notification was delivered to the owners of other facilities within the work areas and that those listed below are the only facility owners known to be involved or potentially impacted by the proposed work.

| | |
|-----------------------------------|--|
| Date Notified: <u>7/2/2020</u> | Name of other facility owners (attach additional sheets if necessary). <u>FPL</u> |
| <u>7/2/2020</u> | <u>ATT</u> |
| <u>7/2/2020</u> | <u>Hotwire</u> |
| _____ | _____ |
| _____ | _____ |

| Utility Agency/Owner | Utility Builder (when applicable) |
|---|-----------------------------------|
| Signature: <u>BRAD MACEK (digital signature)</u> Date: <u>7/13/2021</u> | Signature: _____ Date: _____ |
| Name (printed): <u>BRAD MACEK</u> | Name (printed): _____ |
| Title: _____ | Title: _____ |

FDOT PROJECT INFORMATION

Pursuant to UAM Section 2.1(10), the utility work is within FDOT projects listed below and must have a Utility Work Schedule for each project approved prior to commencement of work within the FDOT project limits:
There are NO FDOT constructions (proposed or underway).
This work is NOT related to an approved Utility work Schedule.

FDOT SPECIAL INSTRUCTIONS

In accordance with UAM Section 2.7, FDOT incorporates the below and attached special instructions into this permit.
A pre-work meeting must be scheduled with Treva_Fitz@royjorgensen.com 772-584-9935 prior to any work beginning.

Additional FDOT Special Instructions are attached and incorporated into this permit. Yes No

PERMIT APPROVAL

By signature below, FDOT gives permission to the UAO and /or Utility Builder to construct, operate, and maintain the utilities indicated in this Utility Permit in compliance with the UAM, all incorporated documents, and special instructions. Any changes to the approved work must be approved by the FDOT's Approving Engineer and attached and incorporated into this permit in accordance with UAM Section 2.11.

Approving Engineer: Paul Brege (digital signature) Date: 7/15/2021
Name: Paul Brege
Title: MAINTENANCE MANAGER/PERMITS

Notification of Utility Work to be provided to: Telephone (772) 584-9935 ext. _____ or Email: treva_fitz@royjorgensen.com

Rep. Name: Treva Fitz Telephone 7725849935 Email: treva_fitz@royjorgensen.com
An FDOT Representative is required to be present on the worksite prior to commencement of work. Yes No

Florida Department of Transportation
UTILITY PERMIT

PERMIT NO: 2021-H-490-00119

CERTIFICATION

I, the undersigned UAO and/or Utility Builder, hereby CERTIFY that the utilities were constructed and inspected in compliance with the UAM all incorporated documents, and special instructions. Pursuant to UAM Section 2.11, all changes have been approved by the FDOT's Approving Engineer and incorporated into this permit along with all other material certifications, test results, bore logs, approved plans changes, as-built plans or other required documentation.

I also CERTIFY that work began on _____ and was completed on _____ and that the area was left in as good or better condition than when the work began.

Utility Agency/Owner

Utility Builder (when applicable)

Signature: _____ Date _____

Signature: _____ Date _____

Name (printed): _____

Name (printed): _____

Title: _____

Title: _____

FINAL INSPECTION OF WORK

The work was inspected and found to be in non-compliance as noted below:

All issues of non-compliance listed above have been brought into compliance and/or FDOT has no outstanding issues that need to be addressed by the UAO and/or Utility Builder. However, this final inspection does not release the UAO and/or Utility Builder of their continuing responsibilities pursuant to Rule 14-46.001, the UAM, all incorporated documents, and special instructions.

FDOT Inspector: _____ Date: _____

Name: _____

Title: _____

SPECIAL CONDITIONS

A copy of this permit & plan will be on the job site at all times

This permit is valid only for work proposed within the D.O.T. right-of-way.

Contact Permit Inspector Treva Fitz @ 772-584-9935 a minimum of 48 HRS before work is to start to schedule a pre-construction conference.

Certification acceptance and final approval is contingent upon conformity of all work done according to this permit.

Validity of this permit is contingent upon permittee obtaining necessary permits from all other agencies involved.

FDOT PERMITS ARE VALID FOR (1) ONE YEAR FROM DATE OF APPROVAL. The permittee or authorized agent shall request an extension. (If possible request received 30 days prior to permit expiring.)

Sidewalk closures require the contractor to implement all rules outlined in the most current edition of FDOT Standard Index 660.

Upon completion of work the PERMIT FINAL INSPECTION CERTIFICATION will be signed & dated then sent to FDOT or their Representative

NO EXCEPTIONS

Approved
2021-H-490-00119
Paul Bregg
7/15/2021
EBID #20210116

National Pollutant Discharge Elimination System Treasure Coast



BE A RESPONSIBLE NEIGHBOR ON THE STATE'S HIGHWAY

Please reference the following numbers:

| | | |
|---|---------------------------------------|----------------|
| Illicit Discharge or Illegal Dumping | FDOT Treasure Coast Operations Center | 772-465-7396 |
| Spill (oil or hazardous materials) onto the highway | State Watch Office | 1-800-320-0519 |

- Return **used oil** to your nearest service station or any auto supply store for recycling.
- **SWEEP AND REMOVE**, do not wash fertilizers, grass clippings, pesticides, soil, or sediment into the storm drain system.
- **DURING CONSTRUCTION**, clean equipment tires before leaving your site and don't allow any erosion or sediment to enter the highway storm drain system. Control waste that may cause adverse impacts to water quality. Please contact **FDOT Treasure Coast Operations Center 48 hours** prior to breaking ground on a project that has an **approved DCP**.

To keep up to date on your **stormwater responsibility**, please visit:
FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
<http://www.dep.state.fl.us/water>

For your information, FDOT-sponsored **trainings** on illicit discharge detection and elimination (IDDE) or spill prevention/response can be found by visiting:

<http://wbt.dot.state.fl.us/ois/IllicitDischarge/index.htm>

<http://wbt.dot.state.fl.us/ois/SpillPrevention/index.htm>

REMEMBER, what goes into a storm drain ends up floating in our waterways or washing up on our beaches!!!

Approved
2021-H-490-00119
Paul Brege
7/15/2021

PERMIT NO: _____

STATE ROAD INFORMATION

| | | | | |
|----------------------|------------------|------------------------|--------------------------------|-----------------------------|
| County: St. Lucie | Section: 3102 | State Road No: SR-9 | Beginning Mile Post: 124.33 | Ending Mile Post: 124.33 |
|----------------------|------------------|------------------------|--------------------------------|-----------------------------|

APPLICANT INFORMATION

The Utility Agency Owner (UAO) shall be identified in this Applicant Information Box. When the UAO is a City or County and desires to have the Utility Builder make a joint permit applicant, as prescribed in Section 2.1(4) of the 2017 Utility Accommodation Manual (UAM), the Utility Builder shall also be identified in this Applicant Information Box. A Utility Builder alone cannot apply for a utility permit without the City or County adding them as a joint applicant.

| <u>Utility Agency/Owner (UAO)</u> | | <u>Utility Builder (only applicable when the UAO is a City or County)</u> | |
|-----------------------------------|---|---|------------------------------|
| Name: | <u>City of Port St. Lucie Utilities</u> | Name: | _____ |
| Contact Person: | <u>Bradley E. Macek</u> | Contact Person: | _____ |
| Address: | <u>900 S.E. Ogden Lane</u> | Address: | _____ |
| City: | <u>Port St. Lucie</u> | City: | _____ |
| State: | <u>FL</u> | State: | _____ |
| Zip: | <u>34983</u> | Zip: | _____ |
| Telephone: | <u>(772) 873 - 6412</u> ext. _____ | Telephone: | () _____ - _____ ext. _____ |
| Email: | <u>bmacek@cityofpsl.com</u> | Email: | _____ |

WORK DESCRIPTION

The Applicant(s) requests permission from the Florida Department of Transportation (FDOT) to construct, operate, and maintain the utilities as described below and as depicted in the incorporated documentation.

The City is constructing an extension to their force main system, and this project entails a 24-inch force along Glades Cutoff Road. This permit request is for the crossing of I-95, approx. 350LF north of Glades Cutoff Road, via a directional bore.

Utility Work No: _____

Additional sheets are attached and are incorporated into this permit Yes No

For FDEP certification, the FDOT agency report is attached in accordance with UAM Section 2.4.1 (13) Yes No

TRAFFIC CONTROL (TCP)

- The TCP will comply with the following 600 series index(es) Note, a TCP is not anticipated since work is outside the I-95 R/W
 A TCP has been attached and incorporated into this permit application in compliance with UAM Section 2.4.2.

MOT Technician's contact information (may be supplied at the two (2) business day notification to FDOT):

Name: N/A Telephone () _____ - _____ Email: _____

COMMENCEMENT OF WORK

The UAO and/or Utility Builder shall commence actual construction in good faith within sixty (60) calendar days after approval of the permit application. If the beginning date is more than sixty (60) calendar days from the date of approval, the UAO and/or Utility Builder must review the permit with the FDOT Approving Engineer listed to make sure no changes have occurred to the transportation facility that would affect the permit's continued approval. The UAO and/or Utility Builder shall make good faith efforts to expedite the work and complete the work within the calendar days indicated.

Anticipated Start Date: 12 / 15 / 2021

Calendar days needed to completed: 45

UTILITY PERMIT

PERMIT NO: _____

APPLICANT SIGNATURE

By the below signature(s) the UAO and/or Utility Builder agree(s) to construct, operate, and maintain the work as noted in the above Work Description, shown in plans and incorporated documents, in compliance with the UAM, all instructions noted in the FDOT Special Instructions Box, and special instructions incorporated into this permit. The UAO and/or Utility Builder declares, the location of all existing utilities that it owns or has an interest in, both aerial and underground, are accurately shown on the plans of the work areas. In accordance with UAM Section 2.8, the UAO and/or Utility Builder further declares that a letter of notification was delivered to the owners of other facilities within the work areas and that those listed below are the only facility owners known to be involved or potentially impacted by the proposed work.

| Date Notified: | Name of other facility owners (attach additional sheets if necessary). |
|----------------|--|
| 7 / 2 / 2020 | FPL |
| 7 / 2 / 2020 | ATT |
| 7 / 2 / 2020 | Hotwire |
| | |
| | |

Utility Agency/Owner

Signature: pp. Klatsygarzel, Asst. Director Date: 6 / 30 / 21
 Name (printed): Bradley E. Macek
 Title: Utility Systems Director

Utility Builder (when applicable)

Signature: _____ Date: ____/____/____
 Name (printed): _____
 Title: _____

FDOT PROJECT INFORMATION

Pursuant to UAM Section 2.1(10), the utility work is within FDOT projects listed below and must have a Utility Work Schedule for each project approved prior to commencement of work within the FDOT project limits:

N/A

FDOT SPECIAL INSTRUCTIONS

In accordance with UAM Section 2.7, FDOT incorporates the below and attached special instructions into this permit.

Additional FDOT Special Instructions are attached and incorporated into this permit. Yes No

PERMIT APPROVAL

By signature below, FDOT gives permission to the UAO and/or Utility Builder to construct, operate, and maintain the utilities indicated in this Utility Permit in compliance with the UAM, all incorporated documents, and special instructions. Any changes to the approved work must be approved by the FDOT's Approving Engineer and attached and incorporated into this permit in accordance with UAM Section 2.11.

Approving Engineer: _____ Date: ____/____/____
 Name: _____
 Title: _____

Notification of Utility Work to be provided to: Telephone (____) _____ - _____ or Email: _____

An FDOT Representative is required to be present on the worksite prior to commencement of work. Yes No

Rep. Name: _____ Telephone (____) _____ - _____ Email: _____

UTILITY PERMIT

PERMIT NO: _____

CERTIFICATION

I, the undersigned UAO and/or Utility Builder, hereby CERTIFY that the utilities were constructed and inspected in compliance with the UAM all incorporated documents, and special instructions. Pursuant to UAM Section 2.11, all changes have been approved by the FDOT's Approving Engineer and incorporated into this permit along with all other material certifications, test results, bore logs, approved plans changes, as-built plans or other required documentation.

I also CERTIFY that work began on ___/___/___ and was completed on ___/___/___ and that the area was left in as good or better condition than when the work began.

| Utility Agency/Owner | Utility Builder (when applicable) |
|-----------------------------------|-----------------------------------|
| Signature: _____ Date ___/___/___ | Signature: _____ Date ___/___/___ |
| Name (printed): _____ | Name (printed): _____ |
| Title: _____ | Title: _____ |

FINAL INSPECTION OF WORK

The work was inspected and found to be in non-compliance as noted below:

All issues of non-compliance listed above have been brought into compliance and/or FDOT has no outstanding issues that need to be addressed by the UAO and/or Utility Builder. However, this final inspection does not release the UAO and/or Utility Builder of their continuing responsibilities pursuant to Rule 14-46.001, the UAM, all incorporated documents, and special instructions.

FDOT Inspector: _____ Date: ___/___/___

Name: _____

Title: _____

GENERAL NOTES:

