

Solicitation ITB-21-035-MC

HONEY HILL WATERMAIN SYSTEM REHABILITATION (WATR2010)

Bid Designation: Public



City of North Miami Beach

Bid ITB-21-035-MC

HONEY HILL WATERMAIN SYSTEM REHABILITATION (WATR2010)

Bid Number **ITB-21-035-MC**

Bid Title **HONEY HILL WATERMAIN SYSTEM REHABILITATION (WATR2010)**

Bid Start Date **Jun 8, 2021 1:40:22 PM EDT**

Bid End Date **Jul 8, 2021 2:00:00 PM EDT**

Question & Answer End Date **Jun 24, 2021 5:00:00 PM EDT**

Bid Contact **Meghan Cianelli Bennett**
Purchasing Supervisor

Contract Duration **One Time Purchase**

Contract Renewal **Not Applicable**

Prices Good for **120 days**

Pre-Bid Conference **Jun 22, 2021 11:00:00 AM EDT**
Attendance is optional
Location: Join Zoom Meeting
<https://us02web.zoom.us/j/8235709045?pwd=a0VGR0FqbmlIVElSaisxWEVQaVp0UT09>

Meeting ID: 823 570 9045
Passcode: 2kV5Tg

Bid Comments **The City of North Miami Beach, Florida (“City”) is seeking a qualified firm(s) (“CONTRACTOR”) to submit a Bid for the Honey Hill Watermain System Betterments Project No. WATR2010. The Contractor is hereby notified that this project is being partially funded through WIFIA and is subject to all of the requirements pertaining to thereof. Specifically, Article III of the agreement requires compliance with all applicable laws, rules, regulations, and requirements, including without limitation 40 U.S.C. § 3141-3144, 3146, and 3147 (relating to Davis-Bacon Act requirements) and 33 U.S.C. § 3914 (relating to American iron and steel products). Copies of the requisite reporting documentation are attached.**

SITE VISIT: There will be no official scheduled site visit to review the City’s expectations for this project, the project background, or to discuss the overview of scope. It is recommended that all interested proposers visit the site at their own leisure. It will be the sole responsibility of the bidder to ensure that his bid is submitted prior to the bid opening date and time listed. PAPER BID SUBMITTALS WILL NOT BE ACCEPTED. BIDS MUST BE SUBMITTED ELECTRONICALLY VIA BIDSYNC.COM. Bid Security bond: A certified check, cashier’s check, bank officer’s check or bid bond for FIVE percent (5%) of the bid amount, made payable to the City North Miami Beach, Florida, shall accompany each proposal. Bidders can submit bid bonds for projects four different ways: 1.) BidSync allows bidders to submit bid bonds electronically directly through their system using Surety 2000 . For more information on this feature and to access it, contact BIDSYNC customer care department. 2.) Bidders may upload their original executed bid bond on BIDSYNC to accompany their bids with the electronic proposal, and deliver the original, signed and sealed hard copy within five (5) business days after bid opening, with the company name, bid number and title clearly indicated. 3.) Bidders can hand deliver their bid bond in a sealed envelope to the Procurement Management Division, Suite 315, 17011 NE 19th Ave. North Miami Beach, FL 33162-3100, before time of bid opening, with the company name, bid number and title clearly indicated on the envelope. 4.) Bidders can mail their bid bond to the Procurement Management Division, Suite 315, 17011 NE 19th Ave. North Miami Beach, FL 33162-3100, before time of bid opening, with the company name, bid number and title clearly indicated on the envelope.

Certified Checks, Cashier’s Checks and Bank Drafts. These cannot be submitted via BIDSYNC, nor are their

images allowed to be uploaded and submitted with your electronic bid. These forms of securities, as well as hard copy bid bonds, must be received on or before the Invitation to Bid (ITB) opening date and time, at the Procurement Management Division, Suite 315, 17011 NE 19th Ave. North Miami Beach, FL 33162-3100, with the bid number and title clearly indicated on the envelope. It is the bidder's sole responsibility to ensure that his bid bond or other bid security is received by the Procurement Services Division before time of bid opening. Failure to adhere to this requirement may be grounds to consider the bid as non-responsive.

The City of North Miami Beach reserves the right to waive any informality in any or all bids and to reject any or all bids. For information concerning technical specifications, please utilize the question/answer feature provided by Periscope Source at www.bidsync.com. Questions of a material nature must be received prior to the cut-off date specified in the solicitation. Material changes, if any, to the scope of services or bidding procedures, will only be transmitted by written addendum. Contractors please note: No part of your bid can be submitted via FAX. No variation in price or conditions shall be permitted based upon a claim of ignorance. Submission of a bid will be considered evidence that the Contractor has familiarized himself with the nature and extent of the work, equipment, materials, and labor required. The entire bid response must be submitted in accordance with all specifications contained in this solicitation.

Added on Jun 10, 2021:

Zoom information added to the pre-bid meeting.

Added on Jul 1, 2021:

See updated Bid Tab (Bid Item 8 has been modified to indicate separate lines for Concrete and Paver) and a revised Specification Section 01025.

Added on Jul 1, 2021:

Bid Tab:

Item 11 was itemized to include the individual items to be procured and installed and change the unit summary from "ton" to "each"

Item 8 was itemized to distinguished between Concrete driveways/walkways vs paver driveways/walkways.

Bid Set

Section 01025

The language describing Bid tab item 11 was modified to more accurately describe the itemization of the parts to be installed and the unit change from "ton" to "each".

Addendum # 1

Pre-Bid Conference Changes **Pre-Bid Conference information has changed. Please review all Pre-Bid Conferences.**

Addendum # 2

Item Response Form

Item **ITB-21-035-MC-01-01 - Bid Schedule - Honey Hill Water System Betterment WATR2010**
 Quantity **1 each**
 Unit Price
 Delivery Location **City of North Miami Beach**
 NMB Water
 17050 NE 19th AVE
 North Miami Beach FL 33162
 Qty 1

Description

Total Base Bid Amount - Bid Item No. 1-27.

Bidders must include the excel bid schedule as backup to this lump sum price to be considered responsive.

Item **ITB-21-035-MC-01-01-01 - Alternate #1**
 Quantity **1 each**
 Unit Price

Delivery Location

City of North Miami Beach

NMB Water

17050 NE 19th AVE

North Miami Beach FL 33162

Qty 1

Description

Alternate #1 Subtotal: Bid Item No. 28 (A1.a. to A1.e.)

Bidders must include the excel bid schedule as backup to this lump sum price to be considered responsive.

SECTION 1.0 GENERAL TERMS AND CONDITIONS

1.1 DEFINITIONS

When used in Contract Documents (defined below) or in related documents, the following terms shall have the meanings given below:

Addendum: A modification of the Plans, Specifications or other Contract Documents distributed to prospective Bidders prior to the opening of Bids/Proposals.

Advertisement for Bids: The public notice inviting the submission of bids for the work.

Bid/Proposal Bond: A bond executed by a Bidder/Proposer and its Surety in the attached form guaranteeing that the Bidder/Proposer, if awarded the Contract will execute the same and will timely furnish the required Performance Bond, Payment Bond, and evidence of Insurance.

Calendar Day: Every day shown on the calendar.

Change Order: A written agreement executed by the City, the Contractor and the Contractor's Surety, covering modifications to the Contract recommended by the Project Manager and approved by the City Manager and/or City Commission.

Contract: The written agreement between the City and the Bidder for performance of the Work in accordance with the requirements of the Contract Documents and for the payment of the agreed consideration.

Contract Documents: The Instructions to Bidders, Bid Form, Bid Bond, Contract, Performance Bond, Payment Bond, General Conditions, Special Conditions, and Scope of Work, together with all Addenda.

Contract Manager: North Miami Beach's City Manager or designee or duly authorized representative designated to manage the Contract.

Contractor: The individual, firm, partnership, corporation or joint venture whose bid is accepted and who enters into a Contract with the City of North Miami Beach and who is liable for the

acceptable performance of the work and for the payment of all legal debts pertaining to the Work.

Contract Date: The date on which the Agreement is effective.

Contract Time: The number of days allowed for completion of the work. All contract time shall be measured in calendar days.

City: A political subdivision, Incorporated City within Miami-Dade County of the State of Florida, whose governing body is a City Commission consisting of a Mayor, Vice Mayor and five City Commission members.

City Manager: The Manager of the City of North Miami Beach, Florida.

Days: Reference made to Days shall mean consecutive calendar days.

Deliverables: All documentation and any items of any nature submitted by the Contractor to the City's

Contract Manager for review and approval in writing pursuant to the terms of the Agreement.

Lessee: Any individual, partnership or corporation having a tenant relationship with the City of North Miami Beach.

Owner: The term Owner as used in this Contract shall mean the City of North Miami Beach.

Performance Deposit: Certified Bank Check executed by the Contractor, on the attached forms, assuring that the Contractor will, in good faith, perform and guarantee the work in full conformity with the terms of the Contract Documents and will promptly pay all persons supplying the Contractor with labor, materials, or supplies, used directly or indirectly by the Contractor in the prosecution of the Work.

Project Manager: The duly authorized representative designated to manage the Project.

Bid: The written offer of a Bidder to perform the work or service.

Bid Documents: Bid Guarantee or Bid deposit. The Advertisement for Bid, Instructions to Bidders, Bid Form, Bidder Bond, Contract, Performance Bond, Payment Bond, General

Conditions, Special Conditions, and Scope of Work, together with all Addenda.

Bid Form: The form on which Bids are submitted.

Bidder: Any individual, firm, partnership or corporation submitting a Bid in accordance with the Instructions to Bidders.

Scope of Service: Document which details the work to be performed by the Bidder.

Subcontractor or Sub consultant: Any person, entity, firm or corporation, other than the employees of the Contractor, who furnishes labor and/or materials, in connection with the Work, whether directly or indirectly, on behalf of and/or under the direction of the Contractor and whether or not in privity of Contract with the Contractor.

The words "Work", "Services", "Program", or "Project": All matters and things required to be done by the Bidder in accordance with the provisions of the Contract.

The words "Directed", "Required", "Permitted", "Ordered", "Designated", "Selected", "Prescribed", or words of like import to mean respectively, the direction, requirement, permission, order, designation, selection or prescription of the City's Contract Manager; and similarly the words "approved", "acceptable", "satisfactory", "equal", "necessary", or words of like import to mean respectively, approved by, or acceptable or satisfactory to, equal or necessary in the opinion of the City's Contract Manager. In resolving disputes and in all respects the City Manager's decision shall be final.

1.2 VENDOR REGISTRATION INSTRUCTIONS

It is the policy of the City to encourage full and open competition among all available qualified vendors. All vendors regularly engaged in the type of work specified in the Solicitation are encouraged to submit Bids. At the time of contract award (including small purchase orders), Bidders must complete a Vendor Application. For information and to apply as a vendor, please visit our website at www.Citynmb.com to download an application and submit it to Procurement Management Division, 17011 NE 19 Avenue, Suite 315 North Miami Beach, Florida 33162. To get solicitation document, specifications and updates go to www.Citynmb.com.

1.3 CONE OF SILENCE AND REQUEST FOR ADDITIONAL INFORMATION

"Cone of Silence," as used herein, means a prohibition on any communication regarding a particular Request for Proposal ("RFP"), Request for Qualification ("RFQ") or Invitation to Bid ("ITB").

Pursuant to Section 2-11.1(t) of the County Code, all solicitations, once advertised and until an award recommendation has been forwarded to the appropriate authority are under the "Cone of Silence". Any communication or inquiries, except for clarification of process or procedure already contained in the solicitation, are to be made in writing to the attention of the Chief Procurement Officer or Procurement Supervisor. Such inquiries or request for information shall be submitted to the Chief Procurement Officer or Procurement Supervisor and shall contain the requester's name, address, and telephone number. If transmitted by facsimile, the request should also include a cover sheet with Bidder's facsimile number. The request may also be electronically mailed to bids@Citynmb.com or mailed to Procurement Management Division, 17011 NE 19 Avenue, Suite 315, North Miami Beach, Florida 33162.

During the Cone of Silence the following is prohibited: Any communication regarding this solicitation between a potential vendor, service provider, Bidder, lobbyist, or consultant and the City's professional staff including, but not limited to City Commission, the City Manager and his or her staff. All communication regarding this solicitation should be sent in writing only to the Procurement Management Division at bids@Citynmb.com.

1.4 BIDDERS RESPONSIBILITIES

Bidders are required to submit their bids upon the following express conditions:

- A. Bidders shall thoroughly examine the drawings, specifications, schedules, instructions and all other contract documents.
- B. Bidders shall make all investigations necessary to thoroughly inform themselves regarding site(s) and facilities for delivery of material and equipment as required by the solicitation conditions. No plea of ignorance, by the Bidder, of conditions that exist or that may hereafter exist as a result of failure or omission on

the part of the Bidder to make the necessary examinations and investigations, or failure to fulfill in every detail the requirements of the contract documents, will be accepted as a basis for varying the requirements of the City or the compensation due the Bidder.

- C. Bidders are advised that all City contracts are subject to all legal requirements provided for in the City of North Miami Beach Purchasing Code and applicable Miami-Dade County Ordinances, State Statutes and Federal Statutes.

1.5 SUBMISSION OF BIDS

- A. Bids and Addenda thereto shall be delivered via Bidsync.com by the due/time specified.

1.6 ADDENDA

The Procurement Management Division may issue an addendum in response to any inquiry received, prior to the bid opening, which changes, adds to or clarifies the terms, provisions or requirements of the solicitation. The Bidder should not rely on any representation, statement or explanation, whether written or verbal, other than those made in this solicitation document or in any addenda issued. Where there appears to be a conflict between this solicitation and any addenda, the last addendum issued shall prevail. It is the Bidder's responsibility to ensure receipt of all addenda and any accompanying documents. Bidder(s) shall acknowledge receipt of any formal Addenda via Bidsync.com. Failure to acknowledge Addenda shall deem the response non-responsive provided, however, that the City may waive this requirement in its best interest.

1.7 REJECTION OF BID

The City reserves the right to reject any or all bids prior to award. Reasonable efforts will be made to either award the contract or reject all bids within one hundred and twenty (120) calendar days after Bids opening date.

1.8 WITHDRAWAL OF BID

- A. Bids may not be withdrawn and shall be deemed enforceable for a period of 120 days after the time set for the Bid opening.

- B. Bids may be withdrawn prior to the time set for the Bid opening. Such request must be in writing.

- C. The City will permanently retain as liquidated damages the Bid deposit furnished by any Bidder who requests to withdraw a Bid after the Bid opening.

1.9 LATE BIDS OR MODIFICATIONS

Only Bids received as of opening date and time will be considered timely. Bids and modifications received after the time set for the Bid opening will be rejected as late.

1.10 CONFLICTS WITHIN THE SOLICITATION

Where there appears to be a conflict between the General Terms and Conditions, Special Conditions, Scope of Services, Bid Submittal Section, or any addendum issued, the order of precedence shall be as follows: The last addendum issued, the General Terms and Conditions, the Special Conditions, the Scope of Services, and the Bid Submittal Section.

1.11 CLARIFICATION OR OBJECTION TO BID SPECIFICATIONS

If any person contemplating submitting a bid for this contract is in doubt as to the true meaning of the specifications or other bid documents or any part thereof, he/she may submit to the Chief Procurement Officer on or before the date and time stated herein, a request for clarification. All such requests for clarification shall be made in writing and the person submitting the request will be responsible for its prompt delivery. Any interpretation of the bid, if made, will be made only by Addendum duly issued. The City will not be responsible for any other explanation or interpretation of the proposed made or given prior to the award of the contract. Any objection to the specifications and requirements as set forth in this bid must be filed in writing with the **Chief Procurement Officer by the deadline for Questions posted on Bidsync.com.**

1.12 INVOICING/PAYMENT

All invoices should be sent to:
Finance Department,
17011 NE 19 Avenue, 3rd Floor,
North Miami Beach, Florida 33162.

In accordance with Florida State Statutes, Chapter 218, payment will be made within 45 days after receipt of services and a proper invoice. The City cannot make advance payments, make deposits in advance of receipt of goods, or pay C.O.D. Bidders should state any payment discount in the space provided on the bid form.

1.13 COMPETENCY OF BIDDERS

- A. Pre-award inspection of the Bidder's facility may be made prior to the award of contract. Bids will be considered only from firms which are regularly engaged in the business of providing the goods and/or services as described in this solicitation(s); have a record of performance for a reasonable period of time; and have sufficient financial support, equipment and organization to ensure that they can satisfactorily deliver the material and/or services if awarded a Contract under the terms and conditions herein stated. The terms "equipment and organization" as used herein shall be construed to mean a fully equipped and well established company in line with the best business practices in the industry and as determined by the proper authorities of the City.
- B. The City may consider any evidence available to it of the financial, technical and other qualifications and abilities of a Bidder, including past performance (experience) in making the award in the best interest of the City. In all cases the City of North Miami Beach shall have no liability to any contractor for any costs or expense incurred in connection with this bid or otherwise.

1.14 NOTICE REQUIREMENTS UNDER THE AGREEMENT

All notices required or permitted under the Agreement shall be in writing and shall be deemed sufficiently served if delivered by Registered or Certified Mail, with return receipt requested; or delivered personally; or delivered via e-mail (if provided below) and followed with delivery of hard copy; and in any case addressed as follows:

To the Chief Procurement Officer.

Procurement Management Division
17011 NE 19th Avenue, Suite 315
North Miami Beach, FL 33162
Phone: (305) 948-2946
Email: bids@Citynmb.com

and,

To the City Attorney
City Attorney
17011 NE 19th Avenue, 4th Floor
North Miami Beach, FL 33162
Phone: (305) 948-2939

To the Bidder

Notices will be sent to the Bidder at the e-mail address and to the person listed in the bid, as applicable.

Either party may at any time designate a different address and/or contact person by giving notice as provided above to the other party. Such notices shall be deemed given upon receipt by the addressee.

1.15 EMPLOYEES

All employees of the Bidder shall be considered to be at all times the sole employees of the Bidder under the Bidder's sole direction, and not employees or agents of the City of North Miami Beach. The Bidder shall supply competent and physically capable employees and the City is authorized to require the Bidder to remove any employee it deems careless, incompetent, insubordinate or otherwise objectionable and whose presence on City property is not in the best interest of the City.

Each employee at all times shall have and display in plain view proper identification. The names of the employee and the company shall be displayed on the front of the employee's shirt.

1.16 AWARD OF BID

The bid, or contract, shall be awarded to the lowest responsible and responsive bidder whose bid conforms with the terms and conditions of the Invitation to Bid.

1.17 PROTESTS

- A. Right to protest. Any Bidder or interested parties (hereinafter collectively referred

to as the " Bidder ") who has a substantial interest in, and is aggrieved in connection with the solicitation or proposed award of the ITB may protest to the City Manager or designee. Protests arising from the decisions and votes of any evaluation or selection committee shall be limited to protests based upon alleged deviation(s) from established purchasing procedures set forth in City Purchasing Code, any written guidelines of the procurement department, and the specifications, requirements and/or terms set forth in the ITB.

1. Any protest concerning the ITB specifications, requirements, and/or terms must be made within three business days (for the purposes of this section, "business day" means a day other than Saturday, Sunday or a national holiday), from the time the facts become known and, in any case, at least seven business days prior to the opening of the responses. Such protest must be made in writing (as provided for herein *Notice Requirements*) to the Chief Procurement Officer with copy to the City Manager and City Attorney, and such protest shall state the particular grounds on which it is based and shall include all pertinent documents and evidence. No protest shall be accepted unless it complies with the requirements of this section. Failure to timely protest ITB specifications, requirements and/or terms is a waiver of the ability to protest the specifications, requirements and/or terms.
 2. Any protest after the bid opening, including challenges to actions of any evaluation or selection committee as provided in subsection (1) above shall be submitted in writing to the Chief Procurement Officer with copy to the City Manager and City Attorney. The City will allow such bid protest to be submitted anytime until two business days following the release of the notice of the City Manager's written recommendation to the City Commission for award of the solicitation in question. Such protest shall state the particular grounds on which it is based and shall include all pertinent grounds on which it is based, and shall include all pertinent documents and evidence. No protest shall be accepted unless it complies with the requirements of this section. All Bidders shall be notified in writing (which may be transmitted by electronic communication, such as facsimile transmission and/or e-mail), following the release of the City Manager's written recommendation to the City Commission.
- B. The City may request reasonable reimbursement for expenses incurred in processing any protest hereunder, which expenses shall include, but not be limited to, staff time, legal fees and expenses (including expert witness fees), reproduction of documents and other out-of-pocket expenses.
 - C. Authority to resolve protests. The City Manager or designee shall have the authority to settle and resolve a protest concerning the solicitation or award of the ITB.
 - D. Responsiveness. Prior to any decision being rendered under this section with respect to a protest, the City Manager and the City Attorney, or their respective designees, shall certify whether the submission of the response to the ITB in question is responsive. The parties to the protest shall be bound by the determination of the City Manager and the City Attorney with regard to the issue of responsiveness.
 - E. Decision and appeal procedures. If the protest is not resolved by mutual agreement, the City Manager and the City Attorney, or their respective designees, shall promptly issue a decision in writing. The decision shall specifically state the reasons for the action taken and inform the protestor of his or her right to challenge the decision. Any person aggrieved by any action or decision of the City Manager, the City Attorney, or their respective designees, with regard to any decision rendered

under this section may appeal said decision by filing an original action in the Circuit Court of the Eleventh Judicial Circuit in and for Miami-Dade County, Florida, in accordance with the applicable court rules. Any action not brought in good faith shall be subject to sanctions including damages suffered by the City and attorney's fees incurred by the City in defense of such wrongful action.

- F. Distribution. A copy of each decision by the City Manager and the City Attorney shall be mailed or otherwise furnished immediately to the protestor.
- G. Stay of procurements during protests. In the event of a timely protest under this section, the City shall not proceed further with the solicitation or with the award pursuant to the ITB unless a written determination is made by the City Manager, that the award pursuant to the ITB must be made without delay in order to protect a substantial interest of the City.
- H. The institution and filing of a protest under this section is an administrative remedy that shall be employed prior to the institution and filing of any civil action against the City concerning the subject matter of the protest.
- I. Protests not timely made under this section shall be barred. Any basis or ground for a protest not set forth in the letter of protest required under this section shall be deemed waived.
- J. At the time the City Manager's written recommendation for award of the ITB is presented at a meeting of the Mayor and City Commission, the City Attorney, or designee, shall present a report to inform the Mayor and City Commission of any legal issues relative to any protest filed in connection with the ITB in question.
- K. The determination of the City Manager and the City Attorney with regards to all procedural and technical matters shall be final.

1.18 AGREEMENT

An agreement shall be sent to the awarded Bidder to be signed, witnessed, and returned to the City for execution. The City will provide a copy of the fully executed agreement to the awarded Bidder.

1.19 DISQUALIFICATION OF BIDDERS

A Bidder may be disqualified temporarily or permanently and his/her bid(s) rejected for:

- Poor performance or default, in the City's opinion, on previous contracts with the City.
- Poor performance or default, in the City's opinion, on previous contracts with other public entities.
- Insufficient financial or company size, in the City's opinion, to perform the requirements of the contract.

1.20 SUBCONTRACTING

The Bidder will not assign, transfer or sub-contract any work either in whole or in part, without prior written approval of the City. The Bidder shall furnish in writing to the City the names of the Subcontractors. The Bidder shall not contract with any Subcontractors to whom the City has made reasonable and timely objection. The final Subcontractors list shall be presented to the City.

1.21 ASSIGNMENT

The successful Bidder shall not assign, transfer, hypothecate, or otherwise dispose of this contract, including any rights, title or interest therein, or its power to execute such contract to any person, company or corporation without the prior written consent of the City and City's approval.

1.22 FRAUD AND MISREPRESENTATION

In accordance with City Purchasing Policy 3.6 and pursuant to Section 2-8-1.4 of the Miami-Dade County Code, any individual, corporation or other entity that attempts to meet its contractual obligations with the City through fraud, misrepresentation or material misstatement, may be debarred from doing business with the City. The City as further sanction may terminate or cancel any other contracts with such individual, corporation or entity. Such individual or entity shall be responsible for all direct or indirect costs associated with termination or cancellation, including attorney's fees.

1.23 COLLUSION

The Bidder, by affixing his signature to this bid, agrees to the following: "Bidder certifies that his/her bid is made without previous understanding, agreement, or connection with any person, firm or corporation, making a bid for the same items, or the initiating City department, and is in all respects fair, without outside control, collusion, fraud, or otherwise illegal action."

1.24 PATENTS AND COPYRIGHTS

It shall be understood and agreed that by the submission of a bid, the Bidder, if awarded a contract, shall save harmless and fully indemnify the City and any of its officers or agents from any and all damages that may, at any time, be imposed or claimed for infringement of any patent right, trademark, or copyright, of any person or persons, association, or corporation, as the result of the use of such articles by the City, or any of its officers, agents, or employees, and of which articles the contractor is not the patentee, assignee, licensee, or owner, or lawfully entitled to sell same.

1.25 PUBLIC RECORDS LAW

Pursuant to Florida Statute 119.07, public records may be inspected and examined by anyone desiring to do so, at a reasonable time, under reasonable conditions, and under supervision by the custodian of the public record. Sealed Bids and Proposals become subject to this statute, notwithstanding Bidders' requests to the contrary, at the time the City provides notice of a decision or intended decision, or 30 days after bid or bid opening, whichever is earlier.

Financial statements submitted in response to a request by the City are confidential, and exempt from disclosure. Data processing software obtained under a licensing agreement which prohibits its disclosure is also exempt.

Bidders are hereby notified and agree that all information submitted as part of, or in support of bid/proposal submittals will be available for public inspection after opening of bids/proposals in compliance with Chapter 119 of the Florida Statutes. The Bidder shall not submit any information in response to this invitation which the Bidder considers to be a trade secret, proprietary or confidential. The submission of any information to the City in connection with this ITB shall be deemed conclusively to be a waiver of any trade secret or other protection, which would otherwise

be available to the Bidder. In the event that the Bidder submits information to the City in violation of this restriction, either inadvertently or intentionally and clearly identifies that information in the bid/proposal as protected or confidential, the City shall endeavor to redact and return that information to the Bidder as quickly as possible, and if appropriate, evaluate the balance of the bid/proposal. The redaction or return of information pursuant to this clause may render a bid/response non-responsive.

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 AGREEMENT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT (TELEPHONE NUMBER: (305) 787-6001, E-MAIL ADDRESS: CITYCLERK@CITYNMB.COM, AND MAILING ADDRESS: CITY CLERK, NMB CITY HALL, 17011 N.E. 19 AVENUE, NORTH MIAMI BEACH, FLORIDA 33162-3100).

1.26 EXCEPTIONS TO BID

The Bidder must clearly indicate any exceptions they wish to take to any of the terms in this Bid, and outline what, if any, alternative is being offered. All exceptions and alternatives shall be included and clearly delineated, in writing, in the Bid. The City, at its sole and absolute discretion, may accept or reject any or all exceptions and alternatives. In cases in which exceptions and alternatives are rejected, the City shall require the Bidder to comply with the particular term and/or condition of the ITB to which the Bidder took exception to (as said term and/or condition was originally set forth on the ITB.)

1.27 INDEMNIFICATION AND HOLD HARMLESS AGREEMENT

The Bidder shall indemnify and hold harmless the City of North Miami Beach and its officers, employees, agents and instrumentalities from any and all liability, losses or damages in an amount not less than \$1,000,000 per occurrence. In addition to \$1,000,000 per occurrence, the City shall be entitled to attorney's fees and costs of defense, which the City of North Miami Beach, or its officers, employees, agents or instrumentalities may incur as a result of claims, demands, suits, causes of actions or proceedings of any kind or nature arising out of, relating to or resulting from the performance of this project by the awarded Bidder or its employees, agents, servants, partners, principals or subcontractors. Furthermore, the awarded Bidder shall pay all claims and losses in an amount not less than \$1,000,000 per occurrence in connection therewith and shall investigate and defend all claims, suits or actions of any kind of nature in the name of the City of North Miami Beach, where applicable, including appellate proceedings, and shall pay all costs, judgments, and attorney's fees which may issue thereon. The awarded Bidder expressly understands and agrees that any insurance protection required by the resulting agreement or otherwise provided by the awarded Bidder shall cover the City of North Miami Beach, its officers, employees, agents and instrumentalities and shall include claims for damages resulting from and/or caused by the negligence, recklessness or intentional wrongful misconduct of the indemnifying party and persons employed or by utilized by the indemnifying party in the performance of the contract.

1.28 COPELAND "ANTI-KICKBACK"

Contractor and all subcontractors will comply with the Copeland Anti-Kickback Act (18 U.S.C. 874) as supplemented in Department of Labor regulations (29 CFR Part 3).

1.29 CHOICE OF LAW

If and when this contract is disputed, and should it be necessary to litigate, the substantive and procedural laws of the State of Florida shall govern the outcome of such litigation. This shall apply notwithstanding such factors which include, but are not limited to, place where contract is entered into, place where accident arises and choice of law principles.

1.30 QUANTITIES

The City specifically reserves the right to accept all or any part of the bid, to split the award, to increase or decrease the quantity to meet additional or reduced requirements of the City, without such change affecting the contract price set forth in the bid form by the Bidder.

1.31 CLAIMS

Successful Bidder(s) will be responsible for making any and all claims against carriers for missing or damaged items.

1.32 MODIFICATION OF CONTRACT

The contract may be modified by mutual consent, in writing through the issuance of a modification to the contract, purchase order, change order or award sheet, as appropriate.

1.33 PUBLIC ENTITY CRIMES

A person or affiliate who has been placed on the convicted vendor list following a conviction for a public entity crime may not submit a bid/proposal on a contract to provide any goods or services to a public entity, may not submit a bid/proposal on a contract with a public entity for the construction or repair of a public building or public work, may not submit bids/proposals on leases of real property to a public entity, may not be awarded or perform work as a contractor, supplier, subcontractor, or consultant under a contract with any public entity, and may not transact business with any public entity in excess of the threshold amount provided in Florida Statutes, Section 287.017, for CATEGORY TWO for a period of 36 months from the date of being placed on the convicted vendor list.

1.34 DISCRIMINATION

Any entity or affiliate who has been placed on the discriminatory vendor list may not submit a bid/proposal on a contract to provide goods or services to a public entity, may not submit a bid/proposal on a contract with a public entity for construction or repair of a public building or public work, may not submit bids/proposals on leases of real property to a public entity, may not award or perform work as a contractor, supplier, subcontractor, or consultant under contract with any public entity, and may not transact business with any public entity.

1.35 DRUG-FREEWORKPLACE PROGRAM

Bidders are required to maintain and enforce a Drug-Free Workplace Program for the duration of the agreement and any extensions thereof. Bidders shall complete and submit a copy of the attached form and a copy of the program with their bid.

1.36 SOLICITATION, GIVING, AND ACCEPTANCE OF GIFTS POLICY

Bidders shall sign and submit this attached form indicating understanding and compliance with the City's and State's policies prohibiting solicitation and acceptance of gifts by public officers, employees, or candidates.

Failure to submit this signed form will result in your bid being declared non-responsive; provided, however, that the low Bidder may be given the opportunity to submit the form to the City within five calendar days after notification by the City, if this is determined to be in the best interest of the City.

1.37 ACCESS TO RECORDS

The City reserves the right to require the Bidder to submit to an audit. The Bidder shall provide access to all of its records which relate directly or indirectly to the Agreement at its place of business during regular business hours. The selected Bidder shall retain all records pertaining to the Agreement and upon request make them available to the City for three years following expiration of the Agreement. The Bidder agrees to provide such assistance as may be necessary to facilitate the review or audit by the City to ensure compliance with applicable accounting and financial standards at no cost to 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 AGREEMENT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT (TELEPHONE

NUMBER: (305) 787-6001, E-MAIL ADDRESS:

CITYCLERK@CITYNMB.COM, AND MAILING ADDRESS: CITY CLERK, NMB CITY HALL, 17011 N.E. 19 AVENUE, NORTH MIAMI BEACH, FLORIDA 33162-3100).

1.38 BEST INTEREST OF NORTH MIAMI BEACH

The City of North Miami Beach reserves the right to reject any and all submissions, to waive any and all irregularities in any submission, and to make awards in the best interest of the City.

1.39 INSURANCE REQUIREMENTS

The Bidder shall maintain and carry in full force during the Term the insurance required herein. Upon City's notification, the Bidder shall furnish to the Procurement Management Division, Certificates of Insurance that indicate that insurance coverage has been obtained which meets the requirements as outlined below:

- A. Worker's Compensation Insurance for all employees of the Bidder as required by Florida Statute 440. Should the Bidder be exempt from this Statute, the Bidder and each employee shall hold the City harmless from any injury incurred during performance of the Contract. The exempt Bidder shall also submit a written statement detailing the number of employees and that they are not required to carry Worker's Compensation insurance, and do not anticipate hiring any additional employees during the term of this contract or a copy of a Certificate of Exemption.
- B. General Liability Insurance on a comprehensive basis in an amount not less than \$1,000,000 per person, \$2,000,000 per occurrence for bodily injury and property damage. City of North Miami Beach must be shown as an additional insured with respect to this coverage. The mailing address of City of North Miami Beach 17011 NE 19 Avenue, Suite 315, North Miami Beach, Florida 33162, as the certificate holder,

must appear on the certificate of insurance.

- C. Automobile Liability Insurance covering all owned, non-owned, and hired vehicles used in connection with the Services, in an amount not less than \$1,000,000 per person and \$2,000,000 per occurrence. City of North Miami Beach must be shown as an additional insured with respect to this coverage. The mailing address of City of North Miami Beach 17011 NE 19 Avenue, Suite 315, North Miami Beach, Florida 33162, as the certificate holder, must appear on the certificate of insurance. Add: Uninsured Motorist Coverage.

The insurance coverage required shall include those classifications, as listed in standard liability insurance manuals, which most nearly reflect the operation of the Bidder. All insurance policies required above shall be issued by companies authorized to do business under the laws of the State of Florida with the following qualifications:

The company must be rated no less than "B" as to management, and no less than "Class V" as to financial strength, according to the latest edition of Best's Insurance Guide published by A.M. Best Company, Oldwick, New Jersey, or its equivalent, subject to the approval of the City's Risk Management Division.

Certificates of Insurance must indicate that for any cancellation of coverage before the expiration date, the issuing insurance carrier will endeavor to mail thirty (30) day written advance notice to the certificate holder. In addition, the Bidder hereby agrees not to modify the insurance coverage without thirty (30) days written advance notice to the City.

NOTE: CITY OF NORTH MIAMI BEACH CONTRACT NUMBER AND TITLE MUST APPEAR ON EACH CERTIFICATE OF INSURANCE.

Compliance with the foregoing requirements shall not relieve the Bidder of this liability and obligation under this section or under any other section in the Agreement.

Award of this Contract is contingent upon the receipt of the insurance documents, as required, within fifteen (15) calendar days after City

notification to Bidder to comply before the award is made. If the insurance certificate is received within the specified time frame but not in the manner prescribed in the Agreement, the Bidder shall be verbally notified of such deficiency and shall have an additional five (5) calendar days to submit certificate to the City. If the Bidder fails to submit the required insurance documents in the manner prescribed in the Agreement within twenty (20) calendar days after City notification to comply, the Bidder shall be in default of the contractual terms and conditions and award of the Contract will be rescinded, unless such time frame for submission has been extended by the City.

The Bidder shall be responsible for assuring that the insurance certificates required in conjunction with this Section remain in force for the duration of the contractual period of the Contract, including any and all option years or extension periods that may be granted by the City. If insurance certificates are scheduled to expire during the contractual period, the Bidder shall be responsible for submitting new or renewed insurance certificates to the City at a minimum of thirty (30) calendar days in advance of such expiration. In the event that expired certificates are not replaced with new or renewed certificates which cover the contractual period, the City shall suspend the Contract until such time as the new or renewed certificates are received by the City in the manner prescribed herein; provided, however, that this suspended period does not exceed thirty (30) calendar days. Thereafter, the City may, at its sole discretion, terminate this contract.

1.40 CITY WEBSITE

The City utilizes the following procedures for notification of bid opportunities: www.bidsync.com and on the City Website: <https://www.citynmb.com/214/Bid-Opportunities>. These are the only forms of notification by the City. The City shall not be responsible for receipt of notification and information from any source other than those listed. It shall be the bidder's responsibility to verify the validity of all bid information received by sources other than those listed.

1.41 DISCLAIMER

The City of North Miami Beach may, in its sole and absolute discretion without prejudice or

liability, accept or reject, in whole or in part, for any reason whatsoever any or all bids; re-advertise this ITB; postpone or cancel at any time this ITB process; or, waive any formalities of or irregularities in the process. Bids that are not submitted on time and/or do not conform to the City of North Miami Beach's requirements will not be considered. After all bids are analyzed, Bidder(s) submitting bids that appear, solely in the opinion of the City of North Miami Beach, to be the most qualified, shall be submitted to the City of North Miami Beach's City Commission, and the final selection will be made thereafter with a timetable set solely by the City of North Miami Beach. The selection by the City of North Miami Beach shall be based on the ITB, which is, in the sole opinion of the City Commission of the City of North Miami Beach, in the best interest of the City of North Miami Beach. The issuance of this ITB constitutes only an invitation to make presentations to the City of North Miami Beach. The City of North Miami Beach reserves the right to determine, at its sole discretion, whether any aspect of the response satisfies the criteria established in this ITB. In all cases the City of North Miami Beach shall have no liability to any bid for any costs or expense incurred in connection with this ITB.

1.42 CONFIDENTIALITY

As a political subdivision, the City of North Miami Beach is subject to the Florida Government in the Sunshine Act and Public Records Law. By submitting a bid, Bidder acknowledges that the materials submitted with the bid and the results of the City of North Miami Beach's evaluation are open to public inspection upon proper request. Bidder should take special note of this as it relates to proprietary information that might be included in its bid.

1.43 NATURE OF THE AGREEMENT

The Agreement incorporates and includes all negotiations, correspondence, conversations, agreements, and understandings applicable to the matters contained in the Agreement. The parties agree that there are no commitments, agreements, or understandings concerning the subject matter of the Agreement that are not contained in the Agreement, and that the Agreement contains the entire agreement between the parties as to all matters contained herein. Accordingly, it is agreed that no deviation from the terms hereof shall be predicated upon

any prior representations or agreements, whether oral or written. It is further agreed that any oral representations or modifications concerning the Agreement shall be of no force or effect, and that the Agreement may be modified, altered or amended only by a written amendment duly executed by both parties hereto or their authorized representatives.

The Bidder shall provide the services set forth in the Scope of Services, and render full and prompt cooperation with the City in all aspects of the Services performed hereunder.

The Bidder acknowledges that the Agreement requires the performance of all things necessary for or incidental to the effective and complete performance of all Work and Services under this Contract. All things not expressly mentioned in the Agreement but necessary to carrying out its intent are required by the Agreement, and the Bidder shall perform the same as though they were specifically mentioned, described and delineated.

The Bidder shall furnish all labor, materials, tools, supplies, and other items required to perform the Work and Services that are necessary for the completion of this Contract. All Work and Services shall be accomplished at the direction of and to the satisfaction of the City's Contract Manager.

The Bidder acknowledges that the City shall be responsible for making all policy decisions regarding the Scope of Services. The Bidder agrees to provide input on policy issues in the form of recommendations.

The Bidder agrees to implement any and all changes in providing Services hereunder as a result of a policy change implemented by the City. The Bidder agrees to act in an expeditious and fiscally sound manner in providing the City with input regarding the time and cost to implement said changes and in executing the activities required to implement said changes.

1.44 PAYMENT FOR SERVICES/AMOUNT OBLIGATED

The Bidder warrants that it has reviewed the City's requirements and has asked such questions and conducted such other inquiries as the Bidder deemed necessary in order to determine the price the Bidder will charge to

provide the Work and Services to be performed under this Contract. The compensation for all Work and Services performed under this Contract, including all costs associated with such Work and Services, shall be in the total amount submitted on the Bid Form. The City shall have no obligation to pay the Bidder any additional sum(s) in excess of this amount, except for a change and/or modification to the Contract which is approved and executed in writing by the City and the Bidder.

All Services undertaken by the Bidder before City's approval of this Contract shall be at the Bidder's risk and expense.

1.45 PRICING

Prices shall remain firm and fixed for the term of the Contract, including any option or extension periods; however, the Bidder may offer incentive discounts to the City at any time during the Contract term, including any renewal or extension thereof.

1.46 MANNER OF PERFORMANCE

- A. The Bidder shall provide the Services described herein in a competent and professional manner satisfactory to the City in accordance with the terms and conditions of the Agreement. The City shall be entitled to a satisfactory performance of all Services described herein and to full and prompt cooperation by the Bidder in all aspects of the Services. At the request of the City, the Bidder shall promptly remove from the project any Bidder's employee, subcontractor, or any other person performing Services hereunder. The Contractor agrees that such removal of any of its employees does not require the termination or demotion of any employee by the Bidder.
- B. The Bidder agrees to defend, hold harmless and indemnify the City and shall be liable and responsible for any and all claims, suits, actions, damages and costs (including attorney's fees and court costs) made against the City, occurring on account of, arising from or in connection with the removal and replacement of any Bidder's personnel performing services hereunder at the

behest of the City. Removal and replacement of any Bidder's personnel as used in this Article shall not require the termination and or demotion of such Bidder's personnel.

- C. The Bidder agrees that at all times it will employ, maintain and assign to the performance of the Services a sufficient number of competent and qualified professionals and other personnel to meet the requirements to which reference is hereinafter made. The Bidder agrees to adjust its personnel staffing levels or to replace any of its personnel upon reasonable request from the City, should the City make a determination, in its sole discretion that said personnel staffing is inappropriate or that any individual is not performing in a manner consistent with the requirements for such a position.
- D. The Bidder warrants and represents that its personnel have the proper skill, training, background, knowledge, experience, rights, authorizations, integrity, character and licenses as necessary to perform the Services described herein, in a competent and professional manner.
- E. The Bidder shall at all times cooperate with the City and coordinate its respective work efforts to most effectively and efficiently maintain the progress in performing the Services.
- F. The Bidder shall comply with all provisions of all federal, state and local laws, statutes, ordinances, and regulations that are applicable to the performance of the Agreement.

1.47 INDEPENDENT CONTRACTOR RELATIONSHIP

The Bidder is, and shall be, in the performance of all work services and activities under the Agreement, an independent contractor, and not an employee, agent of the City. All persons engaged in any of the work or services performed pursuant to the Agreement shall at all times, and in all places, be subject to the Bidder's sole direction, supervision and control. The Bidder shall exercise control over the means and

manner in which it and its employees perform the work, and in all respects the Bidder's relationship and the relationship of its employees to the City shall be that of an independent contractor and not as employees and agents of the City.

The Bidder does not have the power or authority to bind the City in any promise, agreement or representation other than specifically provided for in the Agreement.

1.48 AUTHORITY OF THE CITY'S CONTRACT MANAGER

- A. The Bidder hereby acknowledges that the City's Contract Manager will determine in the first instance all questions of any nature whatsoever arising out of, under, or in connection with, or in any way related to or on account of, the Agreement including without limitations: questions as to the value, acceptability and fitness of the Services; questions as to either party's fulfillment of its obligations under the Contract; negligence, fraud or misrepresentation before or subsequent to acceptance of the Bid; questions as to the interpretation of the Scope of Services; and claims for damages, compensation and losses.
- B. The Bidder shall be bound by all determinations or orders and shall promptly obey and follow every order of the Contract Manager, including the withdrawal or modification of any previous order and regardless of whether the Bidder agrees with the Contract Manager's determination or order. Where orders are given orally, they will be issued in writing by the Contract Manager as soon thereafter as is practicable.
- C. The Bidder must, in the final instance, seek to resolve every difference concerning the Agreement with the Contract Manager. In the event that the Bidder and the Contract Manager are unable to resolve their difference, the Bidder may initiate a dispute in accordance with the procedures set forth in the section below. Exhaustion of these procedures shall be a condition precedent to any lawsuit permitted

hereunder.

- D. In the event of such dispute, the parties to the Agreement authorize the City Manager or designee, who may not be the Contract Manager or anyone associated with this Project, acting personally, to decide all questions arising out of, under, or in connection with, or in any way related to or on account of the Agreement (including but not limited to claims in the nature of breach of contract, fraud or misrepresentation arising either before or subsequent to execution hereof) and the decision of each with respect to matters within the City Manager's purview as set forth above shall be conclusive, final and binding on parties. Any such dispute shall be brought, if at all, before the City Manager within 10 days of the occurrence, event or act out of which the dispute arises.

The City Manager may base this decision on such assistance as may be desirable, including advice of experts, but in any event shall base the decision on an independent and objective determination of whether Bidder's performance or any Deliverable meets the requirements of the Agreement and any specifications with respect thereto set forth herein. The effect of any decision shall not be impaired or waived by any negotiations or settlements or offers made in connection with the dispute, whether or not the City Manager participated therein, or by any prior decision of others, which prior decision shall be deemed subject to review, or by any termination or cancellation of the Agreement. All such disputes shall be submitted in writing by the Bidder to the City Manager for a decision, together with all evidence and other pertinent information in regard to such questions, in order that a fair and impartial decision may be made. The parties agree that whenever the City Manager is entitled to exercise discretion or judgment or to make a determination or form an opinion pursuant to the provisions of this Article, such action shall be deemed fair and impartial when exercised or taken. The City Manager shall render a decision in writing and deliver a copy of the same to the Bidder.

Except as such remedies may be limited or waived elsewhere in the Agreement, Contractor reserves the right to pursue any remedies available under law after exhausting the provisions of this Article.

1.49 MUTUAL OBLIGATIONS

The Agreement, including attachments and appendices to the Agreement, shall constitute the entire Agreement between the parties with respect hereto and supersedes all previous communications and representations or agreements, whether written or oral, with respect to the subject matter hereto unless acknowledged in writing by the duly authorized representatives of both parties.

Nothing in the Agreement shall be construed for the benefit, intended or otherwise, of any third party that is not a parent or subsidiary of a party or otherwise related (by virtue of ownership control or statutory control) to a party.

In those situations where the Agreement imposes an indemnity or defense obligation on the Contractor, the City may, at its expense, elect to participate in the defense if the City should so choose. Furthermore, the City may at its own expense defend or settle any such claims if the Contractor fails to diligently defend such claims, and thereafter seek indemnity for costs and attorney's fees from the Contractor.

1.50 QUALITY ASSURANCE/QUALITY ASSURANCE RECORD KEEPING

The Contractor shall maintain, and shall require that its subcontractors and suppliers maintain, complete and accurate records to substantiate compliance with the requirements set forth in the Scope of Services. The Contractor and its subcontractors and suppliers shall retain such records, and all other documents relevant to the Services furnished under the Agreement for a period of three (3) years from the expiration date of the Agreement and any extension thereof.

1.51 SUBSTITUTION OF PERSONNEL

In the event the Contractor wishes to substitute personnel for the key personnel identified by the Contractor's Bid, the Contractor must notify the City in writing and request written approval for the substitution at least ten (10) business days prior to effecting such substitution.

1.52 ASSUMPTION, PARAMETERS, PROJECTIONS, ESTIMATES AND EXPLANATIONS

The Contractor understands and agrees that any assumptions, parameters, projections, estimates and explanations presented by the City were provided to the Contractor for evaluation purposes only. However, since these assumptions, parameters, projections, estimates and explanations represent predictions of future events, the City makes no representations or guarantees, the City shall not be responsible for the accuracy of the assumptions presented, the City shall not be responsible for conclusions to be drawn there from, and any assumptions, parameters, projections, estimates and explanations shall not form the basis of any claim by the Contractor. The Contractor accepts all risks associated with using this information.

1.53 SEVERABILITY

If the Agreement contains any provision found to be unlawful, the same shall be deemed to be of no effect and shall be deemed stricken from the Agreement without affecting the binding force of the Agreement as it shall remain after omitting such provision.

1.54 TERMINATION FOR CONVENIENCE AND SUSPENSION OF WORK

- A. The City may terminate the Agreement if an individual or corporation or other entity attempts to meet its contractual obligation with the City through fraud, misrepresentation or material misstatement.
- B. The City may, as a further sanction, terminate or cancel any other contract(s) that such individual or corporation or other entity has with the City. Such individual, corporation or other entity shall be responsible for all direct and indirect costs associated with such termination or cancellation, including attorney's fees.
- C. Contractor acknowledges and agrees that ten dollars (\$10.00) of the compensation to be paid by the City, the receipt and adequacy of which is hereby acknowledged by Contractor is given

specific consideration to Contractor for City's right to terminate this Agreement for convenience.

- D. The City, through its City Manager, and for its convenience and without cause, terminate the Contract at any time during the term by giving written notice to consultant of such termination; which shall become effective within fifteen (15) days following receipt by the Contractor of such notice. If the Contract is terminated for convenience by the City, the Contractor shall be paid for any services satisfactorily performed up to the date of termination; following which the City shall be discharged from any and all liabilities, duties, and terms arising out, or by virtue of, this Contract.
- E. The foregoing notwithstanding, any individual, corporation or other entity which attempts to meet its contractual obligations with the City through fraud, misrepresentation or material misstatement may be debarred from City contracting in accordance with the City debarment procedures. The Contractor may be subject to debarment for failure to perform and all other reasons set forth in Chapter 3 of the City's Purchasing Policies and Procedures Manual.

In addition to cancellation or termination as otherwise provided in the Agreement, the City may at any time, in its sole discretion, with or without cause, terminate the Agreement by written notice to the Contractor and in such event:

- F. The Contractor shall, upon receipt of such notice, unless otherwise directed by the City:
1. Stop work on the date specified in the notice ("the Effective Termination Date");
 2. Take such action as may be necessary for the protection and preservation of the City's materials and property;
 3. Cancel orders;
 4. Assign to the City and deliver to any location designated by the City any

non-cancelable orders for Deliverables that are not capable of use except in the performance of the Agreement and which have been specifically developed for the sole purpose of the Agreement and not incorporated in the Services;

5. Take no action which will increase the amounts payable by the City under the Agreement.
- G. In the event that the City exercises its right to terminate the Agreement pursuant to this Article the Contractor will be compensated as stated in the payment Articles, herein, for the:
1. Portion of the Services completed in accordance with the Agreement up to the Effective Termination Date; and
 2. Non-cancelable Deliverables that are not capable of use except in the performance of the Agreement and which have been specifically developed for the sole purpose of the Agreement but not incorporated in the Services.
- H. All compensation pursuant to this Article is subject to audit.

1.55 EVENT OF DEFAULT

- A. An Event of Default shall mean a breach of the Agreement by the Contractor. Without limiting the generality of the foregoing and in addition to those instances referred to herein as a breach, an Event of Default, shall include the following:
1. The Contractor has not delivered Deliverables on a timely basis;
 2. The Contractor has refused or failed, except in any case for which an extension of time is provided, to supply enough properly skilled staff personnel;
 3. The Contractor has failed to make prompt payment to subcontractors or suppliers for any Services;

4. The Contractor has become insolvent (other than as interdicted by the bankruptcy laws), or has assigned the proceeds received for the benefit of the Contractor's creditors, or the Contractor has taken advantage of any insolvency statute or debtor/creditor law or if the Contractor's affairs have been put in the hands of a receiver;
 5. The Contractor has failed to obtain the approval of the City where required by the Agreement;
 6. The Contractor has failed to provide "adequate assurances" as required under subsection "B" below; and
 7. The Contractor has failed in the representation of any warranties stated herein.
- B. When, in the opinion of the City, reasonable grounds for uncertainty exist with respect to the Contractor's ability to perform the Services or any portion thereof, the City may request that the Contractor, within the time frame set forth in the City's request, provide adequate assurances to the City, in writing, of the Contractor's ability to perform in accordance with terms of the Agreement. Until the City receives such assurances the City may request an adjustment to the compensation received by the Contractor for portions of the Services which the Contractor has not performed. In the event that the Contractor fails to provide to the City the requested assurances within the prescribed time frame, the City may:
1. Treat such failure as a repudiation of the Agreement;
 2. Resort to any remedy for breach provided herein or at law, including but not limited to, taking over the performance of the Services or any part thereof either by itself or through others.
- C. In the event the City shall terminate the Agreement for default, the City or its

designated representatives may immediately take possession of all applicable equipment, materials, products, documentation, reports and data.

1.56 REMEDIES IN THE EVENT OF DEFAULT

If an Event of Default occurs, the Contractor shall be liable for all damages resulting from the default, including but not limited to:

- A. Lost revenues;
- B. The difference between the cost associated with procuring Services hereunder and the amount actually expended by the City for procurement of Services, including procurement and administrative costs; and,
- C. Such other direct damages.

The Contractor shall also remain liable for any liabilities and claims related to the Contractor's default. The City may also bring any suit or proceeding for specific performance or for an injunction.

1.57 PATENT AND COPYRIGHT INDEMNIFICATION

- A. The Contractor warrants that all Deliverables furnished hereunder, including but not limited to: services, equipment programs, documentation, software, analyses, applications, methods, ways, processes, and the like, do not infringe upon or violate any patent, copyrights, service marks, trade secret, or any other third party proprietary rights.
- B. The Contractor shall be liable and responsible for any and all claims made against the City for infringement of patents, copyrights, service marks, trade secrets or any other third party proprietary rights, by the use or supplying of any programs, documentation, software, analyses, applications, methods, ways, processes, and the like, in the course of performance or completion of, or in any way connected with, the Work, or the City's continued use of the Deliverables furnished

hereunder. Accordingly, the Contractor at its own expense, including the payment of attorney's fees, shall indemnify, and hold harmless the City and defend any action brought against the City with respect to any claim, demand, and cause of action, debt, or liability.

- C. In the event any Deliverable or anything provided to the City hereunder, or a portion thereof is held to constitute an infringement and its use is or may be enjoined, the Contractor shall have the obligation, at the City's option, to (i) modify, or require that the applicable subcontractor or supplier modify, the alleged infringing item(s) at the Contractor's expense, without impairing in any respect the functionality or performance of the item(s), or (ii) procure for the City, at the Contractor's expense, the rights provided under the Agreement to use the item(s).
- D. The Contractor shall be solely responsible for determining and informing the City whether a prospective supplier or subcontractor is a party to any litigation involving patent or copyright infringement, service mark, trademark, violation, or proprietary rights claims or is subject to any injunction which may prohibit it from providing any Deliverable hereunder. The Contractor shall enter into agreements with all suppliers and subcontractors at the Contractor's own risk. The City may reject any Deliverable that it believes to be the subject of any such litigation or injunction, or if, in the City's judgment, use thereof would delay the Work or be unlawful.
- E. The Contractor shall not infringe any copyright, trademark, service mark, trade secrets, patent rights, or other intellectual property rights in the performance of the Work.

1.58 PROPRIETARY RIGHTS

- A. The Bidder hereby acknowledges and agrees that the City retains all rights, title and interests in and to all materials, data, documentation and copies thereof furnished by the City to the Bidder

hereunder or furnished by the Bidder to the City and/or created by the Bidder for delivery to the City, even if unfinished or in process, as a result of the Services the respondent performs in connection with this Agreement, including all copyright and other proprietary rights therein, which the Bidder as well as its employees, agents, subcontractors and suppliers may use only in connection with the performance of Services under this Agreement. The Bidder shall not, without the prior written consent of the City, use such documentation on any other project in which the Bidder or its employees, agents, subcontractors or suppliers are or may become engaged. Submission or distribution by the Bidder to meet official regulatory requirements or for other purposes in connection with the performance of Services under this Agreement shall not be construed as publication in derogation of the City's copyrights or other proprietary rights.

- B. All rights, title and interest in and to certain inventions, ideas, designs and methods, specifications and other documentation related thereto developed by the Bidder and its subcontractors specifically for the City, hereinafter referred to as "Developed Works" shall become the property of the City.
- C. Accordingly, neither the Bidder nor its employees, agents, subcontractors or suppliers shall have any proprietary interest in such Developed Works. The Developed Works may not be utilized, reproduced or distributed by or on behalf of the Bidder, or any employee, agent, subcontractor or supplier thereof, without the prior written consent of the City, except as required for the Bidder's performance hereunder.

1.59 ELECTRONIC BIDDING

The City maintains an automated vendor address list that has been generated for each specific commodity class item through our electronic bid issuing service, www.bidsync.com. Notices of Invitations to Bids (ITB'S) are sent by email to the selection of bidders who have fully registered with www.bidsync.com, and to every vendor on those lists, who may then view the bid documents

online. Bidders who have been informed of a bid's availability in any other manner are responsible for registering with BidSync in order to view the bid documents. There is no fee for doing so. If you wish bid notifications be provided to another e-mail address contact www.bidsync.com.

1.60 LOCAL, STATE, AND FEDERAL COMPLIANCE REQUIREMENTS

Bidder agrees to comply, subject to applicable professional standards, with the provisions of any and all applicable Federal, State, County and City orders, statutes, ordinances, rules and regulations which may pertain to the Services required under the Agreement, including but not limited to:

- A. Equal Employment Opportunity (EEO), in compliance with Executive Order 11246 as amended and applicable to this Contract.
- B. Miami-Dade County Florida, Department of Small Business Development Participation Provisions, as applicable to this Contract.
- C. Occupational Safety and Health Act (OSHA) as applicable to this contract.
- D. Environmental Protection Agency (EPA), as applicable to this Contract.
- E. Miami-Dade County Code, Chapter 11A, Article 3. All contractors and subcontractors performing work in connection with this Contract shall provide equal opportunity for employment because of race, religion, color, age, sex, national origin, sexual preference, disability or marital status. The aforesaid provision shall include, but not be limited to, the following: employment, upgrading, demotion or transfer, recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in a conspicuous place available for employees and applicants for employment, such notices as may be required by the Dade County Fair Housing and Employment Commission, or other authority having jurisdiction over the Work setting forth the provisions of

the nondiscrimination law.

- F. "Conflicts of Interest" Section 2-11 of the County Code, and Ordinance 01-199.
- G. North Miami Beach Purchasing Policies and Procedures Manual Policy 3.6 "Debarment and Suspension".
- H. Florida Building Code (FBC).
- I. Notwithstanding any other provision of the Agreement, Contractor shall not be required pursuant to the Agreement to take any action or abstain from taking any action if such action or abstention would, in the good faith determination of the Contractor, constitute a violation of any law or regulation to which Contractor is subject, including, but not limited to, laws and regulations requiring that Contractor conduct its operations in a safe and sound manner.

1.61 NONDISCRIMINATION

During the performance of this Contract, Bidder agrees to not discriminate against any employee or applicant for employment because of race, religion, color, sex, handicap, marital status, age or national origin, and will take affirmative action to ensure that they are afforded equal employment opportunities without discrimination. Such action shall be taken with reference to, but not be limited to, recruitment, employment, termination, rates of pay or other forms of compensation, and selection for training or retraining, including apprenticeship and on-the-job training. By entering into this Contract with the City, the Bidder attests that it is not in violation of the Americans with Disabilities Act of 1990 (and related Acts). If the Bidder or any owner, subsidiary or other firm affiliated with or related to the Bidder is found by the responsible enforcement agency or the City to be in violation of the Act, such violation shall render this Contract void. This Contract shall be void if the Bidder submits a false affidavit or the Contractor violates the Act during the term of this Contract, even if the Bidder was not in violation at the time it submitted its affidavit.

1.62 CONFLICT OF INTEREST

The Bidder represents that:

- A. No officer, director, employee, agent, or other consultant of the City or a member of the immediate family or household of the aforesaid has directly or indirectly received or been promised any form of benefit, payment or compensation, whether tangible or intangible, in connection with the grant of the Agreement.
 - B. There are no undisclosed persons or entities interested with the Bidder in the Agreement. The Agreement is entered into by the Bidder without any connection with any other entity or person making a bid for the same purpose, and without collusion, fraud or conflict of interest. No elected or appointed officer or official, director, employee, agent or other consultant of the City, or of the State of Florida (including elected and appointed members of the legislative and executive branches of government), or member of the immediate family or household of any of the aforesaid:
 - 1. Is interested on behalf of or through the Bidder directly or indirectly in any manner whatsoever in the execution or the performance of the Agreement, or in the services, supplies or work, to which the Agreement relates or in any portion of the revenues; or
 - 2. Is an employee, agent, advisor, or consultant to the Contractor or to the best of the Bidder's knowledge, any subcontractor or supplier to the Bidder.
 - C. Neither the Bidder nor any officer, director, employee, agent, parent, subsidiary, or affiliate of the Bidder shall have an interest which is in conflict with the Bidder's faithful performance of its obligations under the Agreement; provided that the City Attorney, in its sole discretion, may consent in writing to such a relationship, and provided the Bidder provides the City with a written notice, in advance, which identifies all the individuals and entities involved and sets forth in detail the nature of the relationship and why it is in the City's best interest to consent to such relationship.
 - D. The provisions of this Article are supplemental to, not in lieu of, all applicable laws with respect to conflict of interest. In the event there is a difference between the standards applicable under the Agreement and those provided by statute, the stricter standard shall apply.
 - E. In the event Bidder has no prior knowledge of a conflict of interest as set forth above and acquires information which may indicate that there may be an actual or apparent violation of any of the above, Bidder shall promptly bring such information to the attention of the City's Attorney. Bidder shall thereafter cooperate with the City Attorney's review and investigation of such information, and comply with the instructions Bidder receives from the Contract Manager in regard to remedying the situation.
- 1.63 PRESS RELEASE OR OTHER PUBLIC COMMUNICATION**
- Under no circumstances shall the Bidder, its employees, agents, subcontractors and suppliers, without the express written consent of the City:
- A. Issue or permit to be issued any press release, advertisement or literature of any kind which refers to the City, or the Work being performed hereunder, unless the Bidder first obtains the written approval of the City. Such approval may be withheld if for any reason the City believes that the publication of such information would be harmful to the public interest or is in any way undesirable; and
 - B. Communicate in any way with any contractor, department, board, agency, Commission or other organization or any person whether governmental or private in connection with the Services to be performed hereunder except upon prior written approval and instruction of the City; and
 - C. Represent, directly or indirectly, that any product or service provided by the Bidder or such parties has been approved or endorsed by the City, except as may be

required by law.

1.64 BANKRUPTCY

The City reserves the right to terminate this contract if, during the term of any contract the Bidder has with the City, the Bidder becomes involved as a debtor in a bankruptcy proceeding, or becomes involved in a reorganization, dissolution, or liquidation proceeding, or if a trustee or receiver is appointed over all or a substantial portion of the property of the Bidder under federal bankruptcy law or any state insolvency law.

1.65 GOVERNING LAW/VENUE

This Contract, including appendices, and all matters relating to this Contract (whether in contract, statute, tort (such as negligence), or otherwise) shall be governed by, and construed in accordance with, the laws of the State of Florida. Venue shall be in Miami-Dade County.

1.66 SURVIVAL

The parties acknowledge that any of the obligations in the Agreement will survive the term, termination and cancellation hereof. Accordingly, the respective obligations of the Bidder and the City under the Agreement, which by nature would continue beyond the termination, cancellation or expiration thereof, shall survive termination, cancellation or expiration hereof.

1.67 VERBAL INSTRUCTIONS PROCEDURE

No negotiations, decisions, or actions shall be initiated or executed by the Bidder as a result of any discussions with any City employee. Only those communications which are in writing from an authorized City representative may be considered. Only written communications from Bidder, which are assigned by a person designated as authorized to bind the Bidder, will be recognized by the City as duly authorized expressions on behalf of Bidder.

1.68 PROHIBITION OF INTEREST

No contract will be awarded to a proposing firm who has City elected officials, officers or employees affiliated with it, unless the proposing firm has fully complied with current Florida State Statutes and City Ordinances relating to this

issue. Bidders must disclose any such affiliation. Failure to disclose any such affiliation will result in disqualification of the Bidder or termination of the agreement, removal of the Bidder from the City's Bidder lists, and prohibition from engaging in any business with the City.

1.69 NO CONTINGENT FEES

Vendor warrants that it has not employed or retained any company or person other than a bona fide employee working solely for the Vendor to solicit or secure the Agreement, and that it has not paid or agreed to pay any person, company, corporation, individual, or firm, other than a bona fide employee working solely for the Vendor any fee, commission, percentage, gift, or other consideration contingent upon or resulting from the award or making of the Agreement. For the breach or infraction of this provision, the City shall have the right to terminate the Agreement without liability at its discretion, to deduct from the contract price, or otherwise recover the full amount of such fee, commission, percentage, gift or consideration.

1.70 E-VERIFY

Bidder acknowledges that the City may be utilizing the Bidder's services for a project that is funded in whole or in part by State funds pursuant to a contract between the City and a State agency. Bidder shall be responsible for complying with the E-Verify requirements in the contract and using the U.S. Department of Homeland Security's E-Verify system to verify the employment of all new employees hired by Bidder during the Agreement term. The Bidder is also responsible for e-verifying its subcontractors, if any, pursuant to any agreement between the City and a State Agency, and reporting to the City any required information. Bidder acknowledges that the terms of this paragraph are material terms, the breach of any of which shall constitute a default under the Agreement.

1.71 FORCE MAJEURE

The Agreement which is awarded to the successful Bidder may provide that the performance of any act by the City or Bidder hereunder may be delayed or suspended at any time while, but only so long as, either party is hindered in or prevented from performance by acts of God, the elements, war, rebellion, strikes, lockouts or any cause beyond the reasonable

control of such party, provided however, the City shall have the right to provide substitute service from third parties or City forces and in such event the City shall withhold payment due Bidder for such period of time. If the condition of force majeure exceeds a period of 14 days the City may, at its option and discretion, cancel or renegotiate the Agreement.

1.72 BUDGETARY CONSTRAINTS

In the event the City is required to reduce contract costs due to budgetary constraints, all services specified in this document may be subject to a permanent or temporary reduction in budget. In such an event, the total cost for the affected service shall be reduced as required. The Bidder shall also be provided with a minimum 30-day notice prior to any such reduction in budget.

1.73 ANNEXATION

Bidder agrees to extend all terms, conditions and pricing in the Agreement and any amendments thereto, to any areas annexed into the City.

1.74 SOVEREIGN IMMUNITY

Nothing in the Agreement shall be interpreted or construed to mean that the City waives its common law sovereign immunity or the limits on liability set forth in Section 768.28, Florida Statute.

1.75 SCRUTINIZED COMPANIES PURSUANT TO SECTION 287.135 AND 215.473

Contractor must certify that the company is not participating in a boycott of Israel. Contractor must also certify that Contractor is not on the Scrutinized Companies that Boycott Israel list, not on the Scrutinized Companies with Activities in Sudan List, and not on the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, or has been engaged in business operations in Cuba or Syria. Subject to limited exceptions provided in state law, the City will not contract for the provision of goods or services with any scrutinized company referred to above. Contractor must submit the certification that is attached to this contract. Submitting a false certification shall be deemed a material breach of contract. The City shall provide notice, in writing, to the Contractor of the City's determination concerning the false certification. The Contractor

shall have five (5) days from receipt of notice to refute the false certification allegation. If such false certification is discovered during the active contract term, the Contractor shall have ninety (90) days following receipt of the notice to respond in writing and demonstrate that the determination of false certification was made in error. If the Contractor does not demonstrate that the City's determination of false certification was made in error then the City shall have the right to terminate the contract and seek civil remedies pursuant to Section 287.135, Florida Statutes, as amended from time to time.

END OF SECTION

SECTION 2.0 SPECIAL CONDITIONS

2.1 COMPETENCY OF BIDDERS

Bids shall be considered only from firms that have been continuously engaged in providing products and services similar to those specified herein for a minimum of five (5) years and that are presently engaged in the provision of these services. Contract(s) will be awarded only to responsible and responsive Bidder(s) qualified by experience to do the work specified.

The Bidder shall submit, prior to award of Contract, satisfactory evidence of his experience in like work and that he is fully prepared with the necessary organization, capital, and personnel to complete the Scope of Services. Bidder shall be insured, licensed and certified by all applicable local, county, and state agencies.

2.2 PERFORMANCE OF SERVICES

Bidder agrees to perform services in a professional and workmanlike manner and in compliance with all applicable laws, ordinances, rules, regulations, and permits. Only the highest quality services shall be acceptable. Services, equipment and workmanship not conforming to the intent of the Agreement or meeting the approval of the City may be rejected.

2.3 CONTRACT TERM

This contract shall commence upon the effective date of the duly executed Agreement and shall remain in effect until such time as the commodities, equipment and/or services acquired in conjunction with this Invitation to Bid, have been delivered and completed and accepted by the City's authorized representative and upon completion of the expressed and/or implied warranty periods. Bidding firms shall provide timelines within their bid packages outlining investment, project, and revenue milestones as applicable.

Immediately after the Notice to Proceed is issued and prior to actually commencing work, the bidder agrees to deliver to the Engineer in a form satisfactory to the Engineer, a Construction Progress Schedule. Showing dates of commencement and completion for each and every subdivision of the project and a schedule of material delivery dates to be incorporated into

each phase of work as set forth in the specifications. Within five working days of the receipt of said schedule, the Engineer shall meet with the Contractor for a joint review. The Contractor shall submit six copies of the corrected schedule at the Preconstruction Meeting for review and approval. All work must be completed within the Contract Term herein specified.

2.4 PRICING

Pricing shall be all-inclusive. Successful bidders shall include in their pricing all the labor specified, performed according to the provisions of the contract, supplying all materials, supplies, permits and any other necessary services to complete the work. All material, workmanship, and equipment shall be subject to the inspection and approval of the City's Project Manager.

2.5 REQUESTS FOR INFORMATION

For Requests for Information (RFI) prior to the bid opening, the bidder is to follow this procedure. For information concerning specifications please utilize the question / answer feature provided by BidSync at www.bidsync.com. Questions of a material nature must be received prior to the cut-off date specified in the solicitation. Material changes, if any, to the scope of services or bidding procedures will only be transmitted by written addendum. (See addendum section of BidSync Site). Please note: No variation in price or conditions shall be permitted based upon a claim of ignorance. Submission of a bid will be considered evidence that the Bidder has familiarized themselves with the nature and extent of the work, and the equipment, materials, and labor required. The entire bid response must be submitted in accordance with all specifications contained in this solicitation. The questions and answers submitted in www.bidsync.com shall become part of any contract that is created from this ITB.

For RFIs after the Notice of Award, the bidder shall submit the RFI form stipulated at the Pre-Construction meeting to the Construction Manager for processing. If the information required is necessary before a certain date to preclude a delay to the Construction of the Project, said date must be clearly delineated in the RFI and added to the header.

2.6 VARIATIONS, CONTRADICTIONS AND SUBSTITUTIONS

Any variations from ITB specifications, no matter how slight, including substitutions of products or methods, must be noted and explained fully in a submittal with bid entitled "Exceptions to Specifications". If no exceptions are noted, it shall be understood that the plans and specifications will be adhered to exactly.

Where an "or equal" is specified, the City shall be the sole judge in determining equality. Any deviation from these specifications and/or changes during construction must be approved by the City in writing. If specifications are in contradiction, or if they contain any errors or omissions, bidders shall notify the Procurement Division in writing at least ten (10) working days before the Solicitation opening, or at the pre-Bid conference, to allow sufficient time to resolve all discrepancies.

2.7 VENDOR AS AN INDEPENDENT CONTRACTOR

It is expressly agreed that the Bidder is an independent contractor and not an agent of City. The Bidder shall not pledge or attempt to pledge the credit of City or in any other way attempt to bind the City.

2.8 PROTECTION OF PROPERTY

The Bidder shall take extra precaution to protect all property while conducting services. Any damage done by the Bidder shall be corrected to its original or better state and shall be corrected to the satisfaction of the Project Manager or designee.

2.9 BIDDER'S REPRESENTATIONS

Bidder must familiarize itself with the nature and extent of the Solicitation Documents, locality, and all local conditions and Laws and Regulations that in any manner may affect cost, progress, performance or furnishing of the services.

Bidder must give Project Manager written notice of all conflicts, errors or discrepancies that he has discovered in the Solicitation Documents and the written resolution thereof by Project Manager is acceptable to Bidder.

2.10 PERSONNEL

Bidder's personnel shall carry photo identification, commercial driver's license, and show same to City personnel at any time upon request. The City reserves the right to request the same of Subcontractors.

2.11 REQUIRED LICENSES / CERTIFICATIONS

Bidder must be properly registered to practice their profession and licensed to engage in contracting in the State of Florida at the time of Bid Submission. Contractor must have proper licensing and be able to provide evidence of the same, if requested at the time of award. All construction personnel shall have the appropriate certifications for the work to be performed including OSHA 10-hour Construction Safety.

2.12 PERFORMANCE AND PAYMENT BOND

Within ten (10) days of the award of contract, the Proposer shall provide the following surety bonds, each in the amount of one hundred percent (100%) of the contract price, and issued by a properly licensed surety company, listed in the current issue of the Federal Register published by the Department of the Treasury, acceptable to the City of North Miami Beach. The bonds should provide that the surety's liability will be co-extensive with the Proposer's liability and should contain a provision that the surety waives notice of changes to the contract, including, but not limited to, changes in the times for performance.

- a) A Performance and One-Year Warranty Bond covering the faithful performance of the contract and a one-year warranty on labor and materials from the date of final acceptance of the work.
- b) A Labor and Material Payment Bond.

2.13 PRE-CONSTRUCTION MEETING

Soon after Proposer has been notified of award of RFP, Proposer, and City shall agree upon a date and time for a pre-construction meeting. The Proposer shall have in attendance a principal of the firm or the project manager. Depending on the scope of the project, the additional stakeholders may be requested to attend.

The following matters (if applicable), at a minimum, shall be discussed and presented at this meeting:

- a) Signed contract
- b) Certificates of Insurance
- c) Performance and Payment Bonds
- d) Project Managers
- e) Substantial Completion

Schedule of Values - The Schedule of Values shall allocate the entire contract sum among the various portions of the work and be prepared in such form and supported by such data to substantiate its accuracy. This Schedule shall be used as a basis for reviewing the Proposer's Applications for Payment.

Construction Schedule with Critical Path Method or Bar Chart Procedure with start and completion dates for each task. The construction schedule at a minimum shall include the following;

- a) Notice to Proceed
- b) Schedule of on-site construction progress meetings
- c) Shop drawings submittals
- d) As-built submittal
- e) Stakeout Surveys
- f) Securing of construction site
- g) Work to be performed by Subcontractors
- h) Staging area
- i) Material deliveries
- j) Obtain Permits
- k) Cities scheduled events affecting involved facility/site
- l) Sequence of Construction
- m) Substantial Completion
- n) Final Completion
- o) Training of City staff on the use and maintenance of materials and/or equipment

2.14 MATERIALS, INSPECTION, AND RESPONSIBILITY

The City shall have a right to inspect any material to be used in carrying out this contract. The City does not assume any responsibility for the availability of any controlled materials or other materials and equipment required under this contract. The Proposer shall be responsible for the contract quality and standards of all materials, components or completed work finished under this contract for 12 months from the date of final approved inspection and acceptance. Materials,

components, or completed work not complying therewith may be rejected by the City and shall be replaced by the Proposer at no cost to the City. Any materials or components rejected shall be removed within a reasonable time from the premises at the entire expense of the Proposer, after written notice has been mailed by the City to the Proposer that such materials or components for work have been rejected.

2.15 PROGRESS MEETINGS

The Project Managers will schedule and hold regular on-site progress meetings at least monthly, and at other times as requested by the City Project Manager. The City, Proposer, and all subcontractors active on the site shall be represented at each meeting. City or Proposer may request attendance by representatives of suppliers or manufacturers. The purpose of the meetings will be to review the progress of the Work, maintain coordination of efforts, discuss changes in scheduling, and resolve problems which may develop. To expedite the planning and coordination of the work, the Contractor shall provide a four-week look-ahead schedule at each and every project meeting showing what work they are planning to do until the next meeting. Minutes shall be kept of each meeting by the City and shall be part of the documentation for the project.

2.16 PROGRESS PAYMENTS

Based on Applications for Payment submitted to the City by the Proposer, and Certificates for Payment issued by the Architect/Engineer or City, the City shall make progress payments to the Proposer based on the Schedule of Values and percentage of completion, or units completed. A retainage of ten percent (10%) will be deducted from the monthly payment. The City shall reduce the retainage to five percent (5%) after successful completion of fifty (50%) of work.

Applications for Payment shall indicate the percentage of completion of each portion of the work, or the volume, area, or linear measurement of work completed as of the end of the period covered by the Application for Payment. The period covered by each Application for Payment shall be one calendar month or as otherwise agreed upon at the Pre-construction Conference. As-built records of the work performed and requested for payment shall be submitted prior to submitting the partial payment request.

2.17 NOTICE TO PROCEED

The date of commencement of construction will be established during the Pre-Construction Conference, which shall be held shortly after the award of contract and will be stated in the Notice to Proceed.

Immediately after the Notice to Proceed is issued and prior to actually commencing work, the bidder agrees to deliver to the Engineer in a form satisfactory to the Engineer, a Construction Progress Schedule. Showing dates of commencement and completion for each and every subdivision of the project and a schedule of material delivery dates to be incorporated into each phase of work as set forth in the specifications. Within five working days of the receipt of said schedule, the Engineer shall meet with the Contractor for a joint review. The Contractor shall submit six copies of the corrected schedule at the Preconstruction Meeting for review and approval. All work must be completed within the Contract Term herein specified.

2.18 SUBSTANTIAL COMPLETION

For the purpose of this project, Substantial Completion shall be defined as that point which the City has occupancy and/or use of the facility under construction, including equipment and systems installed. This date is considered the end of major work in the field for scheduling purposes and all activities necessary to facilitate operation including Operations and Maintenance Manuals, As-Built Drawings and Training shall be completed as required prior to Substantial Completion.

2.19 FINAL COMPLETION

For the purpose of this project, Final Completion shall be defined at that point after which the Director of Public Utilities or his representative, the City's Building Official, and the using Department have made and approved the Final Inspection and the Punch List has been completed, and all deliverable have been provided to the City.

2.20 SUPERVISION

The Proposer is to be responsible for his employees and Subcontractors, and for compliance with all laws and ordinances governing

his work. He shall be responsible for the accuracy of the laying out and giving his personal superintendence to the work. He shall have at all times a competent representative available to answer questions or handle problems, who shall be satisfactory to the City. He shall at all times take proper precautions to protect his work and materials from damage and disfigurement until accepted.

2.21 PERMITS

The Proposer shall obtain all permits and call for inspections required for this project. The Building Dept. is mandated to charge fees. The Proposer shall be responsible for the payment of all permit fees including but not limited to: State BPR Building Certification Fee, State DCA Surcharge, County Code Compliance Fee, Microfilm Fee, and Structural Examination Fee. Fees for re-inspections shall be charged to the Proposer at normal rate and all costs shall be borne by the Proposer. The Proposer shall obtain all required permits to do the job. Proposer shall present the City with proof of payment for all permit fees. The Proposer is required to perform all controlled inspections required by the requisite permits at no additional cost to the City.

2.22 PROTECTION OF PROPERTY

The Proposer shall take extra precaution to protect all property while removing and replacing materials and equipment. Any damage done by the Proposer, whether it is necessary to the installation or accidental, shall be corrected to its original or better state, and shall be corrected to the satisfaction of the Director of the Department of Public Utilities.

2.23 WARRANTY

All materials and workmanship must be warranted for a minimum period of one year from the date of final acceptance. Equipment or systems carrying more than a one-year warranty shall be enumerated on the Bid Proposal form.

2.24 FINAL ACCEPTANCE

The Final Inspection shall be made only after the City is satisfied that the work described in the plans and specifications has been completed in accordance with the intent of these specifications. The acceptance of the work shall not in any way prejudice the City's rights to demand replacement

of defective materials and workmanship.

2.25 SAFETY

Proposer shall provide and place safety barriers and signage to modify and direct circulation at and around construction site. Every effort shall be made to minimize and limit construction noise, dirt, and dust. The Proposer is solely responsible for the safety of his personnel, but the Engineer reserves the right to discuss safety concerns on the site.

2.26 HAZARDOUS MATERIAL

No hazardous materials have been designed into this project, nor have been specified. Proposer shall use no hazardous materials in the execution of the work covered by these specifications except as necessary for the immediate prosecution of the work. Such materials shall be properly stored and disposed of in accordance with Local, State, and Federal law. If suspected Hazardous Materials are encountered during the normal course of the work, the Proposer will notify the City so that the material can be identified and remediated in accordance with Local, State and Federal Laws.

2.27 TRAINING

Proposer shall provide training to City staff on the use and maintenance of equipment and/or materials use in this project. The details of how the training will be conducted are contained in the Project Technical Specifications.

2.28 MANUALS

Proposer shall provide the specified number of manufacturers' training and maintenance manuals for any equipment installed. Details as to the contents and format of the manuals shall be in accordance with the Project Technical Specifications.

2.29 CHANGE ORDERS

Each Change Order to the Contract must be supported in writing and signed by the Proposer and the City. Without this prior written authorization, the City will not pay for extra work performed. The amount of Proposer's overhead and profit allowed for any change order, whether increase or decrease, shall not exceed the

following limits for work by the Proposer:

Overhead Limit: 10% of direct cost;

Profit Limit: 5% of the sum of direct cost and overhead cost.

For any portion of the work for a change order that is performed by a Subcontractors or a Sub Proposer, Proposer's combined overhead and profit limits allowed will not exceed 5% of the actual direct cost of the work. The City will verify the Change Orders compliance, the determination of the final completion status, and the reception of all due related documents, including his/her approval of the updated record drawings, etc.

2.30 CLEAN UP

Proposer shall remove and dispose of any dirt or debris resulting from this project. All debris shall be disposed of at an authorized dumping facility. Dump tickets shall be submitted to the City with each pay request.

Exposed metal shall be polished, glass shall be cleaned, surrounding structures or landscaping affected or damaged during completion of this project shall be restored to an equal or better condition. Paint shall be touched up if and where needed. Proposer's equipment and surplus material shall be removed from site.

2.31 ARCHITECT/ENGINEER OF RECORD

The A/E of Record will verify the Change Orders compliance, the determination of the final completion status, and the reception of all due related documents, including his/her approval of the updated record drawings, approval of all NOA compliances, etc.

2.32 CONTRACT TIME / LIQUIDATED DAMAGES

Upon failure of the Contractor to complete the Work within the time specified for completion, the Contractor shall pay to the City the sum of Five Hundred Dollars (\$500.00) for each and every calendar day that the completion of the Work is delayed beyond the time specified in this Agreement for completion, as fixed and agreed liquidated damages and not as a penalty, so long as the delay is caused by the Contractor. Should an act of God or the acts or omissions of the City, its agents or representatives, in derogation to the terms of this Agreement cause the delay, the Contractor shall not be responsible for the delay

nor liquidated damages. Liquidated damages are fixed and agreed upon between the Parties, recognizing the impossibility of precisely ascertaining the amount of damages that will be sustained by the City as a consequence of such delay and both parties desiring to obviate any question of dispute concerning the amount of damages and the cost and effect of the failure of the Contractor to complete the Work on time. Liquidated damages shall apply separately to each portion of the Work for which a time of completion is given. The City shall have the right to deduct from or retain any compensation which may be due or which may become due and payable to the Contractor the amount of liquidated damages, and if the amount retained by the City is insufficient to pay in full such liquidated damages, the Contractor shall pay all liquidated damages in full. The Contractor shall be responsible for reimbursing the City, in addition to liquidated damages or other damages for delay, for all costs of engineering, architectural fees, and inspection and other costs incurred in administering the construction of the Project beyond the completion date specified or beyond an approved extension of time granted to the Contractor whichever is later. Delays caused by or resulting from entities, contractors or subcontractors who are not affiliated with the Contractor shall not give rise to a claim by Contractor for damages for increase in material and/or labor costs. Such entities, contractors and subcontractors include, but are not limited to, the City's contractors and subcontractors, Florida Power and Light Company, AT&T, and Florida East Coast Railway, LLC.

2.33 AS-BUILT DRAWINGS

A set of drawings, which depicts the actual as-built conditions of the completed construction, provides the user with a permanent record of each project feature. These working as-built drawings will typically be red lined mark ups of the Construction plans. The working As-built drawings must be reviewed at least periodically by the City's Project Manager in conjunction with the approval of progress payments. The contract requires the Proposer to prepare, maintain and deliver to the City a set of redlined, record drawings, which show the actual as-built conditions of the construction phases.

2.34 PROPOSER'S WORK AND STAGING AREA

a) As applicable, the Proposer shall use only site areas designated by the City as Proposer Staging area for the project. The Proposer shall keep this area in a secure, clean and orderly condition, and shall be responsible for screening and fencing the area so as not to cause a nuisance or sight obstruction to motorists or pedestrians.

b) Responsibility for protection and safekeeping of equipment and materials at or near the sites will be solely that of the Proposer and no claim shall be made against the City.

c) Upon completion of the Contract, the Proposer shall remove from the storage areas all of their equipment, temporary fencing, surplus materials, rubbish, etc., and restore the areas to their original condition.

d) Proposer's insurance shall extend coverage to all designated storage areas.

2.35 DAVIS-BACON ACT (2 CFR §200.326 Appendix II to Part 200 (D))

CONTRACTOR shall pay wages to laborers and mechanics at a rate not less than those in the attached Davis-Bacon Act Wage Rate Table(s) as made by the Secretary of Labor. CONTRACTOR shall pay wages not less than once per week.

2.36 BID SECURITY

A certified check, cashier's check, bank officer's check or bid bond for FIVE percent (5%) of the bid amount, made payable to the City of North Miami Beach, Florida, shall accompany each bid.

2.37 AUTHORITY OF THE ENGINEER

The supervision of this execution of this Contract is vested in the Engineer, the Construction Manager and his/her instructions shall be carried into effect promptly and efficiently.

The Engineer shall in all cases shall determine the amount, quality, fitness and acceptability of the work and materials to be paid for and shall decide finally and conclusively all questions or differences of opinion that may arise as to the interpretation of the Plans and Specifications or the fulfillment of the terms of the Contract. In the event of such a question or difference of opinion, the decision of the Engineer is to be a condition precedent to the Contractor's right to receive any

money for the work or the materials to which the question or difference of opinion relates.

If the Contractor considers any work demanded of him/her to be outside the requirements of the Contract, or if he/she considers any decision or ruling of the Engineer to be unfair, he/she shall immediately, upon such work being demanded or ruling or decision being made, shall asked for written instructions or decisions, whereupon he/she shall proceed without delay to perform the work or conform to the decision or ruling. Beginning with the first day of this work, the Contractor and the Inspector shall fill out daily Time and Material Records for the work. Such records shall be signed by both parties. This documentation does not constitute acknowledgement for authorization to pay for this work. In the event that a claim for this work is approved by the City subsequent to the commencement of the work, an accurate accounting of work shall be agreed upon by both parties upon completion of this work and will be paid for as work as provided in the Specifications by Allowance Account if funds are available, or by an approved Change Order by the Board of Commissioners.

The work will be paid for either by a unit price item in the Contract or as extra work for labor, material and equipment which shall be full and complete compensation to the Contractor.

Failure of the Contractor's representatives to meet with the Inspector to maintain daily records of the work shall be deemed that the Contractor does not wish to pursue this claim and has waived all grounds for making a claim.

Unless the Contractor files such a written protest with the Director of NMB Water within ten (10) days of the receipt of such written instructions or decisions, he/she shall be deemed to have waived all rounds for such protest and to have accepted the requirement, decision or ruling of the Engineer as just and reasonable and as being with the scope of the Contractor's obligations under the Contract Documents and no further documentation will be required by the City.

No payment for any claim will be made in the event that a timely Contractor's written protest to the Director is formally denied.

The Engineer of Record shall furnish the Contractor with vertical and horizontal controls

which shall be utilized as specified elsewhere to layout the work. The Contractor shall retain the services of a Florida Registered Land Surveyor whom shall verify all controls. It is the responsibility of the Contractor to preserve all such controls.

2.38 AUTHORITY AND DUTIES OF INSPECTORS

Inspectors employed by the City, will be authorized to inspect all work and materials which are to be part of the completed project. Inspectors have no authority to revoke, alter or waive any requirements of the Specifications or to make any changes in the plans. Each inspector is authorized to call the attention of the Contractor to any failure of the work to conform to the Plans and Specifications and will have the authority to suspend the work affected until any question at issue can be referred to and decided by the Engineer. The written notification of such defects is a Non-Conformance Report and the Contractor is required to acknowledge all such reports issued and resolve them as directed by the Engineer. The Inspector shall have no authority to delay the Contractor by failure to inspect the work and materials with reasonable promptness.

2.39 WATER INFRASTRUCTURE AND INNOVATION FINANCE ACT COMPLIANCE

The Bidder is hereby notified that this project is being partially funded through WIFIA and is subject to all of the requirements pertaining to thereof. Specifically, Article III of the agreement requires compliance with all applicable laws, rules, regulations, and requirements, including without limitation 40 U.S.C. § 3141-3144, 3146, and 3147 (relating to Davis-Bacon Act requirements) and 33 U.S.C. § 3914 (relating to American iron and steel products). Copies of the requisite reporting documentation are attached.

Federal Lobbying Restrictions (31 U.S.C 1352)

– "Recipients of federal financial assistance may not pay any person for influencing or attempting to influence any officer or employee of a federal agency, a member of Congress, an officer or employee of Congress, or an employee of a member of Congress with respect to the award, continuation, renewal, amendment, or modification of a federal grant, loan, or contract. These requirements are implemented for USEPA in 40 CFR Part 34, which also describes types of activities, such as legislative liaison activities and

professional and technical services, which are not subject to this prohibition. Upon award of this contract, Contractor shall complete and submit to the City the certification and disclosure forms in Appendix A and Appendix B to 40 CFR Part 34. Contractor shall also require all subcontractors and suppliers of any tier awarded a subcontract over \$100,000 to similarly complete and submit the certification and disclosure forms pursuant to the process set forth in 40 CFR 34.110.”

as backhaul, roaming, or interconnection arrangements.

b) Telecommunications equipment that cannot route or redirect user data traffic or permit visibility into any user data or packets that such equipment transmits or otherwise handles.”

END OF SECTION

Prohibition on Certain Telecommunications and Video Surveillance Services or Equipment – “The John S. McCain National Defense Authorization Act for Fiscal Year 2019 (P.L. 115232), at Section 889, prohibits EPA financial assistance recipients, including WIFIA borrowers, from expending loan funds to procure or obtain; extend or renew a contract to procure or obtain; or enter into a contract (or extend or renew a contract) to procure or obtain equipment, services, or systems that use covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system. As described in the Act, “covered telecommunications equipment or services” means:

a) Telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities).

b) For the purpose of public safety, security of government facilities, physical security surveillance of critical infrastructure, and other national security purposes, video surveillance and telecommunications equipment produced by Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities).

c) Telecommunications or video surveillance services provided by such entities or using such equipment.

d) Telecommunications or video surveillance equipment or services produced or provided by an entity that the Secretary of Defense, in consultation with the Director of the National Intelligence or the Director of the Federal Bureau of Investigation, reasonably believes to be an entity owned or controlled by, or otherwise connected to, the government of a covered foreign country.

The Act does not prohibit:

a) Procuring with an entity to provide a service that connects to the facilities of a third-party, such

SECTION 3.0 SCOPE OF SERVICES

3.1 PURPOSE AND INTENT

The City of North Miami Beach, Florida ("City") is seeking a qualified firm(s) ("CONTRACTOR") to submit a Bid for the Honey Hill Watermain System Betterments Project No. WATR2010.

The City expects to retain a Firm that can meet the challenges of a dynamic City, capable of providing reliable and expedient response times to meet project deadlines, staff requests, and outstanding service delivery. In addition, the awarded Firm shall be able to provide technical assistance and maintain industry best practices throughout the project.

The Work of the Contract is comprised of replacement of approximately 8,660 LF of existing 2-inch water mains as shown in the plans including, but not limited to installation of approximately 8,715 LF of 6-inch DIP watermain, 670 LF of 4-inch DIP watermain, connections to existing asbestos-cement(ACP) water mains, site/roadway/driveway restoration, milling and resurfacing, installation of fire hydrants, replacement of existing water services, replacement of existing sidewalks, abandonment of existing water mains, reconnecting new services to proposed water mains and existing water meters, and all other related work. The Contractor shall be careful not to damage the existing ACP watermains and if damaged shall be replaced without any additional cost to the CITY.

The Work set forth within these bid documents includes the furnishing of all labor, materials, equipment, services and incidentals for the replacement of the existing water mains including all items listed above and all appurtenant work, complete, tested and ready for operation, including temporary utilities and facilities as required, all in conformance with the Contract Documents.

The project area is bounded by NW 200th Street on the south, NW 15th Avenue on the west, NW 202nd Street on the north, and NW 7th Avenue on the east located within the City of Miami Gardens, Florida.

3.2 DESCRIPTION OF CITY OF NORTH MIAMI BEACH

The City of North Miami Beach is a first-tier suburb in northeastern Miami-Dade County, which is located in the southeast part of Florida. Located midway between Miami and Fort Lauderdale with excellent regional highway access, it is primarily a residential and shopping community. Its central location and easy access have made North Miami Beach one of South Florida's best-known regional shopping areas and offers a wide variety of recreational, cultural, and dining experiences. The City of North Miami Beach celebrated its 90th Anniversary in 2016.

3.3 SCOPE OF SERVICES

The Bidder shall ensure smooth and efficient project planning, staffing, communication updates, and scheduling, through project completion, as required by the scope of services herein contained. Bidders shall include in their offer all required project labor, machinery, rentals, tools, travel, transportation, delivery, materials, equipment, supplies, permits, and related incidentals necessary to meet, in its entirety, the ITB requirements specified herein.

Bidder shall be responsible for ensuring it is in possession of all required City permits prior to commencement of work, and maintaining permits throughout the contract award, as required. All costs associated with obtaining required permits shall be the responsibility of the awarded Bidder(s).

Specific responsibilities include but are not limited to the following;

The Work to be performed under this Contract shall consist of furnishing all equipment, materials, supplies, and manufactured articles and for furnishing all transportation and services, including fuel, power, water, and essential communications, and for the performance of all labor, work, or other operations required for the fulfillment of the Contract in strict accordance with the Contract Documents.

The Work shall be complete, and all work, materials, and services not expressly shown or called for in the Contract Documents which may be necessary for the complete and proper construction of the Work in good faith shall be performed, furnished, and installed by the CONTRACTOR as though originally so specified or shown, at no increase in cost to the CITY.

The Work to be done under this Contract and in accordance with these Specifications and drawings outlined in BID SET included hereafter and it consists of furnishing all equipment, superintendence, labor, skill, material and all other items necessary for the Project.

The CONTRACTOR shall perform all work required for such construction in accordance with the Contract Documents and subject to the terms and conditions of the Contract, complete and ready for use.

3.4 BIDDER QUALIFICATIONS AND EXPERIENCE INCLUDING KEY PERSONNEL

The successful Bidder shall have a valid State of Florida license that enables them to procure all required permits, complete all of the work as specified herein and required by law, and shall successfully completed at least three (3) projects of similar type, size and complexity in the State of Florida within the last five (5) years.

The Bidder shall provide the following information for consideration of the project, failure to provide this information will deem the Bid non-responsive and non-responsible.

- 3.4.1 Names of key members who will be performing the work on this project and name of the project manager(s) will be supervising the construction work on this project
- 3.4.2 Written assurance that the key individuals listed and identified in this section will be performing the work and will not be substituted with other personnel without the City's approval.
- 3.4.3 Bidder shall state the length of time the company has been in business providing the services requested in this ITB.
- 3.4.4 List of all judgments from lawsuits in the last three (3) years involving the corporation, partnership or individuals.
- 3.4.5 State that the business is licensed, permitted, and/or certified to do business in the State of Florida. All required federal, state, and local licenses and permits shall be kept in force during the term(s) of the contract. Copies of all required licenses are to be provided with submittal.
- 3.4.6 The Bidder must include references for three (3) projects relevant in scope to this ITB. The references shall include:
 - Description and scope of the project;
 - Owner's point of contact and contact information;
 - Status of the project;
 - Originally scheduled contractual completion date;
 - Actual completion date;
 - Original contractual cost;
 - Final cost, including all change orders (if applicable); and
 - A narrative explaining reasons for cost and schedule variances (if applicable).

CITY OF NORTH MIAMI BEACH
Honey Hill Watermain System Betterments
North Miami Beach Project No. WATR2010
BID SET

City of North Miami Beach, Purchasing Division
City Hall 17011 NE 19 Ave, Room 315 3rd floor.

MAYOR & COUNCIL

Anthony F. DeFillipo, Mayor

Paule Villard
Daniela Jean
Fortuna Smukler
Mckenzie Fleurimond
Barbara Kramer
Michael Joseph

Arthur H. Sorey, III, *City Manager*
Hans Ottinot, *City Attorney*
Samuel Zamacona, *Interim Director of NMB Water*
Andrise Bernard, CMC, *City Clerk*

Timothy James Hall, P.E., State of Florida,
Professional Engineer, License No. 50588.

This document has been digitally signed and sealed
by Timothy James Hall, P.E. on 3-29-21.

Printed copies of this document are not considered
signed and sealed and the signature must be
verified on any electronic copies.

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**Timothy
James Hall** Digitally signed by
Timothy James Hall
Date: 2021.05.24
10:44:20 -04'00' p. 36

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PART 1 - GENERAL

1.01 GENERAL

- A. The Work to be performed under this Contract shall consist of furnishing all equipment, materials, supplies, and manufactured articles and for furnishing all transportation and services, including fuel, power, water, and essential communications, and for the performance of all labor, work, or other operations required for the fulfillment of the Contract in strict accordance with the Contract Documents. The Work shall be complete, and all work, materials, and services not expressly shown or called for in the Contract Documents which may be necessary for the complete and proper construction of the Work in good faith shall be performed, furnished, and installed by the CONTRACTOR as though originally so specified or shown, at no increase in cost to the City of North Miami Beach Public Services Department.
- B. Wherever the Contract Documents address a third party, i.e., subcontractor, manufacturer, etc., it is to be considered as the CONTRACTOR through the third party.
- C. Wherever a reference to number of days is noted, it shall be construed to mean calendar days.