- ALL CONNECTIONS TO EXISTING MAINS SHALL BE OBTAINED BY THE CITY OF PORT ST. LUCIE UNDER THEIR DIRECT SUPERVISION. TAPPING SLAVE AND VALVE SHALL BE PRESSURE TESTED PRIOR TO INSTALLATION. IF SERVICE MUST BE CUT OFF TO EXISTING MAINS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY NOTIFICATIONS. THE CONTRACTOR MAY BE REQUIRED TO ASSIST IN THE REMOVAL OF EXISTING MAINS AND TO PROVIDE A SERVICE CUT OFF WITHIN THE LENGTH OF SERVICE INTERVENTION. THE CITY WILL PROVIDE A SERVICE CUT OFF IF THE CONTRACTOR IS NOT READY TO PROCEED ON SCHEDULE. SUCH SERVICE CUT OFFS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE AUTHORIZED BY THE CITY. NO OUSTANDING SHOULD BE WITHOUT SERVICE FOR MORE THAN FOUR HOURS.
- LOCAL INFORMATION WILL BE REQUIRED FOR ALL PIPE AND FITTINGS USED TO COMPLETE CONNECTIONS WITH PORTABLE WATER.
- THE CONTRACTOR SHALL HAVE AVAILABLE AT THE JOB SITE AT ALL TIMES ONE COPY OF CITY OF PORT ST. LUCIE UTILITY MINIMUM DESIGN AND CONSTRUCTION STANDARDS AND SPECIAL PROVISIONS, AND COPIES OF ANY REQUIRED CONSTRUCTION PERMITS.
- THE CONTRACTOR SHALL CONTACT ALL CONCERNED UTILITIES AT LEAST 48 HOURS IN ADVANCE OF CONSTRUCTION OPERATIONS.
- THE LOCATION AND SIZE OF ALL EXISTING UTILITIES SHOWN ON THE PLANS ARE APPROXIMATE AND ARE BASED ON THE BEST AVAILABLE INFORMATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION OF ALL EXISTING UTILITIES AND TO BE RESPONSIBLE FOR THE LOCATION OF ALL EXISTING UTILITIES AND TO BE RESPONSIBLE FOR THE LOCATION OF ALL EXISTING UTILITIES AND TO BE RESPONSIBLE FOR THE LOCATION OF ALL EXISTING UTILITIES.
- THE CONTRACTOR SHALL CONTACT ALL CONCERNED UTILITIES AT LEAST 48 HOURS IN ADVANCE OF CONSTRUCTION OPERATIONS.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE HIS COMPLETE FAMILIARITY WITH THE PROJECT SITE AND COMPONENTS TO INCLUDE SUBSURFACE CONDITIONS OF SOIL AND GROUNDWATER TABLE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY NOTIFICATIONS PRIOR TO CONSTRUCTION OF WORK.
- DENSITY TESTS OF BACKFILL MATERIAL SHALL BE REQUIRED AT INTERVALS OF NOT MORE THAN 500 FEET. DENSITY TESTS OF PAVEMENT OPEN-CUT AREAS SHALL BE REQUIRED AT INTERVALS OF NOT MORE THAN 500 FEET. DENSITY TESTS SHALL COMMENCE AT THE TOP OF CONDUIT AND EVERY 12 INCHES TO THE FINISH GRADE. COMPACTED MATERIAL SHALL BE TAKEN AT INTERVALS OF NOT MORE THAN 500 FEET, AND CLOSER AS NECESSARY IN THE EVENT OF PROBLEMS WITH THE MATERIAL. THE CERTIFIED COPY OF THE TESTS SHALL BE PROVIDED TO THE CITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY NOTIFICATIONS PRIOR TO CONSTRUCTION OPERATIONS. CONTRACTORS BID PRICE SHALL INCLUDE PAYMENT FOR ALL TESTS CONDUCTED BY AN INDEPENDENT TESTING LAB.
- ANY LANDSCAPING DISTURBED, UNLESS OTHERWISE SHOWN ON THE PLANS, SHALL BE REPLACED BY THE CONTRACTOR TO THE SATISFACTION OF THE CITY AT THE CONTRACTOR'S EXPENSE.
- ANY SPERMIA, CURB AND GUTTER OR PAVEMENT DETURBED, UNLESS OTHERWISE SHOWN ON THE PLANS, SHALL BE REPLACED BY THE CONTRACTOR TO THE SATISFACTION OF THE CITY AT THE CONTRACTOR'S EXPENSE. UNLESS OTHERWISE SPECIFIED, ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS. ALL CONCRETE WORK SHALL COMPLY WITH THE CURRENT EDITION OF THE AMERICAN CONCRETE INSTITUTE (ACI) 308.1R-08. ALL CONCRETE SHALL MEET ADA REQUIREMENTS. THIS INCLUDES, BUT IS NOT LIMITED TO, DETECTABLE WALKING SURFACES.

GENERAL NOTES:

- THE CONTRACTOR SHALL PROVIDE A CLEANING PLAN SHOWING METHOD OF FILING AND CLEANING SURFACES TO BE FILLED. ALL FILLS SHALL BE FILLED WITH CLEANING SAND AND SHALL BE APPROVED BY THE DEPARTMENT PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY NOTIFICATIONS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY NOTIFICATIONS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY NOTIFICATIONS PRIOR TO CONSTRUCTION.
- A FLORIDA DEPARTMENT OF TRANSPORTATION PERMIT IS REQUIRED FOR ALL WORK. A COPY OF THIS PERMIT MUST BE MAINTAINED ON THE PROJECT SITE AT ALL TIMES DURING CONSTRUCTION.
- THE CONTRACTOR SHALL INSTALL TESTING POINTS FOR TESTING OF MAINS.
- FORCE MAINS AND APPURTENANCES SHALL BE IN ACCORDANCE WITH CURRENT AWWA / DCP STANDARDS.
- MINIMUM COVER TO FINISHED GRADE OVER FORCE MAINS SHALL BE 36 INCHES.
- ALL MAINS SHALL BE TESTED FOR LEAKAGE. WATER SHALL BE SUPPLIED TO THE SYSTEM TO BE TESTED. LEAKAGE SHALL BE MEASURED FROM PRESENTLY PORTABLE LINES OR PROTECTED FROM THE CITY. THE CITY SHALL BE NOTIFIED AT LEAST 48 HOURS IN ADVANCE OF ANY TESTING TO BE CONDUCTED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY NOTIFICATIONS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY NOTIFICATIONS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY NOTIFICATIONS PRIOR TO CONSTRUCTION.
- ALL CONSTRUCTION OPERATIONS SHALL BE IN ACCORDANCE WITH THE CITY OF PORT ST. LUCIE UTILITY MINIMUM DESIGN AND CONSTRUCTION STANDARDS (LATEST EDITION). A DEVIATING PERMIT FROM SOUTH FLORIDA WATER MANAGEMENT DISTRICT SHALL BE OBTAINED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE PRIOR TO BEGINNING OF CONSTRUCTION.
- THE "TRENCH SAFETY ACT" SHALL BE INCORPORATED INTO THIS CONTRACT AS ENACTED BY THE LEGISLATURE OF THE STATE OF FLORIDA TO BE IN EFFECT AS OF OCTOBER 1, 1990.
- ALL CONCRETE AND ASPHALT DRIVE MUST BE REPLACED FROM SAW CUT TO EDGE OF PAVEMENT, OR AS NOTED ON THE PLANS.
- LOCATIONS OF AIR RELEASE VALVES ARE APPROXIMATE ONLY. FINAL LOCATIONS WILL BE DETERMINED BY CITY PERSONNEL ON FIELD.
- MINIMUM LENGTH OF FORCE MAIN PRESSURE TEST SHALL BE 300 FEET. WATER SOURCE FOR FLOODING, FILLING AND PRESSURE TESTING THE WATER MAIN SHALL BE FROM A TREATED SOURCE APPROVED BY THE DEPARTMENT.
- THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION AND RESTORATION (IF ANY) OF EXISTING UTILITIES WITHIN THE CONSTRUCTION LIMITS OF THE PROJECT, INCLUDING BUT NOT LIMITED TO, POWER, GAS, WATER, FIBER OPTIC, MAIL BOXES, DRAINAGE PIPES AND STRUCTURES, ETC.
- THE CONTRACTOR SHALL VERIFY THE LOCATION OF EXISTING WATER SERVICES SERVICES FROM DAMAGE, AND REPAIR ANY BREAKS IMMEDIATELY.
- "RECORD DRAWINGS" SHALL INCLUDE FURNISHING THE CITY WITH ALL INFORMATION NECESSARY FOR A COMPLETE SET OF RECORD DRAWINGS AS SPECIFIED IN THE STANDARDS (LATEST EDITION).
- MECHANICALLY RESTRAIN LENGTHS, AS INDICATED ON DRAWING, ON EACH SIDE OF ALL BIRDS AND AS INSTRUCTED IN CITY OF PORT ST. LUCIE SPECIFICATIONS. THE CONTRACTORS BID PRICE FOR TRENCH, GATE VALVES AND FITTINGS SHALL INCLUDE MECHANICAL RESTRAINT.
- THE CONTRACTOR SHALL PROTECT EXISTING UTILITIES FROM DAMAGE DURING SHORE TRENCH AS REQUIRED TO PROTECT AND MAINTAIN EXISTING UTILITIES. THE CONTRACTOR SHALL NOTIFY EACH UTILITY PRIOR TO ATTEMPTING TO SUPPORT OR ALLOWED TO SUPPORT THEIR FACILITIES. THEN IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE WORK AND PAY THE UTILITY FOR THEIR EXPENSES INCURRED AND INCLUDED IN THE CONTRACTORS BID PRICE.
- ALL PRESSURE TESTS SHALL BE IN ACCORDANCE WITH AWWA STANDARDS.
- AP RELEASE VALVE SHALL BE CONSTRUCTED PER CITY DETAIL AS SHOWN IN THE DEPARTMENT'S UNIFORM DESIGN AND CONSTRUCTION STANDARDS.
- VALVE STEM PIPER SHALL BE REQUIRED WHERE OPERATING DEPTH EXCEEDS 4 FEET. THE PIPER SHALL BE BOLTED TO THE VALVE NUT METHOD AND MATERIALS SHALL BE APPROVED BY THE DEPARTMENT. COST FOR THIS WORK SHALL BE INCLUDED IN THE CONTRACTORS BID UNIT PRICE FOR GATE VALVES.
- THE CONTRACTOR SHALL CLEAN MAINS USING APPROVED PRESSURIZED AIR. TEMPORARY CLEANING STATIONS SHALL BE CONSTRUCTED BY THE CONTRACTOR.

WHERE: L = LEAKAGE IN GALLONS
 N = NUMBER OF JOINTS IN TEST SECTION
 P = TEST PRESSURE IN PSI
 D = DIAMETER OF PIPE IN INCHES

NOTE: CITY OF PORT ST. LUCIE UTILITY STANDARDS MANUAL (LATEST EDITION) STANDARDS SHALL BE APPLIED TO THIS PROJECT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY NOTIFICATIONS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY NOTIFICATIONS PRIOR TO CONSTRUCTION.

SEE SANDING STATE ONE CALL INSERTED HERE IN THIS MARK UP.

37. ALL REFERENCES TO STAINLESS STEEL SHALL REFER TO GRADE 316 UNLESS OTHERWISE NOTED.

38. WATER, WASTEWATER AND RECLAIMED WATER LINES SHALL NOT BE CONSTRUCTED WITHOUT FIRST OBTAINING AN APPROVAL ON PERMIT, AS APPLICABLE, FROM THE DEPARTMENT.

39. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY'S UTILITY STANDARDS AND REGULATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY NOTIFICATIONS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY NOTIFICATIONS PRIOR TO CONSTRUCTION.

40. CONSTRUCTION SHALL BE IN ACCORDANCE WITH UTILITY STANDARDS IN EFFECT AT THE TIME THE PROJECT WAS APPROVED BY PSUS. AND WILL NOT BE SUBJECT TO CHANGES IN THE STANDARDS DURING THE LIFE OF THE PROJECT.

41. WASTEWATER BODYPAGE SHALL BE SUBJECT TO PSUS WASTEWATER SYSTEM ORDINANCES - TITLE V.

42. ALL ABANDONED MAINS AND SERVICE LINES SHALL BE REMOVED OR FILLED WITH CLEAN GROUT AT THE DISCRETION OF PSUS. ASBESTOS CONTAINING PIPE (ACP) SHALL BE REMOVED OR FILLED WITH CLEAN GROUT AT THE DISCRETION OF PSUS. STATE AND LOCAL REGULATIONS. ALL CUTTING, REMOVAL AND DISPOSAL OF ACP SHALL BE PERFORMED BY A FLORIDA LICENSED ASBESTOS ABATEMENT CONTRACTOR.

43. MAINS SHALL BE OBTAINED FOR SUBURBANE AND AERIAL PIPE CROSSING CANALS AND OTHER SURFACE WATERS FROM JURISDICTIONAL AGENCIES AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE PERMITTED PLANS AND STANDARDS.

44. WASTEWATER BODYPAGE FACILITIES SHALL BE RESTORED WITH A MINIMUM OF ONE FULL ROW (1" X 6") OF SOU.

45. ON FORCE MAINS LESS THAN OR EQUAL TO 16 INCHES IN DIAMETER, PERMANENT SEAL GATE VALVES SHALL BE INSTALLED AT A MAXIMUM OF 400 FEET INTERVALS. SEAL GATE VALVES SHALL BE INSTALLED AT A MAXIMUM OF 16 INCHES INTERVALS. SEAL GATE VALVES OF FORCE MAINS GREATER THAN 16 INCHES IN DIAMETER SHALL BE INSTALLED AT MAXIMUM 2500 FEET INTERVALS.

100% SUBMITTAL

811
 CALL 2 WORKING DAYS BEFORE YOU DIG
 IT'S THE LAW
 DIAL 811
 Know what's below. Call 811 any day.

UNIFORM STATE OF FLORIDA, INC.



GLADES CUTOFF RD. 24" FORCE MAIN EXTENSION PHASE 3
 PREPARED FOR
PORT ST. LUCIE UTILITY SYSTEMS
 CITY OF PORT ST. LUCIE, FLORIDA

Kimley»Horn
 © 2020 KIMLEY-HORN AND ASSOCIATES, INC.
 1920 BOWEN WAY, SUITE 200, WEST PALM BEACH, FL 33411
 PHONE: 561-848-7175
 WWW.KIMLEY-HORN.COM CA 00200665

SHA PROJECT: 0-240022002
 DATE: FEB. 2021
 SCALE: AS SHOWN
 DRAWN BY: SS
 CHECKED BY: RAE
 SHEET NO.: TC1

| NO. | REVISIONS | DATE | BY |
|-----|-----------|------|----|
| | | | |
| | | | |
| | | | |

GENERAL NOTES

SHEET NUMBER

G-2

**CITY OF PORT ST. LUCIE RIGHT-OF-WAY USE PERMIT
(to be applied for by Contractor)**

EBID #20210116
Construction of Northport 24" Force Main
Excel Bid Reply- Schedule A

Company Name: _____

| <u>Item No.</u> | <u>Description</u> | <u>Estimated Qty</u> | <u>Unit</u> | <u>Unit Price</u> | <u>Total Price</u> |
|------------------------------------|---|----------------------|-------------|-------------------|--------------------|
| A. General Conditions | | | | | |
| 1 | Bonds and Insurance | 1 | LS | | \$ - |
| 2 | Mobilization /Demobilization | 1 | LS | | \$ - |
| 3 | Maintenance of Traffic | 1 | LS | | \$ - |
| Subtotal Item A | | | | | \$ - |
| B. Force Main Extension | | | | | |
| 1 | PCV Forcemain | | | | |
| a. | 24-inch | 8,240 | LF | | \$ - |
| b. | 16-inch | 10 | LF | | \$ - |
| 2 | Plug Valves and Valve Boxes | | | | |
| a. | 24-inch | 7 | EA | | \$ - |
| 3 | Tapping Sleeve and Valve | | | | |
| a. | 24" x 24" | 1 | EA | | \$ - |
| 4 | D.I. Fittings | 19,500 | LB | | \$ - |
| 5 | Directional Bore | | | | |
| a. | 24-inch FPVC DR18 | 1,790 | LF | | \$ - |
| 6 | ARV Assembly | 4 | EA | | \$ - |
| 7 | FM Connection to Existing | | | | |
| a. | 16" tie in @Sta 105+74 | 1 | LS | | \$ - |
| 8 | Miscellaneous Items | | | | |
| a. | Swale Regrading | 550 | LF | | \$ - |
| b. | Clearing and Grubbing | 14,000 | SY | | \$ - |
| c. | Barb wire fence with wood posts | 3,400 | LF | | \$ - |
| d. | 3" Water Service Relocation | 1 | LS | | \$ - |
| e. | 42" RCP Mitered End and Pipe, Remove/Replace | 1 | LS | | \$ - |
| f. | Canal Crossing Sign | 2 | EA | | \$ - |
| 9 | Miscellaneous Restoration | | | | |
| a. | Asphalt Driveway | 375 | SY | | \$ - |
| b. | Concrete Driveway | 385 | SY | | \$ - |
| c. | Concrete Sidewalk | 15 | SY | | \$ - |
| d. | Bahia Sod | 4,500 | SY | | \$ - |
| e. | Seed and Mulch | 9,500 | SY | | \$ - |
| Subtotal Item B | | | | | \$ - |
| GRAND TOTAL (ITEMS A&B) | | | | | \$ - |

EBID #20210116

Construction of Northport 24" Force Main

Excel Bid Reply- Schedule A

NOTE: The City's Estimated Annual Usage as indicated in this document has been inserted to establish a possible annual usage. Actual quantities that will be ordered by the City during the Contract Period may vary substantially from the Estimated Annual Usage. Bidders are cautioned that the anticipated quantities used for this computation will be estimates. The City makes no guarantee as to the actual quantity or type of services that will be utilized during the Contract period.