1.02 WORK COVERED BY CONTRACT DOCUMENTS

- A. The Work of the Contract is comprised of replacement of approximately 8,660 LF of existing 2-inch water mains as shown in the plans including, but not limited to installation of approximately 8,715 LF of 6-inch DIP watermain, 670 LF of 4-inch DIP watermain, connections to existing asbestos-cement(ACP) water mains, site/roadway/driveway restoration, milling and resurfacing, installation of fire hydrants, replacement of existing water services, replacement of existing sidewalks, abandonment of existing water mains, reconnecting new services to proposed water mains and existing water meters, and all other related work. The Contractor shall be careful not to damage the existing ACP watermains and if damaged shall be replaced without any additional cost to the CITY.
- B. The Work set forth within these bid documents includes the furnishing of all labor, materials, equipment, services and incidentals for the replacement of the existing water mains including all items listed above and all appurtenant work, complete, tested and ready for operation, including temporary utilities and facilities as required, all in conformance with the Contract Documents.
- C. The project area is bounded by NW 200th Street on the south, NW 15th Avenue on the west, NW 202nd Street on the north, and NW 7th Avenue on the east located within the City of Miami Gardens, Florida.

1.03 CONTRACT METHOD

- A. The Work hereunder will be constructed under a unit price contract.

1.04 SEQUENCE OF CONSTRUCTION

- A. Following receipt of Notice to Proceed with the work, the CONTRACTOR shall notify the ENGINEER and the CITY at least five days prior to start of construction to allow the CITY time to make arrangements for inspection of the work.

- B. Work under the Contract shall be scheduled and performed in such a manner as to result in the least possible disruption to the residents. Existing utility services shall be maintained throughout the construction.
- C. Critical events in the sequence of construction are specified herein. The outline sequence of construction does not include all items necessary to complete the work, but is intended to identify the general sequence of critical events necessary to minimize disruption to the on-going station operation and to ensure compliance with discharge requirements. It shall be understood by the CONTRACTOR that the critical events identified are not all inclusive and that additional items of work not stated are required. The sequence of construction is a precedence requirement and does not attempt to schedule the CONTRACTOR's work. It is intended only to indicate which activities must precede other activities in order to minimize interference and disruptions.
- D. The existing facilities shall be maintained in an operable condition by the CONTRACTOR during construction (excluded from this requirement are all normal and emergency maintenance functions normally performed by the CITY with the CITY's staff or by Contract.) All work by the CONTRACTOR that disrupts the normal operations shall be shown on the Construction Schedule and specifically scheduled with the CITY. Schedule notification shall consist of a written notice defining the work to be accomplished, the function that will be interrupted, the duration of the interruption, and the mitigating effort to be performed by the CONTRACTOR to maintain the service continuously. The written notice shall be submitted to the ENGINEER 14 days in advance of the proposed work and the ENGINEER will respond to the CONTRACTOR in writing within 7 days of receipt of the notice regarding the acceptability of the proposed plan.
- E. In performing the work in the sequence described hereinafter, all requirements of the Contract Documents shall be strictly followed. **VALVES BETWEEN THE EXISTING AND NEW WORK SHALL BE OPERATED BY CITY PERSONNEL. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR'S PERSONNEL OPERATE ANY SUCH VALVE.**
- F. Temporary installation/connections, may be used where sufficient time is not available to complete a particular aspect of the work. All such subject temporary installations shall be subject to review and acceptance by the ENGINEER.
- G. The CONTRACTOR shall note that many areas of the work require the CONTRACTOR to work on existing pipelines and structures which will require isolating the portion of the pipeline to work on. The CONTRACTOR shall be responsible for the proper containment and disposal of water/wastewater drained from existing pipelines during construction. The CONTRACTOR shall contain such water/wastewater (in accordance with all applicable codes) and shall dispose of such as directed by the ENGINEER. The CONTRACTOR shall be responsible for the prevention of wastewater spills within the realm of his work areas.
- H. Cancellation of Planned Shutdown: A planned shutdown in accordance with the above-described procedures may be canceled by the CITY upon 24-hour notification by the CITY/ENGINEER to the CONTRACTOR. Such cancellation shall be expected due to wet weather conditions or other conditions beyond the control of the CITY, ENGINEER or CONTRACTOR. All efforts shall be taken to check weather forecasts and the like prior to scheduling shutdowns. However, if a cancellation must occur, the CITY shall not be responsible for any additional costs associated with mobilization and demobilization.

- I. The general sequence has been divided into steps representing major work areas. The CONTRACTOR is advised that in some instances activities identified in one step will continue through the next step and that certain steps may proceed simultaneously.
- J. The general sequence of construction for the **Honey Hill Water System Betterment** shall be as follows, but a detailed Sequence of Construction shall be submitted by the CONTRACTOR and approved by the CITY and the ENGINEER before any work is started. The CITY/ENGINEER reserves the right to make changes to the sequence as necessary to facilitate the work or to minimize any conflict with operations and other contractors.

- Step 1 Mobilize for work. Set up storage, staging and parking areas. Obtain permits, develop and submit construction schedule, collect pre-construction video, and start shop drawing submittal.
- Step 2 Contractor to conduct site survey establishing base lines and property lines and provide Engineer with copy of survey as stated in 01010.1.13.
- Step 3 Contact utility location service and the CITY prior to commencing work. Have locates done for the work area specified in the Contract Documents.
- Step 4 Verify locations, elevations, dimensions, type of joints, pipe materials and all other existing conditions, etc., before ordering materials to complete the work in accordance with the Contract Documents. Use exploratory test pits and trenches as necessary to verify field conditions.
- Step 5 Upon approval of shop drawings, order all long lead items so that materials may be delivered in a timely fashion without delays to construction.
- Step 6 The CONTRACTOR shall establish and maintain a management of traffic plan for the duration of the project in accordance with Miami-Dade Public Works Department and City of Miami Gardens requirements.
- Step 7 Install 6-inch/4-inch Ductile Iron Pipe water main as specified on Contract Documents.
- Step 8 Clean and pressure test water main. Install first lift of asphalt.
- Step 9 Disinfect the water main, conduct Bacteriological Sampling and obtain Health Department approval thru the ENGINEER.
- Step 10 Prior to performing the interconnection between the existing and new water mains, the CONTRACTOR shall contact NMB WATER who shall then coordinate the necessary shut downs and valve closings by CITY personnel.
- Step 11 Upon receiving permission from NMB WATER, the CONTRACTOR shall have six hours to perform both interconnections, one at each end of the replacement segment. All interconnection work will occur at night between the hours of 7:00 p.m. and 5:00 a.m. unless otherwise directed by the CITY.
- Step 12 Mill and resurface and pavement markings.
- Step 13 Miscellaneous work, site restoration, demobilization and related closeout activities shall be in accordance with Section 01700, "Project Closeout".

1.05 ABANDONMENT AND SALVAGE OF EXISTING FACILITIES

- A. The scope of work requires the CONTRACTOR to interface with existing structures, and piping which will be reconnected, abandoned or otherwise removed and/or relocated as part of the work. Prior to beginning any work, associated with existing facilities to be

abandoned, salvaged, or otherwise removed or relocated, the CONTRACTOR shall inform the ENGINEER of his intent so that all arrangements can be made with the CITY for disconnecting electrical service (where appropriate), isolating pipelines (where possible) or otherwise removing existing facilities from service to the extent possible. The CONTRACTOR shall not proceed without written authorization from the ENGINEER.

- B. Pipelines: The CONTRACTOR shall abandon, salvage or otherwise remove existing pipelines or segments of existing pipelines shown to be abandoned in place, salvaged, or removed as part of the contract work. Unless otherwise indicated in the Contract Documents, all piping shown on the Drawings to be abandoned shall be abandoned in place. Pipe shown to be abandoned need only be removed a minimum three feet clear of new utilities to be installed. Abandon-in-place shall be defined as installing plugs, or other permanent closure, as reviewed and accepted by the ENGINEER, on all terminations, open ends or ends of pipe designated as being cut, capped and anchored in an acceptable manner. The pipe will remain buried unless otherwise noted.
- C. Piping indicated on the Drawings as being removed, or any piping to be abandoned which interferes with new structures or piping, shall be excavated and removed using methods which will not disturb adjacent piping or other facilities. All pipe materials shall be subject to salvage by the CITY as defined below. Any remaining piping on both ends of pipe segments removed shall be abandoned in-place, per the above definition. After piping has been removed, the CONTRACTOR shall backfill the evacuated area in accordance with requirements set forth in other sections of these specifications.
- D. Salvage: The CITY may desire to salvage certain items of existing equipment which are to be dismantled and removed during the course of construction. Prior to removal of any existing equipment or piping from the site of work, the CONTRACTOR shall ascertain from the ENGINEER whether or not the particular item or items are to be salvaged. Items to be salvaged shall be stockpiled on the site, or delivered to a storage area at a location as directed by the CITY. All other items of equipment shall be disposed of off-site by the CONTRACTOR at his expense, in accordance with applicable laws, ordinances and regulations.

1.06 REHABILITATION

- A. Certain areas of existing structures, roadway, driveway, sidewalk, piping, conduits, swale, shrubs and the like will be affected by work necessary to complete modifications under this Contract. The CONTRACTOR shall be responsible to rehabilitate those areas affected by its construction activities.
- B. Where new rectangular openings are to be installed in concrete, the CONTRACTOR shall core the edges of each opening (both sides of wall or elevated slab) by saw cutting clean straight lines to a minimum depth of one inch and then chipping out the concrete. Alternately, the opening can be formed by saw cutting completely through the slab or wall. Saw cuts deeper than one inch (or the depth of cover over existing reinforcing steel, whichever is less) shall not be allowed to extend beyond the limits of the opening. Corners shall be made square and true by a combination of core drilling, chipping, or grinding. All necessary precautions shall be taken during removal of concrete to prevent debris from falling and damaging adjacent equipment or piping. Saw cuts allowed to extend beyond the opening shall be repaired by filling with nonshrink grout. The concrete around any exposed reinforcement steel shall be chipped back and exposed reinforcement steel cut a minimum of 1-1/2 inches from the finished face of the new opening. The inside face of the new opening shall be grouted to fill any voids and cover the exposed aggregate and shall be trowel-finished to provide a plumb and square opening.

- C. Where new conduit or piping is to be installed through existing concrete walls, the CONTRACTOR shall accurately position and core-drill openings. Openings shall be adequately sized to allow alignment of piping or conduit and fittings without deflection and to provide adequate clearance for satisfactory packing in the annular space between the piping or conduit and the core drilling opening as shown on the Drawings.
 - D. Where new piping is to be connected to existing piping, the existing piping shall be cut square and the ends properly prepared for the connection shown on the drawings. Any damage to the lining and coating of the existing piping shall be repaired by the CONTRACTOR.
 - E. Where existing equipment, equipment pads and bases, piping, piping supports, electrical panels and devices, conduits, and associated appurtenances are removed, the CONTRACTOR shall rehabilitate the affected area such that little or no evidence of the previous installation remains. Openings in concrete floors, walls, and ceiling from piping, conduit, and fastener penetrations shall be filled with nonshrink grout and finished to match the adjacent area. Concrete pads and bases for equipment and supports shall be removed by chipping away concrete and cutting any exposed reinforced steel and anchor bolts a minimum of 1-1/2 inches below finished grade. The area of concrete to be rehabilitated shall be scored by saw cutting clean, straight lines to a minimum depth of 1-1/2 inches, and all concrete within the scored lines removed to a minimum depth of 1-1/2 inches. The area within the scored lines shall be patched with nonshrink grout to match the adjacent grade and finish. Abandoned connections to piping and conduits shall be terminated with blind flanges, caps, and plugs suited for the material, type, and service of the pipe or conduit.
 - F. Where existing structural steel members are removed or modified, the surface of the remaining existing steel members damaged by construction activities shall be repaired. The affected areas shall be surface prepared and coated.
 - G. Disposal of Debris: All debris, materials, piping, and miscellaneous waste products from the work described in this section shall be removed from the project as soon as possible. They shall be disposed of in accordance with applicable federal, state, and local regulations. The CONTRACTOR is responsible for determining these regulations and shall bear all costs or retain any profit associated with disposal of these items.
- 1.07 CONTRACTOR USE OF PROJECT SITE
- A. The CONTRACTOR's use of the project site shall be limited to its construction operations, including on-site storage of materials, on-site fabrication facilities, and field offices, as noted on the Contract Drawings.
- 1.08 CITY USE OF THE PROJECT SITE
- A. The CITY may utilize all or part of the existing facilities during the entire period of construction for the conduct of the CITY's normal operations. The CONTRACTOR shall cooperate with the CITY to minimize interference with the CONTRACTOR's operations and to facilitate the CITY's operations.
- 1.09 COORDINATION WITH OTHER CONTRACTS - NOT USED.
- 1.10 PARTIAL UTILIZATION OF THE WORK BY CITY
- A. The CONTRACTOR is hereby advised that the CITY may accept the responsibility for the maintenance and protection of a specific portion of the project if utilized prior to completion. However, the CONTRACTOR shall retain full responsibility for satisfactory operation of the total project.

1.11 PERMITS

- A. It shall be the CONTRACTOR's responsibility to secure all permits of every description required to initiate and complete the work under this contract, except permits obtained by the CITY.
- B. Design plan approvals obtained by the CITY or his authorized representative, include the following: Department of Environmental Resource Management (DERM), City of Miami Gardens, Miami Dade County, and City of North Miami Beach.
- C. No separate or direct payment will be made to the CONTRACTOR for permits and inspection requirements, but all such costs shall be included in the applicable items in the Schedule of Prices. The CITY will furnish signed and sealed sets of Contract Documents for permit use as required.
- D. The CONTRACTOR shall furnish to the ENGINEER copies of all permits prior to commencement of work requiring permits.

1.12 FIELD ENGINEERING

- A. The CONTRACTOR shall employ a Land Surveyor registered in the State of Florida and acceptable to the ENGINEER. The CONTRACTOR shall locate and protect survey control and reference points.
- B. Provide Field Engineering Services: Establish elevations, lines, and levels, utilizing recognized engineering survey practices.
- C. Submit a copy of registered site drawing and certificate signed by the Land Surveyor that the elevations and locations of the Work are in conformance with the Contract Documents.

1.13 DIMENSIONS AND LOCATIONS OF EXISTING STRUCTURES, PIPING AND UTILITIES

- A. Where the dimensions and locations of existing structures, piping and utilities are of critical importance in the installation or connection of new work, the CONTRACTOR shall verify such dimensions and locations in the field before the fabrication of any materials or equipment which is dependent on the correctness of such information.

1.14 CONSTRUCTION VIDEO

- A. The CONTRACTOR shall digitally record the entire project site including all concrete and asphalt pavements, curb and gutter, houses, landscaping, structures to be demolished, and existing structures that are to be modified. The recording shall be turned over to the ENGINEER prior to beginning construction activities. The recording shall be turned over electronically on DVD format only. The recording shall clearly identify existing site and structural conditions prior to construction. CONTRACTOR shall record all driveways and landscaping of residences adjacent to project site in sufficient detail to properly document pre-construction conditions.

1.15 GUARANTEE/WARRANTY

- A. The Contractor shall guarantee that all new equipment has the capacity specified and that it will operate without excess noise or vibration.
- B. Contractor shall furnish **written warranties for the work** covering all workmanship and materials for a minimum period of **one year from the date of issuance of a Certificate of Occupancy (CO) by the Building Official** (unless a longer period is specified elsewhere in the contract documents for specific equipment or systems). This shall include an agreement to repair or replace, at the Contractor's expense, all defects that may appear in that time, which in the opinion of the Engineer, are due to defective workmanship or

materials. All items not having a successful five-year operating history shall have the same guarantee as above but extended for five years less their successful operating period.

- C. All factory **warranties shall have an effective date of one year from the date of substantial completion of the work, or when equipment is placed into service for beneficial use**, whichever comes first. Copies of factory warranties for all equipment furnished shall be submitted as described above, with the written guarantee, and shall be included in operation and maintenance manuals.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

- END OF SECTION -

SECTION 01015 - CITY FURNISHED EQUIPMENT AND SERVICES**PART 1 - GENERAL****1.01 MATERIALS SUPPLIED BY THE CITY**

- A. There will be NO owner furnished equipment for this project.

1.02 MATERIALS AND EQUIPMENT FURNISHED BY CONTRACTOR

- A. The Contractor will supply all materials for the project.
- B. All materials and equipment furnished by the Contractor for use in the work shall be new and of recent domestic manufacture and shall be the products of reliable manufacturers or suppliers who, unless otherwise specified, have been regularly engaged in the manufacture of such materials and equipment for at least five years. All components shall, wherever possible, be standard stock articles of well-known manufacturers. Where the Plans and Specifications designate the product of a particular manufacturer, the product specified has been found suitable for the intended use, but, unless otherwise provided, articles or products of similar characteristics may be offered for the approval of the Engineer. Complete descriptive data shall be furnished in quintuplicate regarding all articles furnished by the Contractor. The descriptive data shall consist of dimension drawings, catalog references, material lists and other information necessary to clearly identify and evaluate each article. When substitutions are permitted, the Contractor shall make all necessary changes in adjacent or connected structures and equipment at his expense.
- C. Where contemplated changes, substitutions or appurtenant work require engineering design in the opinion of the Engineer, the Contractor shall have such design services performed at his expense. Said engineering design services shall be of an extent satisfactory to the Engineer whose word shall be final and shall be performed by a Registered Professional Engineer licensed to practice in the State of Florida.

PART 2 - PRODUCTS (NOT USED)**PART 3 - EXECUTION (NOT USED)**

- END OF SECTION -

SECTION 01025 - MEASUREMENT AND PAYMENT

PART 1 - GENERAL

1.01 SCOPE

- A. The CITY intends to award the Contract to the lowest qualified Total Base Bid. It is intended that all work required to complete this Project will be included in the various bid items described below. In an effort to minimize pavement restoration, the project is designed with trenchless installation of long water services. Alternative #1 considers the use of open cut installation for these services, however doing so requires resurfacing of the entire roadway. Alternate #1 pricing is not mandatory for a complete bid. Alternative #1 bid items will only be accepted if resulting in a reduction in project costs. Acceptance is at the sole discretion of the CITY. If accepted, the Total Base Bid will be adjusted accordingly.
- B. The prices stated in the Bid include full compensation for overhead and profit, all costs and expenses for taxes, labor, equipment, furnishing and repairing small tools and ordinary equipment, patent fees and royalties, bond, insurance, labor for handling materials during inspection, together with any and all other costs and expenses for performing and completing the work as shown on the Contract Drawings and specified herein.
- C. The prices stated in the Bid include full compensation for removal and disposal of waste, cleanup, and restoration of all improvements incidental to construction for which there are no other bid items; including but not limited to, sprinkler systems, drainage systems, guardrails, landscaping, fences, curbs and gutters, and all other work not included in other bid items.
- D. The CONTRACTOR's attention is called to the fact that the quotations for the various items of work are intended to establish a total price for completing the work in its entirety. Should the CONTRACTOR determine that the Proposal or list of Bid Items has not established a price for some item of work; the CONTRACTOR shall include that work in some other applicable Bid Item, so that the Proposal for the project reflects the CONTRACTOR's total price for completing the work in its entirety.

1.02 PAYMENT ITEMS

The format for Payment Requests shall be as directed by the ENGINEER. This shall include the level of detail and grouping of pay items.

A. **Item No. 1 - Mobilization and Site Preparation and Demolition**

The work and incidental costs specified under Mobilization will be paid lump sum and include full compensation for furnishing all labor, tools, materials and equipment, including but not limited to site preparation, surveying both horizontal and vertical control for construction, surveyed construction as-builts, tree trimming, protection of existing utilities during construction, excavation, dewatering (if necessary), adherence to Trench Safety Act, demolition of existing piping and removal of said piping as shown on the drawings necessary for completion of the item. Includes but not limited to, bonds and insurance, those operations necessary for the movement of personnel, equipment, supplies, and incidentals to the project site and for the establishment of temporary offices, buildings, safety equipment and first aid supplies, sanitary and other facilities. Include any other preconstruction expense, including videography of pre-construction conditions, protection of existing trees with tree barricade, coordination with franchise utilities including holding

of utility poles during construction, necessary for the start of the work, excluding the cost of construction materials. Payment of Mobilization costs exceeding 10% of the total Contract amount will be deferred to substantial completion.

B. Item No. 2 - Testing and Quality Control

Quality Control is a requirement of entire project and therefore does not have a separate pay item. Testing Services will be invoiced monthly by City's approved testing consultant and submitted through CONTRACTOR for processing and payment. In consideration for processing and coordinating Testing Services, CONTRACTOR shall include a 10% mark-up in submitting Testing Services invoice for payment. Refer to Testing and Quality Control Services, Section 01400. Price will be based upon an allowance for such services, payment will be based upon actual of invoices.

C. Item No. 3 - Maintenance of Traffic

Payment for maintenance of traffic will be made in equal monthly draws dispensed over the duration of the contract totaling to the lump sum price named in the Bid Schedule. Refer to Maintenance of Traffic, Section 01570, and all other references to traffic control in this document and any regulatory requirements. Price shall include preparation and processing of Maintenance of Traffic Plans for permit approval by a Florida Licensed Professional Traffic Engineer.

D. Item No. 4 - Environmental Protection Plan (NPDES / SWPPP)

Payment for implementation of the Environmental Protection Plan, as required for compliance with NPDES and SWPPP requirements, will be made in equal monthly draws dispensed over the duration of the contract totaling to the lump sum price named in the Bid Schedule. This item shall include preparing Stormwater Prevention Pollution Plan (SWPPP), submittal of NOI (Notice of Intent), submitting NOI (Notice of Intent) to use Generic Permit for Stormwater Discharge from Construction Activities two (2) days prior to the start of construction to the Florida Department of Environmental Protection (FDEP), retention of records required by the permit, retaining copy of SWPPP at construction site, implementation of the SWPPP, submitting NOT (Notice of Termination) of Generic Permit Coverage to FDEP to discontinue permit coverage, implementation of best management practices (BMP) and environmental pollution protection throughout construction including but not limited to silt fences, temporary stabilized gravel construction entrance(s), concrete wash down area(s), sandbags, straw bales, gutterbuddies adjacent to existing and proposed curb inlets, drainage structure/inlet protection, and turbidity barriers.

E. Item No. 5 - Mill Existing Roadway Pavement

Measurement for payment of milling of existing pavement will be based upon the number of square yards of such existing pavement milled in accordance with the requirements of the Contract Documents. Payment for milling of existing pavement at the depth indicated will be made at the unit price per square yard for such milling as named and at the thickness indicated in the Bid Schedule which price will constitute full compensation for milling, removal of milled material, including restoration of traffic loop detectors, temporary pavement markings, saw cutting of all pavement and cleanup of the area disturbed.

F. Item No. 6 - Pavement Resurfacing

For constructing pavement resurfacing (one-inch thick asphaltic wearing surface overlay), will be paid for at the unit price bid times the number of square yards of overlay, measured,

accepted and installed where directed by the ENGINEER, including from two feet up to lane width or full pavement width, and as shown on the Plans. The price bid shall be full compensation for furnishing all materials, labor, and equipment required for a complete asphaltic concrete surface course installation, including but not limited to, removal and replacement of signs, pavement messages and traffic loops, adjusting manhole steel frames and covers, raise and adjust affected valve boxes and replacement of all other miscellaneous items disturbed by paving repairs. Replacement of permanent pavement markings and reflective pavement markers removed or obliterated by the CONTRACTOR's operation, whether in the area of the new pavement or not, will be included under this pay item. Such amount represents the amount the CONTRACTOR feels is necessary to comply with the governing agency's requirements. The price bid shall be full compensation for furnishing all materials, labor, and equipment for a complete installation. Also to be included in this price is the cost for furnishing all of the materials, supplies and labor required to place temporary pavement markings as directed by the ENGINEER. Pavement resurfacing will usually apply to the combined area of milled and patched surfaces.

G. Item No. 7 - Restoration of Asphalt Driveways and Walkways

Measurement for payment of restoration of existing asphalt driveways/walkways will be based upon the number of square yards of such existing surface restored in accordance with the requirements of the Contract Documents. Payment will be made at the unit price per square yard for such restoration, matching the existing thickness, which price will constitute full compensation for cutting, removal of material, saw cutting, restoration and cleanup of the area disturbed.

H. Item No. 8 - Restoration of Concrete and Paver Driveways/Walkways

Measurement for payment of restoration of existing concrete driveways/walkways will be based upon the number of square yards of such existing surface restored including restoration of any pedestrian ramp with detectable warning in accordance with the requirements of the Contract Documents. Payment will be made at the unit price per square yard for such restoration as indicated in the Bid Schedule, matching the existing thickness, color, and pattern which price will constitute full compensation for cutting, removal of material, saw cutting, restoration and cleanup of the area disturbed. Includes textured and/or colored concrete and supply of all replacement materials.

I. Item No. 9 - Furnish & Install 4" D.I.P. Water Main

Measurement for payment for furnishing and installing water main pipe will be based upon the number of linear feet of pipe constructed as determined by measurement along the centerline of the pipe in place, inclusive of valve structures, vaults and casings, mega-lugs, thrust blocks, and restraints all in accordance with the requirements of the Contract Documents. Payment for furnishing and installing water main will be made at the unit price per linear foot of pipe named in the Bid Schedule which price shall constitute full compensation for the complete installation of ductile iron pipe and restraints, including but not limited to, providing all necessary pipe excavation, dewatering, bedding backfilling, flowable fill, compaction, pavement restoration including the first lift of asphalt, and temporary relocation and/or restoration of existing utilities as required for a complete and functional installation.

J. Item No. 10 - Furnish & Install 6" D.I.P. Water Main

Measurement for payment for furnishing and installing water main pipe will be based upon the number of linear feet of pipe constructed as determined by measurement along the

centerline of the pipe in place, inclusive of valve structures, vaults and casings, megalugs, thrust blocks, and restraints all in accordance with the requirements of the Contract Documents. Payment for furnishing and installing water main will be made at the unit price per linear foot of pipe named in the Bid Schedule which price shall constitute full compensation for the complete installation of ductile iron pipe and restraints, including but not limited to, providing all necessary pipe excavation, dewatering, bedding backfilling, flowable fill, compaction, pavement restoration including the first lift of asphalt, and temporary relocation and/or restoration of existing utilities as required for a complete and functional installation.

K. Item No. 11 - Furnish and Install Ductile Iron Water Fittings

Measurement of payment for furnish and install fittings shall be based upon the unit bid price per ton named in the Bid Schedule for fittings furnished in accordance with Contract Documents. Weight will be based on compact fitting weight only, not including megalugs or joint restraints. Payment for furnishing and installing fittings shall be at the unit bid price per ton and shall include furnishing, complete installation including storing and transporting fittings.

L. Item No. 12 - Furnish and Install Water Service (Short – Single)

“Short-Single” services shall be defined as being on the same side of the roadway as the proposed water main serving a single meter connection. Measurement of payment for furnishing and installing new water service to the existing meter box will be based upon the actual number installed in accordance with the Contract Documents. Price shall constitute full compensation for complete installation of the new water service from the new water main to existing meter, including casing pipe, fittings, service saddle and corporation stop, curb stop, connection to existing meter assembly, adjustments and/or re-setting of meter box, complete restoration including but not limited to paving, existing landscaping, decorative walls, fencing, mail boxes, asphalt, pavers, concrete and all else necessary for a complete and functional installation. Payment for this item shall be made upon completion of all items stated above.

M. Item No. 13 - Furnish and Install Water Service (Short - Double)

“Short-Double” services shall be defined as being on the same side of the roadway as the proposed water main serving a dual meter connection. Measurement of payment for furnishing and installing new water service to the existing meter box will be based upon the actual number installed in accordance with the Contract Documents. Price shall constitute full compensation for complete installation of the new water service from the new water main to existing meters, including casing pipe, fittings, service saddle and corporation stop, dual corporation (curb) stops and meter yoke, connection to existing meter assemblies, adjustments and/or re-setting of meter box, complete restoration including but not limited to paving, existing landscaping, decorative walls, fencing, mail boxes, asphalt, pavers, concrete and all else necessary for a complete and functional installation. Payment for this item shall be made upon completion of all items stated above as related to both service connections.

N. Item No. 14 - Furnish and Install Trenchless Water Service (Long - Single)

“Long-Single” services shall be defined as being on the opposite side of the roadway from the proposed water main serving a single meter connection. Measurement of payment for furnishing and installing new water service to the existing meter box will be based upon the actual number installed in accordance with the Contract Documents. Price shall constitute full compensation for complete installation of the new water service

by trenchless technology from the new water main to existing meter, including casing pipe, fittings, sheeting, dewatering, utility support, service saddle and corporation stop, curb stop, connection to existing meter assembly, adjustments and/or re-setting of meter box, complete restoration any disturbed items including but not limited to paving, existing landscaping, decorative walls, fencing, mail boxes, asphalt, pavers, concrete and all else necessary for a complete and functional installation. Payment for this item shall be made upon completion of all items stated above.

O. Item No. 15 - Furnish and Install Trenchless Water Service (Long - Double)

“Long-Double” services shall be defined as being on the opposite side of the roadway from the proposed water main serving a dual meter connection. Measurement of payment for furnishing and installing new water service to the existing meter box will be based upon the actual number installed in accordance with the Contract Documents. Price shall constitute full compensation for complete installation of the new water service by trenchless technology from the new water main to existing meters, including casing pipe, fittings, service saddle and corporation stop, dual curb stops and meter yoke, connection to existing meter assemblies, adjustments and/or re-setting of meter box, complete restoration any disturbed items including but not limited to paving, existing landscaping, decorative walls, fencing, mail boxes, asphalt, pavers, concrete and all else necessary for a complete and functional installation. Payment for this item shall be made upon completion of all items stated above as related to both service connections.

P. Item No. 16 - Furnish and Install Fire Hydrant Assembly

Measurement for payment to furnish and install fire hydrant assemblies shall be at the unit bid price per each fire hydrant assembly furnished and installed in accordance with the Contract Documents. Payment for furnishing and installing fire hydrant assemblies shall be at the unit bid price per each and shall include furnishing, storing, transporting, and installing. Fire hydrant assemblies shall include the complete fire hydrant, fire hydrant extensions, guard posts, and concrete pad. Pipe, gate valves and other fittings shall not be included in this pay item.

Q. Item No. 17 - Furnish and Install 6” Gate Valve

Measurement for payment to furnish and install valves will be based upon the number of valves furnished and installed, in accordance with the requirements of the Contract Documents. Additional valves incorporated for testing purposes shall be at the sole expense of the CONTRACTOR. Price shall constitute full compensation for the completed installation of the valve, including valve box and extension to finish grade and concrete collar installed in unpaved areas.

R. Item No. 18 - Furnish and Install 4” Gate Valve

Measurement for payment to furnish and install valves will be based upon the number of valves furnished and installed, in accordance with the requirements of the Contract Documents. Additional valves incorporated for testing purposes shall be at the sole expense of the CONTRACTOR. Price shall constitute full compensation for the completed installation of the valve, including valve box and extension to finish grade and concrete collar installed in unpaved areas.

S. Item No. 19 - Connect to Existing Water main

Measurement for payment to connection to existing water main will be based upon the number of connections made in accordance with the Contract Documents. This pay item will address connection of proposed water main to existing 6” stub-outs with cap and 2” gate

valve. Cost for the proposed connections to existing 6" valves shown on the plans shall be included in the corresponding watermain installation bid item and will not be paid under this bid item. Price shall constitute full compensation for the completed connection including isolation of valves/mains, accommodations for continuous service, removal of cap, valve, and existing piping as needed, capping of pipe to be abandoned, connection to proposed valve, disinfection, and associated pavement restoration. Contractor has responsibility to verify existing conditions prior to performing work.

T. Item No. 20 - Furnish and Install 8" x 6" Tapping Sleeve and Valve

Measurement of payment to furnish and install tapping sleeve and valve will be based upon actual quantity furnished and installed in accordance with the requirements of the Contract Documents. Payment for connection to existing main with tapping sleeves and valves will be made at the unit price named in the Bid Schedule. Price shall constitute full compensation for the satisfactory connection including furnishing and installation of the tapping sleeve, valve, valve extension and valve box, restraining existing water main a minimum of one (1) joint on each side of the tap or as otherwise directed by plans, dewatering, excavation, backfill, restoration, and all else necessary for a complete and functional installation. Contractor has responsibility to verify existing conditions prior to performing work.

U. Item No. 21 - Furnish and Install 8" x 4" Tapping Sleeve and Valve

Measurement of payment to furnish and install tapping sleeve and valve will be based upon actual quantity furnished and installed in accordance with the requirements of the Contract Documents. Payment for connection to existing main with tapping sleeves and valves will be made at the unit price named in the Bid Schedule. Price shall constitute full compensation for the satisfactory connection including furnishing and installation of the tapping sleeve, valve, valve extension and valve box, restraining existing water main a minimum of one (1) joint on each side of the tap or as otherwise directed by plans, dewatering, excavation, backfill, restoration, and all else necessary for a complete and functional installation. Contractor has responsibility to verify existing conditions prior to performing work.

V. Item No. 22 - Furnish and Install 6" x 6" Tapping Sleeve and Valve

Measurement of payment to furnish and install tapping sleeve and valve will be based upon actual quantity furnished and installed in accordance with the requirements of the Contract Documents. Payment for connection to existing main with tapping sleeves and valves will be made at the unit price named in the Bid Schedule. Price shall constitute full compensation for the satisfactory connection including furnishing and installation of the tapping sleeve, valve, valve extension and valve box, restraining existing water main a minimum of one (1) joint on each side of the tap or as otherwise directed by plans, dewatering, excavation, backfill, restoration, and all else necessary for a complete and functional installation. Contractor has responsibility to verify existing conditions prior to performing work.

W. Item No. 23 - Furnish and Install Sample Point

Measurement for payment for sample points will be based upon the actual number, each, of such sample points furnished and installed, all in accordance with requirements of the Contract Documents. Payment for sample points will be made at the unit price, each, named in the Bid Schedule which price shall constitute full compensation for the complete installation of sample point and removal and disposal after sampling is complete.

X. Item No. 24 - Site Restoration and Cleanup

Payment for performing site restoration and clean-up including but not limited to pavement markings, painting, finish grading, driveways, sod, landscaping and any miscellaneous restoration work including all labor, materials and equipment required shall be made at the contract lump sum price in the Bid Schedule.

Y. Item No. 25 - Indemnification

Measurement and payment for consideration for indemnification of the OWNER and ENGINEER will be based upon the lump sum price named for such work, all in accordance with the requirements of the Contract Documents. Payment will be one hundred dollars for consideration for indemnification named in the Bid Schedule and shall constitute full compensation for indemnifying the OWNER and ENGINEER as specified on the Contract Documents.

Z. Item No. 26 - Dedicated Allowance Unforeseen Conditions

This item accounts for all labor, materials, equipment and services necessary for modification or extra work required to complete the Project because of unforeseen conditions, unforeseen conflicts between existing elements of work and the proposed work; for changes required to resolve any unforeseen conditions, Revised Regulations, Technological and Products Development, Operational Changes, Schedule Requirements, Program Interface, Emergencies and Other Miscellaneous Costs; and for adjustments to estimated quantities installed; and associated time related to work. This item may or may not be used either in part or in whole. Disbursement of this pay item is entirely at the discretion of the Engineer/City and must be ordered by the Engineer and approved by the CITY.

AA. Item No. 27 - TOTAL BASE BID AMOUNT, the sum of Item 1 through Item 26.

This item may be adjusted by Item 28.

BB. Item No. 28 - Alternative #1 Subtotal: Open-Cut Water Service Installation.

This bid item includes alternate bid items A1.a. through A1.e. These items together are meant to eliminate the need for trenchless installation for "long" service connections and are meant to be utilized in place of items No. 14 and 15. Price shall constitute full compensation for complete installation of the new "long" water services from the new water main to existing meters, including casing pipe, fittings, service saddle and corporation stop, curb stops and meter yoke as required, connection to existing meter assemblies, adjustments and/or re-setting of meter box, complete restoration of Right of Way including but not limited to paving, existing landscaping, decorative walls, fencing, mail boxes, asphalt, pavers, concrete and all else necessary for a complete and functional installation. This price shall include milling and resurfacing of the second lane. Measurement will be based upon quantity furnished and installed and payment will be based upon the unit price in the Bid Schedule. Installation must comply with requirements of Contract documents. Payment for this item shall be made upon completion of all items stated above. This item may or may not be used either in part or in whole. Decision to exercise this alternative is at the discretion of the Engineer as approved by City.

CC. **Item No. 29 – TOTAL BASE BID AMOUNT**, the sum of Item 27 adjusted for Item 28, which constitutes the complete costs for the project.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

- END OF SECTION -

SECTION 01040 - COORDINATION

PART 1 - GENERAL

1.01 THE REQUIREMENT

- A. The Contractor shall allow the CITY or his agents, and other project Contractors or their agents, to enter upon the work for the purpose of constructing, operating, maintaining, removing, repairing, altering, or replacing such pipes, sewers, conduits, manholes, wires, poles, or other structures and appliances which may be required to be installed at or in the work. The CONTRACTOR shall cooperate with all aforesaid parties and shall allow reasonable provisions for the prosecution of any other work by the CITY, or others, to be done in connection with his work, or in connection with normal use of the facilities.
- B. The CONTRACTOR shall cooperate fully with the CITY, the ENGINEER, and all other Contractors employed on the work, to effect proper coordination and progress to complete the project on schedule and in proper sequence. Insofar as possible, decisions of all kinds required from the ENGINEER shall be anticipated by the CONTRACTOR to provide ample time for inspection, or the preparation of instructions.
- C. The CONTRACTOR shall assume full responsibility for the correlation of all parts of his work with that of other Contractors. Each CONTRACTOR'S superintendent shall correlate all work with other Contractors in the laying out of work. The CONTRACTOR shall lay out his own work in accordance with the Drawings, Specifications, and instructions of latest issue and with due regard to the work of other Contractors.

1.02 COORDINATION OF DRAWINGS AND SPECIFICATIONS

- A. Before starting any Work, CONTRACTOR shall review all Drawings and Specifications and immediately report to the ENGINEER, in writing, any errors, discrepancies, and/or omissions discovered.
- B. Where differences are discovered between Drawings and Specifications or within either document itself, CONTRACTOR shall notify ENGINEER and request interpretation or decision before proceeding with the Work. ENGINEER, on behalf of CITY, will have final decision regarding such item and manner in which the Work is to be installed and such decision will be final. Otherwise, CONTRACTOR shall include the item or arrangement of better quality, greater quantity, or higher cost in Bid Price.
- C. CONTRACTOR shall compare Drawings and verify dimensions, clearances and the like before laying out Work and will be held responsible for conflicts that might have been avoided by such verification.
- D. Drawings are diagrammatic and indicate general arrangement of systems and work included in the Contract. CONTRACTOR shall notify ENGINEER of discrepancies before proceeding.

1.03 COORDINATION OF UTILITY ADJUSTMENTS/INSTALLATIONS

- A. The CONTRACTOR shall be responsible for fully coordinating with utility companies/agencies any work required in relation to the removal, relocation or other adjustment of utility services existing in the area of construction. Existing utilities and appurtenances shown on the Drawings were located from existing records but no guaranty is made that all existing facilities are shown or that those shown are entirely accurate. The Contractor shall be responsible for determining the exact location of all underground utilities with the

respective companies/agencies prior to the commencement of any subsurface work on the project.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

- END OF SECTION -

SECTION 01050 - FIELD ENGINEERING

PART 1 - GENERAL

1.01 SCOPE

- A. CONTRACTOR shall provide field engineering services as necessary to perform and complete the Work of the Contract, as indicated on Drawings and specified in this Section.
- B. CONTRACTOR shall provide the services of a land surveyor to perform project related surveys.

1.02 QUALIFICATIONS OF SURVEYOR

- A. The land surveyor shall be a Professional Engineer or Registered Land Surveyor registered in the State of Florida. CONTRACTOR shall submit to ENGINEER the name, address and evidence of current registration of surveyor or professional engineer.

1.03 SURVEY REQUIREMENTS

- A. The scope of survey work shall include:
 - 1. Protect and, if damaged or destroyed, properly replace survey reference points.
 - 2. Establish project survey control points and set out lines and levels, locate and lay out all site improvements and other work. Including determining the limits of driveway/walkway/sod restoration on private property based upon grading provided within the right-of way.
 - 3. Verify all lay out and record locations, with horizontal and vertical data, for Project Record Documents and submit documentation to verify accuracy of field survey work.
 - 4. Conduct all surveys required for measurements of work for payment purposes. Provide signed and sealed certified quantities for pay estimates to accompany each Pay Request.
 - 5. On completion of work, prepare a certified survey showing finished dimensions, locations, angles and elevations of construction, duly signed and sealed by the surveyor, certifying that elevations and locations of improvements are in conformance with Contract Documents.
 - 6. During the construction process, maintain records of all deviations from the Contract Documents and prepare As-built Drawings showing correctly and accurately all changes and deviations made during construction to reflect the work as it was actually constructed and subsequently surveyed. Also refer to Engineering As-built Requirements within General Notes and Specifications.

1.04 SURVEY REFERENCE POINTS

- A. Existing basic horizontal and vertical control points are designated on Drawings. All elevations are referred to NAVD 1988; Horizontal Control - NAD 83, Florida State Plane Coordinates. Establish all vertical and horizontal controls required for construction.
- B. Locate and protect control points prior to starting site work, and preserve permanent reference points during construction.
 - 1. Make no changes or relocations of such points without prior written notice to and

concurrence of ENGINEER.

2. Report to ENGINEER when any reference point is lost or destroyed, or requires relocation because of necessary changes in grades or locations.
3. Replace control points that may be lost or destroyed. Establish replacements based on original survey control.
4. ENGINEER will identify existing control points and property line corner stakes indicated on Drawings, as required.

1.05 PROJECT SURVEY REQUIREMENTS

- A. Establish a minimum of two permanent bench marks on the project site, all referenced to data established by survey control points. Record locations, with horizontal and vertical data, on Project Record Documents.
- B. Establish lines and levels, locate and lay out, by instrument and similar appropriate means.
 1. Site improvements, including storm sewer system.
 2. Drainage structures, including inlets, manholes, pollution control structures complete with invert and weir elevations, locations of storm sewer connections, levels of manhole frames and covers and other pertinent survey data.
- C. Verify layouts by same methods from time to time.

1.06 RECORDS

- A. Maintain a complete, accurate log of control and survey work as it progresses.
- B. On completion of major site improvements, prepare a certified survey showing finished dimensions, locations, angles and elevations of construction.
- C. On request of ENGINEER, submit documentation to verify accuracy of field survey work.
- D. Submit certificate, duly signed and sealed by the surveyor, certifying that elevations and locations of improvements are in conformance with Contract Documents.

1.07 PROJECT SIGNS

- A. Subject to compliance with local regulations and prior approval of CITY as to size, design, type and location, CONTRACTOR and Subcontractors may erect temporary signs for purposes of identification. Signs for maintenance and control of traffic may also be required and/or approved.
- B. Furnish, erect, and maintain such signs as may be required by Safety Regulations or as necessary to safeguard life and property.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

- END OF SECTION -

SECTION 01070 - ABBREVIATIONS

PART 1 - GENERAL

1.01 WORK INCLUDED

- A. Wherever in these specifications references are made to the standards, specifications, or other published data of the various national, regional, or local organizations, such organizations may be referred to by their acronym or abbreviation only. As a guide to the user of these specifications, the following acronyms or abbreviations which may appear in these specifications shall have the meanings indicated herein.

1.02 ABBREVIATIONS AND ACRONYMS

AAMA	Architectural Aluminum Manufacturer's Association
AASHTO	American Association of the State Highway and Transportation Officials
ACI	American Concrete Institute
ACPA	American Concrete Pipe Association
AFBMA	Anti-Friction Bearing Manufacturer's Association, Inc.
AGMA	American Gear Manufacturer's Association
AHGDA	American Hot Dip Galvanizers Association
AI	The Asphalt Institute
AIA	American Institute of Architects
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
AITC	American Institute of Timber Construction
AMCA	Air Moving and Conditioning Association
ANSI	American National Standards Institute, Inc.
APA	American Plywood Association
API	American Petroleum Institute
APHA	American Public Health Association
APWA	American Public Works Association
ASA	Acoustical Society of America
ASAE	American Society of Agriculture Engineers
ASCE	American Society of Civil Engineers
ASHRAE	American Society of Heating, Refrigerating, and Air-Conditioning Engineers
ASLE	American Society of Lubricating Engineers
ASME	American Society of Mechanical Engineers
ASMM	Architectural Sheet Metal Manual
ASSE	American Society of Sanitary Engineers
ASTM	American Society for Testing and Materials
AWPA	American Wood Preservers Association
AWPI	American Wood Preservers Institute
AWS	American Welding Society
AWWA	American Water Works Association
BHMA	Builders Hardware Manufacturer's Association
CMA	Concrete Masonry Association
CRSI	Concrete Reinforcing Steel Institute
DERM	Department of Environmental Resource Management
DCPW	Dade County Public Works
DIPRA	Ductile Iron Pipe Research Association

EIA	Electronic Industries Association
ETL	Electrical Test Laboratories
FBC	Florida Building CODE
FDER	Florida Department of Environmental Regulation
FDOT	Florida Department of Transportation
FS	Federal Specifications
IEEE	Institute of Electrical and Electronics Engineers
IES	Illuminating Engineering Society
IPCEA	Insulated Power Cable Engineers Association
ISA	Instrument Society of America
ISO	International Organization for Standardization
MBMA	Metal Building Manufacturer's Association
MTI	Marine Testing Institute
NAAM	National Association of Architectural Metal Manufacturer's
NACE	National Association of Corrosion Engineers
NBS	National Bureau of Standards
NEC	National Electrical Code
NEMA	National Electrical Manufacturer's Association
NFPA	National Fire Protection Association
NRCA	National Roofing Contractors Association
OSHA	Occupational Safety and Health Administration
PCA	Portland Cement Association
RER	Regulatory and Economic Resources (Miami Dade County)
SBC	Standard Building Code
SMACCNA	Sheet Metal and Air Conditioning Contractors National Association
SSPC	Steel Structures Painting Council
SSPWC	Standard Specifications for Public Works Construction
SFWMD	South Florida Water Management District
UL	Underwriters Laboratories, Inc.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

- END OF SECTION -

SECTION 01090 - REFERENCE STANDARDS

PART 1 - GENERAL

1.01 WORK INCLUDED

- A. Titles of Sections and Paragraphs: Captions accompanying specification sections and paragraphs are for convenience of reference only, and do not form a part of the Specifications.
- B. Applicable Publications: Whenever in these Specifications references are made to published specifications, codes, standards, or other requirements, it shall be understood that wherever no date is specified, only the latest specifications, standards, or requirements of the respective issuing agencies which have been published as of the date of the opening of bids, shall apply; except to the extent that said standards or requirements may be in conflict with applicable laws, ordinances, or governing codes. No requirements set forth herein or shown on the Drawings shall be waived because of any provision of, or omission from, said standards or requirements.
- C. Specialists, Assignments: In certain instances, Specification text requires (or implies) that specific work is to be assigned to specialists or expert entities, who must be engaged for the performance of that work. Such assignments shall be recognized as special requirements over which the CONTRACTOR has no choice or option. These requirements shall not be interpreted so as to conflict with the enforcement of building codes and similar regulations governing the Work; also they are not intended to interfere with local union jurisdiction settlements and similar conventions. Such assignments are intended to establish which party or entity involved in a specific unit of work is recognized as "expert" for the indicated construction processes or operations. Nevertheless, the final responsibility for fulfillment of the entire set of contract requirements remains with the CONTRACTOR.

1.02 REFERENCE SPECIFICATIONS, CODES, AND STANDARDS

- A. Without limiting the generality of other requirements of the specifications, all work specified herein shall conform to or exceed the requirements of all applicable codes.
- B. References herein to "Building Code" or FBC shall mean the Florida Building Code. The latest edition of the code as approved and used by the local agency as of the date of the Notice to Proceed, as adopted by the agency having jurisdiction, shall apply to the Work herein, including all addenda, modifications, amendments, or other lawful changes thereto.
- C. In case of conflict between codes, reference standards, Drawings and the other Contract Documents, the most stringent requirements shall govern. All conflicts shall be brought to the attention of the ENGINEER for clarification and directions prior to ordering or providing any materials or labor. The CONTRACTOR shall follow the most stringent requirements.
- D. Applicable Standard Specifications: The CONTRACTOR shall construct the Work specified herein in accordance with the requirements of the Contract Documents and the referenced portions of those referenced codes, standards, and Specifications listed herein.

- E. References herein to "OSHA Regulations for Construction" shall mean Title 29, Part 1926, Construction Safety and Health Regulations, Code of Federal Regulations (OSHA), including all changes and amendments thereto.
- F. References herein to "OSHA Standards" shall mean Title 29, Part 1910, Occupational Safety and Health Standards, Code of Federal Regulations (OSHA), including all changes and amendments thereto.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not used)

- END OF SECTION-

SECTION 01100 - SPECIAL PROJECT PROCEDURES

PART 1 - GENERAL

1.01 EXISTING CONDITIONS

- A. This Project is in an area with existing improvements consisting of water, sanitary sewer, franchise utilities and storm drains. The Project is located within the City of Miami Gardens, in Miami-Dade County, Florida. The work shall be conducted in a manner that will minimize restriction of access to public and private property and facilities, and minimize disruption of traffic. The CONTRACTOR shall exercise extreme care to prevent damage to and interference with existing improvements and to maintain the adjacent areas and travel routes safe for pedestrian and vehicular traffic at all times.

1.02 EXISTING IMPROVEMENTS/UTILITIES

- A. Existing improvements, including utilities, both surface and subsurface, shown on the Drawings were located from existing records. No guaranty is made that all improvements are shown or that those shown are entirely accurate. It is the CONTRACTOR's responsibility to verify the locations, character and depths of all existing improvements prior to performing any Work. The City and ENGINEER will assume no liability for damages sustained or costs incurred because of the CONTRACTOR's operations in the vicinity of existing improvements. The CONTRACTOR hereby agrees that he shall have no claim for delay or for extra compensation and that he shall have no claims for relief from any obligation or responsibility under the Contract on account of any surface or subsurface improvements or utilities encountered. CONTRACTOR shall notify the ENGINEER of any deviation between existing conditions and the Drawings. The CONTRACTOR shall coordinate all utility related work, of whatever nature, with the utility company or companies whose services are impacted by the proposed construction or any element thereof.

1.03 LAND FOR FIELD OFFICES, STORAGE AND CONSTRUCTION PURPOSES

- A. CONTRACTOR shall obtain and pay all costs in connection with any additional work areas, storage sites, and access to the construction site or temporary right-of-way that may be required for proper completion of the work.
- B. Responsibility for safety and security of the storage site, including protection and safekeeping of equipment and materials at or near the construction site, shall be solely that of the CONTRACTOR and no claims shall be made against the City by reason of any act of an employee or trespasser. CONTRACTOR shall place no equipment or materials upon public or private property until permission has been received. Any agreement between CONTRACTOR and alternate entity for use of land shall be submitted to City for review and approval.

- C. Upon completion of the Contract, CONTRACTOR shall remove from the site and storage area all equipment, field offices, fencing, rubbish, etc., and leave the areas clean and restored to its original condition. CONTRACTOR shall fill, compact and resurface all holes or excavations made for fence installation, as directed by the ENGINEER.

1.04 WATER POLLUTION PREVENTION AND EROSION CONTROL

- A. When required to dispose of water from dewatering and other operations, CONTRACTOR shall obtain and pay for all necessary permits, shall take all actions necessary to prevent contamination of or disturbance to the environment or natural habitat of the properties adjacent to the site, and shall comply with all permit requirements and restrictions as set by the regulatory agencies having jurisdiction. CONTRACTOR shall schedule and control operations so as to confine all runoff water from disturbed surfaces, water from dewatering operations and water in existing ditches that becomes contaminated with lime silt, muck and other deleterious matter from the construction operations.
- B. CONTRACTOR shall provide all temporary materials and operations necessary to attain the required pollution and erosion controls including, but not limited to, temporary seeding, filter blankets, chemicals, temporary dikes and ditches, silt screens, fiber mats, mulches, sod, bituminous spray and other erosion control devices. The pollution control procedures shall include control of lime suspended in water which may flow into canals and ditches and which may require the use of screens, filter blankets and coagulants within such ditches. CONTRACTOR shall maintain all pollution and erosion prevention procedures, materials, equipment and other related items in an approved condition until notified by the ENGINEER to discontinue such maintenance.
- C. Where necessary, CONTRACTOR shall channel runoff water from construction areas and all water from dewatering operations into temporary stilling basins.
- D. The CONTRACTOR shall furnish all labor and equipment and perform all work required for the prevention of environmental pollution during and as a result of the work under this contract. The CONTRACTOR shall be responsible for preparing and complying with the requirements of the National Pollution Prevention Discharge Elimination System (NPDES) and Storm Water Pollution Prevention Plan (SWPPP), including preparation of Storm Water Pollution Prevention Plan (SWPPP) and submittal of the Notice of Intent (NOI) prior to start of construction and submittal of Notice of Termination (NOT) after final project certification and approval. For the purpose of this contract environmental pollution is defined as the presence of chemical, physical, or biological elements or agents which adversely affect human health or welfare; unfavorably alter ecological balances of importance to human life, affect other species of importance to man, or degrade the utility of the environment for aesthetic and recreational purposes. The control of environmental pollution requires consideration of air, water, land and involves noise, solid waste management and management of radiant energy and radioactive materials, as well as other pollutants.

1.05 COORDINATION WITH TRAFFIC CONTROL AGENCIES

- A. CONTRACTOR shall perform the construction work with minimum interruption of traffic movement on existing streets and roadways. In order to limit such interruption, CONTRACTOR shall coordinate the work with all agencies having jurisdiction and schedule the work so that interruptions are held to a minimum.
- B. In the work schedule submittals, CONTRACTOR shall provide documentation of the CONTRACTOR's coordination with such agencies and shall not deviate from the approved

schedule without prior approval. CONTRACTOR shall provide proper maintenance and control of all traffic in the areas of construction during the course of construction and shall furnish and maintain all required traffic control signs and devices, barricades, safety cones, flashers, flambeaus and similar devices.

1.06 PROGRESS SCHEDULE

- A. Immediately after award of Contract and prior to the pre-construction conference, CONTRACTOR shall submit to the CITY a construction progress schedule showing chronologically all operations contemplated and necessary for the successful completion of the work within the agreed contract time, phases and a schedule of shop drawings and submissions. The schedule shall include a detailed description of the proposed construction elements and procedures, indicating the proposed degree of coordination and compliance with the requirements of the traffic control agencies. The CITY reserves the right to make changes to the schedule and sequence as necessary to facilitate the work or to minimize any conflict with traffic operations.
- B. Prior to commencement of construction, a pre-construction meeting will be held to review CONTRACTOR's construction progress schedule, proposed sequence of construction and schedule of values, to establish a working understanding between the parties as to the project and other pre-construction activities. At the pre-construction conference, the CONTRACTOR shall review the schedules with the City and Engineer. Thereafter, the CONTRACTOR shall add calendar dates and shall modify and/or correct the schedule until satisfactory to the City, at which time it will be approved for use by the CONTRACTOR for planning, organizing, and directing the work of the project.

Additionally, prior to construction, a Public Information Meeting will be held at City Hall where the public will be invited to ask questions about the construction schedule and process. The CONTRACTOR will be required to present the Construction Schedule at this time.

1.07 CONNECTIONS TO EXISTING PIPING/SYSTEMS

- A. Required connections to existing storm water management systems or other piping systems shall be performed in such a manner that no damage and minimal interruption is caused to the existing installations. Any damage caused to existing improvements shall be repaired or replaced at no cost to the CITY. CONTRACTOR shall coordinate construction operations with the utility companies and notify them at least 48 hours in advance of any activity that may impact their systems.

1.08 HYDRAULIC UPLIFT ON STRUCTURES

- A. CONTRACTOR shall make all necessary provisions to safeguard any structures that may become buoyant during the construction operations due to groundwater or floods and before the structure is put into service. Should there be any possibility of buoyancy of a structure, CONTRACTOR shall take the necessary steps to prevent its buoyancy either by increasing the structure's weight, by filling it with approved material or other acceptable methods. Damage to any structures due to floating or flooding shall be repaired or, if necessary, the structures shall be replaced at no cost to the CITY.

1.09 UTILITY PROTECTION SHEETING

- A. The Contractor shall be responsible for properly supporting the sides of all trenches and excavations with timbers or other supports wherever necessary or required to properly safeguard the trenches and protect the City's existing facilities when new underground

construction is within 3 feet of existing watermain/forcemain. The cost of all necessary timber, sheeting and bracing whatsoever left in place or removed, shall be included in the unit price bid for the installed improvements.

- B. Portions of the sheeting driven below the elevation of the top of the pipe shall not be disturbed or removed. Sheeting and bracing shall be left in place if so ordered by the Engineer and/or where shown on the Plans to avoid undermining or otherwise endangering the work or adjacent structures. All sheeting left in place shall be cut off or driven at least 30 inches below finished grade, unless otherwise ordered.
- C. Great care shall be exercised in the selection of sheeting and bracing of adequate design, type, size and strength. The adequacy of the sheeting used for all supporting and bracing purposes shall be the responsibility of the Contractor. The sizes and length of the sheeting used shall conform closely to the needs of the work and oversizing as well as undersizing should be avoided. In placing and driving the sheeting, proper workmanship and equipment shall be used to achieve a true alignment and close contact of the sheeting boards.
- D. Sheeting shall be straight and sound, free from shakes, cracks, large or loose knobs and other defects impairing its strength and durability. It shall be squared to the required dimension throughout its entire length.
- E. If required for the proper execution of the work where running sand, quicksand or other semifluid material difficult to handle is encountered, the sheeting shall be tongue and groove.
- F. The Contractor may, in lieu of sheeting, bracing and shoring to maintain the allowable trench widths, use a "trench box" ("trench shield" or "mule") provided pipe section are secure downstream by a cable(s) stretched through and secured to the end section of pipe by means of a timber and a cable clamp, all materials being of adequate size and strength. The cable shall be held taut during the process of advancing the "box".

The procedure may be used so long as, in the opinion of the Engineer, the work is proceeding satisfactorily. The Engineer may revoke permission to use the "trench box" at any time he feels unsatisfactorily or inadequate work is being performed and the Contractor shall, without appeal, immediately begin using sheeting, bracing and shoring to maintain the allowable trench widths.

At all times, when soil conditions permit, the bottom edge of the "trench box" shall be no lower than the springline of the pipe, so as not to disturb the trench compaction when advancing the "trench box." No compensation will be made for utilizing the trench box.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

- END OF SECTION -

SECTION 01200 - PROJECT MEETINGS**PART 1 - GENERAL****1.01 PRECONSTRUCTION MEETING**

- A. A preconstruction meeting will be held after Award of Contract, but prior to starting work at the site.
- B. Attendance:
 - 1. Owner.
 - 2. Engineer.
 - 3. Contractor.
 - 4. Major subcontractors.
 - 5. Safety representative.
 - 6. Representatives of governmental or other regulatory agencies.
- C. Minimum Agenda:
 - 1. Tentative construction schedule.
 - 2. Critical work sequencing.
 - 3. Designation of responsible personnel.
 - 4. Adequacy of distribution of Contract Documents.
 - 5. Submittal of Shop Drawings and samples.
 - 6. Procedures for maintaining record documents.
 - 7. Use of site and Owner's requirements.
 - 8. Major equipment deliveries and priorities.
 - 9. Safety and first aid procedures.
 - 10. Security procedures.
 - 11. Housekeeping procedures.
 - 12. Processing of Partial Payment Requests.
 - 13. General regard for community relations.

1.02 PROGRESS MEETINGS WITH ENGINEER:

- A. In addition to other regular project meetings for other purposes (as indicated elsewhere in the Contract Documents), hold general progress meetings twice each month with times coordinated with preparation of payment requests. Meeting dates shall be established by the Engineer. Require every entity then involved in the planning, coordination or performance of work to be properly represented at each meeting. Include (when applicable) consultants, separate contractors (if any), principal subcontractors, suppliers/ manufacturers/fabricators, governing authorities, insurers, special supervisory personnel and others with an interest or expertise in the progress of the work. Review each entity's present and future needs including interface requirements, time, sequence, deliveries, access, site utilization, temporary facilities and services, hours of work, hazards and risks, housekeeping, submittals, change orders, and documentation of

information for payment requests. Discuss whether each element of current work is ahead of schedule. Determine how behind-time work will be expedited, and secure commitments from the entities involved in doing so. Discuss whether schedule revisions are required to ensure that current work and subsequent work will be completed within the Contract Time. Review everything of significance which could affect the progress of the work.

- B. Within seven days after each progress meeting date, the Engineer will forward copies of the minutes-of-the-meeting, to the Contractor.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

- END OF SECTION -

SECTION 01300 - SUBMITTALS

PART 1 - GENERAL

1.01 THE REQUIREMENT

- A. This section specifies the means of all submittals. All submittals, whether their final destination is to the CITY, ENGINEER, or other representatives of the CITY, shall be directed through the ENGINEER. A general summary of the types of submittals and the number of copies required is as follows:

<u>Copies to ENGINEER</u>	<u>Type of Submittal</u>
2	Progress Schedule
2	Construction Schedule
2	Schedule of Payment Items
4	Progress Estimates
6	Shop Drawings
2	Certificates of Compliance
2	Warranties
2*	Product Samples

* Unless otherwise required in the specific Section where requested.

1.02 SUBMITTAL PROCEDURES

- A. Transmit each submittal with a form acceptable to the ENGINEER, clearly identifying the enclosed material and other pertinent information specified in other parts of this section. Identify variations from Contract Documents which may be detrimental to successful performance of the completed Work.
- B. Revise and resubmit submittals as required, identify all changes made since previous submittals. Resubmittals shall be noted as such.
- C. Distribute copies of reviewed submittals to concerned parties. Instruct parties to promptly report any inability to comply with provisions.

1.03 CONSTRUCTION PROGRESS SCHEDULE

- A. The CONTRACTOR shall have the capability of preparing and utilizing computer-generated construction progress scheduling.
- B. Each computer-generated construction progress schedules and associated report shall include the following tabulations: a list of activities in numerical order, a list of activity precedence, schedules sequenced by Early Start Date and Late Start Date. Each schedule and report shall include the following minimum items:
1. Activity Numbers
 2. Estimated Duration
 3. Activity Description
 4. Early Start Date (Calendar Dated)

5. Early Finish Date (Calendar Dated)
 6. Latest Allowable Start Date (Calendar Dated)
 7. Latest Allowable Finish Date (Calendar Dated)
 8. Status (whether critical)
- C. In addition, each construction progress schedule, network analysis and report shall be prefaced with the following summary data:
1. Contract Name and Number
 2. CONTRACTOR's Name
 3. Contract Duration
 4. Contract Schedule
 5. The Effective or Starting Date of the Schedule (the date indicated in the Notice-to-Proceed)
- D. The workday to calendar date correlation shall be based on an 8-hour day and 40-hour week with adequate allowance for holidays, adverse weather and all other special requirements of the work. Normal CITY hours are Monday through Friday 7:30am to 6:00pm.
- E. If the CONTRACTOR desires to make changes in his method of operating which affect the construction progress schedule and related items, he shall notify the ENGINEER in writing stating what changes are proposed and the reason for the change. If the ENGINEER accepts these changes, in writing, the CONTRACTOR shall revise and submit, without additional cost to the CITY, all of the affected portions of the construction progress schedule, and associated reports. The construction progress schedule and related items shall be adjusted by the CONTRACTOR only after prior acceptance, in writing by the ENGINEER. Adjustments may consist of changing portions of the activity sequence, activity duration's, division of activities, or other adjustments as may be required. The addition of extraneous, nonworking activities and activities which add restraints to the construction progress schedule shall not be accepted.
- F. Except where earlier completions are specified, schedule dates which show completion of all work prior to the contract completion date shall, in no event, be the basis for claim for delay against the CITY by the CONTRACTOR.
- G. Construction progress schedules and related items which contain activities which extend beyond the contract completion date will not be accepted by the ENGINEER.
- H. Whenever it becomes apparent from the current construction progress schedule and associated reports that delays to the critical path have resulted and the contract completion date will not be met, or when so directed by the ENGINEER, the CONTRACTOR shall take some or all of the following actions at no additional cost to the CITY. They shall submit to the ENGINEER for approval, a written statement of the steps they intend to take to remove or arrest the delay to the critical path in the current construction progress schedule. The following corrective actions would be considered for approval:
1. Increase construction manpower in such quantities and crafts as will substantially eliminate the backlog of work.

2. Increase the number of working days per week, the amount of construction equipment, or any combination of the foregoing, sufficiently to substantially eliminate the backlog of work.
 3. Reschedule activities to achieve maximum practical concurrency of accomplishment of activities, and comply with the revised schedule.
- I. If when so requested by the ENGINEER, the CONTRACTOR should fail to submit a written statement of the steps they intend to take or should fail to take such steps as reviewed and accepted in writing by the ENGINEER, the ENGINEER may direct the CONTRACTOR to increase the level of effort in manpower (trades), equipment and work schedule (overtime, weekend and holiday work, etc.) to be employed by the CONTRACTOR in order to remove or arrest the delay to the critical path in the current construction progress schedule, and the CONTRACTOR shall promptly provide such level of effort at no additional cost to the CITY.
 - J. If the completion of any activity, whether or not critical, falls more than 100 percent behind its previously scheduled and accepted duration, the CONTRACTOR shall submit for approval a schedule adjustment showing each such activity divided into two activities reflecting completed versus uncompleted work.
 - K. Shop drawings, which are not approved on the first submittal, shall be immediately resubmitted.
 - L. If the ENGINEER finds that the CONTRACTOR is entitled to any extension of the contract completion date, the ENGINEER's determination as to the total number of days extension shall be based upon the current construction progress schedule and on all data relevant to the extension. Such data shall be included in the next updating of the schedule and related items. Actual delays in activities which, according to the construction progress schedule, do not affect any contract completion date will not be the basis for a change therein.
 - M. From time to time it may be necessary for the contract schedule of completion time to be adjusted by the CITY in accordance with the Contract Documents as may be applicable. Under such conditions, the ENGINEER will direct the CONTRACTOR to reschedule the work or contract completion time to reflect the changed conditions, and the CONTRACTOR shall revise the construction progress schedule and related items accordingly, at no additional cost to the CITY.
 - N. CITY initiated changes that affect the critical path on the network diagram shall be the sole grounds for extending the completion dates.
 - O. Review and acceptance of the construction progress schedule, and related reports, by the ENGINEER is advisory only and shall not relieve the CONTRACTOR of the responsibility for accomplishing the work within the contract completion date. Omissions and errors in the construction progress schedule, and related reports shall not excuse performance less than that required by the Contract and in no way make the ENGINEER an insurer of the CONTRACTOR's success or liable for time or cost overruns flowing from any shortcomings in the construction progress schedule, and related reports.
 - P. The CONTRACTOR shall present and discuss the proposed schedule at the preconstruction conference.
 - Q. The construction progress schedule shall be based upon the precedence diagramming method of scheduling and shall be prepared in the form of a horizontal bar chart showing in detail the proposed sequence of the work and identifying all construction activities

included but not limited to piping, all structures and related work specified herein to be performed under the Contract. The schedule shall be time scaled, identifying the first day of each week, with the estimated date of starting and completion of each stage of the work in order to complete the project within the contract time. The project critical path shall be clearly identified.

- R. The progress schedule shall be plotted on 11-inch by 17-inch paper and shall be revised and updated monthly, depicting progress through the last day of the current month and scheduled progress through completion. Three up to date copies of the schedule shall be submitted along with the application for monthly progress payments for the same period.

1.04 SCHEDULE OF PAYMENT ITEMS

- A. The CONTRACTOR shall submit a Schedule of Payment Items for review within two weeks after receiving the Notice To Proceed. The schedule shall contain the installed value of the component parts of Work for the purpose of making progress payments during the construction period.
- B. The schedule shall be given in sufficient detail for the proper identification of Work accomplished. Each item shall include its proportional share of all costs including the CONTRACTOR's overhead, contingencies and profit. The sum of all scheduled items shall equal the total value of the Contract.
- C. The CONTRACTOR shall expand or modify the above schedule and materials listing as required by the ENGINEER's initial or subsequent reviews.

1.05 SHOP DRAWINGS

- A. The CONTRACTOR shall submit for review shop drawings for all mechanical, electrical, structural and instrumentation items associated with this project.
- B. Shop drawings shall show the principal dimensions, weight, structural and operating features, type and/or brand of finish or shop coat, etc., depending on the subject of the Drawings.
- C. When so specified, or if considered by the ENGINEER to be acceptable, the manufacturer's specifications, catalog data, descriptive matter, illustrations, etc. may be submitted for review in place of shop drawings. In such case, the requirements shall be as specified for shop drawings, insofar as applicable.
- D. The CONTRACTOR shall be responsible for the prompt submittal of all shop drawings so that there shall be no delay to the Work due to the absence of such Drawings. The ENGINEER will review the shop drawings within 14 calendar days of receipt of such Drawings. Reviewed shop drawings will be returned to the CONTRACTOR by regular mail, posted no later than 14 days after receipt.
- E. Time delays caused by rejection of submittals are not cause for extra charges to the CITY or time extensions.
- F. Requirements: All shop drawings shall be submitted to the ENGINEER through the CONTRACTOR. The CONTRACTOR is responsible for obtaining shop drawings from his subcontractors and returning reviewed Drawings to them. All Drawings shall be clearly marked with the name of the project, CITY, CONTRACTOR, and Bid Package number. Drawings shall be suitably numbered and stamped by the CONTRACTOR. Each shipment of Drawings shall be accompanied by a letter of transmittal giving a list of the drawing numbers and the names mentioned above.

- G. Product Data: Where manufacturer's publications in the form of catalogs, brochures, illustrations, or other data sheets are submitted in lieu of prepared shop drawings, such submission shall specifically indicate the particular item offered. Identification of such items and relative pertinent information shall be made with indelible ink. Submissions showing only general information will not be accepted.
- H. Product data shall include materials of construction, dimensions and piping, etc.
- I. Warranties: When warranties are called for, a sample of the warranty shall be submitted with the shop drawings. The sample warranty shall be the same form that will be used for the actual warranty. Actual warranties shall be originals and notarized.
- J. Work Prior to Review: No material or equipment shall be purchased, fabricated especially for this Contract, or delivered to the project site until the required shop drawings have been submitted, processed and marked either "FURNISH AS SUBMITTED" or "FURNISH AS CORRECTED". All materials and Work involved in the construction shall be as represented by said Drawings.
- K. CONTRACTOR's Review: Only submittals, which have been checked and corrected, should be submitted to the CONTRACTOR by his subcontractors and vendors. Prior to submitting shop drawings to the ENGINEER, the CONTRACTOR shall check thoroughly all such Drawings to satisfy himself that the subject matter thereof conforms to the Drawings and Specifications in all respects. Drawings which are correct shall be marked with the date, checker's name and indications of the CONTRACTOR's approval, and then shall be submitted to the ENGINEER other Drawings submitted to the ENGINEER will be returned to the CONTRACTOR unreviewed.
- L. CONTRACTOR's Responsibility: The ENGINEERS review of shop drawings will be general and shall not relieve the CONTRACTOR of the responsibility for details of design, dimensions, etc., necessary for proper fitting and construction of the Work required by the Contract and for achieving the specified performance.
- M. CONTRACTOR's Modifications: For submissions containing departures from the Contract Documents, the CONTRACTOR shall include proper explanation in his letter of transmittal. Should the CONTRACTOR submit a review that requires modifications to the structures, piping, layout, etc. detailed on the Drawings, he shall also submit for review details of the proposed modifications.
- N. Substitutions: Whenever a particular brand or make of material, equipment, or other item is specified, or is indicated on the Drawings, it is for the purpose of establishing a standard of quality, design, and type desired and to supplement the detailed specifications. Any other brand or make which, in the opinion of the ENGINEER, is equivalent to that specified or indicated may be offered as a substitute subject to the following provisions:
1. CONTRACTOR shall submit for each proposed substitution sufficient details, complete descriptive literature, and performance data together with samples of the materials, where feasible, to enable the ENGINEER to determine if the proposed substitution is equal.
 2. A list of installations where the proposed substitution is equal.
 3. Where the acceptance of a substitution requires revision or redesign of any part of the Work, all such revision and redesign, and all new Drawings and details required therefore, shall be provided by the CONTRACTOR at his own cost and expense, and shall be subject to review of the ENGINEER.

4. In all cases the ENGINEER shall be the sole judge as to whether a proposed substitution is to be accepted. The CONTRACTOR shall abide by the ENGINEER's decision when proposed substitute items are judged to be unacceptable and shall in such instances furnish the item, or substitute, as specified. No substitute items shall be used in the Work without written acceptance of the ENGINEER.
 5. Acceptance of any proposed substitution shall in no way release the CONTRACTOR from any of the provisions of the Contract Documents.
- O. Complete Submittals: Each submittal shall be complete in all aspects incorporating all information and data required evaluating the products' compliance with the Contract Documents. Partial or incomplete submissions shall be returned to the CONTRACTOR without review.
- P. Shop Drawing Distribution: The CONTRACTOR shall submit a minimum of 6 copies of all shop drawings to the ENGINEER for review. Shop drawings will be reviewed, stamped and distributed with the appropriate box checked either "FURNISH AS SUBMITTED", "FURNISH AS CORRECTED" or "REVISE AND RESUBMIT". The distribution of processed shop drawings will be as follows:
1. Drawings Marked "FURNISH AS SUBMITTED" or "FURNISH AS CORRECTED"
 - 2 copies returned to the CONTRACTOR
 - 2 copies transmitted to the CITY
 - 2 copies remain at the ENGINEER's office
 2. Drawings Marked "REVISE AND RESUBMIT"
 - 2 copies returned to the CONTRACTOR
 - 1 copy remain at the ENGINEER's office
 - 3 copies will be discarded
- Q. If the CONTRACTOR requires additional copies of returned shop drawings, he shall include extra Drawings in his original submittal. The ENGINEER will process the Drawings and return them to the CONTRACTOR.
- 1.06 REQUEST FOR INFORMATION
- A. All requests for information from the ENGINEER by the CONTRACTOR shall be submitted in writing.
 - B. The ENGINEER has three working days to respond to the request for information in writing.
 - C. In the event that the ENGINEER cannot answer a request for information based on the data provided by the CONTRACTOR, the ENGINEER will request additional information from the CONTRACTOR, in writing. Upon receipt of the additional information required, the ENGINEER will have three working days to answer the request.
- 1.07 WARRANTIES
- A. Warranties called for in the Contract Documents shall be originals and submitted to the CITY through the ENGINEER. When warranties are required they shall be submitted prior to request for payment.

- B. When advance copies of warranties are requested, they shall be submitted with, and considered as shop drawings.

1.08 CERTIFICATES

- A. Two copies of certificates of compliance and test reports shall be submitted for requested items to the ENGINEER prior to request for payment.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

- END OF SECTION -

SECTION 01380 - CONSTRUCTION PHOTOGRAPHS

PART 1 - GENERAL

1.01 DESCRIPTION OF WORK

- A. The CONTRACTOR shall take and submit construction photographs. Photographs shall be clean, sharp and clearly show details. Out-of-focus photographs will not be acceptable.

1.02 PHOTOGRAPHY REQUIRED/DELIVERY OF PRINTS

- A. The CONTRACTOR shall submit one print one electronic copy of each construction photograph as follows:
 - 1. Within fourteen (14) days of receiving Notice to Proceed and within the first ten (10) days of each month.
 - 2. Enclose each print in a clear mylar protector punched to fit a standard three ring binder.
 - 3. Number photographs in sequence beginning with the numeral one.
- B. Prints shall be standard commercial quality, color, 3-1/2 inches by 5 inches, single weight glossy paper. Each print shall have the following information stamped or typed on the back:

CITY OF NORTH MIAMI BEACH
 HONEY HILL WATER SYSTEM BETTERMENTS

Contract No. _____

Contractor: _____

Photograph No. _Date_ _Time: _____

Description: _____

- C. Contractor shall provide to the ENGINEER a CD/DVD prior to construction with all preconstruction photos, and provide each month a CD with construction progress photos taken for the month.
- D. A minimum of six (6) photographs shall be taken prior to construction and each day until completion of the work.
- E. The CONTRACTOR shall take pre-construction photographs of the entire site of the project after receiving the Notice to Proceed and prior to disturbing the site in any manner. The CONTRACTOR shall coordinate with the ENGINEER.

PART 2 - PRODUCTS - (NOT USED)

PART 3 - EXECUTION

3.01 GENERAL

- A. For all photographs, the CONTRACTOR shall coordinate with the ENGINEER as to the actual number and location of views to be photographed and the day and time of photographing.

- END OF SECTION -

SECTION 01400 - TESTING and QUALITY CONTROL**PART 1 - GENERAL****1.01 SAMPLING AND TESTING**

- A. Unless otherwise specified, all sampling and testing shall be in accordance with the methods prescribed in the current standards of the ASTM, as applicable to the class and nature of the article or materials considered; however, the CITY reserves the right to use any generally-accepted system of sampling and testing which, in the opinion of the ENGINEER will insure the CITY that the quality of the workmanship is in full accord with the Contract Documents.
- B. Any waiver by the CITY of any specific testing or other quality assurance measures, whether or not such waiver is accompanied by a guarantee of substantial performance as a relief from the specified testing or other quality assurance requirements as originally specified, and whether or not such guarantee is accompanied by a performance bond to assure execution of any necessary corrective or remedial Work, shall not be construed as a waiver of any requirements of the Contract Documents.
- C. Notwithstanding the existence of such waiver, the ENGINEER reserves the right to make independent investigations and tests and failure of any portion of the Work to meet any of the requirements of the Contract Documents, shall be reasonable cause for the ENGINEER to require the removal or correction and reconstruction of any such work in accordance with the General Conditions.

1.02 SITE INVESTIGATION AND CONTROL

- A. The CONTRACTOR shall verify all dimensions in the field and shall check field conditions continuously during construction. The CONTRACTOR shall be solely responsible for any inaccuracies built into the Work due to its failure to comply with this requirement.
- B. The CONTRACTOR shall inspect related and appurtenant Work and shall report in writing to the ENGINEER any conditions which will prevent proper completion of the Work. Failure to report any such conditions shall constitute acceptance of all site conditions, and any required removal, repair, or replacement caused by unsuitable conditions shall be performed by the CONTRACTOR within the scope of the Project.

1.03 INSPECTION AND TESTING

- A. The CITY will employ and pay for the services of an independent testing laboratory (TESTING LAB) for specified testing as specified by the ENGINEER. The Testing Lab shall be designated by City from an approved vendors list.
- B. The work or actions of the testing laboratory shall in no way relieve the CONTRACTOR of his obligations under the Contract. The laboratory testing work will include such inspections and testing required by the Contract Documents, existing laws, codes, ordinances, etc. The testing laboratory will have no authority to change the requirements of the Contract Documents, nor perform, accept or approve any of the CONTRACTOR's Work.
- C. The CONTRACTOR shall coordinate directly with the TESTING LAB and ENGINEER allowing ample time and opportunity for inspection and testing materials and equipment to be used in the Work. The CONTRACTOR shall advise the ENGINEER promptly upon placing orders for materials and equipment so that arrangements may be made, if

desired, for inspection before shipment from the place of manufacture. The CONTRACTOR shall at all times furnish the TESTING LAB, ENGINEER and his representatives, facilities including labor, and allow proper time for inspecting and testing materials, equipment, and workmanship. The CONTRACTOR must anticipate that possible delays may occur in the execution of its work due to the necessity of materials and equipment being inspected and accepted for use. The CONTRACTOR shall furnish, at his own expense, all samples of materials required by the TESTING LAB and ENGINEER for testing, and shall make his own arrangements for providing water, electric power, or fuel for the various inspections and tests of structures and equipment.

- D. The CITY will bear the cost of all tests, inspections, or investigations undertaken by the order of the ENGINEER for the purpose of determining conformance with the Contract Documents if such tests, inspections, or investigations are not specifically required by the Contract Documents, and if conformance is ascertained thereby. Whenever nonconformance is determined by the ENGINEER as a result of such tests, inspections, or investigations, the CONTRACTOR shall bear the full cost of any additional tests and investigations, which are ordered by the ENGINEER to ascertain subsequent conformance with the Contract Documents.

1.04 RIGHT OF REJECTION

- A. The ENGINEER, acting for the CITY, shall have the right, at all times and places, to reject any articles or materials to be furnished hereunder which, in any respect, fail to meet the requirements of the Contract Documents, regardless of whether the defects in such articles or materials are detected at the point of manufacture or after completion of the Work at the site. If the ENGINEER or its representative, through an oversight or otherwise, has accepted materials or Work which is defective or which is contrary to the Contract Documents, such materials, no matter in what stage or condition of manufacture, delivery, or erection, may be subsequently rejected by the ENGINEER for the CITY.
- B. The CONTRACTOR shall promptly remove rejected articles or materials from the site of the Work after notification of rejection. All costs of removal and replacement of rejected articles or materials as specified herein shall be borne by the CONTRACTOR.

1.05 OTHER CONSTRUCTION CONSIDERATIONS

- A. Cutting and Patching: The CONTRACTOR shall perform all cutting and patching of the Work that may be required to make its several parts come together properly and fit it to receive or be received by such other work. The CONTRACTOR shall not endanger any work of others by cutting, excavating or otherwise altering their work and shall only cut or alter work with the written consent of the ENGINEER and of the other contractors whose work will be affected.
- B. Sleeves and Openings: The CONTRACTOR shall provide all openings, chases, etc., to fit its own work and that of any other subcontractors and contractors. All such openings or chases shown on the Contract Drawings, or reasonably implied thereby, or as confirmed or modified by acceptable shop, setting or erecting drawings, shall be provided by the CONTRACTOR.
- C. Where pipes or conduits are to pass through slabs or walls, or where equipment frames or supports are to be installed as integral part of an opening, the sleeves, openings, forms or frames shall be furnished by the installer of the pipes, conduits or equipment, but shall be placed by the CONTRACTOR. Where hanger inserts, anchor bolts and similar items are to be embedded in concrete as an integral part of a slab or wall, they

shall be furnished by the installer of the pipe or other equipment requiring the hanger, etc., but shall be placed by the CONTRACTOR.

- D. Any cost resulting from correction of defective, ill-timed, or mislocated work or for subsequent work which becomes necessary because of omitted openings, chases, sleeves, frames, inserts, etc., shall be borne by the CONTRACTOR or subcontractor responsible therefor. The CONTRACTOR shall not arbitrarily cut, drill, alter, damage, or otherwise endanger the work of another contractor. In no case shall beams, lintels, or other structural members be cut without the proper authorization of the ENGINEER. The nature and extent of any corrective or additional work shall be subject to the acceptance of the ENGINEER following consultation with the affected parties.
- E. Weather Conditions: Work that may be affected by inclement weather shall be suspended until proper conditions prevail. In the event of impending storms, the CONTRACTOR shall take necessary precautions to protect all work, materials and equipment from exposure.
- F. Fire Protection: The CONTRACTOR shall take all necessary precautions to prevent fires at or adjacent to the Work, including its own buildings and trailers. Adequate fire extinguisher and hose line stations shall be provided throughout the work area.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

- END OF SECTION -

SECTION 01510 - TEMPORARY UTILITIES

PART 1 - GENERAL

1.01 WORK INCLUDED

- A. It shall be the CONTRACTOR's responsibility to provide plant and equipment that is adequate for the performance of the Work under this Contract within the time specified. All plant and equipment shall be kept in satisfactory operating condition, shall be capable of safely and efficiently performing the required Work, and shall be subject to inspection and review by the CITY's representative at any time within the duration of the Contract. All Work hereunder shall conform to the applicable requirements of the OSHA Standards for Construction.
- B. The CONTRACTOR shall provide for utilities and services for its own operations, as noted below. The CONTRACTOR shall furnish, install and maintain all temporary utilities during the contract period including removal upon completion of the Work.

1.02 POWER AND LIGHTING

- A. Electricity will be furnished free of charge by the CITY for hand tools, but not welders, where outlet source is available and approved by the ENGINEER. Electricity for testing and start-up of equipment will be furnished by the CITY.
- B. Construction Lighting: All Work conducted at night or under conditions of deficient daylight shall be suitably lighted to insure proper Work and to afford adequate facilities for inspection and safe working conditions. Temporary lighting shall be maintained during nonworking periods if the area is subject to access by the public or plant personnel.
- C. Electrical Connections: All temporary connections for electricity shall be subject to review by the ENGINEER and the power company representative, and shall be removed in like manner at the CONTRACTOR's expense prior to final acceptance of the Work.
- D. Separation of Circuits: Unless otherwise permitted by the ENGINEER, circuits separate from lighting circuits shall be used for all power purposes.
- E. Construction Wiring: All wiring for temporary electric light and power shall be properly installed and maintained and shall be securely fastened in place. All electrical facilities shall conform to the requirements of Subpart K of the OSHA Safety and Health Standards for Construction.

1.03 WATER SUPPLY

- A. The CITY will furnish water for general construction purposes for this Project free of charge from the most convenient source or through existing piping. All water used, however, **must be metered through a CITY meter**. The CONTRACTOR shall contact the CITY Engineering Division (Public Services Admin Bldg, 17050 NE 19th Avenue, 1st Floor Lobby, North Miami Beach, FL 33162, 305-948-2980) in order to obtain a construction meter. A deposit will be required to be paid by the CONTRACTOR for each construction meter used.

Failure of the CONTRACTOR to meter the water, or providing others with water, could result in his being fined and/or a citation being issued against him in accordance with the rules and regulations of the City of North Miami Beach.

- B. All temporary piping, valves, hoses, equipment, and other items required for handling the water shall be furnished by the CONTRACTOR. Under no circumstances shall the CONTRACTOR utilize a water source until such source has been approved for use by the ENGINEER.
 - C. Care shall be exercised in the use of water and provision shall be made to protect the water supply from contamination and indiscriminate use by unauthorized persons. The CONTRACTOR shall use only potable water.
 - D. Potable Water: All drinking water on the site during construction shall be furnished by the CONTRACTOR and shall be bottled water or water furnished in suitable dispensers.
 - E. Removal of Water Connections: Before final acceptance of the Work on the project, all temporary connections and piping installed by the CONTRACTOR shall be entirely removed, and all affected improvements shall be restored to their original condition, or better, to the satisfaction of the ENGINEER and to the CITY.
- 1.04 TEMPORARY VENTILATION
- A. The CONTRACTOR shall provide and maintain adequate ventilation for a safe working environment. In addition, forced air ventilation shall be provided for the curing of installed materials, humidity control and the prevention of hazardous accumulations of dust, gases or vapors.
- 1.05 COMMUNICATIONS
- A. Telephone Services: The CONTRACTOR shall provide and maintain at all times during the progress of the Work not less than one telephone in good working order, at the site of the Work included in the Contract.
- 1.06 TEMPORARY FENCING:
- A. Provide commercial grade temporary fence to prevent trespass by workmen and suppliers onto private property and the public from construction site. Fencing shall be approved by the ENGINEER.
 - B. Provide 6 foot high fence around construction site. Equip fence with vehicular and pedestrian gates with locks.
 - C. Coordinate location of temporary fencing with Owner (Engineer).

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

- END OF SECTION -

SECTION 01530 - PROTECTION OF EXISTING FACILITIES

PART 1 - GENERAL

1.01 WORK INCLUDED

- A. The CONTRACTOR shall protect all existing utilities and improvements not designated for removal and shall restore damaged or temporarily relocated utilities and improvements to a condition equal to or better than they were prior to such damage or temporary relocation, all in accordance with requirements of the Contract Documents.
- B. The CONTRACTOR shall verify the exact locations and depths of all utilities shown and the CONTRACTOR shall make exploratory excavations of all utilities that may interfere with the Work. All such exploratory excavations shall be performed as soon as practicable after award of Contract and, in any event, a sufficient time in advance of construction to avoid possible delays to the CONTRACTOR's Work. When such exploratory excavations show the utility location as shown to be in error, the CONTRACTOR shall so notify the ENGINEER.
- C. The number of exploratory excavations required shall be that number which is sufficient to determine the alignment and grade of the utility.

1.02 RIGHTS-OF-WAY

- A. The CONTRACTOR shall not do any Work that would affect any oil, gas, sewer, or water pipeline; any telephone, telegraph, or electric transmission line; any fence; or any other structure, nor shall the CONTRACTOR enter upon the rights-of-way involved until notified by the ENGINEER that the CITY has secured authority therefor from the proper party. After authority has been obtained, the CONTRACTOR shall give said party due notice of its intention to begin Work, and shall give said party convenient access and every facility for removing, shoring, supporting, or otherwise protecting such pipeline, transmission line, ditch, fence, or structure, and for replacing same. When 2 or more contracts are being executed at one time on the same or adjacent land in such manner that Work on one contract may interfere with that on another, the CITY shall determine the sequence and order of the Work.

When the territory of one contract is the necessary or convenient means of access for the execution of another contract, such privilege of access or any other reasonable privilege may be granted by the CITY to the CONTRACTOR so desiring, to the extent, amount, in the manner, and at the times permitted. No such decision as to the method or time of conducting the Work or the use of territory shall be made the basis of any claim for delay or damage.

1.03 PROTECTION OF STREET OR ROADWAY MARKERS

- A. The CONTRACTOR shall not destroy, remove, or otherwise disturb any existing survey markers or other existing street or roadway markers without proper authorization. No pavement breaking or excavation shall be started until all survey or other permanent marker points that will be disturbed by the construction operations have been properly referenced for easy and accurate restoration. It shall be the CONTRACTOR's responsibility to notify the proper representatives of the CITY of the time and location that Work will be done. Such notification shall be sufficiently in advance of construction so that there will be no delay due to waiting for survey points to be satisfactorily referenced for restoration. All survey markers or points disturbed by the CONTRACTOR

without proper authorization by the ENGINEER, will be accurately restored by the CITY at the CONTRACTOR's expense after all pump station work has been completed.

1.04 RESTORATION OF PAVEMENT

- A. General: All paved areas including damaged during construction shall be replaced with similar materials and of equal thickness to match the existing adjacent undisturbed areas, except where specific resurfacing requirements have been called for in the Contract Documents or in the requirements of the agency issuing the permit. All temporary and permanent pavement shall conform to the requirements of the affected pavement owner. All pavements which are subject to partial removal shall be neatly saw cut in straight lines.
- B. Temporary Resurfacing: Wherever required by the public authorities having jurisdiction, the CONTRACTOR shall place temporary surfacing promptly after backfilling and shall maintain such surfacing for the period of time fixed by said authorities before proceeding with the final restoration of improvements.
- C. Permanent Resurfacing: In order to obtain a satisfactory junction with adjacent surfaces, the CONTRACTOR shall saw cut back and trim the edge so as to provide a clean, sound, vertical joint before permanent replacement of an excavated or damaged portion of pavement. Damaged edges of pavement along excavations and elsewhere shall be trimmed back by saw cutting in straight lines. All pavement restoration and other facilities restoration shall be constructed to finish grades compatible with adjacent undisturbed pavement.
- D. Restoration of Sidewalks or Private Driveways: Wherever sidewalks or private roads have been damaged during construction, the CONTRACTOR shall place suitable temporary sidewalks or roadways promptly after backfilling and shall maintain them in satisfactory condition for the period of time fixed by the authorities having jurisdiction over the affected portions before proceeding with the final restoration or, if no such period of times is so fixed, the CONTRACTOR shall maintain said temporary sidewalks or roadways until the final restoration thereof has been made.

1.05 EXISTING UTILITIES AND IMPROVEMENTS

- A. General: The CONTRACTOR shall protect all underground utilities and other improvements which may be impaired during construction operations. It shall be the CONTRACTOR's responsibility to ascertain the actual location of all existing utilities and other improvements that will be encountered in its construction operations, and to see that such utilities or other improvements are adequately protected from damage due to such operations. The CONTRACTOR shall take all possible precautions for the protection of unforeseen utility lines to provide for uninterrupted service and to provide such special protection as may be necessary.
- B. Utilities to be Moved: In case it shall be necessary to move the property of any public utility or franchise holder, such utility company or franchise holder will, upon request of the CONTRACTOR, be notified by the CITY to move such property within a specified reasonable time. When utility lines that are to be removed are encountered within the area of operations, the CONTRACTOR shall notify the ENGINEER a sufficient time in advance for the necessary measures to be taken to prevent interruption of service.
- C. Where the proper completion of the Work requires the temporary or permanent removal and/or relocation of an existing utility or other improvement which is shown, the CONTRACTOR shall remove and, without unnecessary delay, temporarily replace or

relocate such utility or improvement in a manner satisfactory to the ENGINEER and the owner of the facility. In all cases of such temporary removal or relocation, restoration to former location shall be accomplished by the CONTRACTOR in a manner that will restore or replace the utility or improvement as nearly as possible to its former locations and to as good or better condition than found prior to removal.

- D. CITY's Right of Access: The right is reserved to the CITY and to the owners of public utilities and franchises to enter at any time upon any public street, alley, right-of-way, or easement for the purpose of making changes in their property made necessary by the Work of this Contract.
- E. Underground Utilities Shown or Indicated: Existing utility lines that are shown or the locations of which are made known to the CONTRACTOR prior to excavation and that are to be retained, and all utility lines that are constructed during excavation operations shall be protected from damage during excavation and backfilling and, if damaged, shall be immediately repaired by the CONTRACTOR.
- F. Underground Utilities Not Shown or Indicated: In the event that the CONTRACTOR damages any existing utility lines that are not shown or the locations of which are not made known to the CONTRACTOR prior to excavation, a written report thereof shall be made immediately to the ENGINEER. If directed by the ENGINEER, repairs shall be made by the CONTRACTOR under the provisions for changes and extra Work contained the General Conditions.
- G. All costs of locating, repairing damage not due to failure of the CONTRACTOR to exercise reasonable care, and removing or relocating such utility facilities not shown in the Contract Documents with reasonable accuracy, and for equipment on the project which was actually working on that portion of the Work which was interrupted or idled by removal or relocation of such utility facilities, and which was necessarily idled during such Work will be paid for as extra Work in accordance with the provisions of the General Conditions. Compensation shall not include CONTRACTOR's costs for the coordination of his activities with the utility company affected. CONTRACTOR shall schedule his work in such a manner that he is not delayed by the utilities companies relocating or supporting their facilities. No compensation will be paid the CONTRACTOR for any loss of time or delay associated with CONTRACTOR scheduling.
- H. Approval of Repairs: All repairs to a damaged improvement are subject to inspection and approval by an authorized representative of the improvement owner before being concealed by backfill or other Work.
- I. Maintaining in Service: All power, telephone or other communication cable ducts, gas and water mains, irrigation lines, sewer lines, storm drain lines, poles, and overhead power and communication wires and cables encountered along the line of the Work shall remain continuously in service during all the operations under the Contract, unless other arrangements satisfactory to the ENGINEER are made with the owner of said pipelines, duct, main, irrigation line, sewer, storm drain, pole, or wire or cable. The CONTRACTOR shall be responsible for and shall repair all damage due to its operations, and the provisions of this Section shall not be abated even in the event such damage occurs after backfilling or is not discovered until after completion of the backfilling.

1.06 TREES WITHIN STREET RIGHTS-OF-WAY AND PROJECT LIMITS

- A. General: The CONTRACTOR shall exercise all necessary precautions so as not to damage or destroy any trees or shrubs, including those lying within street rights-of-way and project limits, and shall not trim or remove any trees unless such trees have been approved for trimming or removal by the jurisdictional agency or CITY. All existing trees and shrubs which are damaged during construction shall be trimmed or replaced by the CONTRACTOR or a certified tree company under permit from the jurisdictional agency or CITY and to the satisfaction of said agency and/or the CITY. Tree trimming and replacement shall be accomplished in accordance with the following paragraphs.
- B. Trimming: Symmetry of the tree shall be preserved; no stubs or splits or torn branches left; clean cuts shall be made close to trunk or large branch. Spikes shall not be used for climbing live trees. All cuts over 1-1/2 inches in diameter shall be coated with an asphaltic emulsion material.
- C. Replacement: The CONTRACTOR shall immediately notify the jurisdictional agency and/or the CITY if any tree is damaged by the CONTRACTOR's operations. If, in the opinion of said agency or the CITY, the damage is such that replacement is necessary, the CONTRACTOR shall replace the tree at its own expense. The tree shall be of a like size and variety as the tree damaged, or, if of a smaller size, the CONTRACTOR shall pay to the CITY of said tree compensatory payment acceptable to the tree owner, subject to the approval of the jurisdictional agency or CITY.

1.07 NOTIFICATION BY THE CONTRACTOR

- A. Prior to any excavation in the vicinity of any existing underground facilities, including all water, sewer, storm drain, gas, or other pipelines; all buried electric power, communications, or television cables; all traffic signal and street lighting facilities; and all roadway and state highway rights-of-way the CONTRACTOR shall notify the respective authorities representing the owners or agencies responsible for such facilities not less than 3 days nor more than 7 days prior to excavation so that a representative of said owners or agencies can be present during such Work if they so desire.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

- END OF SECTION -

SECTION 01550 - SITE ACCESS AND STORAGE

PART 1 - GENERAL

1.01 HIGHWAY LIMITATIONS

- A. The CONTRACTOR shall make its own investigation of the condition of available public and private roads and of clearances, restrictions, bridge load limits, and other limitations affecting transportation and ingress and egress to the site of the Work. It shall be the CONTRACTOR's responsibility to construct and maintain any haul roads required for its construction operations.

1.02 TEMPORARY CROSSINGS

- A. General: Wherever necessary or required for the convenience of the public or individual residents at street or highway crossings, private driveways, or elsewhere, the CONTRACTOR shall provide suitable temporary bridges over unfilled excavations, except in such cases as the CONTRACTOR shall secure the written consent of the individuals or authorities concerned to omit such temporary bridges, which written consent shall be delivered to the ENGINEER prior to excavation. All such bridges shall be maintained in service until access is provided across the backfilled excavation. Temporary bridges for street and highway crossing shall conform to the requirements of the authority having jurisdiction in each case, and the CONTRACTOR shall adopt designs furnished by said authority for such bridges, or shall submit designs to said authority for approval, as may be required.
- B. Street Use: Nothing herein shall be construed to entitle the CONTRACTOR to the exclusive use of any public street, alleyway, or parking area during the performance of the Work hereunder, and it shall so conduct its operations as not to interfere unnecessarily with the authorized work of utility companies or other agencies in such streets, alleys, ways, or parking areas. No street shall be closed to the public without first obtaining permission of the ENGINEER and proper governmental authority. Where excavation is being performed in primary streets or highways, one lane in each direction shall be kept open to traffic at all times unless otherwise provided or shown. Toe boards shall be provided to retain excavated material if required by the ENGINEER or the agency having jurisdiction over the street or highway. Fire hydrants on or adjacent to the Work shall be kept accessible to fire-fighting equipment at all times. Temporary provisions shall be made by the CONTRACTOR to assure the use of sidewalks and the proper functioning of all gutters, sewer inlets, and other drainage facilities.
- C. Traffic Control: For the protection of traffic in public or private streets and ways, the CONTRACTOR shall provide, place, and maintain all necessary barricades, traffic cones, warning signs, lights, and other safety devices in accordance with the requirements of the "Manual of Uniform Traffic Control Devices, Part VI - Traffic Controls for Street and Highway Construction and Maintenance Operations," published by U.S. Department of Transportation, Federal Highway Administration (ANSI D6.1). The CONTRACTOR shall take all necessary precautions for the protection of the Work and the safety of the public. All barricades and obstructions shall be illuminated at night, and all lights shall be kept burning from sunset until sunrise. The CONTRACTOR shall station such guards or flaggers and shall conform to such special safety regulations relating to traffic control as may be required by the public authorities within their respective jurisdictions. All signs, signals, and barricades shall conform to the

requirements of Subpart G, Part 1926, of the OSHA Safety and Health Standards for Construction.