CITY OF PORT ST. LUCIE
SAMPLE CONTRACT

(DO NOT EXECUTE-TERMS MAY CHANGE DUE TO CONTRACTOR'S RESPONSE)

This Construction of the Northport 24" Force Main on Glades Cutoff Rd., executed this _____ day of _____, 2021, by and between the CITY OF PORT ST. LUCIE, FLORIDA, a municipal corporation, duly organized under the laws of the State of Florida, hereinafter called "City", and _____, hereinafter called "Contractor" or "Proposer".

SECTION I
RECITALS

In consideration of the below agreements and covenants set forth herein, the parties agree as follows:

WHEREAS, Contractor is licensed in the State of Florida; and

WHEREAS, the City wishes to contract with a Contractor to provide the Scope of Services and products / services based on the terms and subject to the conditions contained herein; and

WHEREAS, Contractor is qualified, willing, and able to provide the Scope of Services and products / services specified in eBid #20210116 and responses, incorporated herein by reference, and on the terms and conditions set forth herein; and

WHEREAS, the City desires to enter into this Contract with Contractor to perform the Scope of Services and product / services specified and, with a commission amount to be paid as agreed upon below.

NOW THEREFORE, in consideration of the premises and the mutual covenants herein name, the Parties agree as follows:

The Recitals set forth above are hereby incorporated into this Contract and made a part of hereof for reference.

SECTION II
NOTICES

All notices or other communications hereunder shall be in writing and shall be deemed duly given if delivered in person, sent by certified mail with return receipt request, email or fax and addressed as follows unless written notice of a change of address is given pursuant to the provisions of this Contract.

Contractor: _____
Title _____
E-Mail: _____

City Contract Administrator: Shelby Dolan, Procurement Agent I
Procurement Management Department
121 SW Port St. Lucie Boulevard
Port St. Lucie, FL 34984-5099

Tel: 772-873-6338 / Fax: 772-871-7337

E-mail: SDolan@cityofpsl.com

City Project Manager:

Carlos Camacho, Project Manager

Utility Systems Department

City of Port St. Lucie

900 SE Ogden Lane

Port St. Lucie, FL 34983

Tel: 772-873-6419

Email: Ccamacho@cityofpsl.com

SECTION III

DESCRIPTION OF SERVICES TO BE PROVIDED

The specific work that the Contractor has agreed to perform pursuant to the Bid Specifications #20210116, **Construction of the Northport 24" Force Main project on Glades Cutoff Road** including all Attachments, all Addenda, and all other restrictions and requirements are incorporated by this reference.

Scope of Work

The Northport 24" Force Main Project on Glades Cutoff Road in Port St. Lucie consists of a 24" force main that starts at Glades Cutoff Road south of Midway Road near Canal 105. From there it will proceed south to connect with an existing 24" force main on Glades Cutoff Road at the intersection with Commerce Centre Parkway. The project includes approximately 8,240 linear feet of 24" main, two 24" x 16" stub-outs for future connections, a 24" x 24" stub-out for a future connection, 24" line stops, 24" tapping sleeve and valve, 24" plug valves, air release valves, piping fittings, replacement of sidewalks, roads and restoration of sod, and all other necessary appurtenances. It also includes a directional bore of 1,790 linear feet under Interstate Highway I-95. All work shall be in accordance with the Technical Specifications and Construction Plans prepared by Kimley Horn consisting of pages 1 – 28.

Hours of Service – All work done within right-of-way shall be done Monday through Friday, 8:00 AM – 5:00 PM, excluding County observed holidays and County closures, unless otherwise approved by the County Engineer and City Engineer. Any work performed after hours shall be supervised by a County Inspector, for which the Contractor shall reimburse the County at the current Inspector rate. Contractor will need to obtain right-of-way permits from the County for any work done in the rights-of-way.

All night, Saturday, Sunday, and/or Holiday work in the City must be authorized by the City and requires that the Contractor obtain a noise permit from the City Police Department. All night work within the City's rights-of-way requires a minimum forty-eight (48) hour prior notice to the City. This clause shall not pertain to crews organized to perform maintenance work on equipment or to operate and maintain special equipment such as dewatering pumps, which may be required to work twenty-four (24) hours per day.

SECTION IV

TIME OF PERFORMANCE

The Contract period will start on _____, 2021 and will extend for three hundred and thirty (330) calendar days ending on _____, 2022. The Contractor will be required to commence work under this Contract within ten (10) calendar days after the start date identified in this Contract. In the event all work

required in the bid specifications has not been completed by the specified end of the initial term date, the Contractor agrees to provide work at no additional cost as authorized by the Project Manager, or their designee, until all work specified in the bid specifications has been rendered.

Written requests shall be submitted to the City for consideration of extension of completion time due to strikes, unavailable materials, or other similar causes over which the Contractor feels he has no control. Requests for time extensions shall be submitted immediately but in no event more than two (2) weeks upon occurrence of conditions, which, in the opinion of the Contractor, warrant such an extension with reasons clearly stated and a detailed explanation given as to why the delays are considered to be beyond the Contractor's control.

SECTION V
RENEWAL OPTION

Not Applicable

SECTION VI
COMPENSATION

The total amount to be paid by the City to the Contractor is on a per unit price basis listed on Schedule "A" for a total amount of \$_____. Payments will be disbursed in the following manner:

The Contract Sum - Work to be paid for on the basis of per unit prices: each, lump sum, linear feet, square yards, system, etc.

Progress Payments- Within twenty (20) business days, the City shall pay the Contractor, the sum of money due each Progress Payment that is properly allocated to labor, materials and equipment incorporated in the work for the period covered in the application for progress payment. Retainage will be held at 5% from each progress payment.

Acceptance and Final Payment - Upon receipt of written notice that the work is ready for final inspection and acceptance, the City will promptly make such inspection. When City finds the work acceptable under the terms of the Contract and the Contract is fully performed the entire balance will be due the Contractor and will be paid to the Contractor within twenty (20) business days. Such final payment to the Contractor shall be subject to the covenants in the Contract's Standard Specifications and any liquidated damages will be assessed against the Contractor at that time.

Before issuance of final payment, the Contractor shall submit evidence that all payrolls, material bills and other indebtedness connected with the work have been satisfied and paid in full. Final Release of Liens from all contractors, subcontractors, suppliers for materials and sub-subcontractors are to be attached to the final invoice. In lieu of Final Releases, the Contractor may submit a Consent of Surety with the final invoice. All manufacturer's warranty documents must be provided in the format requested by the City prior to final payment. As-built plans are required to be submitted with the final invoice.

Invoices for services shall be submitted once a month, by the tenth (10th) day of each month, and payments shall be made in thirty (30) days unless Contractor has chosen to take advantage of the Purchasing Card Program, which guarantees payment within several days. Payments shall be made in thirty (30) calendar days of receipt of Contractor's valid invoice, provided that the invoice is accompanied by adequate supporting

documentation, including any necessary partial release of liens, and is approved by the Project Manager as required under Section XVI of the Contract.

No payment for projects involving improvements to real property shall be due until Contractor delivers to City a complete release of all claims arising out of the contract or receipts in full in lieu thereof, and an affidavit on his personal knowledge that the releases and receipts include labor and materials for which a lien could be filed.

All invoices and correspondence relative to this Contract must contain the City's contract number and Purchase Order number and/or Visa Authorization number, details of items with prices that correspond to the Contract, a unique invoice number and partial and final release of liens.

All invoices are to be sent to: APNOTIFICATIONS@CITYOFPSL.COM.

The Contractor shall not be paid additional compensation for any loss or damage, arising out of the nature of the work, from the action of the elements, or from any delay or unforeseen obstruction or difficulties encountered in the performance of the work, or for any expenses incurred by or in consequence of the suspension or discontinuance of the work.

In the event the City deems it expedient to perform work which has not been done by the Contractor as required by these Specifications, or to correct work which has been improperly and/or inadequately performed by the Contractor as required in these Specifications, all expenses thus incurred by the City, at the City's option, will be invoiced to the Contractor and/or deducted from payments due to the Contractor. Deductions thus made will not excuse the Contractor from other penalties and conditions contained in the Contract.

All payments not made within the time specified by this section shall bear interest from 30 calendar days after the due date at the rate of one (1) percent per month on the unpaid balance.

Taxes. Contractor is responsible for all federal, state, and local taxes and other charges related to the performance of this contracts.

SECTION VII **WORK CHANGES**

The City reserves the right to order work changes in the nature of additions, deletions or modifications without invalidating the Contract, and agrees to make corresponding adjustments in the contract price and time for completion. Any and all changes must be authorized by a written change order signed by the City's Purchasing Agent or his designee as representing the City. Work shall be changed and the contract price and completion time shall be modified only as set out in the written change order. Any adjustment in the contract price resulting in a credit or a charge to the City shall be determined by mutual agreement of the parties before starting the work involved in the change.

SECTION VIII
CONFORMANCE WITH PROPOSAL

It is understood that the materials and/or work required herein are in accordance with the proposal made by the Contractor pursuant to the Solicitation and Specifications on file in the Procurement Management Department of the City. All documents submitted by the Contractor in relation to said proposal, and all documents promulgated by the City for inviting proposals are, by reference, made a part hereof as if set forth herein in full.

SECTION IX
INDEMNIFICATION/HOLD HARMLESS

Contractor agrees to indemnify, defend and hold harmless, the City, its officers, agents, and employees from, and against any and all claims, actions, liabilities, losses and expenses including, but not limited to, attorney's fees for personal, economic or bodily injury, wrongful death, loss of or damage to property, at law or in equity, which may arise or may be alleged to have risen from the negligent acts, errors, omissions or other wrongful conduct of Contractor, agents, laborers, subcontractors or other personnel entity acting under Contractor control in connection with the Contractor's performance of services under this Contract and to that extent Contractor shall pay such claims and losses and shall pay all such costs and judgments which may issue from any lawsuit arising from such claims and losses including wrongful termination or allegations of discrimination or harassment, and shall pay all costs and attorney's fees expended by the City in defense of such claims and losses including appeals. That the aforesaid hold-harmless Contract by Contractor shall apply to all damages and claims for damages of every kind suffered, or alleged to have been suffered, by reason of any of the aforesaid operations of Contractor or any agent laborers, subcontractors or employee of Contractor regardless of whether or not such insurance policies shall have been determined to be applicable to any of such damages or claims for damages. Contractor shall be held responsible for any violation of laws, rules, regulations or ordinances affecting in any way the conduct of all persons engaged in or the materials or methods used by Contractor on the work. This indemnification shall survive the termination of this Contract.

SECTION X
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](#).

SECTION XI
INSURANCE

The Contractor shall on a primary basis and at its sole expense agree to maintain in full force and effect at all times during the life of this Contract, insurance coverage, limits, including endorsements, as described herein. The requirements contained herein, as well as City's review or acceptance of insurance maintained by Contractor are not intended to and shall not in any manner limit or qualify the liabilities and obligations assumed by Contractor under the Contract.

The parties agree and recognize that it is not the intent of the City of Port St. Lucie that any insurance policy/coverage that it may obtain pursuant to any provision of this Contract will provide insurance coverage

to any entity, corporation, business, person, or organization, other than the City of Port St. Lucie and the City shall not be obligated to provide any insurance coverage other than for the City of Port St. Lucie or extend its immunity pursuant to Section 768.28, Florida Statutes, under its self-insured program. Any provision contained herein to the contrary shall be considered void and unenforceable by any party. This provision does not apply to any obligation imposed on any other party to obtain insurance coverage for this project, any obligation to name the City of Port St. Lucie as an additional insured under any other insurance policy, or otherwise protect the interests of the City of Port St. Lucie as specified in this Contract.

1. Workers' Compensation Insurance & Employer's Liability: The Contractor shall agree to maintain Workers' Compensation Insurance & Employers' Liability in accordance with Section 440, Florida Statutes. Employers' Liability and must include limits of at least \$100,000.00 each accident, \$100,000.00 each disease/employee, \$500,000.00 each disease/maximum. A Waiver of Subrogation endorsement shall be provided. Coverage shall apply on a primary basis. Should scope of work performed by Contractor qualify its employee for benefits under Federal Workers' Compensation Statute (example, U.S. Longshore & Harbor Workers Act or Merchant Marine Act), proof of appropriate Federal Act coverage must be provided.
2. Commercial General Liability Insurance: The Contractor shall agree to maintain Commercial General Liability insurance, inclusive of coverage for food contamination and food-borne illnesses, for the scope of the services provided issued under an Occurrence form basis, including Contractual liability, to cover the hold harmless agreement set forth herein, with limits of not less than:

| | |
|---|-----------------------|
| Each occurrence | \$1,000,000 |
| Personal/advertising injury | \$1,000,000 |
| Products/completed operations aggregate | \$2,000,000 |
| General aggregate | \$2,000,000 |
| Fire damage | \$100,000 any 1 fire |
| Medical expense | \$10,000 any 1 person |

3. Additional Insured: An Additional Insured endorsement **must** be attached to the certificate of insurance and must include coverage for on-going and Completed Operations (should be ISO CG2037 and CG2010) under the General Liability policy. Products & Completed Operations coverage to be provided for a minimum of five (5) years from the date of possession by the City or completion of the contract. Coverage shall apply as primary and non-contributory. A per project aggregate limit endorsement should be attached. Coverage for the hazards of explosion, collapse and underground property damage (XCU) must be included when applicable to the work performed. No exclusion for mold, silica or respirable dust or bodily injury/property damage arising out of heat, smoke, fumes, or hostile fire shall apply. Defense costs are to be in addition to the limit of liability. A waiver of subrogation shall be provided in favor of the City. Coverage shall extend to independent contractors and fellow employees. Contractual Liability is to be included. Coverage is to include a cross liability or severability of interests provision as provided under the standard ISO form separation of insurers clause.

Except as to Workers' Compensation, Employers' Liability, said Certificate(s) and policies shall clearly state that coverage required by the Contract has been endorsed to include the City of Port St. Lucie, a municipality of the State of Florida, its officers, agents and employees as Additional

Insured added to its Commercial General Liability policy and Business Auto policy. The name for the Additional Insured endorsement issued by the insurer shall read **"City of Port St. Lucie, a municipality of the State of Florida, its officers, employees and agents and shall include Contract #20210116 – Construction of the Northport 24" Force Main on Glades Cutoff Road shall be listed as additionally insured."** The Policies shall be specifically endorsed to provide thirty (30) day written notice to the City prior to any adverse changes, cancellation, or non-renewal of coverage thereunder. In the event that the statutory liability of the City is amended during the term of this Contract to exceed the above limits, the Contractor shall be required, upon thirty (30) days written notice by the City, to provide coverage at least equal to the amended statutory limit of liability of the City. Copies of the Additional Insured endorsements shall be attached to the Certificate of Insurance.

4. Automobile Liability Insurance: The Contractor shall agree to maintain Business Automobile Liability at a limit of liability not less than \$1,000,000.00 each accident covering any auto, owned, non-owned and hired automobiles. In the event, the Contractor does not own any automobiles; the Business Auto Liability requirement shall be amended allowing Contractor to agree to maintain only Hired & Non-Owned Auto Liability. This amended requirement may be satisfied by way of endorsement to the Commercial General Liability, or separate Business Auto Coverage form. Certificate holder must be listed as additional insured. A waiver of subrogation shall be provided. Coverage shall apply on a primary and non-contributory basis.
5. Waiver of Subrogation: The Contractor shall agree by entering into this Contract to a Waiver of Subrogation for each required policy. When required by the insurer, or should a policy condition not permit an Insured to enter into a pre-loss Contract to waive subrogation without an endorsement then Contractor shall agree to notify the insurer and request the policy be endorsed with a Waiver of Transfer of Rights of Recovery Against Others, or its equivalent. This Waiver of Subrogation requirement shall not apply to any policy where a condition to the policy specifically prohibits such an endorsement, or voids coverage should Contractor enter into such a Contract on a pre-loss basis.
6. Deductibles: All deductible amounts shall be paid for and be the responsibility of the Contractor for any and all claims under this Contract. Where an SIR or deductible exceeds \$5,000, the City of Port St. Lucie reserves the right, but not obligation, to review and request a copy of the bidder's most recent annual report or audited financial statement.

It shall be the responsibility of the Contractor to ensure that all contractors, independent contractors and/or subcontractors comply with the same insurance requirements referenced herein, including Products & Completed Operations coverage for a minimum of five (5) years from the date of possession by the City or completion of contract. It will be the responsibility of the contractor to obtain Certificates of Insurance from all contractors, independent contractors, and sub-contractors, listing the City as an Additional Insured without the language when required by written contract.

The Contractor may satisfy the minimum limits required above for either Commercial General Liability, Business Auto Liability, and Employers' Liability coverage under Umbrella or Excess Liability. The Umbrella or Excess Liability shall have an Aggregate limit not less than the highest "Each Occurrence" limit for either Commercial General Liability, Business Auto Liability, or Employers' Liability. When required by the insurer,

or when Umbrella or Excess Liability is written on Non-Follow Form," the City shall be endorsed as an "Additional Insured."

The City, by and through its Risk Management Department, reserves the right, but not obligation, to review, modify, reject, or accept any required policies of insurance including limits, coverages or endorsements, herein from time to time throughout the term of this contract. All insurance carriers must have an AM Best rating of at least A: VII or better.

A failure on the part of the Contractor to execute the contract and/or punctually deliver the required insurance, and other documentation may be cause for annulment of the contract.

Payment & Performance Bonds: The Contractor shall furnish an acceptable recorded Performance and Payment Bond complying with the statutory requirements set forth in Section 255.05, Florida Statutes, in the amount of one hundred (100%) percent of the Contract price in a form approved by the City. A fully authorized Surety, licensed by the State of Florida shall execute the Performance and Payment Bond. The Performance and Payment Bond shall remain in full force and effect a minimum of one (1) year after the work has been completed and final acceptance of the work is issued by the City.

Should the Surety become irresponsible during the time the Contract is in force, the City may require additional and sufficient sureties and the Contractor shall furnish same to the satisfaction of the City within ten (10) days after written notice to do so. In default thereof, the Contract may be suspended as herein provided.

SECTION XII ACTS OF GOD

The Contractor shall be responsible for all preparation of the site for Acts of God, including but not limited to; earthquake, flood, tropical storm, hurricane or other cataclysmic phenomenon of nature, rain, wind or other natural phenomenon of normal intensity, including extreme rainfall. No reparation shall be made to the Contractor for damages to the Work resulting from these Acts. The City is not responsible for any costs associated with pre or post preparations for any Acts of God.

Emergencies – In the event of emergencies affecting the safety of persons, the work, or property, at the site or adjacent thereto, the Contractor, or his designee, without special instruction or authorization from the City, is obligated to act to prevent threatened damage, injury or loss. In the event such actions are taken, the Contractor shall promptly give to the City written notice and contact immediately by phone, of any significant changes in work or deviations from the Contract documents caused thereby, and if such action is deemed appropriate by the City a written authorization signed by the City covering the approved changes and deviations will be issued.

SECTION XIII PROHIBITION AGAINST FILING OR MAINTAINING LIENS AND SUITS

Subject to the laws of the State of Florida and of the United States, neither Contractor nor any Sub-Contractor supplier of materials, laborer or other person shall file or maintain any lien for labor or materials delivered in the performance of this Contract against the City. The right to maintain such lien for any or all of the above parties is hereby expressly waived.

SECTION XIV COMPLIANCE WITH LAWS

The Contractor shall give all notices required by and shall otherwise comply with all applicable laws, ordinances, and codes and shall, at his own expense, secure and pay the fees and charges for all permits required for the performance of the Contract. All materials furnished and works done are to comply with all federal, state, and local laws and regulations. Contractor will comply with all requirements of [28 C.F.R. § 35.151](#). Contractors and Sub-Contractor, shall comply with [§ 119.0701, Fla. Stat.](#) The Contractor and Sub-Contractor, are to allow public access to all documents, papers, letters, or other material made or received by the Contractor in conjunction with this Contract, unless the records are exempt from [Art. I, § 24\(a\), Fla. Const.](#) and § 119.07(1)(a), Fla. Stat. (2013). Pursuant to [§ 119.10\(2\)\(a\), Fla. Stat.](#), any person who willfully and knowingly violates any of the provisions of Ch. 119, Laws of Fla., commits a misdemeanor of the first degree, punishable as provided in [§ 775.082](#) and [§ 775.083 Fla. Stat.](#)

RECORDS

The City of Port St. Lucie is a public agency subject to Chapter 119, Florida Statutes. The Contractor shall comply with Florida's Public Records Law. CONTRACTOR'S RESPONSIBILITY FOR COMPLIANCE WITH CHAPTER 119, FLORIDA STATUTES. Pursuant to Section 119.0701, F.S.

Contractor agrees to comply with all public records laws, specifically to:

Keep and maintain public records required by the City in order to perform the service;

1. The timeframes and classifications for records retention requirements must be in accordance with the [General Records Schedule GS1-SL for State and Local Government Agencies](#).
2. During the term of the contract, the Contractor shall maintain all books, reports and records in accordance with generally accepted accounting practices and standards for records directly related to this contract. The form of all records and reports shall be subject to the approval of the City.
3. Records include all documents, papers, letters, maps, books, tapes, photographs, films, sound recordings, data processing software, or other material, regardless of the physical form, characteristics, or means of transmission, made or received pursuant to law or ordinance or in connection with the transaction of official business with the City. Contractor's records under this Contract include but are not limited to, supplier/subcontractor invoices and contracts, project documents, meeting notes, emails and all other documentation generated during this Agreement.
4. The Contractor agrees to make available to the City, during normal business hours all books of account, reports and records relating to this contract.
5. A Contractor who fails to provide the public records to the City within a reasonable time may also be subject to penalties under Section 119.10, Florida Statutes.

Upon request from the City's custodian of public records, provide the public agency with a copy of the requested records or allow the records to be inspected or copied within a reasonable time at a cost that does not exceed the cost provided in this chapter or as otherwise provided by law.

Ensure that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law for the duration of the contract term and following completion of the contract if the contractor does not transfer the records to the City.

Upon completion of the contract, transfer, at no cost to the City, all public records in possession of the Contractor, or keep and maintain public records required by the City to perform the service. If the Contractor transfers all public records to the City upon completion of the contract, the Contractor shall destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. If the Contractor keeps and maintains public records upon completion of the contract, the Contractor shall meet all applicable requirements for retaining public records. All records stored electronically must be provided to the City, upon request from the City's custodian of public records in a format that is compatible with the information technology systems of the City.

IF THE CONTRACTOR HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO THE CONTRACTOR'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS CONTRACT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT:

**CITY CLERK
121 SW Port St. Lucie Blvd.
Port St. Lucie, FL 34984
(772) 871 5157
pr@cityofpsl.com**

**SECTION XV
CLEANING UP**

The Contractor shall, during the performance of this Contract, remove and properly dispose of resulting defected materials, and put the work area in a neat, clean and sanitary condition.

**SECTION XVI
INSPECTION AND CORRECTION OF DEFECTS**

In order to determine whether the required material has been delivered or the required work performed in accordance with the terms and conditions of the Contract documents, the Project Manager shall make inspection as soon as practicable after receipt from the Contractor of a Notice of Performance or delivery ticket. If such inspection shows that the required material has been delivered and required work performed in accordance with terms and conditions of the Contract documents and that the material and work is entirely satisfactory, the Project Manager shall approve the invoice when it is received. Thereafter the Contractor shall be entitled to payment, as described in Section V. If, on such inspection the Project Manager is not satisfied, he shall as promptly as practicable inform the parties hereto of the specific respects in which his findings are not favorable. Contractor shall then be afforded an opportunity if desired by him, to correct the deficiencies so pointed out at no additional charge to the City, and otherwise on terms and conditions

specified by the Project Manager. Upon failure of the Contractor to perform the work in accordance with the Contract Documents, including any requirements with respect to the Schedule of Completion, and after five (5) days written notice to the Contractor, the City may, without prejudice to any other remedy he may have, correct such deficiencies. The Contractor shall be charged all costs incurred to correct deficiencies. Such examination, inspection, or tests made by the Project Manager, at any time, shall not relieve Contractor of his responsibility to remedy any deviation, deficiency, or defect.

Authority - The Contractor is hereby informed that City inspectors are not authorized to alter, revoke, enlarge, or relax the provisions of these specifications. They are not authorized to approve or accept any portion of the completed work, or instructions contrary to the specifications. An inspector is placed on the project (or sent to the location of materials) to inspect materials being used in the work and to observe the manner in which the work is being performed and to report the progress of the work to the City. The inspector shall have the authority to reject defective materials or suspend any work that is being improperly done subject to the final decision of the City.

Notification – The Contractor shall be responsible to give twenty-four (24) hour notification to the City, when field observations are required.

Defective Work - All work and/or materials not meeting the requirements of these specifications shall be deemed as defective by the City, and all such work and/or material, whether in place or not, shall be removed immediately from the site of the work. All rejected materials that have been corrected shall not be used until the City has issued written approval to the Contractor. Without unnecessary delay and without any additional cost to the City, all work that has been rejected shall be remedied or removed and replaced in a manner acceptable to the City. If the Contractor fails to promptly remove and properly dispose of rejected materials and/or work then replaces same immediately after being notified to do so, the City may employ labor to remove and replace such defective work and/or materials. All charges for replacement of defective materials and/or work shall be charged to the Contractor and may be deducted from any moneys due to the Contractor or his Surety.

Repair or Replacement - Should any defect appear during the warranty period, the Contractor shall, at their own expense, have repaired or replaced such item upon receipt of written notice from the City of said defect. Said repair or replacement must be accomplished within fourteen (14) calendar days after receipt of notification from the City of the defect.

Deductions - In the event the City deems it expedient to perform work which has not been done by the Contractor as required by these Specifications, or to correct work which has been improperly and/or inadequately performed by the Contractor as required in these Specifications, all expenses thus incurred by the City, in the City's option, will be invoiced to the Contractor and/or may be deducted from payments due to the Contractor. Deductions thus made will not excuse the Contractor from other penalties and conditions contained in the Contract.

SECTION XVII **SCRUTINIZED COMPANIES**

[Section 287.135, Florida Statutes](#), prohibits agencies from contracting with companies, for goods or services over \$1,000,000 that are on either the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran petroleum Energy Sector List, or do any business with Cuba or Syria.

Both lists are created pursuant to [Section 215.473, Florida Statutes](https://www.sbafla.com/fsb/Portals/FSB/Content/GlobalGovernanceMandates/QuarterlyReports/GlobalGovernanceMandatesandFlorida%20Statutes20190129.pdf?ver=2019-01-29-130006-790)
<https://www.sbafla.com/fsb/Portals/FSB/Content/GlobalGovernanceMandates/QuarterlyReports/GlobalGovernanceMandatesandFlorida%20Statutes20190129.pdf?ver=2019-01-29-130006-790>.

SECTION XVIII CONTRACT ADMINISTRATION

Amendments. The City and the Contractor agree that they will, from time to time, execute, acknowledge and deliver, or cause to be executed, acknowledged and delivered, such supplements hereto and such further instruments as may reasonably be required for carrying out the expressed intention of the Contract. The Contract may be amended in writing from time to time by mutual consent of the parties. All amendments to the Contract must be in writing and fully executed by duly authorized representatives of the City and the Contractor.

Fiscal Year- All reference to Fiscal Year shall mean the City's Fiscal Year. The City's Fiscal Year is from October 1st through September 30th.

Integration of Terms. This Contract represents the entire contract between the parties. The parties shall not rely on any representation that may have been made by either party which is not included in the Contract.

Joint Venture. Nothing in the Contract shall be construed as creating or constituting the relationship of a partnership, joint venture, (or other association of any kind or agent and principal relationship) between the vested parties. Each party shall be deemed to be an independent contractor contracting for the services and acting toward the mutual benefits expected to be derived from the mutually agreed upon contract. Neither Contractor nor any of Contractor's agents, employees, subcontractors or contractors shall become or be deemed to become agents, or employees of the City. Contractor shall therefore be responsible for compliance with all laws, rules and regulations involving its employees and any subcontractors, including but not limited to employment of labor, hours of labor, health and safety, working conditions, workers' compensation insurance, and payment of wages. No party has the authority to enter into any contract or create an obligation or liability on behalf of, in the name of, or binding upon another party to the Contract.

Notice(s). Any and all notices, designations, consents, offers, acceptances or any other communication provided for herein shall be given in writing by registered or certified mail, return receipt requested, by receipted hand delivery, by Fed-EX, UPS, courier or other similar and reliable carrier which shall be addressed to the person who signed the Contract on behalf of the party at the address identified in the contract. Each such notice shall be deemed to have been provided:

- I. Within one (1) day in the case of overnight hand delivery, courier or Services such as Fed-Ex or UPS with guaranteed next day delivery; or,
- II. Within seven (7) days after it is deposited in the U.S. Mail in the case of registered U.S. Mail.

From time to time, the parties may change the name and address of the person designated to receive notice. Such change of the designated person or their designees and/or address shall be in writing to the other party and as provided herein.

Performance by Industry Standards. The Contractor represents and expressly warrants that all aspects of the Services provided or used by it shall, at a minimum, conform to the standards in the Contractor's industry.

This requirement shall be in addition to any express warranties, representations, and specifications included in the Contract, which shall take precedence

Permits, Licenses, and Certifications. The Contractor shall be responsible for obtaining all permits, licenses, certifications, etc., required by Federal, State, County, and Municipal laws, regulations, codes, and ordinances for the performance of the work required in these specifications and to conform with the requirements of said legislation. The Liquor license shall be co-held by the City and Contractor. The Contractor must obtain and pay for all fees associated with the liquor license; furthermore, the City must be listed as the co-holder on the required license. The Contractor shall be required to complete a **W-9 Taxpayer Identification Form**, provided with the City's contract, and return it with the signed contract and insurance documents.