- D. Street Closure: If closure of any street is required during construction, a formal application for a street closure shall be made to the authority having jurisdiction at least 30 days prior to the required street closure in order to determine necessary sign and detour requirements.

1.03 CONTRACTOR'S WORK AND STORAGE AREA

- A. If the CONTRACTOR requires a staging area, the CONTRACTOR shall obtain such areas from off-site sources. The CONTRACTOR shall pay for any off site area it requires.
- B. Responsibility for protection and safekeeping of equipment and materials at or near the sites will be solely that of the CONTRACTOR and no claim shall be made against the CITY by reasons of any act of an employee or trespasser.
- C. Upon completion of the Contract, the CONTRACTOR shall remove from the storage areas all of their equipment, temporary fencing, surplus materials, rubbish, etc., and restore the areas.

1.04 STORED MATERIALS AND PAYMENT

- A. CONTRACTOR is required to carry insurance policies to cover all materials and equipment stored onsite or offsite. Coverage shall include physical loss or damage from transit, fire, lightning, extended coverage, theft, vandalism and malicious mischief, collapse, debris removal, demolition occasioned by enforcement of Laws and Regulations, water damage, and such other perils or causes of loss.
- B. Payment for materials or equipment stored onsite or offsite shall be permitted only with the satisfactory physical delivery being confirmed by the Engineer, materials and equipment are suitably stored in accordance with all manufacturer recommendations/requirements, and shall be accompanied by a bill of sale, invoice, or other documentation warranting that Owner has received the materials and equipment free and clear of all Liens and evidence that the materials and equipment are covered by appropriate property insurance or other arrangements to protect Owner's interest.
- C. In the case of long lead items that need to be ordered and stored in advance of construction work beginning, the CONTRACTOR shall notify the ENGINEER in writing of the circumstances and provide a justification for storage and payment of equipment or materials outside the approved sequence of work.

1.05 TRAFFIC CONTROL

- A. The CONTRACTOR shall maintain traffic and protect the public from all damage to persons and property within the Contract Limits, in accordance with all applicable state, local, and city regulations. The CONTRACTOR shall conduct its operations so as to maintain and protect access, for vehicular and pedestrian traffic, to and from all properties and business establishments and joining or adjacent to those streets affected by its operations, and to subject the public to a minimum of delay and inconvenience. Suitable signs, barricades, railing, etc., shall be erected and the Work outlined by adequate lighting at night. Danger lights shall be provided as required. Watchmen and flagmen shall be provided as may be necessary for the protection of traffic.

- B. All dirt or debris spilled from the CONTRACTOR's trucks on existing pavements shall be removed by the CONTRACTOR immediately.

1.06 SECURITY

- A. The CONTRACTOR shall employ watchmen and security guards as necessary to protect the job site against vandalism, burglary, theft, trespassing, etc. The CONTRACTOR shall care for and protect against loss or damage of all material to be incorporated in the construction for the duration of the project and shall repair or replace damaged or lost materials and damage to structures. The CONTRACTOR shall be responsible for providing, maintaining and securing gates used for construction purposes for the duration of the project.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

- END OF SECTION -

SECTION 01570 - MAINTENANCE OF TRAFFIC

PART 1 - GENERAL

1.01 DESCRIPTION OF WORK

- A. Provide all items necessary to protect, warn and/or maintain vehicular and pedestrian traffic during the course of construction.
- B. The CONTRACTOR shall arrange for the services of a Traffic Engineer/Consultant, registered as a Professional Engineer in the State of Florida or Certified by the State of Florida, to prepare detailed Maintenance of Traffic (MOT) Plans for permit approval by the City, the Florida Department of Transportation (FDOT), County Traffic Engineering Division, and other governmental agencies having jurisdiction prior to the start of construction activities.
- C. The Maintenance of Traffic Plan and all traffic warning and control devices shall conform to the applicable provisions of the latest editions of the national "Manual On Uniform Traffic Control Devices" (MUTCD), the 600 series of the Florida Department of Transportation's "Roadway and Traffic Design Standards", and County's Minimum Standards Applicable to Public Rights of Way.
- D. There will be no separate payment for the fee for Engineering Services, if required.

1.02 TRAFFIC PLAN

- A. The CONTRACTOR shall submit the detailed MOT Plans to the ENGINEER, City, County, and FDOT, as applicable for review and permit approval, **two weeks** before the Pre-Construction Meeting. The detailed MOT Plans must identify at a minimum; each phase of the work, traffic flows during each phase, the proposed location of construction signs, channelizing devices, temporary pavement markings and symbols, lighting devices, barrier walls, modifications to traffic signals and all other required devices as applicable. No work within the public right-of-way shall commence until the detailed M.O.T. Plans have been approved in writing by all governmental agencies having jurisdiction. Upon the start of construction, the CONTRACTOR shall comply with all provisions of the detailed Maintenance of Traffic Plans. In the event of non-compliance by the CONTRACTOR, the ENGINEER will have the authority to order the CONTRACTOR to cease construction operations without compensation of time or money until the violations have been corrected.
- B. The detailed Maintenance of Traffic Plan shall include provisions for pedestrian traffic as well as vehicular (including bus) traffic.
- C. The Maintenance of Traffic Plan shall show and describe proposed location and time durations of the following as applicable:
 - 1. Public vehicular traffic routing.
 - 2. Traffic blockage and lane closings anticipated due to construction operations.
 - 3. Staging/storage areas and haulage routes.
 - 4. Allowable on-street parking in vicinity of work site.
 - 5. Access to buildings adjacent to work site.
 - 6. Driveways which will be blocked by construction operations.

7. Temporary commercial and industrial loading and unloading zones.
8. Temporary traffic control and channelizing devices and markings.
9. Individual street closings with locations and time durations.
10. Detour facilities.

PART 2 - PRODUCTS

2.01 TRAFFIC CONTROL AND CHANNELIZING DEVICES

- A. Provide devices complying with the standards referenced in 1.01 C above as applicable.

PART 3 - EXECUTION

3.01 MAINTENANCE OF TRAFFIC

- A. The CONTRACTOR, at all times, shall conduct the work in such a manner as to insure the least obstruction to traffic as is practical. The safety and convenience of the general public and of the businesses adjacent to the work shall be provided for in a satisfactory manner, as determined by the ENGINEER, the City, the County, and FDOT.
- B. Sidewalks, gutters, drains, fire hydrants and private drives shall, insofar as practical, be kept in good condition for their intended uses. Fire hydrants on or adjacent to the work shall be kept accessible to fire apparatus at all times, and no material or obstruction shall be placed within ten (10) feet of any such hydrant.
- C. Construction materials temporarily stored within the road right-of-way shall be placed so as to cause as little obstruction to the general public as is reasonably possible.
- D. Streets shall not be closed, except in accordance with the approved MOT Plans, and whenever the street is not closed, the work must be conducted with the provision for a safe passageway for vehicular and pedestrian traffic at all times. The CONTRACTOR shall make all necessary arrangements with the City, the ENGINEER, County, and FDOT concerning maintenance of traffic and selection of detours required.
- E. All existing regulatory and information signs and traffic signals shall be maintained by the CONTRACTOR for as long as deemed necessary by the CONSULTANT. If any signs or signals are damaged or lost during the construction period, such signs and signals shall be repaired or replaced by the CONTRACTOR at CONTRACTOR's expense.

3.02 DIVERSION/DETOURING OF TRAFFIC

- A. When permission has been granted to close an existing roadway, the CONTRACTOR shall furnish and erect signs, channelizing devices, lights, flags and other protective devices, which shall conform to the requirements of Par. 1.01 C, and be subject to the approval of the City, the ENGINEER, County, and FDOT. The CONTRACTOR shall furnish and maintain proper protective devices at such locations for the entire time of closure as the CONSULTANT may direct.
- B. The CONTRACTOR shall furnish a sufficient number of protective devices to protect and divert the vehicular and pedestrian traffic from working areas closed to traffic, or to protect any new work. Failure to comply with this requirement will result in the City and/or ENGINEER shutting down the work, until the CONTRACTOR provides the necessary protection.
- C. Any time traffic is diverted for a period of time that will exceed one work day temporary pavement markings will be required. Existing pavement markings that conflict with the

new work zone traffic pattern must be obliterated. Painting over existing pavement markings (black out) is not permitted.

- D. The CONTRACTOR may be required to reposition existing traffic signal heads in order to maintain traffic flows at diverted intersections. If this should be necessary, the CONTRACTOR must submit a plan for approval showing the course of work, and the planned repositioning. Plan must be approved prior to implementation. No separate payment for repositioning the existing traffic signal heads will be made.

- END OF SECTION -

SECTION 01571 - TEMPORARY CONTROLS**PART 1 - GENERAL****1.01 REQUIREMENTS INCLUDED**

- A. Provide and maintain methods, equipment, and temporary construction, as necessary, to provide controls over environmental conditions at the construction site and related area under CONTRACTOR's control; remove physical evidence of temporary facilities at completion of work.

1.02 RELATED REQUIREMENTS

- A. All applicable sections of the Specifications.
- B. Conditions of the Contract.

1.03 NOISE CONTROL

- A. Provide all necessary requirements for noise control during the construction period.
 - 1. Noise procedures shall conform to all applicable OSHA requirements and local ordinances having jurisdiction on the work.
 - 2. Noise levels during night time hours shall not exceed 55 db measured at the property line of a residence.

1.04 DUST CONTROL

- A. Provide positive methods and apply dust control materials to minimize raising dust from construction operations, and provide positive means to prevent air-borne dust from dispersing into the atmosphere.

1.05 WATER CONTROL

- A. Provide methods to control surface water to prevent damage to the project, the site, or adjoining properties.
 - 1. Control fill, grading and ditching to direct surface drainage away from excavations, pits, tunnels and other construction areas; and to direct drainage to proper runoff.
- B. Provide, operate and maintain hydraulic equipment of adequate capacity to control surface and water.
- C. Dispose of drainage water in a manner to prevent flooding, erosion, or other damage to any portion of the site or to adjoining areas.

1.06 PEST CONTROL

- A. Provide pest control as necessary to prevent infestation of construction or storage area.
 - 1. Employ methods and use materials which will not adversely affect conditions at the site or on adjoining properties.
 - 2. Should the use of pesticides be considered necessary, submit an informational copy of the proposed program to OWNER with a copy to ENGINEER. Clearly indicate:

- a. the area or areas to be treated.
 - b. the pesticide to be used, with a copy of the manufacturer's printed instructions.
 - c. the pollution preventative measures to be employed.
 - B. The use of any pesticide shall be in full accordance with the manufacturer's printed instructions and recommendations.
- 1.07 RODENT CONTROL
 - A. Provide rodent control as necessary to prevent infestation of construction or storage area.
 1. Employ methods and use materials which will not adversely affect conditions at the site or on adjoining properties
 2. Should the use of rodenticide be considered necessary, submit an informational copy of the proposed program to CITY. Clearly indicate:
 - a. the area or areas to be treated.
 - b. the rodenticide to be used, with a copy of the manufacturer's printed instructions.
 - c. the pollution preventative measures to be employed.
 - B. The use of any rodenticide shall be in full accordance with the manufacturer's printed instructions and recommendations.
- 1.08 DEBRIS CONTROL
 - A. Maintain all areas under CONTRACTOR's control free of extraneous debris.
 - B. Initiate and maintain a specific program to prevent accumulation of debris at construction site, storage and parking area, or along access roads and haul routes.
 1. Provide containers for deposit of debris as specified in the Contract Documents.
 2. Prohibit overloading of trucks to prevent spillage on access and haul routes.
 - a. Provide periodic inspection of traffic areas to enforce requirements.
 - C. Schedule periodic collections and disposal of debris as specified in the Contract Documents.
 1. Provide additional collections and disposal of debris whenever the periodic schedule is inadequate to prevent accumulation.
- 1.09 POLLUTION CONTROL
 - A. Provide methods, means and facilities required to prevent contamination of soil, water or atmosphere by the discharge of noxious substances from construction operations.
 - B. Provide equipment and personnel, perform emergency measures required to contain any spillage, and to remove contaminated soils or liquids.
 1. Excavate and dispose of any contaminated earth off-site in accordance with regulatory requirements and replace with suitable compacted fill and topsoil.
 - C. Take special measures to prevent harmful substances from entering public waters.

1. Prevent disposal of wastes, effluents, chemicals, or other such substances adjacent to streams or in sanitary or storm sewers.
- D. Provide systems for control of atmospheric pollutants.
1. Prevent toxic concentrations of chemicals.
 2. Prevent harmful dispersal of pollutants into the atmosphere.
- 1.10 EROSION CONTROL
- A. Plan and execute construction and earthwork, by methods to control surface drainage from cuts and fills, and from borrow and waste disposal areas to prevent erosion and sedimentation.
1. Hold the areas of bare soil exposed at one time to a minimum.
 2. Provide temporary control measures such as berms, dikes and drains.
 3. Provide silt screens as required to prevent surface water contamination.
- B. Construct fills and waste areas by selective placement to eliminate surface silts which will erode.
- C. Periodically inspect earthwork to detect any evidence of the start of erosion, apply corrective measures as required to control erosion.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

- END OF SECTION -

SECTION 01600 - MATERIALS AND EQUIPMENT

PART 1 - GENERAL

1.01 GENERAL

- A. The word "Products," as used herein, is defined to include purchased items for incorporation into the Work, regardless of whether specifically purchased for project or taken from CONTRACTOR's stock of previously purchased products. The word "Materials," is defined as products which must be substantially cut, shaped, worked, mixed, finished, refined, or otherwise fabricated, processed, installed, or applied to form units of Work. The word "Equipment" is defined as products with operational parts, regardless of whether motorized or manually operated, and particularly including products with service connections (wiring, piping, and other like items). Definitions in this paragraph are not intended to negate the meaning of other terms used in Contract Documents, including "specialties," "systems," "structure," "finishes," "accessories," "furnishings," special construction," and similar terms, which are self-explanatory and have recognized meanings in the construction industry.

1.02 QUALITY ASSURANCE

- A. Source Limitations: To the greatest extent possible for each unit of Work, the CONTRACTOR shall provide products, materials, or equipment of a singular generic kind from a single source.
- B. Compatibility of Options: Where more than one choice is available as options for CONTRACTOR's selection of a product, material, or equipment, the CONTRACTOR shall select an option which is compatible with other products, materials, or equipment already selected. Compatibility is a basic general requirement of product/material selections.

1.03 DESIGN

- A. Equipment and appurtenances shall be designed in conformity with the ASME, AIEE, NEMA and other generally accepted applicable standards and shall be rugged construction and of sufficient strength to withstand all stresses which may occur during fabrication, testing, transportation, installation and all conditions of operation. All bearings and moving parts shall be adequately protected by bushings or other acceptable means against wear, and provision shall be made for adequate lubrication by readily accessible devices. Details shall be designed for appearance as well as utility. Protruding members, joints, corners, gear covers, etc., shall be finished in appearance.
- B. All corners of structural shapes shall be rounded or chamfered.

1.04 PRODUCT DELIVERY-STORAGE-HANDLING

- A. The CONTRACTOR shall deliver, handle, and store products in accordance with supplier's written recommendations and by methods and means which will prevent damage, deterioration, and loss including theft. Delivery schedules shall be controlled to minimize long-term storage of products at site and overcrowding of construction spaces. In particular, the CONTRACTOR shall provide delivery/installation coordination to ensure minimum holding or storage times for products recognized to be flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other sources of loss.

1.05 TRANSPORTATION AND HANDLING

- A. Products shall be transported by methods to avoid product damage and shall be delivered in undamaged condition in supplier's unopened containers or packaging, dry.
- B. The CONTRACTOR shall provide equipment and personnel to handle products, materials, and equipment including those provided by CITY, by methods to prevent soiling and damage.
- C. The CONTRACTOR shall provide additional protection during handling to prevent marring and otherwise damaging products, packaging, and surrounding surfaces.

1.06 STORAGE AND PROTECTION

- A. Products shall be stored in accordance with supplier's written instructions, with seals and labels intact and legible. Sensitive products shall be stored in weather-tight enclosures and temperature and humidity ranges shall be maintained within tolerances required by supplier's written instructions.
- B. For exterior storage of fabricated products, they shall be placed on sloped supports above ground. Products subject to deterioration shall be covered with impervious sheet covering; ventilation shall be provided to avoid condensation.
- C. Loose granular materials shall be stored on solid surfaces in a well-drained area and shall be prevented from mixing with foreign matter.
- D. Storage shall be arranged to provide access for inspection. The CONTRACTOR shall periodically inspect to assure products are undamaged and are maintained under required conditions.
- E. Storage shall be arranged in a manner to provide access for maintenance of stored items and for inspection.

1.07 STORED MATERIALS AND PAYMENT

- A. CONTRACTOR is required to carry insurance policies to cover all materials and equipment stored onsite or offsite. Coverage shall include physical loss or damage from transit, fire, lightning, extended coverage, theft, vandalism and malicious mischief, collapse, debris removal, demolition occasioned by enforcement of Laws and Regulations, water damage, and such other perils or causes of loss.
- B. Payment for materials or equipment stored onsite or offsite shall be permitted only with the satisfactory physical delivery being confirmed by the Engineer, materials and equipment are suitably stored in accordance with all manufacturer recommendations/requirements, and shall be accompanied by a bill of sale, invoice, or other documentation warranting that Owner has received the materials and equipment free and clear of all Liens and evidence that the materials and equipment are covered by appropriate property insurance or other arrangements to protect Owner's interest.
- C. In the case of long lead items that need to be ordered and stored in advance of construction work beginning, the CONTRACTOR shall notify the ENGINEER in writing of the circumstances and provide a justification for storage and payment of equipment or materials outside the approved sequence of work.

1.08 MAINTENANCE OF STORAGE

- A. Stored products shall be inspected on a regularly scheduled basis. The CONTRACTOR shall follow all required/recommended storage requirements such as environmental controls (air conditioning), periodic rotation of moving parts, lubrication, etc. The

CONTRACTOR shall maintain a log of inspections and shall make said log available to the ENGINEER on request.

- B. The CONTRACTOR shall verify that storage facilities comply with supplier's product storage requirements.
- C. The CONTRACTOR shall verify that supplier/manufacturer required environmental conditions are maintained continually.
- D. The CONTRACTOR shall verify that surfaces of products exposed to the elements are not adversely affected and that any weathering of finishes is acceptable under requirements of Contract Documents.

1.09 MAINTENANCE OF EQUIPMENT STORAGE

- A. For mechanical and electrical equipment in long-term storage, the CONTRACTOR shall provide a copy of the supplier's service instructions to accompany each item, with notice on enclosed instruction shown on exterior of package.
- B. Equipment shall be serviced on a regularly scheduled basis, and a log of services shall be maintained and submitted as a record document to the ENGINEER.

1.10 LUBRICANTS

- A. During testing and prior to acceptance, the CONTRACTOR shall furnish all lubricants necessary for the proper lubrication of all equipment furnished under this Contract.

1.11 SPECIAL TOOLS

- A. For each type of equipment furnished by him, the CONTRACTOR shall provide a complete set of all special tools (including calibration and test equipment) which may be necessary for the adjustment, operation, maintenance and disassembly of such equipment.
- B. Special tools shall be delivered at the same time as the equipment to which they pertain. The CONTRACTOR shall properly store and safeguard such special tools until completion of the Work, at which time they shall be delivered to the CITY.

1.12 PROTECTION AGAINST ELECTROLYSIS

- A. Where dissimilar metals are used in conjunction with each other, suitable insulation shall be provided between adjoining surfaces so as to eliminate direct contact and any resultant electrolysis. The insulation shall be bituminous impregnated felt, heavy bituminous coatings, nonmetallic separators or washers, or other acceptable materials.

1.13 FASTENERS

- A. All necessary bolts, anchor bolts, nuts, washers, plates and bolt sleeves shall be furnished by the CONTRACTOR in accordance herewith. Bolts shall have suitable washers and, where so required, their nuts shall be hexagonal.
- B. All bolts, anchor bolts, nuts, washers, plates, and bolt sleeves shall be Type 316 stainless steel unless otherwise specifically indicated or specified.
- C. Unless otherwise specified, stud, tap, and machine bolts shall be of the best quality refined bar iron. Hexagonal nuts of the same quality of metal as the bolts shall be used.

1.14 SALVAGED AND EXCAVATED MATERIALS

- A. In the absence of special provisions in other Sections of the Specifications, salvage materials, equipment or supplies that occur are the property of the CITY and shall be cleaned and stored as directed by the ENGINEER.
- B. All excavated materials needed for backfilling operation shall be stored on site. Where additional area is needed for stockpiling, it shall be obtained by the CONTRACTOR.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

- END OF SECTION -

SECTION 01700 - PROJECT CLOSEOUT

PART 1 - GENERAL

1.01 SCOPE OF WORK

- A. The Work of Project Closeout consists of completion of project requirements that must be fulfilled near the end of the Contract Time in preparation for final acceptance and occupancy of the project by the CITY as well as final payment to the CONTRACTOR and normal termination of the Contract.

1.02 SUBSTANTIAL COMPLETION

- A. When CONTRACTOR determines that the Work is substantially complete, he shall submit to ENGINEER a written notice that the Work or designated portion thereof, is substantially complete. The notice shall be accompanied by a report of the results of inspection, testing and adjustments of the completed systems, a list of items to be completed or corrected, the required record closeout documents and all special tools, spare parts, extra stock, maintenance materials, keys and similar operational items, as applicable.
- B. ENGINEER will review the documents submitted and, accompanied by the CONTRACTOR, will conduct a construction review to determine the status of completion. If incomplete, the CONTRACTOR shall remedy the deficiencies encountered and the ENGINEER will again review the Work.
- C. The process will be repeated until ENGINEER determines that the Work is substantially complete, at which time he will issue to CONTRACTOR, with copy to CITY, a Certificate of Substantial Completion along with a punchlist of items to be completed or corrected. If, upon Substantial Completion the CITY occupies the Work, the CITY will allow CONTRACTOR reasonable access to complete or correct punchlist items and other related Work.
- D. In the event such occupancy by the CITY is planned, the Certificate of Substantial Completion shall include a written recommendation as to the division of responsibilities and liabilities pending final acceptance between CITY and CONTRACTOR with respect to security, operation, safety, maintenance, utilities, insurance, warranties and guarantees for their written acceptance. However, no occupancy or separate operation of part of the Work will be accomplished prior to compliance with Contract requirements in respect of property insurance. No such use or occupancy shall commence before the insurers have acknowledged notice thereof and in writing effected the changes in coverage necessitated thereby by endorsement on the property insurance policy or policies. Such policy or policies shall not be cancelled or lapse on account of any such partial use or occupancy.

1.03 FINAL CONSTRUCTION REVIEW

- A. When Work is complete, including the punchlist items, CONTRACTOR shall notify ENGINEER in writing that the Work is completed and ready for final construction review. ENGINEER, accompanied by the CONTRACTOR, will make a final construction review to verify status of completion with reasonable promptness and when satisfied that the Work is acceptable under the Contract Documents, he will so advise CITY and CONTRACTOR.
- B. If, during construction operations or during construction reviews for substantial or final completion, the ENGINEER should fail to reject defective Work or materials, such failure to reject shall in no way prevent his later rejection when such defect is discovered, or obligate

CITY to final acceptance. CONTRACTOR shall make no claim for losses suffered due to any necessary removals or repairs of such defects.

1.04 CONTRACTOR'S CLOSEOUT SUBMITTALS

- A. Upon receipt of notice of acceptability from ENGINEER, CONTRACTOR shall assemble, for submittal along with the Final Application for Payment, evidence of compliance with requirements of governing authorities and Contract Documents, as follows:
1. Project Record Documents including As-built Drawings and Specifications, Addenda, Construction Schedule, Change Orders and other modifications of the Contract, Approved Shop Drawings, Product Data and Samples, and Field Test records.
 2. Operating and Maintenance Instructions: Submit instructions and/or manuals for operating equipment and systems as prepared in accordance with the requirements of the applicable equipment specifications sections.
 3. Warranties and Bonds: As applicable and in accordance with the requirements of the individual sections of the specifications.
 4. Evidence of payment to subcontractors, testing laboratories, material men and equipment suppliers and releases of liens therefrom.
- B. During the construction process, CONTRACTOR shall maintain records of all deviations from the Plans and Specifications and prepare therefrom Record Drawings showing correctly and accurately all changes and deviations made during construction to reflect the Work as it was actually constructed. The record drawings shall identify all underground piping and ductwork with elevations and dimensions and locations of valves, pull boxes, etc., changes in location, horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements, actual installed pipe material, class, etc. CONTRACTOR shall prepare these drawings to conform to recognized standards of drafting, to be neat, legible and on standard size project plan sheets. As a prerequisite for monthly progress payments, CONTRACTOR shall submit, simultaneously with the progress payment request, a copy of the currently updated Record Drawings for review by the ENGINEER. Final payment to the CONTRACTOR will not be made until the completed set of record drawings, signed and sealed by a professional engineer or land surveyor registered in the State of Florida and approved by the ENGINEER as to form and accuracy has been delivered to the CITY.

1.05 FINAL ADJUSTMENTS OF ACCOUNTS

- A. CONTRACTOR shall submit a final statement of accounting along with the Final Application for Payment to ENGINEER, reflecting all adjustments to Contract Sum and the ENGINEER, upon verifying the claim, will submit the approved document to CITY for payment.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

- END OF SECTION -

SECTION 02050 - DEMOLITION**PART 1 - GENERAL****1.01 THE REQUIREMENT**

- A. The CONTRACTOR shall remove and dispose of or salvage any existing structure, piping, conduits, electrical equipment, mechanical equipment, or appurtenances or portions thereof, as shown on the Drawings or required to complete the project.
- B. All materials designated for disposal shall, when released by the ENGINEER, become the CONTRACTOR's property and shall be removed from the site to the CONTRACTOR's own place of disposal.

1.02 RELATED WORK SPECIFIED ELSEWHERE

(Not Used)

1.03 SUBMITTALS

- A. The CONTRACTOR shall submit for review, in accordance with Section 01300, "Submittals" the proposed methods, equipment and operation sequence. Include coordination for shut-off, temporary services, continuation of service and other applicable items to ensure no interruption of operations except as hereinbefore specified.

1.04 JOB CONDITIONS

- A. Protection: The CONTRACTOR shall execute the demolition and removal work to prevent damage or injury to structures, occupants thereof and adjacent features which might result from falling debris or other causes, and so as not to interfere with the use, and free and safe passage to and from adjacent structures.
- B. Closing or obstructing of roadways adjacent to the work by the placement or storage of materials will not be permitted. All operations shall be conducted with a minimum interference to traffic on these ways.
- C. The CONTRACTOR shall repair damage done to facilities to remain, or to any property belonging to the CITY.
- D. Scheduling: The CONTRACTOR shall carry out his operations so as to avoid interference with operations and work in the existing facilities.
- E. Notification: At least 48 hours prior to commencement of a demolition or removal, the CONTRACTOR shall notify the ENGINEER in writing of his proposed schedule therefor. No removals shall be started until it is acceptable to the ENGINEER.

1.05 DUST CONTROL

- A. The CONTRACTOR shall use temporary enclosures and other suitable methods to limit the amount of dust and dirt rising and scattering in the air to the lowest practical level. Existing electrical and mechanical equipment to remain shall be protected from damage, dust, and debris.

PART 2 - PRODUCTS

(Not Used)

PART 3 - EXECUTION

3.01 GENERAL

- A. Prior to commencing work, the CONTRACTOR shall check all underground and exposed existing utility in any way associated or in the proximity to the items to be removed and shall verify that the piping is inactive (abandoned) and that electric power to equipment, lighting, controls, etc., has been permanently disconnected. Active services shall be brought to the attention of the CITY for proper action.
- B. The CONTRACTOR shall remove all equipment and accessories in a workmanlike manner and shall take all necessary precautions to avoid damaging existing equipment, piping, and structure which are to be retained. Damages shall be repaired or replaced at the expense of the CONTRACTOR.
- C. The CONTRACTOR shall proceed with the removal of the structures, equipment, piping, and appurtenances in a sequence designed to maintain continuous operation.

3.02 UNAUTHORIZED REMOVAL

- A. Any equipment, piping and appurtenances removed without proper authorization, shall be replaced to the satisfaction of the CITY at no cost to the CITY.

3.03 SALVAGED ITEMS

- A. Items noted on the Drawings to be salvaged shall remain the property of the CITY. Valves shall be salvaged when located on pipelines shown to be demolished. The CONTRACTOR shall carefully move salvaged equipment to a CITY designated off-site location.

3.04 DEMOLITION

- A. All materials and equipment shown on the Drawings to be removed or demolished shall become the property of the CONTRACTOR, with exception of items noted on Drawings to be salvaged or items tagged on site by CITY personnel. The CONTRACTOR shall dispose of all demolition materials, equipment, debris and all other items off the project site and in conformance with all existing applicable laws and regulations.

3.05 STRUCTURAL REMOVALS

- A. The CONTRACTOR shall remove structures to the lines and grades shown, unless otherwise indicated by the ENGINEER.
- B. All wood, concrete, brick, tile, concrete block, roofing materials, reinforcement, structural or miscellaneous metals, plaster, wire mesh and other items contained in or upon the structure shall be removed and taken from the project site. These items shall not be used in backfill.
- C. Finishes: After removal of parts or all of masonry walls, slabs and like work, which tie into new work or existing work, the point of junction shall be neatly repaired so as to leave only finished edges and surface exposed.

3.06 MECHANICAL REMOVALS

(Not Used)

3.07 ELECTRICAL REMOVALS

(Not Used)

3.08 REPAIR WORK

- A. Surfaces of walls, or floors, which are exposed by any of the removals specified herein, and which have holes, scars, chipped or other damaged surfaces revealed by the removal, shall be repaired by the CONTRACTOR as specified in Division 3.

3.09 CLEANUP

- A. The CONTRACTOR shall remove from the project site all debris resulting from the demolition and removal operations as it accumulates. Upon completion of the demolition work, all materials, equipment, waste and debris of every sort shall be removed and the premises shall be left clean, neat and orderly.

- END OF SECTION -

SECTION 02222 - EXCAVATION AND BACKFILL FOR UTILITIES**PART 1 - GENERAL****1.01 WORK INCLUDED**

- A. Excavate, grade and backfill as required for the site underground piping systems, as shown on the Drawings and specified herein.

1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Clearing and Grubbing
- B. Piping, General
- C. Cast-in-Place Concrete
- D. Electrical Work

1.03 SUBMITTALS

- A. General: Submit information and samples to the ENGINEER for review as specified herein in accordance with the Section 01300, "Submittals".
- B. Dewatering: The CONTRACTOR shall submit to the ENGINEER his proposed methods of handling trench water and the locations at which the water will be disposed of. Methods shall be acceptable to the ENGINEER before starting the excavation. It shall be the CONTRACTOR's responsibility to obtain all the necessary dewatering permits from the appropriate permitting agencies prior to starting excavation. (Dewater permits shall be obtained by contractor from appropriate permitting agencies.)
- C. Bedding and Backfill Materials: The CONTRACTOR shall notify the ENGINEER of the off-site sources of bedding and backfill materials, and submit to the ENGINEER a representative sample weighing approximately 50 lbs.
- D. Sheeting System: Drawings of any proposed sheeting system and design computations shall be submitted to the ENGINEER; however, the review of these Drawings shall in no way relieve the CONTRACTOR of the responsibility to provide a safe and satisfactory sheeting and shoring system. Sheeting and shoring shall be designed by the CONTRACTOR, and the proposed design shall be sealed by a Professional Engineer registered in the State of Florida. If the ENGINEER is of the opinion that at any point sufficient or proper supports have not been provided, he may order additional supports put in at the CONTRACTOR's expense.

1.04 QUALITY CONTROL

- A. An independent testing laboratory will be retained by the CITY to do appropriate testing as described in Section 01400, "Testing and Quality Control". The CONTRACTOR shall schedule his Work so as to permit a reasonable time for testing before placing succeeding lifts and shall keep the laboratory informed of his progress.

1.05 GROUNDWATER

- A. The CONTRACTOR shall be responsible for anticipating groundwater conditions and shall provide positive control measures as required. Such measures shall ensure stability of excavations, groundwater pressure control, prevention of tanks, pipes, and other structures from being lifted by hydrostatic pressures, and avoiding the disturbance of subgrade bearing materials.

1.06 TRENCH SAFETY ACT COMPLIANCE

- A. The CONTRACTOR by signing and executing the contract is, in writing, assuring that he will perform any trench excavation in accordance with the Florida Trench Safety Act, Section 553.60 et. seq. The CONTRACTOR further identified the separate item(s) of cost of compliance with the applicable trench safety standards as well as the method of compliance as noted on Sheet P-8 of the Contract front-end document.

The CONTRACTOR acknowledges that this cost is included in the applicable items of the Proposal and Contract and in the Grand Total Bid and Contract Price.

- B. The CONTRACTOR is, and the CITY and ENGINEER are not, responsible to review or assess the CONTRACTOR's safety precautions, programs or costs, or the means, methods, techniques or technique adequacy, reasonableness of cost, sequences or procedures of any safety precaution, program or cost, including but not limited to, compliance with any and all requirements of Florida Statute Section 553.60 et. seq. cited as the "Trench Safety Act". The CONTRACTOR is, and the CITY and ENGINEER are not, responsible to determine if any safety or safety related standards apply to the project, including but not limited to, the "Trench Safety Act".

1.07 PROTECTION OF PROPERTY AND STRUCTURES

- A. The CONTRACTOR shall, at his own expense, sustain in place and protect from direct or indirect injury, all pipes, poles, conduits, walls, buildings, and all other structures, utilities, and property in the vicinity of his work. Such sustaining shall be done by the CONTRACTOR. The CONTRACTOR shall take all risks attending the presence or proximity of pipes, poles, conduits, walls, buildings, and all other structures, utilities, and property in the vicinity of his work. Such sustaining shall be done by the CONTRACTOR. The CONTRACTOR shall take all risks attending the presence or proximity of pipes, poles, conduits, walls, buildings, and all other structures, utilities, and property in the vicinity of his work. He shall be responsible for all damage, and assume all expenses, for direct or indirect injury and damage, caused by his work, to any such pipe, structures, etc., or to any person or property, by reason of injury to them, whether or not such structures, etc., are shown on the Drawings.
- B. Barriers shall be placed at each end of all excavations and at such places as may be necessary along excavations to warn all pedestrian and vehicular traffic of such excavations. Barricades with flashing lights shall also be placed along excavation from sunset each day to sunrise of the next day until such excavation is entirely refilled, compacted, and paved. All excavations shall be barricaded where required to meet OSHA, local and Federal Code requirements, in such a manner to prevent persons from falling or walking into any excavation within the pump station fenced property.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. General: Materials shall be furnished as required from on-site excavations or from acceptable off-site sources as required. The CONTRACTOR shall notify the ENGINEER of the sources of each material at least ten calendar days prior to the anticipated use of the materials.
- B. Pipe Bedding: In general, clean sandy excavated materials, that is free from organics, clay and construction debris, can be used as pipe bedding when construction is in a dry condition and when the bedding is not sided by muck. Pipe bedding material shall be

able to pass through a 3/4-inch sieve. Separation of suitable material for pipe bedding from other material shall be made during the excavation.

- C. Screened gravel shall be used for small diameter (less than 24") and plastic pipe bedding when either the trench is within the water table or when the bedding is sided by muck or muck-like material. Screened gravel shall consist of hard, durable particles of proper size and gradation, and shall be free from organic material, wood, trash, sand, loam, clay, excess fines, and other deleterious materials. The gravel shall be graded within the following limits:

<u>Sieve Size</u>	<u>Percent Finer by Weight</u>
1 inch	100
3/4 inch	99
1/2 inch	65
No. 4	2

- D. Crushed stone shall be used for bedding of 24-inch and larger diameter pipe as detailed and at other locations indicated on the Drawings. Crushed stone shall be used when either side of the trench is within the water table or is sided by muck or muck-like materials. Crushed stone shall consist of hard, durable, subangular particles of proper size and gradation, and clay, excess fines, and other deleterious materials. The stone shall be graded within the following limits:

<u>Sieve Size</u>	<u>Percent Finer by Weight</u>
5/8 inch	100
1/2 inch	40 - 100
3/8 inch	15 - 45
No. 10	0 -5

- E. Sand for bedding polyvinyl chloride pipe shall be a dry screened sand. Sand shall be graded sand with 100 percent passing a 3/8 inch sieve and not more than 5 percent passing a No. 200 sieve.
- F. Backfill: In general, clean sandy excavated material, that is free from organics clay and construction debris can be used for backfill material. All material to be used as selected backfill shall be able to pass a 3/4-inch sieve. If, in the ENGINEER's opinion, excavation material is unsuitable for backfill purposes, imported material having a sand equivalent value of not less than 20 percent shall be used for this portion of the trench backfill. All backfill material (placed above select backfill) shall be able to pass through a 6-inch ring. If suitable backfill is not available from the excavations, it shall be obtained from off site sources.

PART 3 - EXECUTION

3.01 EXCAVATION

- A. The CONTRACTOR shall perform all excavation of every description and of whatever substance encountered, to the dimensions, grades and depths shown on the Drawings, or as directed. All excavations shall be made by open cut. All existing utilities such as pipes, poles and structures shall be carefully located, supported and protected from injury; in case of damage, they shall be restored at the CONTRACTOR's expense.
- B. Pipe trenches for piping shall be excavated to a width within the limits of the top of the pipe and the trench bottom so as to provide a clearance on each side of the pipe barrel, measured to the face of the excavation, or sheeting if used, of 8 inches to 12 inches. Where the pipe size exceeds 12 inches, the clearance shall be from 12 inches to 18 inches. All pipe trenches shall be excavated to a level where suitable material is reached, a minimum of 8 inches below the excavated depth, that will allow for a minimum of 36" of covering unless otherwise indicated on the Drawings. Excavation depths in other types of materials and conditions shall be made as hereinafter specified.
- C. In areas where trench widths are not limited by right-of-way and/or easement widths, property line restrictions, existing adjacent improvements, including pavements, structures and other utilities, and maintenance of traffic, the trench sides may be sloped to a stable angle of repose of the excavated material but only from a point one foot above the crown of the pipe. A substantially and safely constructed movable shield, "box" or "mule" may be used in place of sheeting when the trench is opened immediately ahead of the shield and closed immediately behind the shield as pipe laying proceeds inside the shield.
- D. Ladders or steps shall be provided for and used by workmen to enter and leave trenches.
- E. Excavation for appurtenances shall be sufficient to provide a clearance between their outer surfaces and the face of the excavation or sheeting, if used, of not less than 12 inches.
- F. Excavated unsuitable material shall be removed from the site and disposed of by the CONTRACTOR. Materials removed from the trenches shall be stored in such a manner that will not interfere unduly with pump station operations, traffic on public roadways and sidewalks and shall not be placed on private property. In congested areas, such materials as cannot be stored adjacent to the trench or used immediately as backfill shall be removed to other convenient places of storage acceptable to the CITY at the CONTRACTOR's expense.
- G. Excavated material that is suitable for use as backfill shall be used in areas where sufficient material is not available from the excavation. Suitable material in excess of backfill requirements shall be used on the pump station site as directed by the ENGINEER.

3.02 SHEETING AND BRACING

- A. The CONTRACTOR shall furnish, place and maintain sheeting and bracing to support sides of the excavation as necessary to provide safe working conditions in accordance with OSHA requirements, and to protect pipes, structures and other Work from possible damage. Where wood sheeting or certain designs of steel sheeting are used, the sheeting shall be cut off at a level of 2 feet above the top of the installed pipe and that portion below the level shall be left in place. If interlocking steel sheeting is used, it may

be removed providing removal can be accomplished without disturbing the bedding, pipe or alignment of the pipe. Any damage to the pipe bedding, pipe or alignment of the constructed utility caused by the removal of sheeting shall be cause for rejection of the affected portion of the work. The CITY may permit sheeting to be left in place at the request and expense of the CONTRACTOR.

- B. If the ENGINEER is of the opinion that at any point sufficient or proper supports, have not be provided, he may order additional supports put in at the CONTRACTOR's expense. The CONTRACTOR shall be responsible for the adequacy of all sheeting used and for all damage resulting from sheeting and bracing failure or from placing, maintaining and removing it.

3.03 REMOVAL OF WATER

- A. General: It is a basic requirement of these Specifications that excavations shall be free from water before pipe or structures are installed.
- B. The CONTRACTOR shall provide pumps, and other appurtenant equipment necessary to remove and maintain water at such a level as to permit construction in a dry condition. The CONTRACTOR shall continue dewatering operations until backfilling has progressed to a sufficient depth over the pipe to prevent flotation or movement of the pipe in the trench or so that it is above the water table. If at any point during the dewatering operation it is determined that fine material is being removed from the excavation sidewalls, the dewatering operation shall be stopped if acceptable to the ENGINEER. If any of the subgrade or underlying material is disturbed by movement of groundwater, surface water, or any other reason, it shall be replaced at the CONTRACTOR's expense with crushed stone or gravel.
- C. The CONTRACTOR shall use dewatering systems that include automatic starting devices, and standby pumps that will ensure continuous dewatering in the event of an outage of one or more pumps.
- D. Disposal: Water from the trenches and excavation shall be disposed of in such a manner as will not cause injury to public health, to public or private property, to the Work completed or in progress, to the surface of the streets, cause any interference with the use of the same by the public, or cause pollution of any waterway or stream. The CONTRACTOR shall submit his proposed methods of handling trench water and locations at which the water will be disposed of to the ENGINEER for review and shall receive acceptance before starting the excavation. Disposal to any surface water body will require silt screens to prevent any degradation in the water body. It shall be the CONTRACTOR's responsibility to obtain all the necessary dewatering permits from the appropriate permitting agencies prior to starting excavation.

3.04 TRENCH STABILIZATION

- A. No claim for extras or additional payment will be considered for cost incurred in the stabilization of trench bottoms which are rendered soft or unstable as a result of construction methods, such as improper or inadequate sheeting, dewatering or other causes. In no event shall pipe be installed when such conditions exist and the CONTRACTOR shall correct such conditions so as to provide proper bedding or foundations for the proposed installation at no additional cost to the CITY before placing the pipe or structures.

3.05 PIPE BEDDING

- A. Pipe trenches shall be excavated as described in Article 3.01. The resulting excavation shall be backfilled with acceptable pipe bedding material, up to the level of the centerline of the proposed pipe barrel. This backfill shall be tamped and compacted to provide a proper bedding for the pipe and shall then be shaped to receive the pipe. Bedding shall be provided under the branch of all fittings to furnish adequate support and bearing under the fitting.
- B. Any excavation below the levels required for installation of the pipe bedding shall be backfilled with acceptable bedding material, tamped, compacted and shaped to provide proper support for the proposed pipe, at the CONTRACTOR's expense.

3.06 BACKFILL

- A. Pipelines: Pipeline trenches shall be backfilled to a level 12 inches above the top of the pipe with select backfill obtained from the excavation. Such material shall be placed in 6-inch layers, each compacted to the densities specified in Article 3.07, A. Only hand operated mechanical compacting equipment shall be used within six inches of the installed pipe.
- B. After the initial portion of backfill has been placed as specified above, and after all excess water has completely drained from the trench, backfilling of the remainder of the trench may proceed. The remainder of the backfill shall be selected material obtained from the excavation and shall be placed in horizontal layers, the depth of which shall not exceed the ability of the compaction equipment employed, and in no event shall exceed a depth of 12 inches. Each layer shall be moistened, tamped, puddled, rolled or compacted to the densities specified in Article 3.07.
- C. Manholes and Vaults: Any excavation below the levels required for the proper construction of manholes or vaults shall be filled with Class B Concrete. The use of earth, rock, sand or other materials for this purpose will not be permitted.

3.07 COMPACTION AND DENSITIES

- A. Compaction of backfill shall be 98 percent of the maximum density where the trench is located under structures or paved areas, and 95 percent of the maximum density elsewhere. More thorough compaction may be required when Work is performed in other regulatory agencies jurisdictions, such as the DOT. Methods of control and testing of backfill construction are:
 - 1. Maximum density of the material in trenches shall be determined by ASTM D 1557.
 - 2. Field density of the backfill material in place shall be determined by ASTM D 1556 or D 2922.
- B. Testing: Laboratory and field density tests, which in the opinion of the ENGINEER are necessary to establish compliance with the compaction requirements of these Specifications, shall be ordered by the ENGINEER. The CONTRACTOR shall coordinate and cooperate with the testing laboratory. The testing program will be implemented by the ENGINEER establishing depths and locations of tests. Modifications to the program will be made as job conditions change.
- C. Trench backfill which does not comply with the specified densities, as indicated by such tests, shall be reworked and recompacted until the required compaction is secured, at no

additional cost to the CITY. The costs for retesting such Work shall be paid for by the CONTRACTOR.

3.08 ADDITIONAL EXCAVATION AND BACKFILL

- A. Where organic material, such as roots, muck, or other vegetable matter, or other material which, in the opinion of the ENGINEER, will result in unsatisfactory foundation conditions, is encountered below the level of the proposed pipe bedding material, it shall be removed to a depth of two feet below the outside bottom of the pipe or to a greater depths as directed by the ENGINEER and removed from the site. Sheeting shall be installed if necessary to maintain pipe trenches within the limits identified by the ENGINEER. The resulting excavation shall be backfilled with suitable backfill material, placed in 12-inch layers, tamped and compacted up to the level of the bottom of the proposed pipe bedding material. Sufficient compaction of this material shall be performed to protect the proposed pipe against settlement. Construction shall then proceed in accordance with the provisions of Article 3.05 "Pipe Bedding".
- B. Additional excavation (more than two feet below the pipe) as indicated on the trench detail shall be performed only when ordered by the ENGINEER. Where organic or other material is encountered in the excavation, the CONTRACTOR shall bring the condition to the attention of the ENGINEER and obtain his determination as to whether or not the material will require removal, prior to preparing the pipe bedding. The excavation of material up to a depth of two feet below the outside bottom incidental items of construction and the Work shall be done at the CONTRACTOR's expense.

- END OF SECTION -

SECTION 02501 - PIPING, GENERAL

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. All applicable provisions of the Bidding and Contract Requirements, and Division 1 - General Requirements shall govern the work under this Section.

1.02 WORK INCLUDED

- A. The CONTRACTOR shall furnish and install all piping systems shown and specified, in accordance with the requirements of the Contract Documents. Each system shall be complete with all necessary fittings, hangers, supports, anchors, expansion joints, flexible connectors, valves, accessories, heat tracing, insulation, lining and coating, testing, disinfection, excavation, backfill and encasement, to provide a functional installation.
- B. The piping shown is intended to define the general layout, configuration, routing, method of support, pipe size, and pipe type. Drawings are **not** pipe construction or fabrication drawings. It is the CONTRACTOR's responsibility to develop the details necessary to construct all mechanical piping systems to accommodate the specific equipment provided, and to provide and install all spools, spacers, adapters, connectors, etc., for a complete and functional system.

1.03 RELATED WORK

- A. Division 2 as applicable.
- B. Section 02222 - Excavation and Backfilling for Utilities.
- C. Section 02502 - Valves, General.
- D. Section 02510 - Water Distribution System.
- E. Section 02515 - Water Service Connection and Transfers

1.04 REFERENCE STANDARDS

- A. **Codes:** All codes, as referenced herein are specified in Section 01090, "Reference Standards".
- B. **Commercial Standards:**
 - ANSI/ASME B1.20.1 Pipe Threads, General Purpose (inch).
 - ANSI B16.5 Pipe Flanges and Flanged Fittings, Steel Nickel Alloy and other Special Alloys.
 - ANSI/AWWA C207 Steel Pipe Flanges for Water Works Service, Sizes 4 in through 144 in.
 - ANSI/AWWA C606 Grooved and Shouldered Joints.
 - ANSI/AWS D1.1 Structural Welding Code.
 - ASTM A 307 Specification for Carbon Steel Bolts and Studs, 6,000 psi Tensile.
 - ASTM A 325 Specification for High-Strength Bolts for Structural Steel Joints.
 - ASTM D 792 Test Methods for Specific Gravity and Density of Plastics by Displacement.

ASTM D 2000 Classification System for Rubber Products in Automotive Applications.