Supersedes Former Contracts or Agreements. Unless otherwise specified in the Contract, this Contract supersedes all prior contracts or agreements between the City and the Contractor for the Services provided in connection with the Contract.

Use of Name or Intellectual Property. Contractor agrees it will not use the name or any intellectual property, including but not limited to, City trademarks or logos in any manner, including commercial advertising or as a business reference, without the expressed prior written consent of the City.

Waiver. Except as specifically provided for in a waiver signed by duly authorized representatives of the City and the Contractor, failure by either party at any time to require performance by the other party or to claim a breach of any provision of the Contract shall not be construed as affecting any subsequent right to require performance or to claim a breach. Each waiver, if mutually agreed upon, shall be published as a contract amendment.

SECTION XIX **ADDITIONAL REQUIREMENTS**

In the event of any conflict between the terms and conditions, appearing on any purchase order issued relative to this Contract, and those contained in this Contract and the Specifications herein referenced, the terms of this Contract and Specifications herein referenced shall apply.

City's Public Relations Image – The Contractor's personnel shall at all times handle complaints and any public contact with due regard to the City's relationship with the public. Any personnel in the employ of the Contractor involved in the execution of work that is deemed to be conducting him/herself in an unacceptable manner shall be removed from the project at the request of the City Manager.

Contractual Relations - The Contractor(s) are advised that nothing contained in the contract or specifications shall create any contractual relations between the City and Sub-Contractor of the Contractor(s).

Cooperative Purchasing Agreement - This contract may be expanded to include other governmental agencies provided a cooperative purchasing agreement exists or an inter-local agreement for joint purchasing exists between the City of Port St. Lucie and other public agencies. Contractor(s) may agree to allow other public agencies the same items at the same terms and conditions as this contract, during the period of time that this contract is in effect. Each political entity will be responsible for execution of its own requirements with the Contractor.

Patent Fees, Royalties, and Licenses – If the Contractor requires or desires to use any design, trademark, device, material or process covered by letters of patent or copyright, the Contractor and his surety shall indemnify and hold harmless the City from any and all claims for infringement in connection with the work agreed to be performed. The Contractor shall indemnify the City from any cost, expense, royalty or damage which the City may be obligated to pay by reason of any infringement at any time during the prosecution of or after completion of the work.

Standard Production Items - All products offered must be standard production items that have been available to the trade for a period of not less than two (2) years and are expected to remain available in future years.

SECTION XX **ASSIGNMENT**

Contractor shall not delegate, assign or subcontract any part of the work under this Contract or assign any monies due him hereunder without first obtaining the written consent of the City.

SECTION XXI **TERMINATION, DELAYS AND LIQUIDATED DAMAGES**

Termination for Cause. The occurrence of any one or more of the following events shall constitute cause for the City to declare the Contractor in default of its obligations under the contract:

- I. The Contractor fails to deliver or has delivered nonconforming services or fails to perform, to the City's satisfaction, any material requirement of the Contract or is in violation of a material provision of the contract, including, but without limitation, the express warranties made by the Contractor;
- II. The Contractor fails to make substantial and timely progress toward performance of the contract;
- III. In the event the Contractor is required to be certified or licensed as a condition precedent to providing the Services, the revocation or loss of such license or certification may result in immediate termination of the contract effective as of the date on which the license or certification is no longer in effect;
- IV. The Contractor becomes subject to any bankruptcy or insolvency proceeding under federal or state law to the extent allowed by applicable federal or state law including bankruptcy laws; the Contractor terminates or suspends its business; or the City reasonably believes that the Contractor has become insolvent or unable to pay its obligations as they accrue consistent with applicable federal or state law;
- V. The Contractor has failed to comply with applicable federal, state and local laws, rules, ordinances, regulations and orders when performing within the scope of the contract;
- VI. The Contractor has engaged in conduct that has or may expose the City to liability, as determined in the City's sole discretion;
- VII. The Contractor furnished any statement, representation or certification in connection with the contract, which is materially false, deceptive, incorrect or incomplete.

Notice of Default. If there is a default event caused by the Contractor, the City shall provide written notice to the Contractor requesting that the breach or noncompliance be remedied within the period of time specified in the City's written notice to the Contractor. If the breach or noncompliance is not remedied within the period of time specified in the written notice, the City may:

- I. Immediately terminate the contract without additional written notice(s); and/or
- II. Enforce the terms and conditions of the contract and seek any legal or reasonable remedies; and/or
- III. Procure substitute services from another source and charge the difference between the contract and the substitute contract to the defaulting Contractor

Termination for Convenience. The City, in its sole discretion, may terminate this contract at any time without cause, by providing at least sixty (60) days' prior written notice to Contractor. Any such termination shall be accomplished by delivery in writing of a notice to Contractor. Following termination without cause, the Contractor shall be entitled to compensation upon submission of invoices and proper proof of claim, for services provided under the contract to the City up to the time of termination, pursuant to Florida law.

Liquidated Damages for Delays. If material is not provided or work is not completed within the time stipulated in this Contract, including any extensions of time for excusable delays as herein provided, (it being impossible to determine the actual damages occasioned by the delay) the Contractor shall provide to the City one thousand six hundred and ninety (\$1,690.00) dollars as fixed, agreed and liquidated damages for each calendar day of delay until the work is completed. The Contractor and his sureties shall be jointly and severally liable to the City for the amount thereof.

Excusable Delays. The right of the Contractor to proceed shall not be terminated nor shall the Contractor be charged with liquidated damages for any delays in the completion of the work or delivery of materials due to: (1) any acts of the Federal Government, including controls or restrictions or requisitioning of materials, equipment, tools or labor by reason of war, national defense or any other national emergency, (2) any adverse acts of the City, (3) causes not reasonably foreseeable by the parties at the time of the execution of the Contract that are beyond the control and without the fault or negligence of the Contractor, including but not restricted to, acts of God, acts of the public enemy, acts of another Contractor in the performance of some other Contract with the City, fires, floods, pandemics, epidemics, quarantine, restrictions, strikes, freight embargoes and weather of unusual severity such as hurricanes, tornadoes, cyclones and other extreme weather conditions, and (4) any delay of any Subcontractor occasioned by any of the above mentioned causes. However, the Contractor must promptly notify the City in writing within two (2) days of official notice of scheduled delivery or scheduled work of the cause of delay. If, on the basis of the facts and the terms of this Contract, the delay is properly excusable the City shall extend the time for completing the work for a period of time commensurate with the period of excusable delay.

SECTION XXII LAW, VENUE AND WAIVER OF JURY TRIAL

This Contract is to be construed as though made in and to be performed in the State of Florida and is to be governed by the laws of Florida in all respects without reference to the laws of any other state or nation. The venue of any action taken to enforce this Contract shall be in St. Lucie County, Florida.

The Parties to this Contract hereby freely, voluntarily and expressly, waive their respective rights to trial by jury on any issues so triable after having the opportunity to consult with an attorney.

SECTION XXIII
APPROPRIATION APPROVAL

The Contractor acknowledges that the City of Port St Lucie's performance and obligation to pay under this Contract is contingent upon an annual appropriation by the City Council. The Contractor agrees that, in the event such appropriation is not forthcoming, this Contract may be terminated by the City and that no charges, penalties or other costs shall be assessed.

SECTION XXIV
PUBLIC RECORDS / TRADE SECRETS / COPYRIGHT

The Proposer's response to the City's proposal request is a public record pursuant to Florida law, which is subject to disclosure by the City under the State of Florida Public Records Law, [Florida Statutes Chapter 119.07](#) ("Public Records Law"). The City shall permit public access to all documents, papers, letters or other material submitted in connection with this City's proposal request and the Contract to be executed as subject to the provisions of Chapter 119.07 of the Florida Statutes.

Any language contained in the Proposer's response to the Solicitation purporting to require confidentiality of any portion of the Proposer's response to the Solicitation, except to the extent that certain information is in the City's opinion a Trade Secret pursuant to Florida law, shall be void. If a Proposer submits any documents or other information to the City which the Proposer claims is Trade Secret information and exempt from Florida Statutes Chapter 119.07 ("Public Records Laws"), the Proposer shall clearly designate that it is a Trade Secret and that it is asserting that the document or information is exempt. The Proposer must specifically identify the exemption being claimed under Florida Statutes 119.07. The City shall be the final arbiter of whether any information contained in the Proposer's response to the Solicitation constitutes a Trade Secret. The city's determination of whether an exemption applies shall be final, and the Proposer agrees to defend, indemnify, and hold harmless the city and the city's officers, employees, and agent, against any loss or damages incurred by any person or entity as a result of the city's treatment of records as public records. Proposals purporting to be subject to copyright protection in full or in part will be rejected.

EXCEPT FOR CLEARLY MARKED PORTIONS THAT ARE BONA FIDE TRADE SECRETS PURSUANT TO FLORIDA LAW, DO NOT MARK YOUR RESPONSE TO THE SOLICITATION AS PROPRIETARY OR CONFIDENTIAL. DO NOT MARK YOUR RESPONSE TO THE SOLICITATION OR ANY PART THEREOF AS COPYRIGHTED.

SECTION XXV
PROHIBITION AGAINST CONTINGENT FEES

The Contractor warrants that he or she has not employed or retained any company or person, other than a bona fide employee working solely for the Contractor to solicit or secure this Contract and that he or she has not paid or agreed to pay any person, company, corporation, individual, or firm, other than a bona fide employee working solely for the Contractor any fee, commission, percentage, gift, or other consideration contingent upon or resulting from the award or making of this Contract.

SECTION XXVI
ATTORNEY'S FEES

If this matter is placed in the hands of an attorney for collection, or in the event suit or action is instituted by the City to enforce any of the terms or conditions of the Contract, Contractor shall pay to the City, in such suit or action in both trial court and appellate court, the City's costs, and reasonable attorney's fees for the anticipated cost of collection and judgment enforcement.

SECTION XXVII
CODE OF ETHICS

Contractor warrants and represents that its employees will abide by any applicable provisions of the State of Florida Code of Ethics in [Chapter 112.311 et seq.](#), Florida Statutes, and Code of Ethics Ordinances in [Section 9.14 of the City of Port St. Lucie Code.](#)

SECTION XXVIII
POLICY OF NON-DISCRIMINATION

Contractor shall not discriminate against any person in its operations, activities or delivery of services under this Contract. Contractor shall affirmatively comply with all applicable provisions of federal, state and local equal employment laws and shall not engage in or commit any discriminatory practice against any person based on race, age, religion, color, gender, sexual orientation, national origin, marital status, physical or mental disability, political affiliation or any other factor which cannot be lawfully used as a basis for service delivery.

SECTION XXIX
SEVERABILITY

The Parties to this Contract expressly agree that it is not their intention to violate any public policy, statutory or common law rules, regulations, or decisions of any governmental or regulatory body. If any provision of this Contract is judicially or administratively interpreted or construed as being in violation of any such policy, rule, regulation, or decision, the provision, sections, sentence, word, clause, or combination thereof causing such violation will be inoperative (and in lieu thereof there will be inserted such provision, section, sentence, word, clause, or combination thereof as may be valid and consistent with the intent of the Parties under this Contract) and the remainder of this Contract, as amended, will remain binding upon the Parties, unless the inoperative provision would cause enforcement of the remainder of this Contract to be inequitable under the circumstances.

SECTION XXX
ENTIRE AGREEMENT

The written terms and provisions of this Contract shall supersede any and all prior verbal or written statements of any official or other representative of the City. Such statements shall not be effective or be construed as entering into, or forming a part of, or altering in any manner whatsoever, this Contract or Contract documents.

IN WITNESS WHEREOF, the parties have executed this contract, the day and year first above written.

CITY OF PORT ST. LUCIE FLORIDA

CONTRACTOR

By: _____
Purchasing Agent

By: _____
Authorized Representative

NOTARIZATION AS TO AUTHORIZED REPRESENTATIVE'S EXECUTION

STATE OF FLORIDA)
) ss
COUNTY OF _____)

The foregoing instrument was acknowledged before me by [] physical presence or [] online notarization, this _____ day of _____, 20____, by _____ who is [] personally known to me, or who has [] produced the following identification:

_____.

Signature of Notary Public

Print Name of Notary Public
Notary Public, State of Florida
My Commission expires:

NOTARY SEAL/STAMP

CONTRACTOR'S GENERAL INFORMATION WORK SHEET

eBID #20210116

Attachment F

It is understood and agreed that the following information is to be used by the City to determine the qualifications of prospective Contractor to perform the work required. The Contractor waives any claim against the City that might arise with respect to any decision concerning the qualifications of the Contractor.

The undersigned attests to the truth and accuracy of all statements made on this questionnaire. Also, the undersigned hereby authorizes any public official, Engineer, Surety, bank, material or equipment manufacturer, or distributor, or any person, firm or corporation to furnish the City any pertinent information requested by the City deemed necessary to verify the information on this questionnaire.

Dated at _____, this _____ day of _____, 2021
(Location)

Name of Organization/Contractor: _____

By: _____
Name and Title

1. Corporation, Partnership, Joint Venture, Individual or other? _____

2. Firm's name and main office address, telephone and fax numbers

Name: _____

Address: _____

Telephone Number: _____

Fax Number: _____

3. Contact person: _____ Email: _____

4. Firm's previous names (if any). _____

5. How many years has your organization been in business? _____

6. Total number of staff at this location: _____ Total number of staff on the Treasure Coast: _____

7. Is the Firm a minority business: YES / NO

If no, is your company planning to implement such a program? _____

8. Is the firm claiming Local Preference under City Ordinance 35.12? YES / NO

9. List the license(s) that qualifies your firm to construct this project: _____

10. **ADDENDUM ACKNOWLEDGMENT** - Bidder acknowledges that the following addenda have been received and are included in its proposal/bid:

| Addendum Number | Date Issued | Addendum Number | Date Issued |
|-----------------|-------------|-----------------|-------------|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

11. **BID RESPONSE:**

11.1 Bidder will / will not accept the Purchasing Card (Visa).
(please circle one)

11.2 Percentage of discount when payment is made with Visa: _____%
*Please Note: The City has implemented a **Purchasing Card Program**. The Bidder can take advantage of this project and in consideration receive payment within several days instead of the City's payment policy. Any percentage off the bid price for the acceptance of Visa will be consideration in the bid award. If no such percentage is given, the City shall assume zero (0) percent discount applies.*

11.3 Bid Reply Sheet Grand Total from **Schedule "A"**: \$ _____
(This figure must match the Cost Worksheet and the figure that is to be used on the DemandStar web page. Discrepancies between the Cost Worksheet spreadsheet uploaded on DemandStar, the dollar amount listed on the web page at the time of submittal and the Cost Work Sheet #20210116 uploaded on DemandStar will be resolved in favor of the Cost Worksheet – Schedule "A" that is uploaded at time of submittal.)

Reference Use Only – Use E-Bid Reply – Schedule "A" Spreadsheet to reply to this Bid

Listed below are items that are to be included on the E-Bid Reply Excel Spreadsheet - Schedule "A", completed electronically by the Bidder and submitted with bid packet. Award will be based on, along with other criteria, the total of all line items as shown on E-Bid Reply Excel Spreadsheet, Schedule "A".

Schedule "A"

| <u>Item No.</u> | <u>Description</u> | <u>Estimated Qty</u> | <u>Unit</u> |
|-----------------|-------------------------------------|----------------------|-------------|
| A. | General Conditions (Items A) | | |
| 1 | Bonds and Insurance | 1 | LS |
| 2 | Mobilization /Demobilization | 1 | LS |
| 3 | Maintenance of Traffic | 1 | LS |
| | | | |

| B. | Force Main Extension (Items B) | | |
|-----------|--|--------|----|
| 1 | PCV Forcemain | | |
| a. | 24-inch | 8,240 | LF |
| b. | 16-inch | 10 | LF |
| 2 | Plug Valves and Valve Boxes | | |
| a. | 24-inch | 7 | EA |
| 3 | Tapping Sleeve and Valve | | |
| a. | 24" x 24" | 1 | EA |
| 4 | D.I. Fittings | 19,500 | LB |
| 5 | Directional Bore | | |
| a. | 24-inch FPVC DR18 | 1,790 | LF |
| 6 | ARV Assembly | 4 | EA |
| 7 | FM Connection to Existing | | |
| a. | 16" tie in @Sta 105+74 | 1 | LS |
| 8 | Miscellaneous Items | | |
| a. | Swale Regrading | 550 | LF |
| b. | Clearing and Grubbing | 14,000 | SY |
| c. | Barb wire fence with wood posts | 3,400 | LF |
| d. | 3" Water Service Relocation | 1 | LS |
| e. | 42" RCP Mitered End and Pipe, Remove/Replace | 1 | LS |
| f. | Canal Crossing Sign | 2 | EA |
| 9 | Miscellaneous Restoration | | |
| a. | Asphalt Driveway | 375 | SY |
| b. | Concrete Driveway | 385 | SY |
| c. | Concrete Sidewalk | 15 | SY |
| d. | Bahia Sod | 4,500 | SY |
| e. | Seed and Mulch | 9,500 | SY |

Bidders are cautioned that the anticipated quantities used for this computation will be estimates. The City makes no guarantee as to the actual quantity that will be utilized during the Contract period. A unit price for each item shall be offered shall be shown, and such price shall include packing and shipping unless otherwise specified. A total shall be entered in the "Total" column for each separate item. In case of discrepancy between the unit price and the extended price, the unit price will supersede. The total amount shall be entered on line 11.3 above and entered on the DemandStar web page. The City reserves the right to split the award, if in the City's opinion such a split is in the best interest of the City.

Interpretation of the Approximate Quantities - The Bidder's attention is called to the fact that any estimate of quantities of work to be done and materials to be furnished under the specifications as shown on the proposed form (or elsewhere) is approximate only and not guaranteed by the City. The City does not assume any responsibility that the final quantities shall remain in strict accordance with the estimated quantities, nor shall the Bidder plead misunderstanding or deception because of such estimate of quantities or of the character, location of the work, or other condition pertaining thereto.

12. List five (5) Construction of 24" Force Main projects similar to this project completed by your firm in the last 5 years along with a brief description of project, location of project, client name, client phone number,

email, value of contract, your firm's percentage of the total contract value, as well as the number of change orders and the total change order value. **DO NOT USE the City of Port St Lucie as a reference.**

Project Number 1

Project Name:

Description:

Location:

Client Name, Phone Number & Email:

Value of Total Contract:

Date of Completion:

Firm's Percentage of Total Contract:

Number of Change Orders:

Value of Change Orders:

Was Project Completed on Schedule:

Was Project Completed within Budget?

Project Number 2

Project Name:

Description:

Location:

Client Name, Phone Number & Email:

Value of Total Contract:

Date of Completion:

Firm's Percentage of Total Contract:

Number of Change Orders:

Value of Change Orders:

Was Project Completed on Schedule:

Was Project Completed within Budget?

Project Number 3

Project Name:

Description:

Location:

Client Name, Phone Number & Email:

Value of Total Contract:

Date of Completion:

Firm's Percentage of Total Contract:

Number of Change Orders:

Value of Change Orders:

Was Project Completed on Schedule:

Was Project Completed within Budget?

Project Number 4

Project Name:

Description:

Location:

Client Name, Phone Number & Email:

Value of Total Contract:

Date of Completion:

Firm's Percentage of Total Contract:

Number of Change Orders:

Value of Change Orders:

Was Project Completed on Schedule:

Was Project Completed within Budget?

Project Number 5

Project Name:

Description:

Location:

Client Name, Phone Number & Email:

Value of Total Contract:

Date of Completion:

Firm's Percentage of Total Contract:

Number of Change Orders:

Value of Change Orders:

Was Project Completed on Schedule:

Was Project Completed within Budget?

13. How will the Contractor be able to meet the project timeline and budget given the current workload, work force and equipment?

14. List the number of personnel that will be assigned to the project and include job titles and their licenses or certifications.

15. Has the Contractor or any principals of the applicant organization failed to qualify as a responsible Contractor; refused to enter into a contract after an award has been made; failed to complete a contract during the past five (5) years or been declared to be in default in any contract or been assessed liquidated damages in the last five (5) years? List the name of project, location, client, engineer, date and reason. Use additional pages if needed.

Total Number of Projects where Failure to Complete Work Occurred: _____

Project Number 1

Project Name: _____

Project Location: _____

Client Name and Phone Number: _____

Engineer Name and Phone Number: _____

Date: _____

Reason: _____

Insert additional projects if needed.

16. Has the Contractor or any of its principals ever been declared bankrupt or reorganized under Chapter 11 or put into receivership?

Yes () No ()

If yes, please explain:

17. List any lawsuits pending or completed within the past five (5) years involving the corporation, partnership or individuals with more than ten percent (10 %) interest:

(N/A is not an acceptable answer - insert lines if needed)

18. List any judgments from lawsuits in the last five (5) years:

(N/A is not an acceptable answer - insert lines if needed)

19. List any criminal violations and/or convictions of the Proposer and/or any of its principals:

(N/A is not an acceptable answer - insert lines if needed)

Signature

Title

ATTACHMENT F

NOTICE TO ALL PROPOSERS

To ensure fair consideration is given for all Proposers, it must be clearly understood that upon release of the proposal and during the proposal process, firms and their employees of related companies as well as paid or unpaid personnel acting on their behalf shall not contact or participate in any type of contact with City employees, department heads or elected officials, up to and including the Mayor and City Council. The **"Cone of Silence"** is in effect for this solicitation from the date the solicitation is advertised on DemandStar, until the time an award decision has been approved by City Council and fully executed by all parties. Information about the Cone of Silence can be found under the [City of Port St. Lucie Ordinance 20-15, Section 35.13](#). Contact with anyone other than the Issuing Officer may result in the vendor being disqualified. All contact must be coordinated through Ms. **Shelby Dolan** Issuing Officer, for the procurement of these services.

All questions regarding this Solicitation are to be submitted in writing to **Shelby Dolan**, Procurement Agent with the Procurement Management Department via e-mail sdolan@cityofpsl.com, or by phone 772-873-6338. Please reference the Solicitation number on all correspondence to the City.

All questions, comments and requests for clarification must reference the Solicitation number on all correspondence to the City. Any oral communications shall be considered unofficial and non-binding.

Only written responses to written communication shall be considered official and binding upon the City. The City reserves the right, at its sole discretion, to determine appropriate and adequate responses to the written comments, questions, and requests for clarification.

*NOTE: All addendums and/or any other correspondence before bid close date (general information, question and responses) to this solicitation will be made available exclusively through the [DemandStar's Website](#) for retrieval. All notice of intent to award documentation will be published on the [City Clerk's Website](#). Proposers are solely responsible for frequently checking these websites for updates to this solicitation.

I understand and shall fully comply with all requirements of City of Port. St. Lucie Ordinance 20-15, Section 35.13.

Typed Name: _____

Signed: _____

Company and Job Title: _____

Date: _____



"A City for All Ages"

e-BID #20210116
CONTRACTOR'S CODE OF ETHICS
Attachment F

The City of Port St Lucie ("City), through its Procurement Management Department ("Procurement Management Department") is committed to a procurement process that fosters fair and open competition, is conducted under the highest ethical standards and enjoys the complete confidence of the public. To achieve these purposes, Procurement Management Department requires each vendor who seeks to do business with the City to subscribe to this Contractor's Code of Ethics.

- ◆ A Contractor's bid or proposal will be competitive, consistent and appropriate to the bid documents.
- ◆ A Contractor will not discuss or consult with other Vendors intending to bid on the same contract or similar City contract for the purpose of limiting competition. A Vendor will not make any attempt to induce any individual or entity to submit or not submit a bid or proposal.
- ◆ Contractor will not disclose the terms of its bids or proposal, directly or indirectly, to any other competing Vendor prior to the bid or proposal closing date.
- ◆ Contractor will completely perform any contract awarded to it at the contracted price pursuant to the terms set forth in the contract.
- ◆ Contractor will submit timely, accurate and appropriate invoices for goods and/or services actually performed under the contract.
- ◆ Contractor will not offer or give any gift, item or service of value, directly or indirectly, to a City employee, City official, employee family member or other vendor contracted by the City.
- ◆ Contractor will not cause, influence or attempt to cause or influence, any City employee or City Official, which might tend to impair his/her objectivity or independence of judgment; or to use, or attempt to use, his/her official position to secure any unwarranted privileges or advantages for that Vendor or for any other person.
- ◆ Contractor will disclose to the City any direct or indirect personal interests a City employee or City official holds as it relates to a Vendor contracted by the City.
- ◆ Contractor must comply with all applicable laws, codes or regulations of the countries, states and localities in which they operate. This includes, but is not limited to, laws and regulations relating to environmental,

occupational health and safety, and labor practices. In addition, Contractor must require their suppliers (including temporary labor agencies) to do the same. Contractor must conform their practices to any published standards for their industry. Compliance with laws, regulations and practices include, but are not limited to the following:

- Obtaining and maintaining all required environmental permits. Further, Contractor will endeavor to minimize natural resource consumption through conservation, recycling and substitution methods.
- Providing workers with a safe working environment, which includes identifying and evaluating workplace risks and establishing processes for which employee can report health and safety incidents, as well as providing adequate safety training.
- Providing workers with an environment free of discrimination, harassment and abuse, which includes establishing a written antidiscrimination and anti-bullying/harassment policy, as well as clearly noticed policies pertaining to forced labor, child labor, wage and hours, and freedom of association.

Name of Organization/Proposer _____

Signature _____

Printed Name and Title _____

Date _____

DISCLAIMER: This Code of Ethics is intended as a reference and procedural guide to contractors. The information it contains should not be interpreted to supersede any law or regulation, nor does it supersede the applicable contractor contract. In the case of any discrepancies between it and the law, regulation(s) and/or contractor contract, the law, regulatory provision(s) and/or vendor contract shall prevail.

**E-Verify Form
Attachment F**

Supplier/Consultant acknowledges and agrees to the following:

1. 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 Supplier/Consultant during the term of the contract; and
2. Shall expressly require any subcontractors performing work or providing services pursuant to the state 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.
3. The Contractor hereby represents that it is in compliance with the requirements of Sections 448.09 and 448.095, Florida Statutes. The Contractor further represents that it will remain in compliance with the requirements of Sections 448.09 and 448.095 Florida Statutes, during the term of this contract and all attributed renewals.
4. The Contractor hereby warrants that it has not had a contract terminated by a public employer for violating Section 448.095, Florida Statutes, within the year preceding the effective date of this contract. If the Contractor has a contract terminated by a public employer for any such violation during the term of this contract, it must provide immediate notice thereof to the City.

E-Verify Company Identification Number _____

Date of Authorization _____

Name of Contractor _____

Name of Project _____

**Solicitation Number
(If Applicable)** _____

I hereby declare under penalty of perjury that the foregoing is true and correct.

Executed on _____, _____, 20____ in _____ (city), _____ (state).

Signature of Authorized Officer

Printed Name and Title of Authorized Officer or Agent

SUBSCRIBED AND SWORN BEFORE ME

ON THIS THE _____ DAY OF _____, 20____.

NOTARY PUBLIC _____

My Commission Expires: _____

NON-COLLUSION AFFIDAVIT RFP
EBID #20210116
Attachment F
Construction of 24" Northport Force Main on
Glades Cutoff Rd.

State of _____ }

County of _____ }

_____, being first duly sworn, disposes and says that:
(Name/s)

1. They are _____ of _____ the Proposer that
(Title) (Name of Company)

has submitted the attached PROPOSAL;

2. He is fully informed respecting the preparation and contents of the attached proposal and of all pertinent circumstances respecting such PROPOSAL;

3. Such Proposal is genuine and is not a collusive or sham Proposal;

4. Neither the said Proposer nor any of its officers, partners, owners, agents, representatives, employees or parties in interest, including this affiant, has in any way colluded, conspired, connived or agreed, directly or indirectly with any other Proposer, firm or person to submit a collusive or sham Proposal in connection with the contract for which the attached proposal has been submitted or to refrain from proposing in connection with such Contract or has in any manner, directly or indirectly, sought by agreement or collusion or communication or conference with any other Proposer, firm or person to fix the price or prices in the attached Proposal or of any other Proposer, or to secure through any collusion, conspiracy, connivance or unlawful agreement any advantage against the City of Port St. Lucie or any person interested in the proposed Contract; and

5. The price or prices quoted in the attached Proposal are fair and proper and are not tainted by any collusion, conspiracy, connivance or unlawful agreement on the part of the Proposer or any of its agents, representatives, owners, employees, or parties in interest, including this affiant.

(Signed) _____

(Title) _____

STATE OF FLORIDA }
COUNTY OF ST. LUCIE} SS:

The foregoing instrument was acknowledged before me this *(Date)* _____

by: _____ who is personally known to me or who has produced
_____ as identification and who did (did not) take an oath.

Commission No. _____

Notary Print: _____

Notary Signature: _____

DRUG-FREE WORKPLACE
FORM eBid # 20210116
Attachment F
Construction of 24" Northport
Force Main on Glades Cutoff

The undersigned Contractor 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 under proposal 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 proposal, 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 Florida Statutes 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 through implementation of this section.

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

Bidder's Signature

Date:

BID #20210116

CITY OF PORT ST. LUCIE, FLORIDA
SEALED BID NO. 20210116

PROJECT TITLE: Construction of the Northport 24" Force Main on Glades Cutoff Rd.

TRENCH SAFETY ACT COMPLIANCE STATEMENT

Project Name: **Construction of the Northport 24" Force Main on Glades Cutoff Rd.**

Project Location: Glades Cutoff Road south of Midway Road near Canal 105, Port St. Lucie, FL.

Instructions:

Chapter 90-96 of the Laws of Florida requires all Contractors' engaged by The City of Port St. Lucie, Florida 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)

Sworn to and subscribed before me in _____ County, Florida on the day of _____, 20__.

NOTARY PUBLIC



"A City for All Ages"

Solicitation Addendum Form

| | |
|---|---|
| Solicitation Number: 20210116 | Solicitation Title: Furnish/ Install Decorative Street Signs & Poles |
| Issuing Officer: Shelby Dolan | Solicitation Initially Posted to Internet: October 1, 2021 |
| eMail Address: SDolan@cityofpsl.com | Telephone: 772-873-6338 |
| Addendum Number: 1 | Date: October 15, 2021 |

Please see the below questions and answers. The answers to each question are in **red**.