1.05 SUBMITTALS

- A. The CONTRACTOR shall submit complete shop DRAWINGS and certificates, test reports, affidavits of compliance, of all piping systems, in accordance with the requirements in Section 01300, "Submittals", and as specified in the individual sections. The shop DRAWINGS shall include all necessary dimensions and details on pipe joints, fittings, fitting specials, valves, appurtenances, design calculations, and material lists. The submittals shall include detailed layout, spool, or fabrication DRAWINGS which show all pipe spools, spacers, adapters, connectors, fittings, and pipe supports necessary to accommodate the equipment and valves provided in a complete and functional system.
- B. All expenses incurred in making samples for certification of tests shall be borne by the CONTRACTOR.
- C. The CONTRACTOR shall submit as part of the shop DRAWINGS a certification from the pipe fabricator stating that all pipes will be fabricated subject to a recognized Quality Control Program. An outline of the program shall be submitted to the ENGINEER for review prior to the fabrication of any pipe

1.06 QUALITY ASSURANCE

- A. **Inspection:** All pipe shall be subject to inspection at the place of manufacture. During the manufacture of the pipe, the ENGINEER shall be given access to all areas where manufacturing is in progress and shall be permitted to make all inspections necessary to confirm compliance with the Specifications.
- B. **Tests:** Except where otherwise specified, all materials used in the manufacture of the pipe shall be tested in accordance with the applicable Specifications and Standards.
- C. **Welding Requirements:** All welding procedures used to fabricate pipe shall be pre-qualified under the provisions of ANSI/AWS D1.1. Welding procedures shall be required for, but not necessarily limited to, longitudinal and girth or spiral welds for pipe cylinders, spigot and bell ring attachments, reinforcing plates and ring flange welds, and plates for lug connections.
- D. **Welder Qualifications:** All welding shall be done by skilled welders, welding operators, and tackers who have had adequate experience in the methods and materials to be used. Welders shall be qualified under the provisions of ANSI/AWS D1.1 by an independent local, approved testing agency not more than 6 months prior to commencing work on the pipeline. Machines and electrodes similar to those used in the WORK shall be used in qualification tests. The CONTRACTOR shall furnish all material and bear the expense of qualifying welders.

1.07 MANUFACTURER'S SERVICE REPRESENTATIVE

- A. Where the assistance of a manufacturer's service representative is advisable, in order to obtain perfect pipe joints, supports, or special connections, the CONTRACTOR shall furnish such assistance at no additional cost to the CITY.

1.08 MATERIAL DELIVERY, STORAGE, AND HANDLING

- A. All piping materials, fittings, valves, and accessories shall be delivered in a clean and undamaged condition and stored off the ground, to provide protection against oxidation caused by ground contact. All defective or damaged materials shall be replaced with new materials.

1.09 CLEANUP

- A. After completion of the work, all remaining pipe cuttings, joining and wrapping materials, and other scattered debris, shall be removed from the site. The entire piping system shall be handed over in a clean and functional condition.

PART 2 - PRODUCTS

2.01 GENERAL

- A. All pipes, fittings, and appurtenances shall be furnished in accordance with the requirements of the applicable Sections of Division 2 and as specified herein.
- B. **Lining:** All requirements pertaining to thickness, application, and curing of pipe lining, are in accordance with the requirements of the applicable Sections of Division 2, unless otherwise specified.
- C. **Coating:** All requirements pertaining to thickness, application, and curing of pipe coating, are in accordance with the requirements of the applicable Sections of Division 2, unless otherwise specified. Pipes above ground or in structures shall be field-painted as directed by the ENGINEER.
- D. **Grooved Piping Systems:** Piping systems with grooved joints and fittings may be provided in lieu of screwed, flanged, welded, or mechanical joint systems for ductile iron yard piping. (All piping above and below ground within the property limits of treatment plants, pump stations, and similar installations). All grooved couplings on buried piping must be bonded. To assure uniform and compatible piping components, all grooved fittings, couplings, and valves shall be from the same manufacturer. The CONTRACTOR shall make the coupling manufacturer responsible for the selection of the correct style of coupling and gasket for each individual location.

2.02 PIPE FLANGES

- A. **Flanges:** Where the design pressure is 150 psi or less, flanges shall conform to either ANSI/AWWA C207 Class D or ANSI B16.5 150-lb class. Where the design pressure is greater than 150 psi, up to a maximum of 275 psi, flanges shall conform to either ANSI/AWWA C207 Class E, Class F, or ANSI B16.5 150-lb class. However, AWWA flanges shall not be exposed to test pressure greater than 125% of rated capacity. For higher test pressures, the next higher rated AWWA flange or an ANSI-rated flange shall be selected. Where the design pressure is greater than 275 psi up to a maximum of 700 psi, flanges shall conform to ANSI B16.5 300-lb class. Flanges shall have flat faces and shall be attached with bolt holes straddling the vertical axis of the pipe unless otherwise shown. Attachment of the flanges to the pipe shall conform to the applicable requirements of ANSI/AWWA C207. Flanges for miscellaneous small pipes shall be in accordance with the standards specified for these pipes.
- B. **Blind Flanges:** Blind flanges shall be in accordance with ANSI/AWWA C207, or with the standards for miscellaneous small pipes. All blind flanges for pipe sizes 12 inches and over shall be provided with lifting eyes in form of welded or screwed eye bolts.
- C. **Flange Coating:** All machined faces of metal blind flanges and pipe flanges shall be coated with a temporary rust-inhibitive coating to protect the metal until the installation is completed.
- D. **Flange Bolts:** All bolts and nuts shall conform to pipe manufacturer's recommendations. Studs and bolts shall extend through the nuts a minimum of 1/4-inch. All-thread studs shall be used on all valve flange connections, where space restrictions preclude the use of

regular bolts.

- E. **Insulating Flanges:** Insulated flanges shall have bolt holes 1/4-inch diameter greater than the bolt diameter.
- F. **Insulating Flange Sets:** Insulating flange sets shall be provided where shown. Each insulating flange set shall consist of an insulating gasket, insulating sleeves and washers and a steel washer. Insulating sleeves and washers shall be one piece when flange bolt diameter is 1-1/2-inch or smaller and shall be made of acetal resin. For bolt diameters larger than 1-1/2-inch, insulating sleeves and washers shall be 2-piece and shall be made of polyethylene or phenolic. Steel washers shall be in accordance with ASTM A 325. Insulating gaskets shall be full-face.
- G. **Flange Gaskets:** Gaskets for flanged joints shall be full-faced, 1/16-inch thick compressed sheets of aramid fiber base, with nitrile binder and non-stick coating, suitable for temperatures to 700 degrees F, a pH of one to eleven, and pressures to 1000 psig. Blind flanges shall have gaskets covering the entire inside face of the blind flange and shall be cemented to the blind flange. Ring gaskets shall not be permitted.

2.03 THREADED INSULATING CONNECTIONS

- A. **General:** Threaded insulating bushings, unions, or couplings, as appropriate, shall be used for joining threaded pipes of dissimilar metals and for piping systems where corrosion control and cathodic protection are involved.
- B. **Materials:** Threaded insulating connections shall be of nylon, Teflon, polycarbonate, polyethylene, or other non-conductive materials, and shall have ratings and properties to suit the service and loading conditions.

2.04 MECHANICAL-TYPE COUPLINGS (GROOVED OR BANDED PIPE)

- A. **General:** Cast mechanical-type couplings shall be provided where shown. The couplings shall conform to the requirements of ANSI/AWWA C606. All gaskets for mechanical-type couplings shall be compatible with the piping service and fluid utilized, in accordance with the coupling manufacturer's recommendations. The wall thickness of all grooved piping shall conform with the coupling manufacturer's recommendations to suit the highest expected pressure. To avoid stress on equipment, all equipment connections shall have rigid-grooved couplings, or harness sets in sizes where rigid couplings are not available, unless thrust restraint is provided by other means. The CONTRACTOR shall have the coupling Manufacturer's service representative verify the correct choice and application of all couplings and gaskets, and the workmanship, to assure a correct installation.

2.05 SLEEVE-TYPE COUPLINGS

- A. **Construction:** Sleeve-type couplings shall be provided where shown, in accordance with ANSI/AWWA C219 unless otherwise specified, and shall be of steel with steel bolts, without pipe stop, and shall be of sizes to fit the pipe and fittings shown. The middle ring shall be not less than 1/4-inch in thickness and shall be either 5 or 7 inches long for sizes up to and including 30 inches and 10 inches long for sizes greater than 30 inches, for standard steel couplings, and 16 inches long for long-sleeve couplings. The followers shall be single-piece contoured mill section welded and cold-expanded as required for the middle rings. They shall be of sufficient strength to accommodate the number of bolts necessary to obtain adequate gasket pressures without excessive rolling. The shape of the follower shall be of such design as to provide positive confinement of the gasket. Buried sleeve-type couplings shall be epoxy-coated at the factory as specified.
- B. **Pipe Preparation:** The ends of the pipe, where specified or shown, shall be prepared for

flexible steel couplings. Plain ends for use with couplings shall be smooth and round for a distance of 12 inches from the ends of the pipe, with outside diameter not more than 1/64-inch smaller than the nominal outside diameter of the pipe. The middle ring shall be tested by cold-expanding a minimum of one percent beyond the yield point, to proof-test the weld to the strength of the parent metal. The weld of the middle ring shall be subjected to air test for porosity.

- C. **Gaskets:** Gaskets for sleeve-type couplings shall be rubber-compound material that will not deteriorate from age or exposure to air under normal storage or use conditions. Gaskets for wastewater and sewerage applications shall be Buna "N," grade 60, or equivalent suitable elastomer. The rubber in the gasket shall meet the following specifications:

1. Color - Jet Black
2. Surface - Non-blooming
3. Durometer Hardness - 74±5
4. Tensile Strength - 1000 psi Minimum
5. Elongation - 175% Minimum

The gaskets shall be immune to attack by impurities normally found in water or wastewater. All gaskets shall meet the requirements of ASTM D 2000, AA709Z, meeting Suffix B13 Grade 3, except as noted above. All gaskets shall be compatible with the piping service and fluid utilized.

- D. **Insulating Couplings:** Where insulating couplings are required, both ends of the coupling shall have a wedge-shaped gasket which assembles over a rubber sleeve of an insulating compound in order to obtain insulation of all coupling metal parts from the pipe.
- E. **Restrained Joints:** All sleeve-type couplings on pressure lines shall be harnessed unless thrust restraint is provided by other means. Harnesses shall be in accordance with the requirements of the appropriate reference standard, or as shown.

2.06 FLEXIBLE CONNECTORS

- A. Flexible connectors shall be installed in all piping connections to engines, blowers, compressors, and other vibrating equipment, and where shown. Flexible connectors for service temperatures up to 180 degrees F shall be flanged, reinforced Neoprene or Butyl spools, rated for a working pressure of 40 to 150 psi, or reinforced, flanged duck and rubber, as best suited for the application. Flexible connectors for service temperatures above 180 degrees F shall be flanged, braided stainless steel spools with inner, annular, corrugated stainless steel hose, rated for minimum 150 psi working pressure, unless otherwise shown. The connectors shall be 9 inches long, face-to-face flanges, unless otherwise shown. The final material selection shall be approved by the manufacturer. The CONTRACTOR shall submit manufacturer's shop drawings and calculations.

2.07 EXPANSION JOINTS

- A. All piping subject to expansion and contraction shall be provided with sufficient means to compensate for such movement, without exertion of undue forces to equipment or structures. This may be accomplished with expansion loops, bellow-type expansion joints, or sliding-type expansion joints. Expansion joints shall be of stainless steel, monel, rubber, or other materials, best suited for each individual service. The CONTRACTOR shall submit detailed calculations and manufacturer's shop drawings, guaranteeing satisfactory performance of all proposed expansion joints, piping layouts showing all anchors and guides, and information on materials, temperature and pressure ratings.

2.08 PIPE THREADS

- A. All pipe threads shall be in accordance with ANSI/ASME B1.20.

PART 3 - EXECUTION

3.01 GENERAL

- A. All pipes, fittings, and appurtenances shall be installed in accordance with the requirements of the applicable Section of Divisions 2. The lining manufacturer shall take full responsibility for the complete, final product and its application. All pipe ends and joints at screwed flanges shall be epoxy-coated, to assure continuous protection.
- B. Where core drilling is required for pipes passing through existing concrete, core drilling locations shall be determined by radiograph of concrete construction to avoid damage to embedded raceways and rebars.
- C. All exposed piping shall be painted. All piping to be painted shall be color coded in accordance with CITY's standard color code. Color samples shall be submitted to ENGINEER for final color selection.
- D. Where required for removal, Asbestos Cement (AC) pipe shall be disposed of properly in compliance with applicable environmental regulations.
- E. Existing pipe sizes and materials are based upon best available information. Contactor is responsible for verifying pipe characteristics, including material and size, prior to commencing work or ordering materials.

- END OF SECTION -

SECTION 02502 - VALVES, GENERAL

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. All applicable provisions of the Bidding and Contract Requirements, and Division 1 - General Requirements shall govern the work under this Section.

1.02 WORK INCLUDED

- A. The CONTRACTOR shall provide all tools, supplies, materials, equipment, and labor necessary for furnishing, epoxy coating, installing, adjusting, and testing of all valves and appurtenant work, complete and operable, in accordance with the requirements of the Contract Documents. Where buried valves are shown, the CONTRACTOR shall furnish and install valve boxes to grade, with covers, extensions, and position indicators.
- B. The provisions of this Section shall apply to all valves and valve operators specified in the various Sections and Division 2 of these Specifications including test valves, except where otherwise specified in the Contract Documents. Valves and operators in particular locations may require a combination of units, sensors, limit switches, and controls specified in other Sections of these Specifications.

1.03 RELATED WORK

- A. Section 02222 - Excavation and Backfilling for Utilities.
- B. Section 02510 - Water Distribution System.
- C. Section 02515 - Water Service Connection and Transfers.

1.04 REFERENCE STANDARDS

- A. Codes: All codes referenced herein and specified in Section 01090, "Reference Standards".

- B. Commercial Standards:

ANSI B16.1	Cast Iron Pipe Flanges and Flanged Fittings, Class 25, 125, 250, and 800.
ANSI B16.5	Pipe Flanges and Flanged Fittings, Steel Nickel Alloy and Other Special Alloys.
ANSI/ASME B31.1	Power Piping.
ASTM A 36	Specification for Structural Steel.
ASTM A 48	Specification for Gray Iron Castings.
ASTM A 126	Specification for Gray Iron Castings for Valves, Flanges, and Pipe Fittings.
ASTM A 536	Specification for Ductile Iron Castings.
ASTM B 61	Specification for Steam or Valve Bronze Castings.
ASTM B 62	Specification for Composition Bronze or Ounce Metal Castings.
ASTM B 148	Specification for Aluminum-Bronze Castings.
ASTM B 584	Specification for Copper Alloy Sand Castings for General Applications.

ANSI/AWWA C500	Gate Valves for Water and Sewerage Systems.
ANSI/AWWA C502	Dry-Barrel Fire Hydrants.
ANSI/AWWA C503	Wet-Barrel Fire Hydrants.
ANSI/AWWA C504	Rubber-Seated Butterfly Valves.
ANSI/AWWA C507	Ball Valves 6 Inches Through 48 Inches.
AWWA C508	Swing-Check Valves for Waterwork Service, 2 Inches Through 24 Inches NPS.
ANSI/AWWA C509	Resilient-Seated Gate Valves for Water and Sewage Systems.
ANSI/AWWA C511	Reduced-Pressure Principle Backflow-Prevention Assembly.
AWWA C550	Protective Interior Coatings for Valves and Hydrants.
SSPC-SP-2	Hand Tool Cleaning.
SSPC-SP-5	White Metal Blast Cleaning.

1.05 SUBMITTALS

- A. Shop Drawings: Shop drawings of all valves and operators including associated wiring diagrams and electrical data, shall be furnished as specified in Section 01300, "Submittals".
- B. Valve Labeling: The CONTRACTOR shall submit a schedule of valves to be labeled indicating in each case the valve location and the proposed wording for the label.

1.06 QUALITY ASSURANCE

- A. Valve Testing: Unless otherwise specified, each valve body shall be tested under a test pressure equal to twice its design water-working pressure.
- B. Bronze Parts: Unless otherwise specified, all interior bronze parts of valves shall conform to the requirements of ASTM B 62, or where not subject to dezincification, to ASTM B 584.
- C. Coatings: All coatings in contact with potable water shall be certified to N.S.F. 61. A proof of design certification shall be provided upon request.
- D. Certification: Prior to shipment, the CONTRACTOR shall submit for all valves over 12 inches in size, certified, notarized copies of the hydrostatic factory tests, showing compliance with the applicable standards of AWWA, ANSI, ASTM, NSF etc. and to these specifications.

PART 2 - PRODUCTS

2.01 VALVES, GENERAL

- A. General: The CONTRACTOR shall furnish all valves, gates, valve-operating units, stem extensions, and other accessories as shown or specified. All valves and gates shall be new and of current manufacture. All shut-off valves, 6-inch and larger, shall have operators with position indicators. Where buried, these valves shall be provided with valve boxes and covers containing position indicators, and valve extensions. Shut-off valves mounted higher than 5 feet-6 inches above working level shall be provided with chain operators.

- B. Valve Flanges: The flanges of valves shall be in accordance with Section 02510, "Water Distribution System", unless the valves are to be connected to an equipment with a flange with a different specification.
- C. Gate Valve Stems: Where subject to dezincification, gate valve stems shall be of bronze conforming to ASTM B 62, containing not more than 5% of zinc nor more than 2% aluminum. Gate valve stems shall have a minimum tensile strength of 60,000 psi, a minimum yield strength of 40,000 psi, and an elongation of at least 10% in 2 inches, as determined by a test coupon poured from the same ladle from which the valve stems to be furnished are poured. Where dezincification is not a problem, bronze conforming to ASTM B 584 may be used.
- D. Protective Coating: Except where otherwise specified, ferrous surfaces, exclusive of stainless steel surfaces, in the water passages of all valves 4-inch and larger, as well as the exterior surfaces of all submerged valves, shall be coated with 2 part thermal setting epoxy coatings. Flange faces of valves shall not be epoxy coated. The valve manufacturer shall certify in writing that such coating has been applied and tested in the manufacturing plant prior to shipment, in accordance with these Specifications.
- E. Valve Operators: Where shown, certain valves and gates shall be furnished with electric operators, provided by the valve or gate manufacturer. All operators of a given type shall be furnished by the same manufacturer. Where these operators are supplied by different manufacturers, the CONTRACTOR shall coordinate their selection to provide uniformity of each type of electric operator. All valve operators, regardless of type, shall be installed, adjusted, and tested by the valve manufacturer at the manufacturing plant.
- F. Valve Labeling: Except when such requirement is waived by the ENGINEER in writing, a label shall be provided on all shut-off valves exclusive of hose bibbs and chlorine cylinder valves. The label shall be of 1/16-inch plastic or stainless steel, minimum 2 inches by 4 inches in size, and shall be permanently attached to the valve or on the wall adjacent to the valve as directed by the ENGINEER.
- G. Nuts and Bolts: All nuts and bolts on valve flanges and supports shall be in accordance with manufacturer's recommendations. Where submerged or buried, all nuts and bolts on valve flanges and valve bodies shall be stainless steel.

2.02 GATE VALVES

- A. All buried valves shall be of the inside screw, non-rising stem type. Valves shall be capable of being repacked under line pressure. Valves 14-inch and larger installed vertical pipes with their stems horizontal shall be fitted with bronze slides, tracks, rollers, and scrapers to assist the travel of the gate assembly. Quick opening valves shall have quick opening levers and cams in lieu of handwheel operators.
- B. Resilient-Seated Gate Valves:
 - 1. Resilient-seated gate valves conforming to ANSI/AWWA C509 shall be provided. Resilient-seated gate valves shall have cast iron bodies with flanged, bell, or mechanical joint ends, rubber-coated cast iron disc, flanged bonnet, bronze stem, O-ring seals, and operators with handwheel or square nut, unless otherwise shown.

2.03 BALL VALVES (4-INCH AND SMALLER)

- A. General Requirements: Unless otherwise specified or shown, general purpose ball valves in size up to 4-inch shall have manual operators with lever or handwheel. Ferrous surface of 4-inch valves, which will be in contact with water shall be epoxy-

coated. All ball valves shall be of best commercial quality, heavy duty construction.

- B. Body: All ball valves up to 1-1/2 inch (incl.) in size shall have bronze or forged brass 2 or 3 piece bodies with screwed ends for a pressure rating of not less than 300 psi WOG. Valves 2-inch to 4-inch in size shall have bronze forged brass or steel 2 or 3 piece bodies with flanged ends for a pressure rating of 125 psi or 150 psi.
- C. Balls: The balls shall be solid brass or chrome plated bronze, or stainless steel, with large or full openings.
- D. Stems: The valves seats shall be of Teflon or Buna N or equal, for bi-directional service and easy replacement.

2.04 AIR-VACUUM AND AIR-RELEASE VALVES

- A. Air and Vacuum Valves: Air and vacuum valves shall be capable of venting large quantities of air while pipelines are being filled, and allowing air to re-enter while pipelines are being drained. They shall be of the size shown, with flanged or screwed ends to match piping. Bodies shall be of high-strength cast iron. The float, seat, off-set piping, and all moving parts shall be constructed of Type 316 stainless steel. Seat washers and gaskets shall be of a material insuring water tightness with a minimum of maintenance. Valves shall be designed for minimum 150 psi water-working pressure, unless otherwise shown.
- B. Air-Release Valves: Air-release valves shall vent accumulating air while system is in service and under pressure and be of the size shown and shall meet the same general requirements as specified for air and vacuum valves except that the vacuum feature will not be required. They shall be designed for a minimum water-working pressure of 150 psi, unless otherwise shown.
- C. Combination Air Valves: Combination air valves shall combine the characteristics of air and vacuum valves and air release valves by exhausting accumulated air in systems under pressure and releasing or re-admitting large quantities of air while a system is being filled or drained, respectively. They shall have the same general requirements as specified for air and vacuum valves.

2.05 CORPORATION STOPS (Ball Valve Type)

- A. Unless otherwise shown, corporation stops shall be made of brass alloy for key operation, with screwed ends with corporation thread or iron pipe thread, as required. AWWA taper thread for inlet thread and compression type fittings for outlet.

PART 3 - EXECUTION

3.01 VALVE INSTALLATION

- A. General: All valves, gates, operating units, stem extensions, valve boxes, and accessories shall be installed in accordance with the manufacturer's written instructions and as shown and specified. All gates shall be adequately braced to prevent warpage and bending under the intended use. Valves shall be firmly supported to avoid undue stresses on the pipe.
- B. Access: All valves shall be installed to provide easy access for operation, removal, and maintenance and to avoid conflicts between valve operators and structural members or handrails.
- C. Valve Accessories: Where combinations of valves, sensors, switches, and controls are specified, it shall be the responsibility of the CONTRACTOR to properly assemble and

install these various items so that all systems are compatible and operating properly. The relationship between interrelated items shall be clearly noted on shop drawing submittals.

- END OF SECTION -

SECTION 02510 - WATER DISTRIBUTION SYSTEM**PART 1 - GENERAL****1.01 RELATED DOCUMENTS**

- A. All applicable provisions of the Bidding and Contract Requirements, and Division 1 - General Requirements shall govern the work under this Section.

1.02 SUMMARY

- A. This Section includes water-distribution piping and related appurtenances in the municipal potable water system up to 5 feet outside the building limits for domestic and irrigation water service.
- B. All work shall conform to the requirements of the local water authority, fire marshal, any other regulatory authorities having jurisdiction, or this specification, whichever is more stringent.
- C. All water main installations shall comply with color coding requirements of Chapter 62.555.320, F.A.C.

1.03 WORK INCLUDED

- A. Provide all labor, materials, necessary equipment and services to complete the WORK, as indicated on the drawings, as specified herein or both.

1.04 RELATED WORK

- A. Section 02222 - Excavation and Backfilling for Utilities.
- B. Section 02501 - Piping, General.
- C. Section 02502 - Valves, General.

1.05 REFERENCE STANDARDS

- A. Factory Mutual (FM)
 - 1. Approval Guide
- B. Underwriters Laboratories (UL)
 - 1. Fire Protection Equipment Directory
 - 2. UL 1285 - Pipe and Couplings, Polyvinyl Chloride (PVC), for Underground Fire Service
 - 3. UL 262 - Gate Valves for Fire-Protection Service
 - 4. UL 246 - Hydrants for Fire-Protection Service
- C. National Sanitation Foundation (NSF)
 - 1. NSF 14 - Plastics Piping System Components and Related Materials
 - 2. NSF 61 - Drinking Water System Components - Health Effects
- D. National Fire Protection Association (NFPA)
 - 1. NFPA 70 - National Electrical Code

2. NFPA 24 - Hydraulic Fluid Power Systems - Methods to Improve Sealing Reliability (new standard)
 3. NFPA 1963 - Screw Threads and Gaskets for Fire Hose Connections (latest revision of ANSI/NFPA 1963)
 4. NFPA 13 - Installation of Sprinkler Systems (latest edition)
- E. American Water Works Association (AWWA)
1. C151 Ductile-Iron Pipe, Centrifugally Cast, for Water (Latest revision of ANSI/AWWA C151/A21.51)
 2. C104 - Cement-Mortar Lining for Ductile-Iron Pipe and Fittings for Water
 3. C150 - Thickness Design of Ductile-Iron Pipe
 4. C110 - Ductile-Iron and Gray-Iron Fittings, 3 in through 48 in (75 mm through 1200 mm), for Water and Other Liquids
 5. C153 - Ductile-Iron Compact Fittings, 3 in. through 24 in. (76 mm Through 610 mm) and 54 in. through 64 in. (1,400 mm Through 1,600 mm), for Water Service
 6. C900 - Polyvinyl Chloride (PVC) Pressure Pipe, 4 Inch through 12 Inch for Water Distribution
 7. C500 - Gate Valves for Water and Sewage Systems
 8. C111 - Rubber-Gasket Joints for Ductile-Iron Pressure Pipe and Fittings
 9. C550 - Protective Epoxy Interior Coatings for Valves and Hydrants
 10. C509 - Resilient-Seated Gate Valves for Water Supply Service
 11. M44 - Distribution Valves: Selection, Installation, Field Testing, and Maintenance
 12. C800 - Underground Service Line Valves and Fittings
 13. C702 - Cold Water Meters - Compound Type
 14. C502 - Hydrants, Dry Barrel Fire
 15. M41 - Ductile Iron Pipe and Fittings
 16. C600 - Installation of Ductile-Iron Water Mains and Their Appurtenance
 17. C605 - Water Treatment - Underground Installation of Polyvinyl Chloride PVC Pressure Pipe and Fittings for Water
 18. M23 - PVC Pipe: Design and Installation
 19. M17 - Fire Hydrants: Installation, Field Testing, and Maintenance
 20. C651 - Disinfecting Water Mains
- F. American Society for Testing and Materials (ASTM)
1. B88 - Standard Specification for Seamless Copper Water Tube
 2. B813 - Standard Specification for Liquid and Paste Fluxes for Soldering Applications of Copper and Copper Alloy Tube
 3. B32 - Standard Specification for Solder Metal

4. D2241 - Standard Specification for Poly Vinyl Chloride (PVC) Pressure-Rated Pipe (SDR Series)
 5. D3139 - Standard Specification for Joints for Plastic Pressure Pipes Using Flexible Elastomeric Seals
 6. F645 - Standard Guide for Selection, Design, and Installation of Thermoplastic Water Pressure Piping Systems
- G. American Society of Mechanical Engineers (ASME)
1. B16.18 - Cast Copper Alloy Solder Joint Pressure Fittings R(1994)
 2. B16.22 - Wrought Copper and Copper Alloy Solder Joint Pressure Fittings
- H. Manufacturer's Standardization Society (MSS)
1. SP-60 - Connecting Flange Joint Between Tapping Sleeves and Tapping Valves
- I. Copper Development Association (CDA)
1. Copper Tube Handbook

1.06 QUALITY ASSURANCE

- A. Regulatory Requirements: Comply with requirements of the regulatory authorities having jurisdiction; including tapping of water mains, backflow prevention, installation, testing, and disinfection. Comply with standards of the regulatory authorities having jurisdiction for fire-suppression water-service piping, including materials, hose threads, installation, and testing.
- B. Piping materials shall bear label, stamp, or other markings of specified testing agency.
- C. Electrical Components, Devices, and Accessories: UL listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to the regulatory authorities having jurisdiction, and marked for intended use.
- D. Comply with FM's "Approval Guide" or UL's "Fire Protection Equipment Directory" for fire-service-main products.
- E. NFPA Compliance: Comply with NFPA 13 and NFPA 24 for materials, installations, tests, flushing, and valve and hydrant supervision for fire-service-main piping for fire suppression.
- F. NSF Compliance: Comply with NSF 14 for plastic potable-water-service piping. Comply with NSF 61 for materials for water-service piping and specialties for domestic water.
- G. Comply with requirements of Section 02222 - Excavation and Backfilling for Utilities.

1.07 PROJECT CONDITIONS

- A. Existing Utilities: Do not interrupt utilities serving facilities occupied by OWNER or others unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:
 1. Notify the CITY not less than 2 days in advance of proposed utility interruptions; and,
 2. Do not proceed with utility interruptions without written permission from the CITY.

1.08 EXISTING UTILITIES

- A. Furnish temporary support, adequate protection and maintenance of all underground and surface utility structures, drains, sewers, and other obstructions encountered in the progress of the work.
- B. Where the grade or alignment of the pipe is obstructed by existing utility structure such as conduits, ducts, pipe branch connections to main sewers, or main drains, the obstruction shall be permanently supported, relocated, removed, or reconstructed by the CONTRACTOR in cooperation with the owners of such utility structures. No deviation shall be made from the required line or grade except as directed by the ENGINEER.

PART 2 - PRODUCTS

2.01 PIPE

- A. All metallic pipe shall have bituminous outside coating conforming to:

Viscosity, KU at 25°	56-60
Dry set to touch	6 minutes
Dry hard	22 minutes
- B. Ductile iron pipe shall conform to ANSI/AWWA C150/A21.50 and C151/A21.51 with class 52 pipe. Pipe shall be cement-lined and seal-coated in accordance with ANSI/AWWA C104/A21.3. Class 53 pipe shall be used for flanged applications. The pipe shall be adapted for use with class 350 fittings through 24" and for class 250 fittings in sizes 30" and over.
 1. Unless otherwise indicated, all ductile iron pipe shall be factory lined and coated.
 - a. Lining: All pipe shall be cement mortar lined in accordance with AWWA Standard C104.
 - b. Coating: Unless specified otherwise, all pipe shall be coal-tar enamel coated outside to a dry film thickness of at least 1 mil with Koppers Bitumastic Tank Solution, or equal.
 - c. Repair: Anywhere that the coating is removed purposely or accidentally, the area shall be cleaned of any rust, grease and dirt and recoated to a minimum dry film as specified for the individual piece.
- C. Polyvinyl chloride pipe shall conform to ANSI/AWWA C900 (4" – 12") and C905 (over 12"). Pipe shall be cement-lined and seal-coated in accordance; Polyethylene (PE) encased. Class 12454-A or Class 12454-B virgin material with a minimum wall thickness of DR Series 18 shall be used for PVC pressure pipe. Ultra violet degradation or sun bleached pipe will be cause for rejection. Joints for PVC pressure pipe shall be bell and spigot push on rubber gasket type only. No solvent weld or threaded joints permitted.
- D. Soft Copper Tubing, NPS 3 inches or smaller:
 1. Tubing shall be manufactured in accordance with ASTM B88, Type K, annealed temper. Fittings shall be in accordance with ASME B16.18, for cast-copper-alloy, solder joint pressure fitting, or ASME B16.22 for wrought-copper, and copper-alloy, solder joint pressure fitting type. Soldering flux shall be in accordance with ASTM B813, water-flushable type. Solder filler metal shall be in accordance with ASTM B 32, lead-free type with 0.20% maximum lead content.

- E. All materials used in the construction of potable water distribution/transmission system shall be in compliance with ANSI/NSF Standard 61 - Drinking Water System Components - Health Effects.

2.02 FITTINGS

- A. The pressure rating shall be 350 PSI for fittings.
- B. Fittings shall be cast iron or ductile iron, meeting the ANSI/AWWA Specification C-153/A21.53.
- C. Fitting must be cement lined and seal coated per ANSI/AWWA C104/A21.3.
- D. Flanged fittings shall conform to ANSI Specifications for Class 125.
- E. Ductile iron fittings shall conform to ANSI/AWWA standard specification C110-A21.10 latest revision.

2.03 JOINTS

A. BELL AND SPIGOT CONNECTIONS:

- 1. Joints in bell and spigot pipe shall be push-on, mechanical, or restrained mechanical joints in accordance with ANSI/ANWA Standard C-111/21.11, latest revision.

B. FLANGED CONNECTIONS:

- 1. All flanged pipe barrels shall comply with the physical and chemical requirements as set forth in the Handbook of Ductile Iron Pipe of the Ductile Iron Pipe Research Association. Flanges shall be in accordance with ANSI Specification B16.1 for Class 125 flanges. Bolts shall comply with ANSI Specification B18.2.
- 2. Before starting fabrication of the cast iron pipe and fittings, complete detailed working drawings shall be submitted by the CONTRACTOR for approval by the ENGINEER. Such drawings shall show the piping layouts and contain schedules of all pipe, fittings, valves, expansion joints, hangers and supports and other appurtenances. Where special fittings are required, they shall be shown in large detail with all necessary dimensions. The drawings submitted shall show flanged jointed sections placed so as to be removed without disturbance to the main pipe sections.
- 3. Flanged pipe shall be faced and drilled to the American Standard drilling, unless special drilling is called for or required. Where tap or stud bolts are required, flanges shall be tapped. Flanges shall be accurately faced and drilled smooth and true, at right angles to the pipe axis and shall be covered with zinc dust and tallow or a rust preventive compound immediately after facing and drilling.
- 4. Flanged pipe with screwed-on flanges shall be furnished with long hubs and the flanges shall be screwed on the threaded end of the pipe in the shop and the face of the flange and end of pipe refaced together. There shall be no leakage through the pipe threads and the flanges shall be designed to prevent corrosion of the threads from outside.
- 5. Flanged joints shall be made with bolts or stud bolts and nuts. Bolts, stud bolts, and nuts shall conform to American Standard heavy dimensions, semi-finished with square or hexagonal heads and cold punched hexagonal nuts, meeting the requirements of ASTM Designation A-307. Bolt sizes shall be American

Standard for the flanges specified, and bolts and nuts shall have good, true threads.

2.04 HYDRANTS

- A. Fire hydrants shall have a traffic breakaway-flange; no cut bolts; non-rising stem; dry barrel; 5 1/4" main valve opening; bronze to bronze seating. Pumper nozzle to be 18" min. and 24' max. from finish grade. All hydrants to be installed with anchoring tee and control valve. Fire hydrant shall comply with ANSI/AWWA C502-05 (or latest revision).
- B. Fire hydrants installed that have not been placed into service shall be covered with a burlap bag to indicate that they are out of service.
- C. Fire hydrants shall have a top coat of tnenic series 66 yellow.

2.05 WATER TAPS

- A. Tapping Existing Pipelines.
 - 1. Tapping valves shall be resilient wedge type.
 - 2. Cast iron tapping sleeve or tapping cross shall have mechanical joint connections. The flanged end for tapping valve shall include a recess to provide positive alignment of the tapping valve.
 - 3. Tapping valves shall conform to AWWA C509 and C500 standards. An Affidavit of Compliance shall be furnished for the valves.
 - 4. Tapping valves 16" and smaller shall be designed for operation in a vertical position with a vertical operating shaft. Tapping valves over 16" shall be designed for operation in a horizontal position and shall have a vertical operating shaft.

2.06 WATER SERVICES

- A. Water services in the public R.O.W. shall be polyethylene tubing with a minimum working pressure of 200 psi.
- B. All water service tubing and fittings shall be in conformance with Plans.

PART 3 - EXECUTION

3.01 INSTALLATION, GENERAL

- A. Unloading Material: The CONTRACTOR shall exercise care in unloading and handling pipe, valves, fittings, and all other material. Dropping pipe from trucks and allowing pipe to roll against other pipe will not be permitted.
- B. Excavation: Pipe line trenches shall be excavated to required depth as shown on the drawings or as directed by the ENGINEER. In general, water distribution lines shall have a minimum of 36" cover both for PVC pipe and DIP pipes. If rock is encountered, excavation shall be carried a minimum of 8" below bottom of pipe, and trench backfilled with sand or earth and thoroughly tamped. Width of trench shall be sufficient to allow workmen to perform all operations incidental to constructing the pipe line. Hand dug bell holes shall be provided to permit proper joint making. No section of pipe shall bear on rock or on placed blocking. All excavations will be dewatered to permit dry joints.
- C. Work shall be properly braced where necessary. Where wood sheeting or certain designs of steel sheeting are used, the sheeting shall be cut off at a level two feet above the top of the installed pipe and that portion below that level shall be left in place. If

interlocking steel sheeting of a design approved by the ENGINEER is used, it may be removed providing removal can be accomplished without disturbing the bedding or alignment of the pipe. Any damage to the pipe bedding, pipe or alignment of the constructed main caused by removal of sheeting shall be cause for rejection of the affected portion of the work.

3.02 PIPE

- A. Installation of Pipe: All installation shall conform to AWWA C-600, latest version. Pipe shall not be rolled or pushed into the trench from the bank. Before pipe is lowered into the trench, it shall be thoroughly inspected by the CONTRACTOR, as necessary, to insure sound conditions and eliminate the possibility of leakage or bursting under test pressure.
- B. Water mains shall be preferably laid at least 10 feet horizontally from any existing or proposed sewer mains. A vertical distance of at least 18" should be maintained when a sewer pipe crosses under a water main. If this is not possible, then the water main must be ductile iron with 20 foot lengths of pipe centering on the point of crossing. If a crossing where the sewer is laid above a water line is unavoidable, then the above mentioned precautions shall be observed regardless of the distance of vertical separation between water mains and sewer piping.
- C. Pipes and valves, fittings, and all other materials showing defects shall not be used for construction. All such defective materials shall be removed from the construction site immediately. Before pipe is lowered into the trench, it shall be swabbed or brushed to insure that no dirt or foreign matter will be in the finished line.
- D. Pipe shall be laid on a flat bottom trench and backfill tamped to 6" above the top of the pipe. Pipe installation shall conform to "Type B Method" as adopted by Committee A-21 of the American Standards Association. A firm even bearing shall be provided throughout the length of each section of pipe. Pipe shall not bear on any unyielding structures, nor shall it support any other structures. All dead ends shall be plugged or capped, anchored and held in place with restrained joints as required. Except while work is in progress, all pipe openings shall be suitably plugged to prevent entrance of water or any foreign matter. Material deemed unstable for providing adequate support for pipe shall be removed and replaced by suitable material. Adequate backfill shall be deposited on the pipe to prevent floating. Any pipe which has floated shall be removed from the trench and reinstalled as directed by the ENGINEER.
- E. Joints: All joints shall be suitable for the type of pipe being jointed and shall be made in accordance with manufacturer's recommendations.
 - 1. Mechanical joints: Mechanical joints shall be of the stuffing box type. The gland, followed by the rubber gasket, shall be placed over the plain end of the pipe which is inserted into the socket. The gasket is then pushed into position so that it is evenly seated in the socket. The gland shall be moved into position against the face of the socket, bolts inserted and made finger-tight. Bolts shall be tightened by a ratchet wrench suitable for the size of pipe being connected alternately, bottom, then top, etc., until the joint is completed.
 - 2. Compression Pipe joints: Compression joints shall be a rubber seal joint, made pressure tight by a molded rubber gasket and lubricated to facilitate assembly. The joint shall be made tight by inserting the plan end into the bell after lubrication. Joints shall be made up as recommended by the manufacturer.

3. Flanged joints: Flanged joints shall be made with rubber gaskets. Bolts shall have rough square heads and hexagonal nuts and made to American Standard rough dimensions and shall be recommended size trimmed. Bolts shall be recommended size for the diameter of the pipe being jointed and shall be tightened as to distribute evenly the stress in the bolts and bring the pipe into alignment.
4. Threads shall be neatly cut with sharp tools and the jointing procedure shall conform with the best practices. Before jointing, all scale shall be reamed. All pipe shall be screwed with an application of graphite and engine oil or other approved pipe compound applied to the threads. This application shall be thoroughly wiped off the inside of every joint.

3.03 INSTALLATION OF FITTINGS

- A. Applicable portions of these specifications shall apply to installation of fittings. Reaction of restrained joints shall be applied at bends and tees and where changes in pipe diameter occur at reducers or in fittings.

3.04 INSTALLATION OF FIRE HYDRANTS

- A. All hydrants shall stand plumb and burial line shall be set at finished grade. The pumper nozzle shall be set at 18" min. and 24" max. above finished grade.

3.05 INSTALLATION OF VALVES

- A. All valves shall stand plumb unless otherwise shown on the plans or directed by the ENGINEER. The operation of installing tapping sleeves and valves shall be done by an experienced organization who has been engaged in this type of work not less than one (1) year with a representative list of successful installations.

3.06 PRESSURE TESTS

- A. After pipe has been adequately backfilled, all laid pipes shall be subjected to hydro-static pressure of 150 PSI (200 PSI for firelines). The duration of the pressure test shall not be less than two (2) hours and shall not vary more than 5 PSI during the test. Test sections shall be limited to a maximum length of 2000 feet. Care shall be taken to insure that all air has been removed from the pipe previous to pressure tests. The CONTRACTOR shall provide such means of venting the pipe as are required. Any material or installation proving defective shall be replaced by the CONTRACTOR.

3.07 LEAKAGE TEST

- A. After the main has been brought up to test pressure, it shall be held at this pressure and make up water shall be carefully measured by use of displacement meter or by pumping water from a vessel of known volume. The pipe line shall be walked and all visible joints inspected for leakage and movement of pipe. All visible leaks shall be repaired. Should any section of pipe line disclose joint leakage greater than that permitted, the CONTRACTOR shall at their own expense, locate and repair the defective joints until leakage is within the permitted allowance.
- B. The leakage test shall be conducted in accordance with AWWA Specification C-600, latest revision. Leakage shall be less than the number of gallons per hour as determined by the formula:

$$L = \frac{SD P^{1/2}}{148,000}$$

in which L equals the allowable leakage in gallons per hour, S is the pipe length in the main tested, D is the nominal diameter of the pipe in inches, and P is the average test pressure during the leakage test, in pounds per square inch, gauge. Length of test shall not be less than two (2) hours. Average test pressure shall not be less than 150 PSI. The test shall be conducted as directed by the ENGINEER.

3.08 BACKFILL

- A. No trenches or excavations shall be backfilled until the trench and installation has been inspected and written approval given by the ENGINEER. All backfill shall be carefully placed to avoid movement of the pipeline. Backfill shall be free from rock, stones larger than 2" in any dimension, brush, or other unsuitable material as determined by the Engineer. It shall be placed in the trench uniformly on both sides of the pipe for full width of the trench and to the horizontal diameter of the full length of the pipe. This backfill shall be thoroughly tamped to provide support free from voids.
- B. Additional backfill shall then be placed between joints to an average depth of 12" over the top of the pipe where pipe is of 8" and smaller diameter, and 24" over larger pipe. Pipe joints shall remain exposed until completion of the pressure and leakage tests unless otherwise directed by the ENGINEER.
- C. On completion of pressure and leakage tests, the exposed joints shall be backfilled to a depth of 12" above the top of the pipe. Backfill shall be carefully compacted until 12" of cover exists over the pipe. The remainder of the backfill shall then be placed and compacted thoroughly by puddling and tamping as required. Where directed, puddling and tamping may be omitted, and backfill shall be neatly rounded over the trench to a sufficient height to allow for settlement to grade after consolidation.

3.09 STERILIZATION OF COMPLETE PIPELINE

- A. Before the final acceptance of complete pipeline, all requirements of the County and Health Department shall be satisfied. Satisfactory bacteriological test results from the agencies shall be forwarded to the ENGINEER.
- B. Prior to chlorination of mains, all dirt and foreign matter shall be removed by high velocity flushing through fire hydrants or other approved blow-offs. The main shall then be filled with a chlorine solution of at least 50 parts per million of chlorine and retained in the pipe not less than twenty-four (24) hours. Chlorine residual after retention period shall be not less than 30 parts per million. After chlorination, the mains shall be thoroughly flushed with potable water and required samples taken for bacteriological analysis. Sampling to be witnessed by the ENGINEER.

3.10 RESTORATION OF SURFACE AND/OR STRUCTURES

- A. The CONTRACTOR shall restore and/or replace paving, curbing, sidewalks, fences, sod, survey points and other disturbed surfaces to a condition equal to that before the work was begun and to satisfaction of the ENGINEER, and shall furnish all labor and materials incidental thereto. Relative restoration of surfaces and/or structures, the CONTRACTOR shall comply with all governing agencies requirements including city, town, county and state.

3.11 CONNECTION TO EXISTING SYSTEM

- A. The CONTRACTOR shall make proper arrangements for compliance with the regulations for connection to any existing distribution system with the OWNER of that system. Tap-in and connection will be made in strict accordance with the ENGINEER.

- END OF SECTION -

SECTION 02515 - WATER SERVICE CONNECTIONS AND TRANSFERS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. All applicable provisions of the Bidding and Contract Requirements, and Division 1 - General Requirements shall govern the work under this Section.

1.02 WORK INCLUDED

- A. This section covers the work necessary for service connections, laying service pipe, casing pipe, making connections to the new water main and to the existing service pipe, testing and flushing, and all incidental work necessary to accomplish the construction.
- B. The work includes excavation, backfill and compaction, furnishing and installing service clamps, corporation stops or valves, meter yokes or connections, service connection piping, fittings, and appurtenances within the designated limits, testing, flushing, and other incidental work as required for a complete installation. Included are the installation and transfers of 5/8-inch, one (1) inch, 1½ inch, and two (2)-inch meter connections within the limits shown on the plans.
- C. The approximate location of service connections to be installed or transferred will be determined by the CONTRACTOR, upon review and approval by the ENGINEER and CITY.

1.03 RELATED WORK

- A. Division 2 as applicable
- B. Section 02222 - Excavation and Backfilling for Utilities.
- C. Section 02502 - Valves, General.
- D. Section 02510 - Water Distribution System.

PART 2 - PRODUCTS

2.01 EXCAVATION

- A. Excavation shall conform to the requirements of Section 02222, Excavation and Backfilling for Utilities.

2.02 BACKFILL

- A. Acceptable material excavated from the trench shall be used for trench backfill. Select backfill material for use in the pipe zone, when required by the ENGINEER, shall contain no material larger than one (1) inch in diameter.

2.03 SERVICE CONNECTION SIZE

- A. The location and size of service connection to be transferred or installed will be as determined in the field by CONTRACTOR. The meter and meter box will be installed by CONTRACTOR if required. Minimum tap size shall be one (1) inch.

2.04 SERVICE SADDLES

- A. Service saddles shall be malleable or ductile iron double-strap saddles with iron pipe tap, or equal. Saddle shall be of the size required by the pipe and shall be provided with a neoprene O-ring seal and appropriately sized IP tap. Straps shall be corrosion resistant with Type 304 stainless steel bands and hardware. All service saddles shall conform to

ANSI/AWWA C111/A21.11 and ASTM A-588.

2.05 TAPPING MATERIALS

- A. The CONTRACTOR shall provide the necessary tapping machines for making the connections, and shall furnish the miscellaneous materials required for making the taps, such as cutting oil and similar materials.

2.06 CORPORATION STOPS

- A. Corporation stops for one (1) inch services shall have AWWA thread inlet and a compressive connection outlet suitable for service pipe. Corporation stops for two (2) inch services shall be ball valves and have outside iron thread inlet and a compression connection outlet suitable for service pipe. Corporation stops shall meet AWWA C800, latest revision.

2.07 COUPLINGS

- A. Couplings shall be hose clamp type coupling, outside IP thread to plastic for connecting polyethylene pipe to corporation stop and meter yoke. Clamp pipe with two stainless steel clamps at each connection.

2.08 FLEXIBLE COUPLINGS

- A. Flexible couplings shall be straight cast couplings.

2.09 UNION

- A. Copper-to-copper union.

2.10 MISCELLANEOUS FITTINGS

- A. Miscellaneous fittings, includes reducers and adapters.

2.11 CURB STOPS

- A. Curb stops shall meet AWWA C800, latest revision and shall be resilient seated.

2.12 CURB BOXES

- A. Curb boxes shall be two (2) feet long, extension type, arch pattern base, and furnished with lids and plugs.

2.13 METER STOP

- A. Meter stops provided by CONTRACTOR.

2.14 METERS, BOXES, AND COVERS

- A. Meters and boxes are existing. CONTRACTOR will connect new service lines to existing meter assembly and adjust boxes as necessary.
- B. Where meter boxes are damaged, CONTRACTOR shall furnish and install replacement box of similar kind in its place.

2.15 METER YOKES

- A. CONTRACTOR to connect to existing.

2.16 ANGLE VALVES

(not used)

2.17 COPPER TUBING

(not used)

2.18 WATER SERVICE PIPING

- A. Water service piping shall be Polyethylene tubing (blue in color), 200 psi rated, and conform to AWWA 901-08 with a SDR of 9. Pipe joints shall be of the compression type totally confined grip seal and coupling nut.