1. Please advise whether the materials for this project are subject to the American Iron and Steel (AIS) requirements.
Yes, all materials to comply with procurement documents.
2. Please provide the Engineer's estimate for this project.
See attachment
3. The water & sewer infrastructure industry is under a "Force Majeure" situation due to the continuous and significant price increases along with extremely long lead times for all the piping materials, fittings, valves, etc. All these products are experiencing rapid price increases and material shortages with extended lead times mainly caused by the worldwide disruption of the supply chains caused by the COVID 19 pandemic. The material suppliers are not committing to holding prices/quotations and have implemented a policy of "pricing to be determined at time of shipment and subject to availability". These are unprecedented times that appear to be here well into 2022. How this Force Majeure situation will be addressed by the City? The Contractor should be compensated for both time and cost since we cannot secure pricing and lead time for the piping materials, fittings, valves, etc. needed to construct this project.
The City understands the ongoing price fluctuations, but we are not considering Force Majeure situations. We request that bidders provide a price reflecting the best available information at the bid closing date.
4. Do you know how thick and what mix for the asphalt? I looked on C-22 and it just says to match what's existing.
As per City Detail G-05, "Utility Road Cut Pavement Restoration," minimum thickness is 1-inch.
5. On sheet C-23, details of the tapping sleeve & valve has a note that size on size taps are not allowed unless approved in writing by PSLUSD. Please advise if this will apply to the 24"x24" tapping sleeve & valve as shown on sheet C-1.



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Yes, the size-on-size connection on C-1 has been approved by the EOR and will be accepted by the City.

6. Section 02665-Directional Boring of Pipe-includes specifications of:
 - a. After completion of the joint fusing and "**before the pipe pullback**", the pipe shall be pressure tested in accordance with Section 02670.
Is the intent of the specification to pressure test the 24" fused main laying on the ground to 150 psi?
If this is the case, testing to 150 psi will be considerably dangerous to all personnel and the public in the vicinity.
We envision performing a cursory test to confirm the integrity of the welded joints either hydrostatically (10-15 psi) or pneumatically (5-7 psi) while on the surface.
We are ultimately responsible for the test to 150 psi, however this should be in the ground during the final testing phase. Please advise.
Yes, a cursory test should be performed prior to pullback, then a full pressure test once the pipe is fully installed.
7. Will the fused connections of the pipe require de-beading of the interior joint?
No, de-beading will not be required.
8. Will the city allow payment for stored materials?
Yes, the city will pay for stored materials. However, the contractor is fully responsible for replacing any materials that go missing between delivery and installation.
9. Please confirm if C-153 fittings can be used in the installation?
Please refer to Technical Specification Section 02660.
10. Please advise as to what erosion control measures are expected for the project?
Please refer to City of Port Saint Lucie Utility Standards.
11. Are pig launching/receiving stations required and if so are they to be paid under the fitting weights and gate valves in the bid schedule?
No, pig launching/receiving stations are not required on this project. Please refer to the Technical Specifications.
12. Please advise if a temporary fence is required to be installed prior to or in conjunction with removal of the barbed wire fence?
Temporary fence is required and it must be closed at the end of every work day.
13. Can additional clearing (+/- 5') be performed into the right of way of Glades Cutoff Rd. and temporary access to accommodate the pipe installation?
Clearing of the right-of-way will be performed by others prior to the pipe installation.



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14. Will you allow HDPE pipe as an approved alternate for the FPVC required for this project? HDPE should be able to offer better pricing and lead time than FPVC, plus it's more durable and leak-resistant.

Yes, as mentioned in the pre-bid meeting, HDPE will be allowed as an approved alternate and will be included in the revised bid reply spreadsheet.

15. Due to the material market volatility in pricing for all materials associated with this project, will the City consider reducing the risk of contractors to price these materials and guessing at where pricing will be at time of Contract, by committing to cover cost increases in materials due to non-controllable market conditions. Other municipalities have been asking the successful bidder to provide price quotes from their suppliers some time after the bid so that increases in price can be tracked and covered in a change order once the materials are actually ordered.

The City understands the ongoing price fluctuations, but we are not considering Force Majeure situations. We request that bidders provide a price reflecting the best available information at the bid closing date.

****A revised spreadsheet has been added as an attachment, which includes the alternate bid for two types of materials. (See Attachment D-Revised)****

Also, please see attached, revised Plan Sheet from the EOR.

Note: In the event of a conflict between previously released information and the information contained herein, the latter shall control.

Please let us know of any questions.

Cordially,

Shelby Dolan

EBID #20210116- Excel Bid Reply
Construction of Northport 24" Force Main

Company Name: _____

| <u>Item No.</u> | <u>Description</u> | <u>Estimated Qty</u> | <u>Unit</u> | <u>Unit Price</u> | <u>Total Price</u> |
|-----------------|--|------------------------------------|-------------|-------------------|--------------------|
| A. | General Conditions | | | | |
| 1 | Bonds and Insurance | 1 | LS | | \$ - |
| 2 | Mobilization /Demobilization | 1 | LS | | \$ - |
| 3 | Maintenance of Traffic | 1 | LS | | \$ - |
| | | Subtotal Item A | | | \$ - |
| B. | Force Main Extension | | | | |
| 1 | PCV Forcemain | | | | |
| a. | 24-inch | 8,240 | LF | | \$ - |
| b. | 16-inch | 10 | LF | | \$ - |
| 2 | Plug Valves and Valve Boxes | | | | |
| a. | 24-inch | 7 | EA | | \$ - |
| 3 | Tapping Sleeve and Valve | | | | |
| a. | 24" x 24" | 1 | EA | | \$ - |
| 4 | D.I. Fittings | 19,500 | LB | | \$ - |
| 5 | ARV Assembly | 4 | EA | | \$ - |
| 6 | FM Connection to Existing | | | | |
| a. | 16" tie in @Sta 105+74 | 1 | LS | | \$ - |
| 7 | Miscellaneous Items | | | | |
| a. | Swale Regrading | 550 | LF | | \$ - |
| b. | Clearing and Grubbing | 14,000 | SY | | \$ - |
| c. | Barb wire fence with wood posts | 3,400 | LF | | \$ - |
| d. | 3" Water Service Relocation | 1 | LS | | \$ - |
| e. | 42" RCP Mitered End and Pipe, Remove/Replace | 1 | LS | | \$ - |
| f. | Canal Crossing Sign | 2 | EA | | \$ - |
| 8 | Miscellaneous Restoration | | | | |
| a. | Asphalt Driveway | 375 | SY | | \$ - |
| b. | Concrete Driveway | 385 | SY | | \$ - |
| c. | Concrete Sidewalk | 15 | SY | | \$ - |
| d. | Bahia Sod | 4,500 | SY | | \$ - |
| e. | Seed and Mulch | 9,500 | SY | | \$ - |
| | | Subtotal Item B | | | \$ - |
| | | GRAND TOTAL (ITEMS A&B) | | | \$ - |

| | | | | | |
|-----------|---|------|----|--|------|
| C. | Alternate Bid 1- HPDE Horizontal Directional Drill | | | | |
| 1 | FM via HDPE | | | | |
| a. | 30" HDPE (DR11) FM | 1790 | LF | | \$ - |
| b. | 30" PVC to HDPE Adapater | 2 | EA | | \$ - |
| C. | 30" x 24" Reducer | 2 | EA | | \$ - |
| d. | 24" 11-1/4° Bend | 2 | EA | | \$ - |

EBID #20210116- Excel Bid Reply
Construction of Northport 24" Force Main

| | | | |
|---|----------------------------|------------------------|------|
| | | Subtotal Item C | \$ - |
| D. Alternate Bid 2- Fusible PVC Horizontal Directional Drill | | | |
| 1 | FM via Fusible PVC | | |
| a. | 24" Fusible PVC (DR 25) FM | 1790 | LF |
| b. | 24" 11-1/4° Bend | 2 | EA |
| | | Subtotal Item D | \$ - |
| BASE BID PLUS ALTERNATE 1 (ITEMS A, B, & C) TOTAL | | | \$ - |
| BASE BID PLUS ALTERNATE 2 (ITEMS A, B, & D) TOTAL | | | \$ - |

NOTE: The City's Estimated Annual Usage as indicated in this document has been inserted to establish a possible annual usage. Actual quantities that will be ordered by the City during the Contract Period may vary substantially from the Estimated Annual Usage. Bidders are cautioned that the anticipated quantities used for this computation will be estimates. The City makes no guarantee as to the actual quantity or type of services that will be utilized during the Contract period.



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Solicitation Addendum Form

| | |
|---|--|
| Solicitation Number: 20210116 | Solicitation Title: Construction of the Northport 24" on Glades Cutoff Road |
| Issuing Officer: Shelby Dolan | Solicitation Initially Posted to Internet: October 1, 2021 |
| eMail Address: SDolan@cityofpsl.com | Telephone: 772-873-6338 |
| Addendum Number: 2 | Date: October 21, 2021 |

Please see the below clarification to the following questions and answers. The answers to each question are in **red**.

1. Please provide the Engineer's estimate for this project.
At this time the amount can not be provided. The City is requesting that any potential bidder please base their bid fees on their contacts with suppliers at the present time.

Note: In the event of a conflict between previously released information and the information contained herein, the latter shall control.

Please let us know of any questions.

Cordially,

Shelby Dolan



"A City for All Ages"

Solicitation Addendum Form

| | |
|---|--|
| Solicitation Number: 20210116 | Solicitation Title: Construction of the Northport 24" on Glades Cutoff Road |
| Issuing Officer: Shelby Dolan | Solicitation Initially Posted to Internet: October 1, 2021 |
| eMail Address: SDolan@cityofpsl.com | Telephone: 772-873-6338 |
| Addendum Number: 3 | Date: October 28, 2021 |

Note: The Bid Opening date has changed to Monday November 8, 2021 at 3:00 P.M. EST.

Please see the below clarification to the following questions and answers. The answers to each question are in red.

1. On sheet C-21 of the plans is has call outs for two 16" plug valves but on the Addendum 1 Schedule of Values there is no line item for them. Please advise.

Please see revised plans, specification, and schedule of values.

2. Please adjust your Schedule of Values by the following...
Reduce your 24" valves by one (1) {there's only (6) 24" valves now (& the (2) 16" valves)} Please clarify what you mean to your clearing question in not 13 of addendum 1. You answered with "clearing will be performed by others prior to pipe installation". There is a clearing line item in the bid. Please clarify if contractors are responsible for all clearing. Also the pounds for the fitting is over approximately 3,500-4,000 pounds. There are approximately 15,500 to 16,000 pounds on the project but your bid form identifies 19,500 pounds. Can you please adjust this because it artificially inflates the bid.

Please provide a price based on quantities as shown on the Bid Unit Price Items sheet.

3. We recognized we are beyond the date for questions. We respectfully request the owner to adjust the items that we sent previously. If you do have the opportunity to update the form could you also correct item 8A (Asphalt driveway) actual is 135 SY bid form presently identifies 375 SY. Item 8B (Concrete driveway) actual is 200 SY bid form items 385 SY.

Please provide a price based on quantities as shown on the Bid Unit Price Items sheet.

Note: In the event of a conflict between previously released information and the information contained herein, the latter shall control.

***A revised spreadsheet has been added as an attachment, which includes the alternate bid for two types of materials. (See Attachment D-Revised Addendum 3) Please note: This will be the only form accepted. No other form will be accepted unless directed in a future Addendum. Also, please see other following attachments to include the revised Plan Sheet and Specifications. ***



"A City for All Ages"

Instructions to Bidder:

Each bidder must acknowledge receipt of any addenda on the Bidder's Questionnaire Sheet to have his/her bid or proposal to be accepted.

Please let us know of any questions.

Cordially,

Shelby Dolan

SECTION 01050

MEASUREMENT AND PAYMENT (ADDENDUM NO. 3)

PART 1 - GENERAL

1.01 DESCRIPTION

This section defines the method which will be used to determine the quantities of work performed, materials supplied and establishes the basis upon which payment will be made.

- A. The Unit Cost Prices stated in the Contract shall be considered payment in Full for the completion of all work. Payment shall be made under each item only for work as it is not specifically included under other items.
- B. The Contractor shall furnish all labor, equipment and material required to complete the construction and testing of the raw watermain extension and associated appurtenances.
- C. The following explanation of the Measurement and Payment for the bid items is provided; however, the omission of reference to any item shall not alter the intent of the Bid Form or relieve the Contractor of the necessity of constructing a complete project under this Contract.

1.02 ESTIMATED QUANTITIES

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

1.03 MEASUREMENT STANDARDS

All work completed under the Contract shall be measured according to United States Standard Methods.

1.04 METHOD OF MEASUREMENT

Measurement of Length - Unless otherwise specified for the particular items involved, all measurements of distance for items to be paid for on the basis of length shall be taken horizontally or vertically.

Measurement of Area - In the measurement of items paid for on the basis of area of finished work, the lengths and/or widths to be used in the calculations shall be the actual dimensions measured along the surface of the completed work within the neat lines shown or designated. At intersections, the measurement used for length of side area will be

measured from the outside edge of the width allowed along the main trench.

1.05 PAYMENT

Lump Sum Items - Where payment for items is shown to be paid for on a lump sum basis, no separate payment will be made for any item of work required to complete the lump sum item.

Unit Price Items - Where payment for items is shown to be paid for on a unit price basis, separate payment will be made for the items of work described herein and listed on the Bid Form. Any related work not specifically listed, but required for satisfactory completion of the Work, shall be considered to be included in the scope of the appropriate listed work items.

1.06 COSTS INCLUDED IN PAYMENT ITEMS

No separate payment will be made for the following items and the cost of such work shall be included in the applicable pay items of work.

- Trench excavation, including necessary pavement removal, except as otherwise specified.
- Structural fill, backfill, density testing and grading.
- Site cleanup.
- Foundation and borrow materials, except as hereinafter specified.
- Stormwater pollution prevention plan.
- Survey layout and as built.
- Testing and placing system in operation.
- Any material and equipment required to be installed and utilized for tests.
- Maintaining the existing quality of service during construction.
- Appurtenant work as required for a complete and operable system.
- Cost for security (if special circumstances apply, approval must be received by the Engineer, in writing).
- Material storage areas.
- Disposal of excess fill and debris.
- Scheduling and calling for utility locates.
- Dewatering.
- Preconstruction site videos.
- Preparation of record drawings.
- Mechanical joint restraint systems (to be included in the unit cost of the DI fittings).

Site cleanup - Contractor's attention is called to the fact that cleanup is considered a part of the work of construction. No payment will be made until cleanup is essentially complete.

Work Outside Authorized Limits – No final payments will be made for work constructed outside the authorized limits of work.

1.07 APPLICATIONS FOR PAYMENT

Applications for Payment shall be prepared by the Contractor and submitted to the Engineer in accordance with the schedule established by the City's Contract, Section V Compensation.

Applications for Payment shall be submitted in the number and form established by the Engineer at the Preconstruction Conference. The form shall be completely filled out and executed by an authorized representative of the Contractor. Supporting data such as schedules of stored materials shall be attached to each copy of the Application.

1.08 CHANGE ORDER PROCEDURE

As defined in the City Contract, Section VI, Work Changes, a Change Order is a written order to the Contractor signed by the county authorizing an addition, deletion or revision in the Work, or an adjustment in the Contract Price or the Contract Time which is issued after the execution of the Contract.