2.19 CASING PIPE

- A. Casing pipe shall be Schedule 40 PVC., or equal, as determined by ENGINEER.

PART 3 - EXECUTION

3.01 TRENCH EXCAVATION AND BACKFILL

- A. Conform to the requirements of Section 02222, "Excavation and Backfilling for Utilities". Place only select backfill material in the trench within 6 inches of the service connection pipe or line. Cover around pipe shall be 8 inches or as indicated on the plans. Backfill and compact remainder of trench with excavated material as specified in the referenced section.

3.02 CONNECTION TO MAIN

- A. Clean exterior of main of dirt or other foreign matter that may impair the quality of the completed connection. Then place service clamp at the desired location and clamp tight by tightening alternate nuts progressively. Do not place service clamp within 1 foot of pipe joint or other clamp.
- B. Taps shall be made in the pipe by experienced workmen using tools in good repair with the proper adapters for the size main being tapped.

3.03 PREPARATION OF TRENCH

- A. Grade the bottom of the trench by hand to the line and grade to which the pipe is to be laid, with proper allowance for special bedding. All other conditions and operations as specified in Section 02222, "Excavation and Backfilling for Utilities" must be adhered to. The trench bottom shall form a continuous and uniform bearing support for the pipe. A 6 inch layer of imported earth or other specified material will be required over and under pipe in areas where suitable trench side material is not available.

3.04 UNDERCROSSING OF ASPHALT-SURFACED ROADS

- A. Service connection piping under asphalt-surfaced roads shall be bored or jacked. Open cutting of asphalt-surfaced roads is not permitted except at the direction of the ENGINEER. The service connection pipe shall be installed so that it has a minimum cover of 2 feet with a slight grade sloping away from the water main.

3.05 COPPER TUBING

(not used)

3.06 POLYETHYLENE PLASTIC TUBING

- A. Install polyethylene plastic tubing in accordance with the manufacturer's recommendations.

3.07 INSTALLATION OF METER BOXES AND METERS

- A. Where applicable, meters and meter boxes or vaults shall be installed by the CONTRACTOR as shown on the plans. Finish grade of completed meter enclosure shall be flush with existing ground or as shown otherwise. Meter boxes or vaults shall be set or

constructed plumb with the top set to conform to the slope of the finish grade. Lightly compacted earth backfill shall be placed inside of the meter boxes to depth indicated. Grade adjustment of the meter boxes or vaults shall be by using standard extension sections for the box or vault specified. Install meter in a horizontal position with the meter dial or dials at a depth below the cover as shown on the plans. Backfill around meter vaults as specified for adjoining pipe.

- B. Where applicable, water meters shall be reinstalled by the CONTRACTOR. Corporation stops shall be in the open position and angle stops shall be closed, prior to reinstallation of the meter.
- C. Withhold connection to meters until the new water system is ready for operation. The remainder of the service connection, excluding the meter, may be installed at any time during or after construction of the main.

3.08 HYDROSTATIC TEST AND LEAKAGE

- A. Test service connections and service connection tubing by either testing in conjunction with the main at the test pressure required for the main, or by testing at the normal hydrostatic main pressure after the main has been completely installed and tested. Inspect visually for leaks and repair any leaks before backfilling. Duration of the test shall be at least fifteen (15) minutes.

3.09 DISINFECTION

- A. Service connection transfers shall be disinfected as follows:
 - 1. Make connection to the main pipeline which shall have been previously hydrostatically tested and disinfected.
 - 2. Prior to connecting new copper or plastic tubing to existing copper tubing or meter stop, flush new copper or plastic tubing by fully opening corporation stop and allowing water to run for 2 minutes.
 - 3. Close corporation stop and meter stop, connect new copper or plastic tubing to existing copper tubing or to meter stop, as applicable. Open corporation stop and allow to stand for a minimum of 30 minutes retention period. Open meter stop.
- B. The CITY may put extra chlorine in the water system during the time of service connection transfers to provide sufficient chlorine residual to adequately disinfect service connections when the above procedure is followed.

- END OF SECTION -

SECTION 02710 - ASPHALTIC CONCRETE PAVEMENT

PART 1 - GENERAL

1.01 WORK INCLUDED

- A. Construct asphaltic concrete pavement in accordance with the lines, grades and typical section as indicated on the Drawings, specified herein and as required for a complete installation.

1.02 SUBMITTALS

- A. The CONTRACTOR shall submit his proposed formula for the asphaltic concrete paving for review in accordance with the Section 01300, "Submittals".

1.03 QUALITY CONTROL

- A. The phrase "DOT Specifications" shall refer to the Florida Department of Transportation Standard Specifications for Road and Bridge Construction. The DOT Specifications, are referred to herein and are hereby made a part of this Contract to the extent of such references, and shall be as binding upon the Contract as through reproduced herein in their entirety.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Limerock Base: The limerock base shall consist of either one or two courses of Miami Oolite limerock in accordance with Section 200 and 911 of the DOT Specifications.
- B. Prime Coat: The material used for the prime coat shall be cut-back Asphalt Grade RC-70 conforming to Sections 300 and 916 of the DOT Specifications for prime to be used on Miami Oolite formation limerock.
- C. Tack Coat: The material used for the tack coat shall be Emulsified Asphalt Grade RS-2 conforming to Sections 300 and 916 of the DOT Specifications. The complete site shall receive a final tack coat to provide a uniform finish for all new and existing paving at the pump station site.
- D. Asphaltic Concrete: The materials and construction of the asphaltic concrete patch and surface courses shall be Type S-I or Type S-III Asphaltic Concrete conforming to Sections 330, 331 and 916 of the DOT Specifications. Locations where Type S-I or Type S-III will be used shall be approved by the Engineer.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Subgrade: Roadway subgrades shall be stabilized to the minimum depth shown on the Drawings to a Limerock Bearing Ratio of not less than 40. Stabilizing shall be Type B as defined in Section 160 of the DOT Specifications. Stabilization may require the addition and thorough mixing in of crushed limerock, course limerock screenings, or any other stabilizing material acceptable to the ENGINEER. The stabilizing material shall be applied in such quantity that, after mixing and blending, the subgrade will have a LBR of not less than 40. Stabilizing material shall be mixed or blended in the subgrade material by plowing, scarifying, disking, harrowing, blading and mixing with rotary tillers until the

mixed materials are of uniform bearing value throughout the width and depth of the layer being processed.

- B. At least three density determinations shall be made on each day's final compaction operations on each course, and the density determinations shall be made at more frequent intervals if deemed necessary by the ENGINEER.
- C. Limerock Base: The limerock base shall be constructed in accordance with Section 200 of the DOT Specifications, to the thickness and width indicated on the Drawings.
- D. After spreading of the base material is completed, the entire surface shall be scarified and shaped so as to produce the exact grade and cross section after compaction. For double course base, this scarifying shall extend a depth sufficient to penetrate slightly the surface of the first course. The maximum depth of each lift shall be 8-inches.
- E. When the material does not have the proper moisture content to insure the required density, wetting or drying shall be required. If the material is deficient in moisture, water will be added and uniformly mixed in by disking the base course to its full depth. If the material contains an excess of moisture, it shall be allowed to dry before being compacted. As soon as proper conditions of moisture are attained, the material shall be compacted to an average density not less than 98 percent maximum density as determined in more than one course, the density shall be obtained in each lift of the base.
- F. During final compacting operations, if blading of any areas is necessary to obtain the true grade and cross section, the compacting operations for such areas shall be completed prior to making the density determination on the finished base.
- G. Unless otherwise directed by the ENGINEER, the surface shall be "hard-planed" with a blade grader immediately prior to the application of the prime coat to remove the thin glaze or cemented surface and to allow free penetration of the prime material. The materials planed from the base shall be removed from the base area.
- H. If cracks or checks appear in the base, either before or after priming, which in the opinion of the ENGINEER, would impair the structural efficiency of the base course, the CONTRACTOR shall remove such cracks or checks by rescarifying, reshaping, adding base material where necessary and recompacting, at no additional cost to the CITY.
- I. Mixing Base and Subgrade: If at any time the subgrade material shall become mixed with the base course material, the CONTRACTOR shall, without additional compensation, dig out and remove the mixture, reshape and compact the subgrade and replace the materials removed with clean base material, which shall be shaped and compacted as specified above.
- J. Prime Coat: The prime coat shall be applied at a rate of 0.15 gallons per square yard and the Work performed in accordance with Section 300 of the DOT Specifications.
- K. Tack Coat: The tack coat shall be applied at a rate between 0.02 and 0.10 gallons per square yard and the Work performed in accordance with Section 300 of the DOT Specifications.
- L. Asphaltic Concrete: The spreading, compacting and jointing the wearing surface shall be in accordance with Sections 330 and 331 of the DOT Specifications to the thickness indicated on the Drawings.

3.02 PAVEMENT REPAIR

- A. All damage to pavement as a result of Work under this Contract shall be repaired in a manner satisfactory to the ENGINEER and at no additional cost to the CITY. The repair shall include the preparation of the subgrade, the placing and compacting of the limerock base, the priming of the base, the placing and maintaining of the surface treatment, all as specified herein.
- B. The width of all repairs shall extend at least 12 inches beyond the limit of the damage. The edge of the pavement to be left in place shall be cut to a true edge with a saw or other acceptable method so as to provide a clean edge to abut the repair. The line of the repair shall be reasonably uniform with no unnecessary irregularities.

3.03 TEMPORARY PAVING

- A. Prior to commencing excavation, the asphalt surface shall be sawcut within the limits of the allowable trench width. Temporary paving will be required along the entire route where the original paved surface is removed. Temporary paving shall be placed the same day the trench is backfilled. The trench shall be backfilled as required in Section 6.09, "Backfill and Compaction", up to a level 1 inch below the existing pavement surface and a temporary, cold mixed sand/asphalt pavement shall be constructed up to the level of the existing pavement surface. The liquid asphalt shall be Grade RC-70 conforming to the requirements of D.O.T. Specifications, Section 916-2. The sand shall conform to the requirements of D.O.T. Specifications, Section 902 for fine aggregate.
- B. The cold mix is to be installed as necessary to assure safe driving surface.
- C. Prior to completion of the work the CONTRACTOR shall remove the 1 inch of cold mix and surplus backfill. He shall replace it with the specified compacted limerock base course and asphalt within the approved working limits. Municipal agencies permitting this work may accelerate the time for removal of the cold mix, at their discretion.
- D. The temporary pavement shall be maintained by the CONTRACTOR in a condition satisfactory to the ENGINEER until its removal. Removal shall include any surplus backfill material. Replacement shall be made within 30 days with the permanent pavement. In replacing the temporary paving with permanent pavement, all work shall be completed in sections compatible with specified traffic maintenance procedures.

No payment shall be made for temporary paving work and the cost for such work shall be included in the prices bid for other applicable items of work.
- E. Sand seal on the limerock base course will not be permitted in lieu of temporary paving.

- END OF SECTION -

SECTION 02760 - CONCRETE PAVEMENT, CURB AND WALKWAYS

PART 1 - GENERAL

1.01 THE REQUIREMENT

- A. Concrete pavement, curbs and sidewalk shall be constructed to the lines and grades and dimensions required for a complete installation as shown on the Drawings and specified herein, and as dictated by the requirements of the Public Works Department having jurisdiction.

1.02 SUBMITTALS

- A. Shop drawings for reinforcing, joint material and mix designs shall be submitted for review in accordance with the Section 01300, "Submittals".

PART 2 - PRODUCTS

2.01 CONCRETE

- A. Concrete shall be Class B, conforming to the Section 03300, "Cast-in-Place Concrete", unless noted or specified otherwise.

2.02 PREFORMED JOINT FILLER

- A. Preformed joint filler shall be sponge rubber and conform to the requirements of AASHTO Designated M148, Type 1.

PART 3 - EXECUTION

3.01 SUBGRADE CONDITION

- A. The finished subgrade shall be maintained in a smooth, compact condition and any areas which are disturbed prior to placing of the concrete shall be restored at the CONTRACTOR's expense. The subgrade shall be moist at the time the concrete is placed. Water shall be uniformly applied ahead of the paving operations as directed by the ENGINEER. If the CONTRACTOR does not maintain the subgrade in the required moist condition, a vapor barrier sheet will be required between the subgrade and the concrete.
- B. The subgrade shall be accurately trimmed to the required elevation with a 1/4-inch tolerance. High areas shall be trimmed to proper elevation. Low areas may be filled with suitable material and compacted to the specified density or filled with concrete integrally with the placing of the pavement.

3.02 SETTING FORMS

- A. The forms shall be accurately set to line and grade and such that they rest firmly, throughout their entire length upon the compacted subgrade surface. Forms shall be joined neatly and tightly and braces to test the pressure of the concrete and the finishing operations. The alignment and grade of all forms shall be approved before and immediately prior to the placing of concrete.

3.03 MIXING CONCRETE

- A. Concrete shall be mixed in accordance with the Section 03300, "Cast-in-Place Concrete".

3.04 PLACING CONCRETE

- A. The concrete shall be distributed on the subgrade to such depth, that, when it is consolidated and finished, the slab thickness required by the Drawings will be obtained at all points and the surface will at no point be below the grade specified for the finished surface, after application of the allowable tolerance. The concrete shall be deposited on the subgrade in a manner which will require as little rehandling as possible.
- B. Fabric reinforcement shall be placed at mid slab depth, and the fabric shall be maintained at this location during the placing and finishing operations.
- C. Concrete shall be thoroughly consolidated against and along the faces of all forms, by means of hand-operated, spud-type vibrators. Vibrators shall not be permitted to come in contact with the subgrade or a side form. Vibration at any one location shall not continue so long as to produce puddling or the accumulation of excessive grout on the surface. In no case shall the vibrator be operated longer than 15 seconds in any one location.

3.05 STRIKING-OFF, CONSOLIDATING AND FINISHING CONCRETE

- A. Immediately after the placing, the concrete shall be struck off, consolidated and finished, to produce a finished pavement conforming to the cross section, width and surface sequence of operations shall be as follows: strike-off; vibratory consolidation; screeding; floating; removal of laitance; straight edging; and final surface finish.

3.06 STRAIGHTEDGING AND SURFACE CORRECTIONS

- A. After floating has been completed and the excess water removed, but while the concrete is still in a plastic state, the surface of the concrete shall be tested for trueness with an accurate 10 foot straightedge. The straightedge shall be furnished by the CONTRACTOR. The straightedge shall be held in successive positions parallel to the road center line, in contact with the surface, and the whole area tested from one side of the slab to the other as necessary. Any depressions shall be immediately filled with freshly mixed concrete and struck-off; consolidated and refinished. High areas shall be cut down and refinished. Straightedge testing and surface correction shall continue until the entire surface appears to conform to the required grade and cross section.

3.07 FINAL FINISH

- A. As soon as the water sheen has disappeared from the surface of the pavement and just before the concrete becomes nonplastic, a light broom finish shall be given to the surface.

3.08 EDGING

- A. After the final finish has been applied, but before the concrete has become nonplastic, the edges of the pavement along each side of the strip being placed, on each side of construction joints and along any structure extending into the pavement, shall be carefully rounded to a 1/4 inch radius except as otherwise indicated. A well-defined and continuous radius shall be produced and a smoother, dense mortar finish obtained. All concrete shall be completely removed from the top of the joint filler.
- B. All joints shall be checked with a straightedge before the concrete has become nonplastic and, if one side of the joint is higher than the other or the entire joint is higher or lower than the adjacent slabs, corrections shall be made as necessary.

3.09 JOINTS

- A. Construction Joints
 - 1. Construction joints shall be located as shown on the Drawings.
- B. Expansion Joints Around Structures
 - 1. Expansion joints shall be formed by placing premolded expansion joint material about all structures and features projecting through, into or against the pavement. Unless otherwise indicated, such joints shall be 1/2 inch in width.
- C. Transverse Expansion Joints
 - 1. Open type transverse expansion joints shall be provided at all sidewalk returns and at 50 foot intervals and wherever indicated on the Drawings. Open type joints shall be formed by staking a 1/4 inch thick metal bulkhead in place and placing concrete on both sides. After the concrete has set sufficiently to preserve the width and shape of the joint, the bulkhead shall be removed. After the sidewalk has been finished over the joint, the slot shall be opened and edged with a tool having a 1/2 inch radius. Transverse expansion joints shall be cleaned and filled with joint filler strips 1/4 inch thick conforming to the requirements of AASHTO M-153.
- D. Scored Joints
 - 1. Scored joints shall be either formed or sawed at 5 foot intervals and shall extend to a depth of at least one fourth of the sidewalk slab thickness.

3.10 CURING

- A. After the finishing operations have been completed and as soon as the concrete has hardened sufficiently that marring of the surface will not occur, the entire surface and the edges of the newly placed concrete shall be covered and cured with membrane curing compound.
- B. Curing compound shall be uniformly applied to the surfaces to be cured, in a single coat, continuous film, at the rate of one gallon to not more than 200 square feet, by a mechanical sprayer.
- C. Curing compound shall not be applied during periods of rainfall. Curing compound shall not be applied to the inside faces of joints to be sealed. Should the film become damaged from any cause within the required curing period, the damaged portions shall be repaired immediately with additional compound. Upon removal of side forms the sides of the slabs exposes shall immediately be coated to provide a curing treatment equal to that provided for the surface.

3.11 CURB AND SIDEWALK CONSTRUCTION

- A. The concrete curbs and sidewalks shall be constructed on a prepared smooth subgrade of uniform density. Large boulders and other obstructions shall be removed to a minimum depth of 6 inches below the finished subgrade elevation and the space shall be backfilled with sand, base course material or other suitable material which shall be thoroughly compacted by rolling or tamping. The CONTRACTOR shall furnish a template and shall thoroughly check the subgrade prior to depositing concrete.
- B. Concrete for curbs and sidewalks shall be formed, mixed, placed and finished in conformance with the requirements of other Articles of this Section, except as modified herein. Sidewalks shall be given a light broom finish.

- END OF SECTION -

SECTION 02900 - LANDSCAPING**PART 1 - GENERAL****1.01 THE REQUIREMENT**

- A. The CONTRACTOR shall provide through the services of a landscape subcontractor all landscape work including; grading, lawns, grasses, labor, material, equipment and all miscellaneous work required for a complete landscape of those areas damaged during construction to better or equal conditions.

1.02 SUBMITTALS

- A. Samples of any landscape material may be required for review on the site or as otherwise determined by the ENGINEER. Only upon favorable review of samples (i.e. mulch, planting soils, sod, etc.) by the ENGINEER, in writing, may delivery of material begin. Samples shall be stored on the site and protected until furnishing of materials is completed.

1.03 SUBCONTRACTOR QUALIFICATION

- A. Qualifications for subcontractors shall be a minimum of (5) years experience in reclamation - restoration of sodded areas. The CONTRACTOR shall submit subcontractor qualifications and list of applicable job references in accordance with the Contract Documents.

1.04 GRADING CONCEPT

- A. Site shall be regarded to existing conditions.

1.05 SITE INSPECTION

- A. The CONTRACTOR shall personally examine the site and fully acquaint himself with all of the existing conditions in order that no misunderstanding may afterwards arise as to site characteristics. No additional compensation will be granted due to any unusual difficulties which may be encountered in the execution or maintenance of any portion of the work.

1.06 CODES AND STANDARDS

- A. The CONTRACTOR shall be responsible for planting and maintaining the landscape in complete accordance with all applicable codes, ordinances and laws. Any modification made to conform with said codes, laws and ordinances shall be completed at the CONTRACTOR's expense at no additional cost to the CITY.

1.07 CONTRACTOR'S CREWS

- A. The CONTRACTOR shall have his labor crews controlled and directed by an experienced foreman well versed in standard planting procedures in order to execute installation rapidly and correctly.

1.08 CONTRACTOR'S RESPONSIBILITY

- A. The CONTRACTOR shall be entirely responsible for the work until final acceptance by the CITY in accordance with the Contract Documents.

- B. Planting zone shall be staked by the CONTRACTOR for review by the ENGINEER prior to installation of sod material.
- C. The CONTRACTOR shall be responsible for damage to sod material. All sod shall comply with applicable state and county rules and regulations.

PART 2 - PRODUCTS

2.01 MATERIALS LIST

- A. No quantities have been provided for landscaping. The CONTRACTOR shall take care as not to damage existing sod and / or landscaping. Any sod and / or landscaping damaged during construction shall be replaced at the CONTRACTOR's expense.

2.02 LANDSCAPE DEVELOPMENT MATERIALS

- A. Planting Soil/Top Soil: Planting soil and top soils shall be fertile, friable, without mixture of subsoil materials, and obtained from the top 6 inches scraped off the existing site and/or a well-drained, arable site. It shall be free from heavy clay, stones, lumps, plants, roots or other foreign materials, or noxious grass (such as Bermuda or nut grass) and noxious weeds. It shall not contain toxic substances which may be harmful to sod growth.
- B. Water: All water necessary for planting and maintenance shall be of satisfactory quality to sustain adequate growth of sod and shall not contain harmful natural or man-made elements detrimental to sod. Water meeting the above standard shall be obtained from on-site sources, as acceptable to the ENGINEER, and metered. The CONTRACTOR shall be responsible to make arrangements for its use by his tanks, hoses, sprinklers, etc. If such water at the site is not satisfactory the CONTRACTOR shall obtain water from an acceptable source off site. The CONTRACTOR shall provide such satisfactory water from sources off the site at no additional cost to the CITY.
- C. Fertilizer: Fertilizer shall be complete with micro-nutrients, uniform in composition, dry and free flowing. Fertilizer shall be delivered to the site in the original unopened containers, each bearing the manufacturer's statement of analysis.

2.03 INSPECTION

- A. Sod shall be subject to inspection and approval at the place of growth, or upon delivery to the site, as determined by the CITY, for quality, size and variety. Such approval shall not impair the right of inspection and/or rejection at the site during progress of the work, or after completion, for size and condition of sod, insects, injuries and latent defects.

2.04 LAWNS AND GRASSES

- A. The materials used in this work shall conform to the following:
 1. The sod shall meet Florida State Plant Board Specifications, absolutely true to variety, type and free from weeds, fungus, insects and disease of any kind. Each sod panel shall have sufficient root and soil base to assure proper sod growth.
 2. Commercial Fertilizer
Commercial fertilizers shall comply with the State fertilizer laws. The numeral designations for fertilizer indicate the minimum percentages (respectively) of (1) total nitrogen, (2) available phosphoric acid and (3) water soluble potash, contained in the fertilizer. Type 1 fertilizer (as hereinafter specified) shall be.

Liquid fertilizer will not be permitted. Type 1 Fertilizer will be complete with micro-nutrients.

a. Type I Fertilizer

The chemical designation of this fertilizer shall be 12-8-8, with at least 50 percent of the nitrogen from a nonwater soluble organic source. The nitrogen source may be an urea-formaldehyde source provided it is not derived from a waste product of the plastic industry.

PART 3 - EXECUTION

3.01 DELIVERY, STORAGE AND HANDLING

Delivery, storage and handling shall comply with the Contract Documents and the following additional requirements.

- A. Sod: The CONTRACTOR shall time deliver so that sod will be placed within 24 hours after stripping and protect sod against drying and breaking of rolled strips.
- B. Storage: The CONTRACTOR shall be responsible for storage and protection of materials to be used in this portion of the project work in accordance with the Contract Documents.

3.02 FINE GRADING

- A. Fine grading shall consist of final finish grading of lawn and planting areas that have been rough graded. The CONTRACTOR shall fine grade the lawn and planting areas with top soil to bring the rough grade up to final finish grade allowing for thickness of sod and/or mulch depth. The CONTRACTOR shall fine grade by hand and/or with any necessary equipment.

3.03 LAWN CONSTRUCTION METHODS

- A. General: Fertilizing or mulching operations will not be permitted when wind velocities exceed 15 miles per hour.
- B. Preparation of Area to be Sodded: The prepared soil shall be loose and reasonably smooth. It shall be reasonably free of large rocks, roots and other material which will interfere with the work and subsequent mowing and maintenance operations.
- C. Irrigation: The sodded area shall be watered so as to provide optimum growth conditions for the establishment of the grass 24 hours after placement. Avoid standing water and over watering, but keep top layer of soil moist.

3.04 PLANTING PROCEDURES

- A. Cleaning Up Before Commencing Work: The CONTRACTOR shall clean up work and planting areas of all rubbish or objectionable matter. All mortar, concrete and toxic material shall be removed from all areas.

3.05 LAWN SODDING

- A. Sod panels shall be laid tightly together so as to make a solid sodded lawn area. On areas where the sod may slide due to height and slope, peg the sod with pegs driven through the sod blocks into firm earth at suitable intervals. Replace any pieces of sod which, after placing, show an appearance of extreme dryness. Avoid a continuous seam along the line of water flow in swales. Place sod a right angles to slope. Sod shall be laid uniformly against the edges of all buildings, paved and planted areas. Immediately

following sod laying, the lawn areas shall be rolled with a lawn roller customarily used for such purposes, and then thoroughly watered. After rolling, top-dressing shall be placed to fill voids between the sod panels and to even out inconsistencies in the sod. Clean sand shall be used for top dressing and shall be uniformly spread over the entire surface of the sod and thoroughly watered in.

- B. Apply specified fertilizer at the specified uniform rates with mechanical spreader.
- C. During delivery, prior to and during the planting of the lawn areas, the sod panels shall at all times be protected from excessive drying and unnecessary exposure of the roots to the sun. All sod shall be stacked during construction and planting, so as not to be damaged by sweating or excessive heat and moisture. Any sod damaged as noted shall not be used on the site.

3.06 HERBICIDAL WEED CONTROL

- A. General: All landscape areas shall be free of nut grass, torpedo grass, and other noxious weeds. "Round-up" or approved equal shall be applied to all planting areas as needed and determined on-site by the ENGINEER for weed control. Landscape CONTRACTOR is responsible for the removal of all weeds appearing on the site.

3.07 LAWN MAINTENANCE

- A. The CONTRACTOR shall, at his expense, maintain the planted areas in a satisfactory condition until final acceptance of the project in accordance with the Contract Documents. Such maintenance shall include the filling, leveling and repairing of any washed or eroded areas, as may be necessary. The CITY, at any time, may require resodding of areas in which the establishment of the grass stand does not appear to be developing satisfactorily.
- B. The CONTRACTOR shall produce a dense, well-established lawn. The CONTRACTOR shall be responsible for the repair and re-sodding of sunken or bare spots due to improper sod installation. Repaired sodding shall be accomplished as in the original work.
- C. Water sod every day for ten (10) successive days, then water three (3) times per week (at even intervals) for two (2) additional weeks. All watering shall be of sufficient quantity to wet or restore water to a depth of four (4) inches.
- D. If a planted area must be resodded due to the CONTRACTOR's negligence, carelessness or failure to provide routine maintenance of such area, such replacement shall be at the CONTRACTOR's expense.

3.08 SOD GUARANTEE AND REPLACEMENT POLICY

- A. Sod Material: The life and satisfactory condition of all sod material planted shall be guaranteed in accordance with the Contract Documents. Any sod which deteriorates in health and appearance so as to become a lesser specification (with 60 days) and/or grade from that which was originally installed shall be replaced.
- B. All sod replacement shall be made with the same species, as was in place at the beginning of the service period or with another sod of comparable value which is acceptable to the CITY.
- C. All sod to be replaced shall be removed from the site and replaced within 10 days.

- END OF SECTION -

SECTION 03300 - CAST-IN-PLACE CONCRETE

PART 1 - GENERAL

1.01 THE REQUIREMENT

- A. The CONTRACTOR shall furnish all materials for concrete in accordance with the provisions of this Section and shall form, mix, place, cure, repair, finish, and do all other work as required to produce finished concrete, all in accordance with the requirements of the Contract Documents.
- B. The requirements in this section shall apply to the following types of concrete:
 - 1. Class A1 Concrete: Normal weight concrete used at all locations, unless otherwise noted.
 - 2. Class A2 Concrete: Normal weight concrete with mandatory addition of high range water reducer, used for concrete walls.
 - 3. Class B Concrete: Normal weight concrete with pea-rock aggregate. Class B concrete shall be used only at locations indicated on the Drawings.
 - 4. Class C Concrete: Normal weight concrete used in electrical/instrumentation ductbanks, pipe encasements and sidewalks.
 - 5. Flowable fill: Lean concrete proportioned without the use of coarse aggregate primarily for use as pipe backfill. Flowable fill shall be utilized only at locations indicated on the Drawings.
 - 6. Tremie concrete: Concrete indicated to be placed underwater.

1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 01300 - Submittals
- B. Section 01400 - Testing and Quality Control

1.03 REFERENCE SPECIFICATIONS, CODES, AND STANDARDS

- A. Without limiting the generality of other requirements of these Specifications, all work specified herein shall conform to or exceed the requirements of the Florida Building Code (FBC) and the applicable requirements of the following documents to the extent that the provisions of such documents are not in conflict with the requirements of this Section.
- B. Codes and Standards
 - 1. The Building Code, as referenced herein, shall be the Florida Building Code.
- C. Federal Specifications
 - 1. UU-B-790A (Int.Amd. 1) Building Paper, Vegetable Fiber (Kraft, Waterproofed, Water Repellant and Fire Resistant).

D. Commercial Standards

1. ACI 214 Recommended Practice for Evaluation of Strength Test Results of Concrete.
2. ACI 301 Specifications for Structural Concrete for Buildings.
3. ACI 305 Hot Weather Concreting.
4. ACI 306 Cold Weather Concreting.
5. ACI 309 Recommended Practice for Consolidation of Concrete
6. ACI 315 Details and Detailing of Concrete Reinforcement.
7. ACI 318 Building Code Requirements for Reinforced Concrete.
8. ACI 347 Recommended Practice for Concrete Formwork.
9. ACI 350 Environmental Engineering Concrete Structures.
10. ASTM C 31 Methods of Making and Curing Concrete Test Specimens in the Field.
11. ASTM C 33 Specification for Concrete Aggregates.
12. ASTM C 39 Test Method for Compressive Strength of Cylindrical Concrete Specimens.
13. ASTM C 88 Test Method for Soundness of Aggregates by use of Sodium Sulfate or Magnesium Sulfate.
14. ASTM C 94 Specification for Ready-Mixed Concrete.
15. ASTM C 114 Method for Chemical Analysis of Hydraulic Cement.
16. ASTM C 136 Method for Sieve Analysis of Fine and Coarse Aggregate.
17. ASTM C 143 Test Method for Slump of Portland Cement Concrete.
18. ASTM C 150 Specification for Portland Cement.
19. ASTM C 156 Test Method for Water Retention by concrete Curing Materials.
20. ASTM C 157 Test Method for length Change of Hardened Cement Mortar and Concrete.
21. ASTM C 192 Method of Making and Curing concrete Test Specimens in the Laboratory.
22. ASTM C 227 Standard Test Method for Potential Alkali Reactivity of Cement Aggregate Combinations (Mortar-Bar Method).
23. ASTM C 260 Specification for Air-Entraining Admixtures for Concrete.
24. ASTM C 289 Standard Test Method for Potential Reactivity of Aggregates (Chemical Method).
25. ASTM C 494 Specification for Chemical Admixtures For Concrete.
26. ASTM C 586 Standard Test Method for Potential Alkali Reactivity of Carbonate Rocks for Concrete Aggregates (Rock Cylinder Method).

27. ASTM C 618 Standard Specification for Fly Ash and Raw or Calcined Natural Pozzolan for use as a Mineral Admixture in Portland Cement Concrete.
28. ASTM D 1751 Specification for preformed Expansion Joint Fillers for Concrete Paving and Structural Construction (Non-extruding and Resilient Bituminous Types).
29. ASTM D 6103 Standard Test Method for Flow Consistency of Controlled Low Strength Material
30. ASTM E11 Specification for Wire-Cloth Sieves for Testing Purposes.
31. ASTM E 119 Method for Fire Tests of Building Construction and Materials.

1.04 SUBMITTALS

- A. The design mixes to be used shall be prepared by qualified persons and submitted for review. The design of the mix is the responsibility of the CONTRACTOR subject to the limitations of the specifications. Review processing of this submission will be required only as evidence the mix has been designed by qualified persons and that the minimum requirements of the specifications have been met. Such review will in no way alter the responsibility of the CONTRACTOR to furnish concrete meeting the requirements of the specifications. If in the progress of the work the sources of materials change in characteristics or the CONTRACTOR requests a new source in writing, the CONTRACTOR shall, at his expense submit new test data and information for the establishment of a new design mix. Submit mix designs for all classes of concrete to be used under this Contract. Mix design submittals shall include the following:
 1. Sources of all materials and certifications of compliance with specifications for all sources of each material.
 2. Certified current (less than one year old) chemical analysis of Portland Cement or Blended Cement to be used.
 3. Certified current (less than one year old) chemical analysis of fly ash to be used.
 4. Manufacturer's data on all admixtures stating compliance with required standards and are compatible with one another. Written conformance to the above mentioned requirements and the chloride ion content of the admixture will be required from the admixture manufacturer prior to Mix design review by the ENGINEER.
 5. Field experience records and/or trial mix data for the proposed concrete mixes.
- B. Where ready-mix concrete is used, the CONTRACTOR shall provide delivery tickets at the time of delivery of each load of concrete. In addition to the information required by ASTM C94, each ticket shall show the mix number, cement content, water/cementitious ratio, and amount of water allowed to be added to truck without exceeding required water/cementitious ratio.
- C. A schedule of all concrete placement with volume of concrete planned to be placed each day.
- D. A layout of all structures with all planned construction joint locations.

1.05 QUALITY ASSURANCE

- A. Plant equipment and facilities shall meet all requirements of the Check List for Certification of Ready Mixed Concrete Production facilities of the National Ready Mixed Concrete Association and ASTM C 94.
- B. Tests for compressive strength and slump of concrete will be performed as specified herein. Test for determining slump will be in accordance with the requirements of ASTM C 143.
- C. The cost of initial trial mixes and initial laboratory tests to design the mixes including compression tests, sieve analysis, and tests on trial mixes shall be included in the Contract Price.
- D. The cost of all tests during construction will be borne by the CITY. However, the CONTRACTOR shall be charged for the cost of any additional tests and investigation on work performed which does not meet the Specifications. All test results shall be sent directly to the ENGINEER. The CONTRACTOR shall be responsible for coordination of all tests with the testing laboratory.
- E. Concrete for testing shall be supplied by the CONTRACTOR at no cost to the CITY, and the CONTRACTOR shall provide assistance to the ENGINEER in obtaining samples. The CONTRACTOR shall dispose of and clean up all excess material.
- F. Construction Tolerances
 - 1. The CONTRACTOR shall set and maintain concrete forms and perform finishing operations so as to ensure that the completed work is within the tolerances specified herein. Surface defects and irregularities are defined as finishes and are to be distinguished from tolerances. Tolerance is the specified permissible variation from lines, grades, or dimensions shown. Where tolerances are not stated in the Specifications, permissible deviations will be in accordance with ACI 347.

1.06 QUALITY CONTROL

- A. Compressive Strength
 - 1. Compression test specimens shall be taken during construction from the first placement of each class of concrete specified herein and at intervals thereafter as selected by the ENGINEER to insure continued compliance with these Specifications. At least one set of test specimens shall be made for each placement in excess of five cubic yards, or for each fifty (50) cubic yards of concrete placed, or for each 5000 square feet of surface area for slabs or walls, whichever is greater.
 - 2. Samples of freshly mixed concrete shall be obtained in accordance with ASTM C 172, and compression test specimens for concrete shall be made in accordance with ASTM C 31. Specimens shall consist of at least five 6-inch diameter by 12-inch high cylinders, or eight 4-inch diameter by 8-inch high cylinders. Each cylinder shall be identified by a tag attached to the side of the cylinder.
 - 3. The CONTRACTOR shall provide approved curing boxes for storage of cylinders on site. The insulated curing box shall be of sufficient size and strength to contain all the specimens made in any four consecutive working days and to protect the specimens from falling over, being jarred or otherwise disturbed during the period of initial curing. The box shall be erected, furnished and maintained by the

CONTRACTOR. Such box shall be equipped to provide the moisture and to regulate the temperature necessary to maintain the proper curing conditions required by ASTM C31. Such box shall be located in an area free from vibration such as pile driving and traffic of all kinds. No concrete requiring inspection shall be delivered to the site until such storage curing box has been provided. Specimens shall remain undisturbed in the curing box until ready for delivery to the testing laboratory but not less than sixteen hours

4. Compression test shall be performed in accordance with ASTM C 39. For 6x12 cylinders, two test cylinders will be tested at 7 days and 2 at 28 days. For 4x8 cylinders, three test cylinders will be tested at 7 days and three at 28 days. The remaining cylinders will be held to verify test results, if needed.

B. Consistency

1. Consistency of the concrete will be checked by the ENGINEER by standard slump cone tests. The CONTRACTOR shall make any necessary adjustments in the mix as the ENGINEER may direct and shall upon written order suspend all placing operations in the event the consistency does not meet the intent of the specifications. No payment shall be made for delays, material or labor costs due to such eventualities.
2. Slump tests shall be made in accordance with ASTM C 143. Slump tests shall be performed as deemed necessary by the ENGINEER and each time compressive strength samples are taken.

C. Air Content

1. Samples of freshly mixed concrete will be tested for entrained air content by the ENGINEER in accordance with ASTM C 231.
2. Air content tests will be performed as deemed necessary by the ENGINEER and each time compressive strength samples are taken.

D. Evaluation and Acceptance of Concrete

1. Evaluation and acceptance of the compressive strength of concrete shall be according to the requirements of ACI 215 and ACI 318, Chapter 5 "Concrete Quality Mixing and Placing", and as specified herein.
2. If any concrete fails to meet these requirements, immediate corrective action shall be taken to increase the compressive strength for all subsequent batches of the type of concrete affected.
3. All concrete which fails to meet the ACI requirements and these specifications, is subject to removal and replacement at the cost of the CONTRACTOR. Additional testing may also be required to verify compressive strength of concrete. Additional testing shall involve extraction and testing of concrete cores in accordance with ASTM C 42. ENGINEER shall determine locations where concrete cores shall be taken. Nondestructive test methods shall not be used to verify strength of in-place concrete.

1.07 PRE-CONCRETE CONFERENCE

- A. At least 35 days prior to start of the Concrete construction schedule, the CONTRACTOR shall conduct a meeting to review the proposed mix designs and to discuss the required methods and procedures to achieve the required concrete construction. The

CONTRACTOR shall send a pre-concrete conference agenda to all attendees 20 days prior to the scheduled date of the conference.

- B. The CONTRACTOR shall require responsible representatives of every party who is concerned with the concrete work to attend the conference, including but not limited to the following:
 - 1. CONTRACTOR's superintendent
 - 2. For the concrete design mix - Laboratory retained for trial batching and tests
 - 3. For field quality control - Concrete subcontractor, Concrete producer, Admixture Manufacturer(s), Concrete pumping contractor
- C. Minutes of the meeting shall be recorded, typed and printed by the CONTRACTOR and distributed by him to all parties concerned within five days of the meeting. One copy of the minutes shall also be transmitted to the ENGINEER.
- D. The minutes shall include a statement by the admixture manufacturer(s) indicating that the proposed mix design and placing techniques can produce the concrete quality required by these Specifications.
- E. The ENGINEER will be present at the conference. The CONTRACTOR shall notify the ENGINEER at least 20 days prior to the scheduled date of the conference.

PART 2 - PRODUCTS

2.01 CONCRETE MATERIALS

- A. Materials shall be delivered, stored, and handled so as to prevent damage by water or breakage. Only one brand of cement shall be used. Cement reclaimed from cleaning bags or leaking containers shall not be used. All cement shall be used in the sequence of receipt of shipments.
- B. All materials furnished and stored for the work shall comply with the requirements of ACI 301, as applicable.
- C. Materials for concrete shall conform to the following requirements:
 - 1. Cement shall be standard brand Portland cement conforming to ASTM C 150 for Type II. Portland cement shall contain not more than 0.60 percent alkalis. The term "alkalis" referred to herein is defined as the sum of the percentage of sodium oxide and 0.658 times the percentage of potassium oxide ($\text{Na}_2\text{O} + 0.658 \text{K}_2\text{O}$). These oxides shall be determined in accordance with ASTM C 114. A single brand of cement shall be used throughout the Work, and prior to its use, the brand shall be acceptable to the ENGINEER. The cement shall be suitably protected from exposure to moisture until used. Cement that has become lumpy shall not be used. Sacked cement shall be stored in such a manner so as to permit access for inspection and sampling. Certified mill test reports for each shipment of cement to be used shall be submitted to the ENGINEER if requested regarding compliance with these Specifications. The proposed Portland cement shall not contain more than 8% tricalcium aluminate and more than 12% tetracalcium aluminoferrite.
 - 2. Fly ash shall meet the requirements of ASTM C 618 for Class F, except the loss on ignition shall not exceed 4%. The fly ash constituent shall be maximum 15% of the total weight of the combined Portland cement and fly ash.

3. Water shall be potable, clean, and free from objectionable quantities of silty organic matter, alkali, salts and other impurities. The water shall be considered potable, for the purposes of this Section only, if it meets the requirements of the local governmental agencies.
4. Aggregates shall be obtained from pits acceptable to the ENGINEER, shall be non-reactive, and shall conform to the FBC and ASTM C 33. Maximum size of coarse aggregate shall be as specified in Article 2.04, Paragraph B of this Section. Lightweight sand for fine aggregate will not be permitted.
 - a. CONTRACTOR shall submit a new trial mix to the ENGINEER for approval whenever a different aggregate or gradation is proposed.
 - b. Coarse aggregates shall consist of clean, hard, durable gravel, crushed gravel, crushed rock or a combination thereof. The coarse aggregates shall be prepared and handled in two or more size groups for combined aggregates with a maximum size not greater than 1 inch. When the aggregates are proportioned for each batch of concrete the two size groups shall be combined.
 - c. Fine aggregates shall be manufactured sand that is hard and durable.
 - d. Combined aggregates shall be well graded from coarse to fine sizes, and shall be uniformly graded between screen sizes to produce a concrete that has optimum workability and consolidation characteristics. Where a trial batch is required for a mix design, the final combined aggregate gradations will be established during the trial batch process.
 - e. When tested in accordance with "Organic Impurities in Sands for Concrete" (ASTM C 40), the fine aggregate shall produce a color in the supernatant liquid no darker than the reference standard color solution.
 - f. When tested in accordance with "Resistance to Abrasion of Small size Coarse Aggregate by Use of the Los Angeles Machine" (ASTM C 131), the coarse aggregate shall show a loss not exceeding 42 percent after 500 revolutions, or 10.5 percent after 100 revolutions.
 - g. When tested in accordance with "Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate" (ASTM C 88), the loss resulting after five cycles shall not exceed 10 percent for fine or coarse aggregate when using sodium sulfate.

2.02 ADMIXTURES

- A. Air-entraining agent meeting the requirements of ASTM C 260, shall be used. Sufficient air-entraining agent shall be used to provide a total air content of 3 to 5 percent. Air-entraining agent shall be Sika AER by Sika Corp., MB-VR by Master Builders, Darex AEA by Grace, AEA-92S by Euclid Chemical Company, or equal.
- B. Admixtures shall be required at the ENGINEER's discretion or, if not required, may be added at the CONTRACTOR's option to control the set, effect water reduction, and increase workability. In either case, the addition of an admixture shall be at the CONTRACTOR's expense. The use of an admixture shall be subject to acceptance by the ENGINEER. Concrete containing an admixture shall be first placed at a location determined by the ENGINEER. If the use of an admixture is producing an inferior end result, the CONTRACTOR shall discontinue use of the admixture. Admixtures specified herein shall conform to the requirements of ASTM C 494. The required quantity of

cement shall be used in the mix regardless of whether or not an admixture is used. Admixtures shall contain no free chloride ions, be non-toxic after 30 days, and shall be compatible with and made by the same manufacturer as the air entraining admixture.

1. Set controlling admixture shall be either with or without water-reducing properties. Where the air temperature at the time of placement is expected to be consistently over 80 degrees Fahrenheit, a set retarding admixture such as Sika Chemical Corporation's Plastiment, Pozzolith 200N by BASF, or equal shall be used. Where the air temperature at the time of placement is expected to be consistently under 40 degrees Fahrenheit, a non-chloride, non-corrosive set accelerating admixture such as Sika Chemical Corporation's Plastocrete 161FL, Pozzolith NC534 by BASF, or equal shall be used.
2. Low range water reducer shall be added to all structural concrete, and shall conform to ASTM C 494, Type A. It shall be either a hydroxylated carboxylic acid type or a dydroxylated polymer type. The quantity of admixture used and the method of mixing shall be in accordance with the manufacturer's instructions and recommendations.
3. Water reducing and retarding admixture shall be in conformance with ASTM C 494 Type D free of chlorides, "Pozzolith 200N" by BASF, "WRDA-64" by Grace or equal.
4. High range water reducer shall be sulfonated polymer conforming to ASTM C 494, Type F or G. The use of high range water reducer is mandatory for Class A2 concrete. The high range water reducer shall be accurately measured and pressure injected into the mixer as a single dose by an experienced technician. A standby system shall be provided and tested prior to each day's operation of the job site system. Concrete shall be mixed at mixing speed for a minimum of 100 mixer revolutions after the addition of the high range water reducer. Acceptable products are "Eucon 37" or Plastol 5000 by the Euclid Chemical Company, "Rheobuild 1000 or Glenium Series" by BASF, and "Daracem 100 or Advaflow Series" by W.R. Grace.
5. The CONTRACTOR shall submit certification from each admixture manufacturer that all admixtures utilized in the design mix are compatible with one another and properly proportioned.
6. Prohibited Admixtures: Calcium chloride, thiocyanate or admixtures containing more than 0.05 percent chloride ions are not permitted.

2.03 ACCESSORIES

- A. Epoxy adhesives shall be the following products for the applications specified to be used in strict accordance with manufacturer's recommendations.
 1. For bonding freshly-mixed, plastic concrete to hardened concrete, Sikadur 32 Hi-Mod, LPL Epoxy Adhesive, as manufactured by Sika Chemical Corporation; Concrevice 1001-LPL, as manufactured by Adhesive Engineering Company; or equal.
 2. For bonding hardened concrete or masonry to steel, Colma-Dur Gel, Sikadur Hi-Mod Gel, or equal.

2.04 CONCRETE MIX

A. Concrete shall be composed of cement, admixtures, aggregates and water. These materials shall be of the qualities specified. The exact proportions in which these materials shall be based on the results of field experience or laboratory trial mixes in conformance with Section 5.3 "Proportioning on the Basis of Field Experience and/or Laboratory Trial Mixtures" of ACI 318. In general, the mix shall be designed to produce a concrete capable of being deposited so as to obtain maximum density and minimum shrinkage and, where deposited in forms, to have good consolidation properties and maximum smoothness of surface. Mix designs with more than 41 percent of sand of the total weight of fine and coarse aggregate shall not be used for Class A1 and A2 Concrete. The aggregate gradations shall be formulated to provide fresh concrete that will not promote rock pockets around reinforcing steel or embedded items. The proportions shall be changed whenever necessary or desirable to meet the required results at no additional cost to the CITY. All changes shall be subject to review by the ENGINEER.

B. The proportions of cement, aggregates, admixtures and water used in the concrete shall be based on tests of grading and moisture content of materials, slump of concrete mixture, strength of concrete and the following factors:

1. Class A1 Concrete (All cast-in-place and precast concrete unless otherwise noted).

Minimum cementitious materials content, 611 lbs.
per cubic yard

Maximum water-cementitious materials 0.45
ratio, by weight

Slump range 3 inches to 4 inches with water
reducing admixture

Coarse Aggregate #57 per ASTM C33

Compressive strength 4,500 psi
at 28 days - F'c

Air Content 3% \pm 1%

2. Class A2 Concrete (All cast-in-place concrete for walls unless otherwise noted).

Minimum cementitious materials content, 611 lbs.
per cubic yard

Maximum water-cementitious materials 0.45
ratio, by weight

Slump range 3-inch maximum before addition of
high range water reducing
admixture.

8-inch maximum after addition of
high range water reducing admixture

- | | | |
|----|---|----------------------|
| | Coarse Aggregate | #57 per ASTM C33 |
| | Compressive strength
at 28 days – F'c | 4,500 psi |
| | Air Content | 3% ± 1% |
| 3. | Class B Concrete (At locations shown on the Drawings). | |
| | Minimum cementitious materials content,
per cubic yard | 611 lbs. |
| | Maximum water-cementitious materials
ratio, by weight | 0.45 |
| | Slump, maximum | 5 inches |
| | Compressive strength at 28 days - F'c | 4,500 psi |
| | Coarse Aggregate | Pearock |
| | Air Content | 3% ± 1% |
| 4. | Class C Concrete (Sidewalks, pipe encasements in the dry, thrust blocks and
electrical duct banks) | |
| | Minimum cementitious materials content,
per cubic yard | 500 lbs. |
| | Maximum water-cementitious materials
ratio, by weight | 0.50 |
| | Slump, maximum | 5 inches |
| | Compressive strength at 28 days - F'c | 3,000 psi |
| | Coarse Aggregate | #57 per ASTM C33 |
| | Air Content | 3% ± 1% |
| 5. | Flowable Fill (In lieu of pipe bedding, select backfill) | |
| | Minimum cementitious materials content,
per cubic yard | 100 lbs. |
| | Maximum water-cementitious materials
ratio, by weight | 5.0 |
| | Flowability, minimum | 8 inches |
| | Compressive strength at 28 days - F'c | 50-150 psi |
| | Coarse aggregate | none |
| | Fine aggregate | limestone screenings |
- C. All Class A1 and A2 concrete, unless noted otherwise on the Drawings, shall be air entrained concrete. A water reducing admixture may be added to the mix at the CONTRACTOR's option.
- D. The mix proportions used shall be changed subject to the limitation specified herein, whenever such change is necessary or desirable to secure the required strength,

density, workability, and surface finish and the CONTRACTOR shall be entitled to no additional compensation because of such changes.