The following procedure shall be used in processing Change Orders:

For Additions to the Work – The City shall issue a written order to the Contractor directing him to accomplish the additional work. The Contractor shall review the order and if they feel that the additional work entitles him to additional payment or additional time, they may submit a claim as prescribed in the Contract.

For Deletions from the Work – The City shall issue a written order to the Contractor directing him to make the change. If the county feels that the contract price should be reduced as a result of the change, the county shall make a claim for the reduction as provided in the Contract.

A. GENERAL CONDITIONS

1. BONDS AND INSURANCE

- a. Measurement and Payment: A lump sum amount not exceeding 2.0 percent of the Grand Total Bid Amount.

2. MOBILIZATION AND DEMOBILIZATION

- a. Measurement and Payment: A lump sum amount not exceeding 5.0 percent of the Grand Total Bid Amount (excluding the Allowances), to include, but not be limited to: videos/photos, clearing and grubbing, site cleanup, project setup, sanitary facilities, labor associated with permit acquisition, construction staging area preparation and closure, project signage and project coordination/management. The lump sum amount shall be paid as noted below.

| <u>Construction % Complete for each Sequence Area</u> | <u>Allowable % of Lump Sum for Mobilization/Demobilization</u> |
|---|--|
| 5% | 25% |
| 10% | 50% |
| 25% | 75% |
| 100% | 100% |

3. MAINTENANCE OF TRAFFIC

- a. Measurement and Payment: A lump sum amount to include, but not be limited to: all signage, temporary striping, flagmen, barricades, temporary asphalt, temporary stabilized access around the construction equipment, notification to businesses, assistance to provide garbage collection, mail/package delivery and daily access (if needed) of other utility support vehicles, all in accordance with Section 01570, Traffic Regulation.

B. FORCEMAIN EXTENSION

1. PVC FORCEMAIN: Pipe will be measured per linear foot along the centerline of the pipe installed for the size of pipe installed. No deduction will be made for the length of valves and fittings installed in the line. Where the measurement terminates at a valve, bend, tee or other fittings, the centerline of the valve or fitting shall be the point of termination. All dewatering, surveying, pigging of the main and all other testing (with any temporary fittings/valves/piping/pumps required), along with the preparation of record drawings shall be included in the unit cost of the pipe. The cost to adjust other utilities (electric, cable, telephone, etc.) if required, and the coordination with that utility, shall also be included in the pipe cost.
2. PLUG VALVES WITH BOXES: Measurement shall be on the basis of furnishing and installing each type of valve and size of valve required including the valve box as noted per City standard.
3. TAPPING SLEEVE AND VALVE: Measurement shall be on the basis of furnishing and installing a tapping sleeve and valve assembly for the size noted. The cost shall include all setup and testing.
4. DI FITTINGS: Measurement of DI fittings shall be on the basis of weight (pounds) per the contractors supplied shop drawing cut sheets. The use of mechanical restraints (megalugs, bell restraints, tie rods, etc) shall be included in the unit price of the DI fitting.
5. DIRECTIONAL BORE: Measurement shall be based upon a complete bore as shown on the plans with the size as noted. Payment shall be based upon the linear foot of bore from each point (surface to surface) including all MOT, rig site preparation work, carrier pipe and casing (if noted), dual pull wires for

locates, preparation/submittal of a frac out plan, submittal of a bore plan with personnel experience and bore rig to be used along with site cleanup.

6. ARV ASSEMBLIES: Measurement shall be by each complete installation of the ARV Assembly and associated piping, valving and enclosures as noted on the plans and supplied per the details.
7. FM CONNECTION TO EXISTING
 - a. 16" tie in @ Sta 105+74: Measurement shall be based upon the complete connection to the City's existing 16-inch concentrate main at Sta 105+74. Cost shall include all coordination with City staff and Engineer, work on off hours (if needed), City assistance on existing valve closures, pipe modifications, couplings/adapters, excavation and backfill, vac truck on-site, cleanup of any spills, observation of connection at line pressure and site restoration. All associated fittings and restraints needed for this connection (on new pipe and existing pipe) shall be paid for under the DI Fitting pay item. All required restoration will be paid for under related items under pay item no. 8, Miscellaneous Restoration.
 - b. 16" Single Line Stop: Measurement shall be based on the complete setting of 16" line stop, activation, concrete thrust collar, line stop removal and capping. All required restoration will be paid for under related items under pay item no. 8, Miscellaneous Restoration.
 - c. Existing ARV Removal: Measurement shall be based upon the complete removal of an existing ARV assembly noted on the plans and the plugging of the existing corp. stop. Contractor is responsible for the disposal of the ARV assembly and appurtenances. All required restoration will be paid for under related items under pay item no. 8, Miscellaneous Restoration.
 - d. Existing 16" Main, Cap and Grout in place: Measurement shall be based upon the cutting and capping of the existing 16" concentrate main as shown on the drawings and grouting this main within the limits shown. This Lump Sum value includes all necessary fittings and appurtenances to perform this item.
 - e. Restrain exist. 16" Main & Valve, Remove 90 deg ELL: Measurement shall be based upon the cutting and capping of the existing 16" concentrate main as shown on the drawings and grouting this main within the limits shown. This Lump Sum value includes all necessary fittings and appurtenances to perform this item.
8. MISCELLANEOUS ITEMS
 - a. SWALE REGRADING: Measurement shall be based upon the length (in linear feet) of swale regrading completed and accepted

MEASUREMENT AND PAYMENT

under the terms of the contract. Payment shall include all necessary survey to place the swale back in its original condition, rough and final grading and post survey grade elevations. All required sodding shall be paid for under the related sod pay item.

- b. CLEARING AND GRUBBING: Measurements shall be based upon the number of square yards of clearing and grubbing completed and accepted under the terms of the contract except that the maximum width to be used in the computation shall be twenty (20) feet. Payment shall include all necessary tree, bushes and under growth encountered along the force main route. All material cleared should be removed and disposed of under this pay item. All required sodding shall be paid for under the related sod pay item.
- c. BARB WIRE FENCE WITH WOOD POSTS: Measurements shall be based upon the length (in linear feet) of barb wire fence that is replaced (to include the wooden posts) and completed and accepted under the terms of the contract. Payment shall include all necessary survey to fence back in its original location and height.
- d. 3" WATER SERVICE RELOCATION: Measurement shall be made on a lump sum basis for the complete relocation of this water service due to a conflict with the proposed force main installation. The pay item shall include all pipe material, connections, fittings/couplings, removal of the existing water service and notifications to the property owner. All required sodding shall be paid for under the related sod pay item.
- e. 42" RCP MITERED END AND PIPE, REMOVE/REPLACE: Measurement shall be made on a lump sum basis for the complete removal and replacement of the 42" RCP pipe and concrete mitered end section that is in conflict with the proposed force main. The pay item shall include all pipe and concrete mitered end, new pipe material, new concrete mitered end, connections to existing pipe, fittings/couplings, additional survey to place the system back in its original condition and disposal of all removed items. All required sodding shall be paid for under the related sod pay item.
- f. CANAL CROSSING SIGN: Measurement shall be based upon the complete installation each crossing signs as shown on the details and location noted on the plans.

9. MISCELLANEOUS RESTORATON

- a. ASPHALT DRIVEWAY: Measurement shall be on a square yardage basis for the installation of new asphalt driveway to the limits shown. Contractor shall confirm with Engineer on limits in the field prior to performing the work. The cost includes all saw cutting,

MEASUREMENT AND PAYMENT

disposal of existing, grading, compaction, densities, and placement/finishing the new asphalt driveway.

- b. **CONCRETE DRIVEWAY:** Measurement shall be on a square yardage basis for the installation of new concrete driveway to the limits shown. Contractor shall confirm with Engineer on limits in the field prior to performing the work. The cost includes all saw cutting, disposal of existing, grading, compaction, densities, wire mesh or steel (match existing) and placement/finishing the new concrete sidewalk.
- c. **CONCRETE SIDEWALK:** Measurement shall be on a square yardage basis for the installation of new concrete sidewalk to the limits shown. Contractor shall confirm with Engineer on limits in the field prior to performing the work. The cost includes all saw cutting, disposal of existing, grading, compaction, densities, wire mesh or steel (match existing) and placement/finishing the new concrete sidewalk.
- d. **BAHIA SOD:** Measurements shall be based upon the number of square yards of sod (for the type of sod noted/match existing/or as directed by the Engineer) completed and accepted under the terms of the contract except that the maximum width to be used in the computation shall be sixteen(16) feet. Payment shall include all necessary soil preparation, topsoil and sod (pegged as required).
- e. **SEED AND MULCH:** Measurements shall be based upon the number of square yards of sod (for the type of sod noted/match existing/or as directed by the Engineer) completed and accepted under the terms of the contract except that the maximum width to be used in the computation shall be twenty (20) feet. Payment shall include all necessary soil preparation and sod (pegged as required).

C. ALTERNATE BID 1 – HDPE HORIZONTAL DIRECTIONAL DRILL

1. FM via HDPE

- a. **30" HDPE (DR11) FM:** Measurement shall be based upon a complete bore as shown on the plans upsizing to a 30" HDPE DR11. Payment shall be based upon the linear foot of bore from each point (surface to surface) including all MOT, rig site preparation work, carrier pipe and casing (if noted), dual pull wires for locates, preparation/submittal of a frac out plan, submittal of a bore plan with personnel experience and bore rig to be used along with site cleanup. Note that the required FDOT top of bore hole depth is 35ft. All required restoration will be paid for under related items under pay item no. 8, Miscellaneous Restoration.

- b. 30" PVC to HDPE Adapter: Measurement shall be based upon each adapter provided with payment being made upon the complete installation of the adapter. Note that other required fittings to complete the installation shall be DI Fittings, paid for under pay item no. 4, D.I. Fittings.

D. ALTERNATE BID 2 – FPVC HORIZONTAL DIRECTIONAL DRILL

1. FM via FPVC

- a. Measurement shall be based upon a complete bore as shown on the plans with the size as noted using fusible PVC (FPVC). Payment shall be based upon the linear foot of bore from each point (surface to surface) including all MOT, rig site preparation work, carrier pipe and casing (if noted), dual pull wires for locates, preparation/submittal of a frac out plan, submittal of a bore plan with personnel experience and bore rig to be used along with site cleanup. the complete installation of the adapter. Note that other required fittings to complete the installation shall be DI Fittings, paid for under pay item no. 4, D.I. Fittings. All required restoration will be paid for under related items under pay item no. 8, Miscellaneous Restoration.

END OF SECTION

EBID #20210116- Excel Bid Reply
Construction of Northport 24" Force Main

Company Name: _____

| <u>Item No.</u> | <u>Description</u> | <u>Estimated Qty</u> | <u>Unit</u> | <u>Unit Price</u> | <u>Total Price</u> |
|-----------------|---|------------------------|-------------|-------------------|--------------------|
| A. | General Conditions | | | | |
| 1 | Bonds and Insurance | 1 | LS | | \$ - |
| 2 | Mobilization /Demobilization | 1 | LS | | \$ - |
| 3 | Maintenance of Traffic | 1 | LS | | \$ - |
| | | Subtotal Item A | | | \$ - |
| B. | Force Main Extension | | | | |
| 1 | PCV Forcemain | | | | |
| a. | 24-inch | 8,240 | LF | | \$ - |
| b. | 16-inch | 20 | LF | | \$ - |
| 2 | Plug Valves and Valve Boxes | | | | |
| a. | 24-inch | 6 | EA | | \$ - |
| b. | 16-inch | 2 | EA | | \$ - |
| 3 | Tapping Sleeve and Valve | | | | |
| a. | 24" x 24" | 1 | EA | | \$ - |
| 4 | D.I. Fittings | | | | |
| | | 19,800 | LB | | \$ - |
| 5 | ARV Assembly | | | | |
| | | 4 | EA | | \$ - |
| 6 | FM Connection to Existing | | | | |
| a. | 16" tie in @Sta 105+74 | 1 | LS | | \$ - |
| b. | 16" Single Line Stop | 1 | LS | | \$ - |
| c. | Existng ARV Removal | 1 | LS | | \$ - |
| d. | Existing 16" Main, Cap and Grout in place | 1 | LS | | \$ - |
| e. | Restrain exist. 16" Main & Valve, Remove 90 deg ELL | 1 | LS | | \$ - |
| 7 | Miscellaneous Items | | | | |
| a. | Swale Regrading | 550 | LF | | \$ - |
| b. | Clearing and Grubbing | 14,000 | SY | | \$ - |
| c. | Barb wire fence with wood posts | 3,400 | LF | | \$ - |
| d. | 3" Water Service Relocation | 1 | LS | | \$ - |
| e. | 42" RCP Mitered End and Pipe, Remove/Replace | 1 | LS | | \$ - |
| f. | Canal Crossing Sign | 2 | EA | | \$ - |
| 8 | Miscellaneous Restoration | | | | |
| a. | Asphalt Driveway | 375 | SY | | \$ - |

EBID #20210116- Excel Bid Reply
Construction of Northport 24" Force Main

| | | | | | | |
|------------------------------------|-------------------|-------|----|--|----|---|
| b. | Concrete Driveway | 385 | SY | | \$ | - |
| c. | Concrete Sidewalk | 15 | SY | | \$ | - |
| d. | Bahia Sod | 4,500 | SY | | \$ | - |
| e. | Seed and Mulch | 9,500 | SY | | \$ | - |
| Subtotal Item B | | | | | \$ | - |
| | | | | | | |
| GRAND TOTAL (ITEMS A&B) | | | | | \$ | - |

| | | | | | | |
|------------------------|---|------|----|--|----|---|
| C. | Alternate Bid 1- HPDE Horizontal Directional Drill | | | | | |
| 1 | FM via HDPE | | | | | |
| a. | 30" HDPE (DR11) FM | 1790 | LF | | \$ | - |
| b. | 30" PVC to HDPE Adapater | 2 | EA | | \$ | - |
| Subtotal Item C | | | | | \$ | - |

| | | | | | | |
|------------------------|--|------|----|--|----|---|
| D. | Alternate Bid 2- Fusible PVC Horizontal Directional Drill | | | | | |
| 1 | FM via Fusible PVC | | | | | |
| a. | 24" Fusible PVC (DR 18) FM | 1790 | LF | | \$ | - |
| Subtotal Item D | | | | | \$ | - |

| | | | | | | |
|--|--|--|--|--|----|---|
| BASE BID PLUS ALTERNATE 1 (ITEMS A, B, & C) TOTAL | | | | | \$ | - |
|--|--|--|--|--|----|---|

| | | | | | | |
|--|--|--|--|--|----|---|
| BASE BID PLUS ALTERNATE 2 (ITEMS A, B, & D) TOTAL | | | | | \$ | - |
|--|--|--|--|--|----|---|

NOTE: The City's Estimated Annual Usage as indicated in this document has been inserted to establish a possible annual usage. Actual quantities that will be ordered by the City during the Contract Period may vary substantially from the Estimated Annual Usage. Bidders are cautioned that the anticipated quantities used for this computation will be estimates. The City makes no guarantee as to the actual quantity or type of services that will be utilized during the Contract period.

***This will be the only form accepted. No other form will be accepted unless directed in a future Addendum.**