2.05 CONSISTENCY

- A. The quantity of water entering into a batch of concrete shall be just sufficient, with a normal mixing period, to produce a concrete which can be worked properly into place without segregation, and which can be compacted by the vibratory methods herein specified to give the desired density, impermeability and smoothness of surface. The quantity of water shall be changed as necessary, with variations in the nature or moisture content of the aggregates, to maintain uniform production of a desired consistency. The consistency of the concrete in successive batches shall be determined by slump tests in accordance with ASTM C 143.

2.06 READY-MIXED CONCRETE

- A. Ready-mixed concrete shall be used meeting the requirements as to materials, batching, mixing, transporting, and placing as specified herein and in accordance with ASTM C 94.
- B. Ready-mixed concrete shall be delivered to the site of the work, and discharge shall be completed within one and one-half hour after the addition of the cement to the aggregates or before the drum has been revolved 250 revolutions, whichever is first. Upon delivery from the truck concrete temperature shall not exceed 90 degrees Fahrenheit.
- C. Truck mixers shall be equipped with electrically-actuated counters by which the number of revolutions of the drum or blades may be readily verified. The counter shall be of the resettable, recording type. The counters shall be actuated at the time of starting mixers at mixing speeds.
- D. Each batch of concrete shall be mixed in a truck mixer for not less than 70 revolutions of the drum or blades at the rate of rotation designated by the manufacturer of equipment. Additional mixing, if any, shall be at the speed designated by the manufacturer of the equipment as agitating speed. All materials including mixing water shall be in the mixer drum before actuating the revolution counter for determining the number of revolution of mixing.

PART 3 - EXECUTION

3.01 PROPORTIONING AND MIXING

- A. Proportioning of the concrete mix shall be based on the results of field experience or laboratory trial mixes in conformance with Section 5.3, "Proportioning on the Basis of Field Experience and/or Trial Mixtures" of ACI 318. When trial mixes are used they shall conform to the requirements of Chapter 3 "Proportioning" of ACI 301; provided, that the maximum slump for any concrete shall not exceed the limits specified in this Section of the Specifications.
- B. When field experience records are inadequate to confirm the quality of a proposed concrete mix in accordance with Section 5.3, "Proportioning on the Basis of Field Experience and/or Trial Mixtures" of ACI 318, or when required by the ENGINEER, an independent testing laboratory designated by the CONTRACTOR and acceptable to the ENGINEER shall test a trial batch of each of the preliminary concrete mixes submitted by the CONTRACTOR. The trial batches shall be prepared using the aggregates, cement and admixtures proposed for the project. The trial batch materials shall be of a quantity such that the testing laboratory can obtain enough samples to satisfy

requirements stated below. Tests on individual materials stated in PART 2 -- PRODUCTS should already be performed before any trial mix is done. The cost of laboratory trial batch tests for each specified concrete mix will be borne by the CONTRACTOR and the CONTRACTOR shall furnish and deliver the materials to the testing laboratory at no cost to the CITY.

- C. An independent testing laboratory shall observe the preparation of the trial batch, and they shall prepare a minimum of fifteen (15) standard test cylinders in accordance with ASTM C 31 in addition to conducting slump (ASTM C 143), air content (C 231) and unit weight (C 138) tests. Compressive strength test on the cylinders shall subsequently be performed by the same laboratory in accordance with ASTM C 39 as follows: Test 3 cylinders at age 7 days; test 3 cylinders at age 21 days; test 3 cylinders at age 28 days and test 3 cylinders at 56 days. The cylinders shall be carefully identified as "Trial Mix, Contract No. _____, Product _____." If the average 28-day compressive strength of the trial mix is less than that specified, or if any single cylinder falls below the required strength by more than 500 psi, the mix shall be corrected, another trial batch prepared, test cylinders taken, and new tests performed as before. Any such additional trial batch testing required shall be performed at no additional cost to the CITY. Adjustments to the mix shall be considered refinements to the mix design and shall not be the basis for extra compensation to the CONTRACTOR.
- D. Mixing of concrete shall conform to the requirements of Chapter 4 of ACI 301 Specifications.
- E. Retempering of concrete or mortar which has partially hardened will not be permitted.

3.02 PREPARATION

- A. Earth surfaces shall be thoroughly wetted by sprinkling, prior to the placing of any concrete, and these surfaces shall be kept moist by frequent sprinkling up to the time of placing concrete thereon. The surface shall be free from standing water, mud, and debris at the time of placing concrete.
- B. No concrete shall be placed until the reinforcement steel and formwork have been erected in a manner acceptable to the ENGINEER. The CONTRACTOR shall notify the ENGINEER not less than two working days prior to Concrete Placement, allowing one day for review and any corrective measures which are required.
- C. Joints in Concrete
 - 1. Concrete surfaces upon or against which concrete is to be placed shall be given a roughened surface for good bond and a bonding agent shall be placed.
 - 2. After the surfaces have been prepared all approximately horizontal construction joints shall be covered with a layer of mortar approximately one-inch thick. The mortar shall have the same proportions of cement and sand as the regular concrete mixture. The water-cement ratio of the mortar in place shall not exceed that of the concrete to be placed upon it, and the consistency of the mortar shall be suitable for placing and working in the manner hereinafter specified. The mortar shall be spread uniformly and shall be worked thoroughly into all irregularities of the surface. Wire brooms shall be used where possible to scrub the mortar into the surface. Concrete shall be placed immediately upon the fresh mortar.
- D. Placing Interruptions
 - 1. When placing of concrete is to be interrupted long enough for the concrete to take a set, the working face shall be given a shape by the use of forms or other means,

that will secure proper union with subsequent work; provided that construction joints shall be made only where acceptable to the ENGINEER. Cold joints will be sufficient cause for rejection of the work.

E. Embedded Items

1. No concrete shall be placed until all formwork, installation of parts to be embedded, reinforcing steel, and preparation of surfaces involved in the placing have been completed and accepted by the ENGINEER at least four hours before placement of concrete. All surfaces of forms and embedded items that have become encrusted with dried grout from concrete previously placed shall be cleaned of all such grout before the surrounding or adjacent concrete is placed.
2. All inserts or other embedded items shall conform to the requirements herein.

F. All reinforcement, anchor bolts, sleeves, inserts, and similar items shall be set and secured in the forms where shown on the Drawings or by shop drawings and shall be acceptable to the ENGINEER before any concrete is placed. Accuracy of placement is the responsibility of the CONTRACTOR.

G. All anchor bolts called for on the drawings shall be cast-in-place in the concrete. Drilled, impact, adhesive or other types of anchors shall not be substituted for anchor bolts unless otherwise shown on the Drawings.

H. Casting New Concrete Against Old

1. Where concrete is to be cast against old concrete (any concrete which is greater than 60 days of age), the surface of the old concrete shall be thoroughly cleaned and roughened by sand-blasting (exposing aggregate) prior to the application of an epoxy bonding agent.

I. No concrete shall be placed in any structure until all water entering the space to be filled with concrete has been properly cut off or has been diverted by pipes, or other means, and carried out of the forms, clear of the work. No concrete shall be deposited underwater, except where shown on the Drawings to be placed by the tremie method, nor shall the CONTRACTOR allow still water to rise on any concrete until the concrete has attained its initial set. Water shall not be permitted to flow over the surface of any concrete in such manner and at such velocity as will injure the surface finish of the concrete. Pumping or other necessary dewatering operations for removing ground water, if required, will be subject to the review of the ENGINEER.

J. Corrosion Protection

1. Pipe, conduit, dowels, and other ferrous items required to be embedded in concrete construction shall be so positioned and supported prior to placement of concrete that there will be a minimum of 2 inches clearance between said items and any part of the concrete reinforcement. Securing such items in position by wiring or welding them to the reinforcement will not be permitted.
2. Openings for pipes, inserts for pipe hangers and brackets, and the setting of anchors shall, where practicable, be provided for during the placing of concrete.
3. Anchor bolts shall be accurately set, and shall be maintained in position by templates while being embedded in concrete.
4. The surfaces of all metalwork to be in contact with concrete shall be thoroughly cleaned of all dirt, grease, loose scale and rust, grout, mortar, and other foreign substances immediately before the concrete is placed.

3.03 PLACING CONCRETE

- A. Placing of concrete shall conform to the applicable requirements of Chapter 8 of ACI 301 and the requirements of this Section.
- B. Non-Conforming Work or Materials
 - 1. Concrete which upon or before placing is found not to conform to the requirements specified herein shall be rejected and immediately removed from the Work. Concrete which is not placed in accordance with these Specifications, or which is of inferior quality, shall be removed and replaced by and at the expense of the CONTRACTOR.
- C. Unauthorized Placement
 - 1. No concrete shall be placed except in the presence of duly authorized representative of the ENGINEER. The CONTRACTOR shall notify the ENGINEER at least 24 hours in advance of placement of any concrete.
- D. Placement in Wall Forms
 - 1. Concrete shall not be dropped through reinforcement steel or into any deep form, whether reinforcement is present or not, causing separation of the coarse aggregate from the mortar on account of repeatedly hitting rods or the sides of the form as it falls, nor shall concrete be placed in any form in such a manner as to leave accumulation of mortar on the form surfaces above the placed concrete. In such cases, some means such as the use of hoppers and, if necessary, vertical ducts of canvas, rubber, or metal shall be used for placing concrete in the forms in a manner that it may reach the place of final deposit without separation. In no case shall the free fall of concrete exceed 4 feet below the ends of ducts, chutes, or buggies.
 - 2. Concrete shall be uniformly distributed during the process of depositing and in no case after depositing shall any portion be displaced in the forms more than 6 feet in horizontal direction. Concrete in forms shall be deposited in uniform horizontal layers not deeper than 2 feet; and care shall be taken to avoid inclined layers or inclined construction joints except where such are required for sloping members. Each layer shall be placed while the previous layer is still soft. The rate of placing concrete in forms shall not exceed 5 feet of vertical rise per hour.
- E. Casting New Concrete Against Old
 - 1. An epoxy adhesive bonding agent shall be applied to set surfaces of construction joints according to the manufacturer's written recommendations.
- F. Conveyor Belts and Chutes
 - 1. All ends of chutes, hopper gates, and all other points of concrete discharge throughout the CONTRACTOR's conveying, hoisting and placing system shall be so designed and arranged that concrete passing from them will not fall separated into whatever receptacle immediately receives it. Conveyor belts, if used, shall be of a type acceptable to the ENGINEER. Chutes longer than 50 feet will not be permitted. Minimum slopes of chutes shall be such that concrete of the specified consistency will readily flow in them. If a conveyor belt is used, it shall be wiped clean by a device operated in such a manner that none of the mortar adhering to the belt will be wasted. All conveyor belts and chutes shall be covered. Sufficient

illumination shall be provided in the interior of all forms so that the concrete at the places of deposit is visible from the deck or runway.

G. Placement in Slabs

1. Concrete placed in sloping slabs shall proceed uniformly from the bottom of the slab to the top, for the full width of the pour. As the work progresses, the concrete shall be vibrated and carefully worked around the slab reinforcement, and the surface of the slab shall be screeded in an up-slope direction.

H. Temperature of Concrete

1. The temperature of concrete when it is being placed shall be not more than 90 degrees F. Concrete ingredients shall not be heated to a temperature higher than that necessary to keep the temperature of the mixed concrete, as placed, from falling below the specified minimum temperature. If concrete is placed when the weather is such that the temperature of the concrete would exceed 90 degrees Fahrenheit, the CONTRACTOR shall employ effective means, such as precooling of aggregates and mixing water using ice or placing at night, as necessary to maintain the temperature of the concrete, as it is placed, below 90 degrees F. The CONTRACTOR shall be entitled to no additional compensation on account of the foregoing requirements. During summer months concrete pours shall be scheduled in the morning or early part of the day when temperatures are cooler.

I. Pumping Equipment

1. Pumping equipment and procedures if used shall conform to the recommendations contained in the report of ACI Committee 304 on Placing Concrete by Pumping Methods, ACI 304.2R. The specified slump shall be measured at the point of discharge. The loss of slump in pumping shall not exceed 1-1/2 inches.

- J. The order of placing concrete in all parts of the work shall be acceptable to the ENGINEER. In order to minimize the effects of shrinkage, the concrete shall be placed in units as bounded by construction joints shown on the Drawings. The placing of units shall be done by placing alternate units in a manner such that each unit placed shall have cured at least 7 days before the contiguous unit or units are placed, except that the corner sections of vertical walls shall not be placed until the 2 adjacent wall panels have cured at least 14 days.

- K. The surface of the concrete shall be level whenever a run of concrete is stopped. To ensure a level, straight joint on the exposed surface of walls, a wood strip at least 3/4-inch thick shall be tacked to the forms on these surfaces. The concrete shall be carried about 1/2-inch above the underside of the strip. About one hour after the concrete is placed, the strip shall be removed and any irregularities in the edge formed by the strip shall be leveled with a trowel and all laitance shall be removed.

- L. As concrete is placed in the forms or in excavations, it shall be thoroughly settled and compacted, throughout the entire depth of the layer which is being consolidated, into a dense, homogeneous mass, filling all corners and angles, thoroughly embedding the reinforcement, eliminating rock pockets, and bringing only a slight excess of water to the exposed surface of concrete during placement. Vibrators shall be high speed power vibrators (8000 to 10,000 rpm) of an immersion type in sufficient number and with (at least one) standby units as required.

- M. Care shall be used in placing concrete around waterstops. The concrete shall be carefully worked by rodding and vibrating to make sure that all air and rock pockets have been eliminated. Where flat-strip type waterstops are placed horizontally, the concrete shall be worked under the waterstops by hand, making sure that all air and rock pockets have been eliminated. Concrete surrounding the waterstops shall be given additional vibration, over and above that used for adjacent concrete placement to assure complete embedment of the waterstops in the concrete.
- N. Concrete in walls shall be internally vibrated and at the same time, stirred, or worked with suitable appliances, tamping bars, shovels, or forked tools until it completely fills the forms or excavations and closes snugly against all surfaces. Subsequent layers of concrete shall not be placed until the layers previously placed have been worked thoroughly as specified. Vibrators shall be provided in sufficient numbers, with standby units as required, to accomplish the results herein specified within 15 minutes after concrete of the prescribed consistency is placed in the forms. The vibrating head shall be kept from contact with the surfaces of the forms. Care shall be taken not to vibrate concrete excessively or to work it in any manner that causes segregation of its constituents.

3.04 CONCRETE FINISHING

- A. Concrete finishes are specified in Section 03350 entitled "Concrete Finishes".

3.05 CURING AND PROTECTION

- A. Curing is specified in Section 03370 entitled "Concrete Curing".

3.06 PLACING CONCRETE UNDERWATER (TREMIE CONCRETE)

- A. Placing concrete underwater will be permitted only when shown on the Drawings. Concrete deposited under water shall be carefully placed in a compacted mass in final position by means of a tremie, a closed bottom dump bucket or other approved method. Care must be exercised to maintain still water at the point of deposit. Concrete shall not be placed in running water. The consistency of the concrete shall be regulated to prevent segregation of materials. The method of depositing concrete shall be regulated such that the concrete enters the mass of the previously place concrete from within, displacing water with a minimum disturbance to the surface of the concrete.
- B. Tremie shall consist of a tube having a diameter of not less than 10 inches and constructed in sections having flanged couplings fitted with gaskets. The tremie shall be supported to permit free movement of the discharge and over the entire top surface of the work and shall permit rapid lowering when necessary to choke off or retard the flow. The discharge end shall be entirely sealed at all times and the tremie tube kept full to the bottom of the hopper. When a batch is dumped into the hopper, the tremie shall be slightly raised, but not out of the concrete at the bottom, until the batch discharges to the bottom of the hopper. The flow shall then be stopped by lowering the tremie. The flow shall be continuous until the placement has been completed.

3.07 PLACING CONCRETE UNDER PRESSURE (PUMPING)

- A. Where concrete is conveyed and placed by mechanically applied pressure, the equipment shall have the capacity for the operation. The operation of the pump shall be such that a continuous stream of concrete without air pockets is produced. To obtain the least line resistance, the layout of the pipeline system shall contain a minimum number of bends with no change in pipe size. If two sizes of pipe must be used, the smaller diameter should be used at the pump end and the larger at the discharge end. When

pumping is completed, the concrete remaining in the pipelines, if it is to be used, shall be ejected in such a manner that there will be no contamination of the concrete or separation of the ingredients.

- B. No aluminum parts shall be in contact with the concrete during the entire placing of concrete under pressure at any time.
- C. Prior to placing concrete under pressure, the CONTRACTOR shall submit the concrete mix design together with test results from a recognized testing laboratory proving the proposed mix meets all requirements. In addition, at the CONTRACTOR's option, an actual pumping test under field conditions may be performed prior to use of the accepted mix. This test requires a duplication of anticipated site conditions from beginning to end. The batching and truck mixing shall be the same as will be used; the same pump and operator shall be present and the pipe and pipe layouts will reflect the maximum height and distance contemplated.
- D. If the pumped concrete does not produce satisfactory end results, the CONTRACTOR shall discontinue the Pumping operation and proceed with the placing of concrete using conventional methods.
- E. The pumping equipment must have two cylinders and be designed to operate with one cylinder only in case the other one is not functioning. In lieu of this requirement, the CONTRACTOR may have a standby pump on the site during pumping.
- F. The minimum diameter of the hose (conduits) shall be four inches.
- G. Pumping equipment and hoses (conduits) that are not functioning properly shall be replaced.

3.08 ORDER OF PLACING CONCRETE

- A. In order to minimize the effects of shrinkage, the concrete shall be placed in units as bounded by construction joints shown on the Drawings and maximum lengths as indicated on Drawings. The placing of units shall be done by placing alternate units in a manner such that each unit placed shall be have cured at least seven days before the contiguous unit or units are placed, except that the corner sections of vertical walls shall not be placed until the two adjacent wall panels have cured at least 14 days.
- B. The surface of the concrete shall be level whenever a run of concrete is stopped.

3.09 CONCRETE IN COLD WEATHER

- A. Cold weather concreting procedures shall be in accordance with the requirements of ACI 306

3.10 CONCRETE IN HOT WEATHER

- A. Hot weather concreting procedures shall conform to the requirement of ACI 305.

3.11 DEFECTIVE CONCRETE

- A. As soon as forms are removed, all exposed surfaces shall be carefully examined and any irregularities shall be immediately rubbed or ground in a satisfactory manner in order to secure a smooth, uniform, and continuous surface. Plastering or coating of surfaces to be smoothed will not be permitted. No repairs shall be made until reviewed by the ENGINEER. In no case will extensive patching of honeycombed concrete be permitted. Concrete containing minor voids, holes, honeycombing, or similar depression defects shall have them repaired as specified herein. Concrete containing extensive voids, holes, honeycombing, or similar depression defects in the opinion of the ENGINEER,

shall be completely removed and replaced. All repairs and replacements herein specified shall be promptly executed by the CONTRACTOR at no additional cost to the CITY.

- B. Defective surfaces to be repaired as specified in Article 3.11, Paragraph A of this Section, shall be cut back from trueline a minimum depth of 1/2 inch over the entire area. Feathered edges will not be permitted. Where chipping or cutting tools are not required in order to deepen the area properly, the surface shall be prepared for bonding by the removal of all laitance or soft material, and not less than 1/32-inch depth of the surface film from all hard portions. The material used for repair shall be acceptable to the ENGINEER.
- C. Holes left by tie-rod cones shall be repaired in an acceptable manner with dry-packed cement grout or premixed patching material as accepted by the ENGINEER.
- D. All repairs shall be built up and shaped in such a manner that the completed work will conform to the requirements of Article 3.04 or 3.05 of this Section, as applicable, using acceptable methods which will not disturb the bond, cause sagging, or cause horizontal fractures. Surfaces of said repairs shall receive the same kind and amount of curing treatment as required for the concrete in the repaired section.
- E. Prior to backfilling, all cracks that may have developed shall be "vee'd" and filled with sealant.

3.12 CARE AND REPAIR OF CONCRETE

- A. The CONTRACTOR shall protect all concrete against injury or damage from excessive heat, lack of moisture, overstress, or any other cause until final acceptance by the CITY. Particular care shall be taken to prevent the drying of concrete and to avoid roughening or otherwise damaging the surface. Any concrete found to be damaged, or which may have been originally defective, or which becomes defective at any time prior to the final acceptance of the completed work, or which departs from the established line or grade, or which, for any other reason, does not conform to the requirements of the Contract Documents, shall be satisfactorily repaired or removed and replaced with acceptable concrete at the CONTRACTOR's expense. This stipulation includes concrete experiencing cracking due to drying or thermal shrinkage of the concrete. Structural cracks shall be repaired using an epoxy injection system approved by the ENGINEER. Non-structural cracks shall be repaired using a hydrophilic resin pressure injected grout system approved by the ENGINEER, unless other means or repair are deemed necessary and approved by the ENGINEER.

- END OF SECTION -

SECTION 03350 - CONCRETE FINISHES

PART 1 - GENERAL

1.01 THE REQUIREMENT

- A. The CONTRACTOR shall furnish all materials, labor, and equipment required to provide finishes of all concrete surfaces specified herein and shown on the Drawings.

1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 03300 - Cast-in-Place Concrete

1.03 REFERENCE SPECIFICATIONS, CODES AND STANDARDS

- A. Without limiting the generality of the other requirements of the specifications, all work herein shall conform to the applicable requirements of the following documents. All referenced specifications, codes, and standards refer to the most current issue available at the time of Bid.
 - 1. ACI 301 - Specifications for Structural Concrete for Buildings
 - 2. ACI 318 - Building Code Requirements for Reinforced Concrete

1.04 SUBMITTALS

- A. Submit the following in accordance with Section 01300 entitled "Submittals".
 - 1. Manufacturer's literature on all products specified herein.

PART 2 - PRODUCTS

2.01 CONCRETE LIQUID DENSIFIER AND SEALANT

- A. Concrete liquid densifier and sealant shall be a high performance, deeply penetrating concrete densifier and sealant. Product shall be odorless, colorless, VOC-compliant, non-yellowing silicate based solution designed to harden, dustproof and protect concrete floors subjected to heavy vehicular traffic and to resist black rubber tire marks on concrete surfaces. The product must contain a minimum solids content of 20% of which 50% is silicate.

PART 3 - EXECUTION

3.01 FINISHES ON FORMED CONCRETE SURFACES

- A. After removal of forms, the finishes described below shall be applied in accordance with Article 3.05 of this Section 03350, "Concrete Finishes". Unless the finish schedule specifies otherwise, all surfaces shall receive at least a Type I finish. The ENGINEER shall be the sole judge of acceptability of all concrete finish work.
 - 1. Type I - Rough: All fins, burrs and other projections left by the forms shall be removed. All holes left by removal of ends of ties, and all other holes, depressions, or voids shall be filled solid with cement grout after first being thoroughly wetted. Honeycombs shall be chipped back to solid concrete as directed, prior to patching with cement grout. Holes shall be filled with a small tool that will permit packing the hole solidly with cement grout. Cement grout shall consist of one part cement to three parts sand, and the amount of mixing water shall be as little as consistent with the requirements of handling and placing. Color of cement grout shall match the adjacent wall surface.

2. Type II - Grout Cleaned: Where this finish is required, it shall be applied after completion of Type I finish. After the concrete has been predampened, a slurry consisting of one part cement (including an appropriate quantity of white cement in order to produce a color matching the surrounding concrete) and 1-1/2 parts sand passing the No. 16 sieve, by damp loose volume, shall be spread over the surface with clean burlap pads or sponge rubber floats. Any surplus shall be removed by scraping and then rubbing with clean burlap. The finish shall be kept damp for at least 36 hours after application.
3. Type III - Smooth Rubbed: Where this finish is required, it shall be applied after the completion of the Type I finish. No rubbing shall be done before the concrete is thoroughly hardened and the mortar used for patching is firmly set. A smooth, uniform surface shall be obtained by wetting the surface and rubbing it with a carborundum stone to eliminate irregularities. Unless the nature of the irregularities require it, the general surface of the concrete shall not be cut into. Corners and edges shall be slightly rounded by the use of the carborundum stone. Brush finishing or painting with grout or neat cement will not be permitted.

3.02 SLAB AND FLOOR FINISHES

- A. The finishes described below shall be applied to floors, slabs, flow channels and top of walls in accordance with Article 3.05 of this Section 03350, "Concrete Finishes". The ENGINEER shall be the sole judge of acceptability of all such finish work.
 1. Type "A" - Screeded: This finish shall be obtained by placing screeds at frequent intervals and striking off to the surface elevation required. When a Type "F" finish is subsequently to be applied, the surface of the screeded concrete shall be roughened with a rake to 1/2" minimum deep grooves prior to final set.
 2. Type "B" - Wood Floated: This finish shall be obtained after completion of a Type "A" finish by working a previously screeded surface with a wood float until the desired texture is reached. Floating shall begin when the water sheen has disappeared and when the concrete has sufficiently hardened so that a person's foot leaves only a slight imprint. If wet spots occur, water shall be removed with a squeegee. Care shall be taken to prevent the formation of laitance and excess water on the finished surface. The finished surface shall be true, even, and free from blemishes and other irregularities.
 3. Type "C" - Cork Floated: This finish shall be similar to Type "B" but slightly smoother than that obtained with a wood float. It shall be obtained by power or band floating with cork floats.
 4. Type "D" - Steel Troweled: This finish shall be obtained after completion of a Type "B" finish. When the concrete has hardened sufficiently to prevent excess fine material from working to the surface, the surface shall be compacted and smoothed with not less than two thorough and complete steel troweling operations. In areas which are to receive a floor covering such as tile, resilient flooring, or carpeting, only one troweling operation is required. The finish shall be brought to a smooth, dense surface, free from defects and blemishes.
 5. Type "E" - Broom or Belt: This finish shall provide the surface with a transverse scored texture by drawing a broom or burlap belt across the surface immediately after completion of a Type "B" finish.

6. Type "F" - Swept in Grout Topping: This finish shall be applied after a completion of a Type "A" finish. The concrete surface shall be properly cleaned, washed, and coated with a mixture of water and Portland Cement. Cement grout, shall then be plowed and swept into neat conformance with the blades or arms of the apparatus by turning or rotating the previously positioned mechanical equipment. Special attention shall be paid to true grades, shapes and tolerances as specified by the manufacturer of the equipment. Before beginning this finish, the CONTRACTOR shall notify the ENGINEER and the equipment manufacturer of the details of the operation and obtain approval and recommendations.
7. Type "G" - Hardened Finish: Either a liquid hardened finish or an aggregate hardened finish shall be provided at the CONTRACTOR's option.
 - a. Liquid hardened finish shall be provided by application of a liquid floor hardener. Floors to receive this finish shall have previously received a Type "D" finish. Liquid hardener shall be applied between 30 to 60 days after concrete placement. Surface to be treated shall be dry, clean and free of all loose dust, dirt, oil, wax, sealers and curing compounds. Application procedure shall be in accordance with manufacturer's instructions and shall consist of a three-coat treatment.
 - b. Aggregate hardened finish shall be provided by applying an aggregate floor hardener concurrently with the application of a Type "D" finish. Application procedure shall be in accordance with manufacturer's instructions.
8. Type "H" - Non-Slip Finish: This finish shall be provided by applying a non-slip shake-on aggregate concurrently with the application of a Type "D" finish. Application procedure shall be in accordance with manufacturer's instructions.
9. Type "J" - Raked Finish: This finish shall be provided by raking the surface as soon as the condition of the concrete permits by making depressions of +/-1/4 inch.

3.03 SEALING OF CONCRETE FLOOR

- A. After installation of all equipment and piping, and after completion of other related construction activities, all floor slabs which are to remain unpainted and not intended to be immersed shall be sealed with a floor sealer unless stated otherwise. Remove all dirt, droppage, oil, grease, asphalt or other foreign matter with caustics and detergents as required prior to application. Sealer shall be applied in accordance with the manufacturer's recommendations.
- B. Floor slabs subjected to vehicular traffic shall be sealed with the concrete liquid densifier and sealer. All other floor slabs to receive sealer shall be sealed with concrete floor sealer.

3.04 FINISHES ON EQUIPMENT PADS

- A. Formed surfaces of equipment pads shall receive a Type III finish.
- B. Top surfaces of equipment pads, except those surfaces subsequently required to receive non-shrink grout and support equipment bases, shall receive a Type "D" finish, unless otherwise noted. Surfaces which will later receive non-shrink grout shall, before the concrete takes its final set, be made rough by removing the sand and cement that accumulates on the top to the extent that the aggregate will be exposed with irregular indentations in the surface up to 1/2 inch deep.

3.05 CONCRETE FINISH SCHEDULE

Item	Type of Finish
Exterior concrete walls below grade	I
Exterior exposed concrete walls, ceilings, beams, manholes, handholes, miscellaneous structures and columns (including top of wall) to one foot below grade. All other exposed concrete surfaces not specified elsewhere	II
All interior exposed concrete walls and vertical surfaces in buildings	III
Interior exposed ceiling, including beams	III
Floors of process equipment tanks or basins, and slabs to receive roofing material or waterproof membranes	B
All interior finish floors of buildings and structures and walking surfaces which will be continuously or intermittently wet	C
All interior finish floors of buildings and structures which are not continuously or intermittently wet	D
Floors to receive tile, resilient flooring, or carpeting	D
Concrete floors in flow channels	D
Exterior concrete sidewalks, steps, ramps, decks, slabs on grade and landings exposed to weather	E
Floors of process equipment tanks indicated on Drawings to receive grout topping	F
Garage and storage area floors	G
Precast concrete form panels, hollow core planks, double tees	J

- END OF SECTION -

SECTION 03370 - CONCRETE CURING**PART 1 - GENERAL****1.01 THE REQUIREMENT**

- A. The CONTRACTOR shall protect all freshly deposited concrete from premature drying and excessively hot or cold temperatures, and maintain with minimal moisture loss at a relatively constant temperature for the period of time necessary for the hydration of the cement and proper hardening of the concrete in accordance with requirements specified herein.

1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 03300 - Cast-in-Place Concrete
- B. Section 03350 - Concrete Finishes

1.03 SUBMITTALS

- A. In accordance with the procedures and requirements set forth in the Section 01300, "Submittals", the CONTRACTOR shall submit the following:
 - 1. Proposed procedures for protection of concrete under wet weather placement conditions.
 - 2. Proposed procedures for hot and cold weather placement.
 - 3. Proposed procedures for protection and curing of concrete during normal conditions.
 - 4. Proposed materials and procedures for moisture preservation.
 - 5. Proposed method of measuring concrete surface temperature changes.
 - 6. Manufacturer's literature and material certification for proposed curing compounds.

1.04 REFERENCE SPECIFICATIONS, CODES AND STANDARDS

- A. Without limiting the generality of other requirements of these specifications all work hereunder shall conform to the applicable requirements of the referenced portions of the following documents, to the extent that the requirements therein are not in conflict with the provisions of this Section.
 - 1. Specifications for Structural Concrete for buildings, ACI 301.
 - 2. Guide for Measuring, Mixing, Transporting, and Placing Concrete, ACI 304.
 - 3. Hot Weather Concreting, ACI 305.
 - 4. Cold Weather Concreting, ACI 306
 - 5. Standard Practice for Curing Concrete, ACI 308
 - 6. Specifications for Sheet Materials for Curing Concrete, ASTM C171.
 - 7. Specification for Liquid Membrane - Forming Compounds for Curing Concrete, ASTM C309.
 - 8. Federal Specification TT-C-800.

1.05 QUALITY ASSURANCE

- A. Curing compound shall not be used on any surface where concrete, coatings, or other material will be bonded unless the manufacturer certifies that the curing compound will not prevent bond or indicates measures to be taken to completely remove the curing compound from areas to receive bonded applications, and specifically approved by the ENGINEER.
- B. Care shall be taken to ensure that curing compounds are compatible with all finish concrete castings.
- C. Curing compounds shall not be used on surfaces exposed to water in potable water storage tanks and treatment plants unless curing compound is certified in accordance with ANSI/NSF Standard 61.

PART 2 - PRODUCTS

2.01 CURING COMPOUNDS

- A. All materials shall meet the ASTM specifications C309, Type 1-D, Class B or Federal Specification TT-C-800 and shall have a minimum solids content of 30 percent. The curing compound shall contain a fugitive dye so that areas of application are readily distinguishable.

2.02 BURLAP MATS

- A. Burlap mats shall conform to AASHTO M-182.

PART 3 - EXECUTION

3.01 PROTECTION AND CURING

- A. All concrete work shall be protected from the elements, flowing water and from defacement of any nature during construction operations.
- B. As soon as the concrete has been placed and horizontal top surfaces have received their required finish, provision shall be made for maintaining the concrete in a moist condition for at least a 7-day period thereafter except for high early strength concrete, for which the period shall be at least the first three days after placement. Horizontal surfaces shall be kept covered, and intermittent, localized drying will not be permitted.
- C. Walls that will be exposed on one side with either fluid or earth backfill on the opposite side shall be continuously wet cured for a minimum of five days. Use of curing compound will not be acceptable for applications of this type.
- D. After placing and finishing, use one or more of the following methods to preserve moisture in concrete:
 - 1. Ponding or continuous fogging or sprinkling.
 - 2. Application of mats or fabric kept continuously wet.
 - 3. Continuous application of steam (under 150 degrees Fahrenheit).
 - 4. Application of sheet materials conforming to ASTM C171.
 - 5. If approved by the ENGINEER, application of a curing compound in accordance with Article 3.05. Apply the compound in accordance with the manufacturer's recommendation on after water sheen has disappeared from the concrete surface and after finishing operations. The rate of application shall not exceed 200 square

feet per gallon. For rough surfaces, apply in two directions at right angles to each other.

- E. Keep absorbent forms wet until they are removed. After form removal, cure concrete by one of the methods in paragraph D.
- F. Any of the curing procedures used in Paragraph 3.01-D may be replaced by one of the other curing procedures listed in Paragraph 3.01-D after the concrete is one-day old. However, the concrete surface shall not be permitted to become dry at any time.

3.02 CONCRETE TEMPERATURE

- A. When the average of the highest and lowest temperature during the period from midnight to midnight is expected to drop below 40 F for more than three successive days, concrete shall be delivered to meet the following minimum temperature immediately after placement:
 - 1. 55 degrees Fahrenheit for sections less than 12 in. in the least dimension
 - 2. 50 degrees Fahrenheit for sections 12 in. to 36 in. in the least dimension
 - 3. 45 degrees Fahrenheit for sections 36 in. to 72 in. in the least dimension
 - 4. 40 degrees Fahrenheit for sections greater than 72 in. in the least dimension
- B. The temperature of concrete as placed shall not exceed these values by more than 20 degrees Fahrenheit.
- C. These minimum requirements may be terminated when temperatures above 50 degrees Fahrenheit occur during more than half of any 24 hour duration.
- D. Unless otherwise specified or permitted, the temperature of concrete as delivered shall not exceed 90 degrees Fahrenheit.
- E. During and following curing, do not allow the surface of the concrete to change temperature more than the following:
 - 1. 50 degrees Fahrenheit in any 24-hr period for sections less than 12 in. in the least dimension
 - 2. 40 degrees Fahrenheit for sections from 12 to 36 in. in the least dimension
 - 3. 30 degrees Fahrenheit for sections 36 to 72 in. in the least dimension
 - 4. 20 degrees Fahrenheit for sections greater than 72 in. in the least dimension

3.03 CURING CONCRETE UNDER COLD WEATHER CONDITIONS

- A. Suitable means shall be provided for a minimum of 72 hours after placing concrete to maintain it at or above the minimum as placed temperatures specified in Article 3.02 herein.. During the 72-hour period, the concrete surface shall not be exposed to air more than 20°F above the minimum as placed temperatures.
- B. Stripping time for forms and supports shall be increased as necessary to allow for retardation in concrete strength caused by colder temperatures. This retardation is magnified when using concrete made with blended cements or containing fly ash or ground granulated blast furnace slag. Therefore, curing times and stripping times shall be further increased as necessary when using these types of concrete.
- C. The methods of protecting the concrete shall be approved by the ENGINEER and shall be such as will prevent local drying. Equipment and materials approved for this purpose

shall be on the site in sufficient quantity before the work begins. The CONTRACTOR shall assist the ENGINEER by providing holes in the forms and the concrete in which thermometers can be placed to determine the adequacy of heating and protection. All such thermometers shall be furnished by the CONTRACTOR in quantity and type which the ENGINEER directs.

- D. Curing procedures during cold weather conditions shall conform to the requirements of ACI 306.

3.04 CURING CONCRETE UNDER HOT WEATHER CONDITIONS

- A. When air temperatures exceed 85°F, the CONTRACTOR shall take extra care in placing and finishing techniques to avoid formation of cold joints and plastic shrinkage cracking. If ordered by the ENGINEER, temporary sun shades and/or windbreakers shall be erected to guard against such developments, including generous use of wet burlap coverings and fog sprays to prevent drying out of the exposed concrete surfaces.
- B. Immediately after screeding, horizontal surfaces shall receive an application of evaporation reducer. Apply in accordance with manufacturer's instructions. Final finish work shall begin as soon as the mix has stiffened sufficiently to support the workmen.
- C. Curing and protection of the concrete shall begin immediately after completion of the finishing operation. Continuous moist-curing consisting of method 1 or 2 listed in paragraph 3.01C is mandatory for at least the first 24 hours. Method 2 may be used only if the finished surface is not marred or blemished during contact with the coverings.
- D. At the end of the initial 24-hour period, curing and protection of the concrete shall continue for at least four (4) additional days using one of the methods listed in paragraph 3.01D.
- E. Curing procedures during hot weather conditions shall conform to the requirements of ACI 305.

3.05 USE OF CURING COMPOUND

- A. Curing compound shall be used only where specifically approved by the ENGINEER. Curing compound shall not be used on surfaces to receive subsequent coatings. Curing compound shall never be used for curing exposed walls with fluid or earth backfill on the opposite side. A continuous wet cure for a minimum of five days is required for these applications. Curing compound shall not be used on surfaces exposed to water in potable water storage tanks and treatment plants unless curing compound is certified in accordance with ANSI/NSF Standard 61.
- B. When permitted, the curing compound shall maintain the concrete in a moist condition for the required time period, and the subsequent appearance of the concrete surface shall not be affected.
- C. The compound shall be applied in accordance with the manufacturer's recommendations after water sheen has disappeared from the concrete surface and after finishing operations. The rate of application shall not exceed 300 square feet per gallon. For rough surfaces, apply in two directions at right angles to each other.

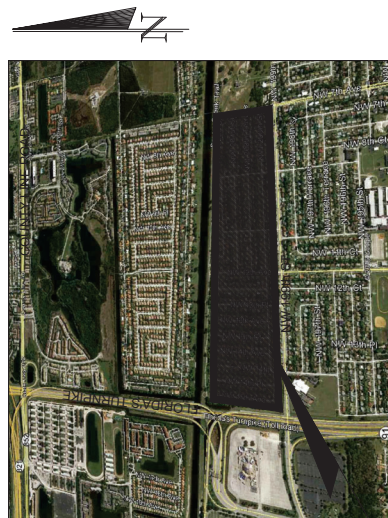
3.06. EARLY TERMINATION OF CURING

- A. Moisture retention measures may be terminated earlier than the specified times only when at least one of the following conditions is met:

1. The strength of the concrete reaches 85 percent of the specified 28-day compressive strength in laboratory-cured cylinders representative of the concrete in place, and the temperature of the in-place concrete has been constantly maintained at 50 degrees Fahrenheit or higher.
2. The strength of concrete reaches the specified 28-day compressive strength as determined by accepted nondestructive methods or laboratory-cured cylinder test results.

- END OF SECTION -

CITY OF NORTH MIAMI BEACH HONEY HILL WATER SYSTEM BETTERMENT CITY PROJECT NO. WATR2010 CITY OF MIAMI GARDENS, MIAMI-DADE COUNTY, FLORIDA



PROJECT LOCATION

LOCATION MAP

SECTION 35, TOWNSHIP 51 SOUTH, RANGE 41 EAST

PREPARED FOR:

CITY OF NORTH MIAMI BEACH



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FLORIDA LICENSED LANDSCAPE ARCHITECTURE BUSINESS NO. 200071



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SHEET NO.	DESCRIPTION	REV
C-1	COVER SHEET	1,2
TPP-1	TPP-2 TEMPORARY POLLUTION PREVENTION DETAILS	2
GN-1	GENERAL NOTES & SPECIFICATIONS	2
K-1	KEY SHEET	1
K-2	OVERALL WATER PLAN	
W-1	WATER MAIN PLAN AND PROFILE - N.W. 14TH PLACE	2
W-3	WATER MAIN PLAN AND PROFILE - N.W. 14TH COURT	2
W-5	WATER MAIN PLAN AND PROFILE - N.W. 14TH AVENUE	2
W-7	WATER MAIN PLAN AND PROFILE - N.W. 13TH AVENUE	2
W-9	WATER MAIN PLAN AND PROFILE - N.W. 12TH PLACE	2
W-11	WATER MAIN PLAN AND PROFILE - N.W. 12TH COURT	2
W-13	WATER MAIN PLAN AND PROFILE - N.W. 201ST STREET	2,3
W-15	WATER MAIN PLAN AND PROFILE - N.W. 200TH TERRACE	2,3
W-21	WATER DETAILS	
W-22	WATER DETAILS	
W-23	WATER DETAILS	2

REV. #	DESCRIPTION	DATE
1	ENGINEERING REVISION	6/30/16
2	REVISED PER CITY OF MIAMI GARDENS COMMENTS	3/1/21
3	REVISED PER CITY OF MIAMI GARDENS COMMENTS	4/22/21

Digitally signed by
Timothy James Hall
Date: 2021.05.24
11:06:15 -0400
Timothy James Hall
May 21, 2021

100% SUBMITTAL
DATE: MARCH 8, 2016
CTA PROJECT NUMBER: 15-0065

VERTICAL INFORMATION HEREON IS RELATIVE TO THE NORTH AMERICAN VERTICAL DATUM (NAVD83).

Timothy James Hall, P.E., State of Florida,
Professional Engineer, License No. 55288,
is the author of this drawing and was prepared
by Timothy James Hall, P.E. on 3/8/21.
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verified on any electronic copies.

- NOTES:**
- PRIOR TO BEGINNING ANY WORK, CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES THAT HAVE FACILITIES WITHIN THE CITY'S SERVICE AREA.
 - THE ABOVE STICKER SHALL APPEAR ON THE COVER SHEET OF ALL CONSTRUCTION PLANS SUBMITTED TO THE CITY.
 - COMPLY WITH MIAMI-DADE COUNTY WHITE LINING ORDINANCE.
 - THE CONTRACTOR SHALL VERIFY THE LOCATION, SIZE, AND FIT OF EXISTING UTILITIES PRIOR TO ORDERING MATERIALS
 - ALL DAMAGED AREAS SHALL BE RESTORED TO EQUAL OR BETTER CONDITION
 - CONTRACTOR SHALL SUBMIT AND GET APPROVAL FROM THE CORRESPONDING JURISDICTIONAL AGENCY FOR A MAINTENANCE OF TRAFFIC PLAN PRIOR TO STARTING WORK IN PUBLIC RIGHT OF WAY.

NOTE: IF IN CONFLICT, CITY OF NORTH MIAMI BEACH GENERAL NOTES PRECEDE OVER OTHER GENERAL NOTES.



1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A MAP WITH ADEQUATE LETTER OF RECORD SHALL PROVIDE MAP WITH A SOUND AND BE LEGIBLE TO BE REPRODUCED IN ANY SIZE...

1. REMEDIATION SHALL BE REQUIRED OUTSIDE OF THE PROPERTY LINE. MARK OR RECORD WITH A 1/2" DIA. RED PIPES FOR THE LOCATION OF THE REMEDIATION...

1. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A MAP WITH ADEQUATE LETTER OF RECORD SHALL PROVIDE MAP WITH A SOUND AND BE LEGIBLE TO BE REPRODUCED IN ANY SIZE...

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RE-DERM WATER-SEWER GENERAL NOTES

A HORIZONTAL DISTANCE OF AT LEAST FEET, AND PREFERABLY 10 FEET (OUTSIDE TO OUTSIDE), SHALL BE MAINTAINED BETWEEN GRAMMITY POWER SEWER PIPES AND WATER PIPES...

1. REMEDIATION SHALL BE REQUIRED OUTSIDE OF THE PROPERTY LINE. MARK OR RECORD WITH A 1/2" DIA. RED PIPES FOR THE LOCATION OF THE REMEDIATION...

1. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A MAP WITH ADEQUATE LETTER OF RECORD SHALL PROVIDE MAP WITH A SOUND AND BE LEGIBLE TO BE REPRODUCED IN ANY SIZE...

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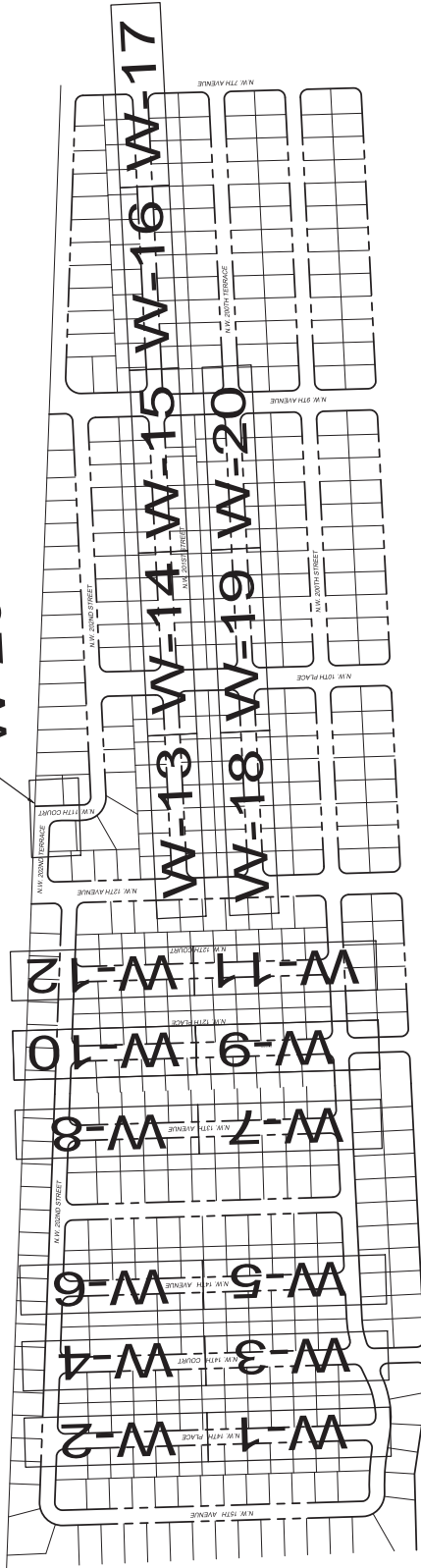
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Table with columns: DATE, BY, DESCRIPTION, REVISIONS, and COMMENTS. Includes revision 1 for 'REVISIONS' and revision 2 for 'REVISIONS'.

Project information and specifications section. Includes: HONEY HILL WATER SYSTEM BETTERMENT, PREPARED FOR: CITY OF NORTHMIAMI BEACH, NIB WATER, SHEET NO: GN-1, PROJECT # 15-0068-001-01. Includes a table for 'REVISIONS' and 'GENERAL NOTES & SPECIFICATIONS'.



W-20



Timothy James Hall, P.E., State of Florida
Professional Engineer, License No. 10088
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Digitally signed
by Timothy
James
Hall
Date: 2021.05.24
11:03:35 -0400
Timothy James Hall
Florida P.E. No. 10088
PA# 21-0354

PROJECT SUMMARY:
THE WORK INCLUDES REPLACEMENT OF APPROXIMATELY 8660 LF OF 2" WATER MAINS WITH 8715 LF OF 6" DIP AND 670 LF OF 4" DIP WATER MAINS. THE WORK IS BEING PERFORMED IN THE AREA OF THE CITY OF NORTH MIAMI BEACH. THE EXISTING WATER MAINS TO BE REPLACED ARE TO BE ABANDONED AFTER THE NEW WATER MAINS ARE CONNECTED TO THE EXISTING 6" SYSTEM AND THE SERVICES ARE RESTORED. THE WATER MAIN INSTALLATION SHALL BE DONE ACCORDING TO THE REQUIREMENTS OF THE CITY OF NORTH MIAMI BEACH AND PAYMENT RESTORATION PER THE REQUIREMENTS OF THE CITY OF MIAMI GARDENS.

PROJECT # 15-0085-001-01

KEY SHEET
K-1

HONEY HILL WATER SYSTEM BETTERMENT
PREPARED FOR:
CITY OF NORTH MIAMI BEACH
NMB WATER

GRAVEN • THOMPSON AND ASSOCIATES, INC.
ENGINEERS • PLANNERS • SURVEYORS
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Phone: (305) 239-6400
Fax: (305) 239-6400
www.graven.com



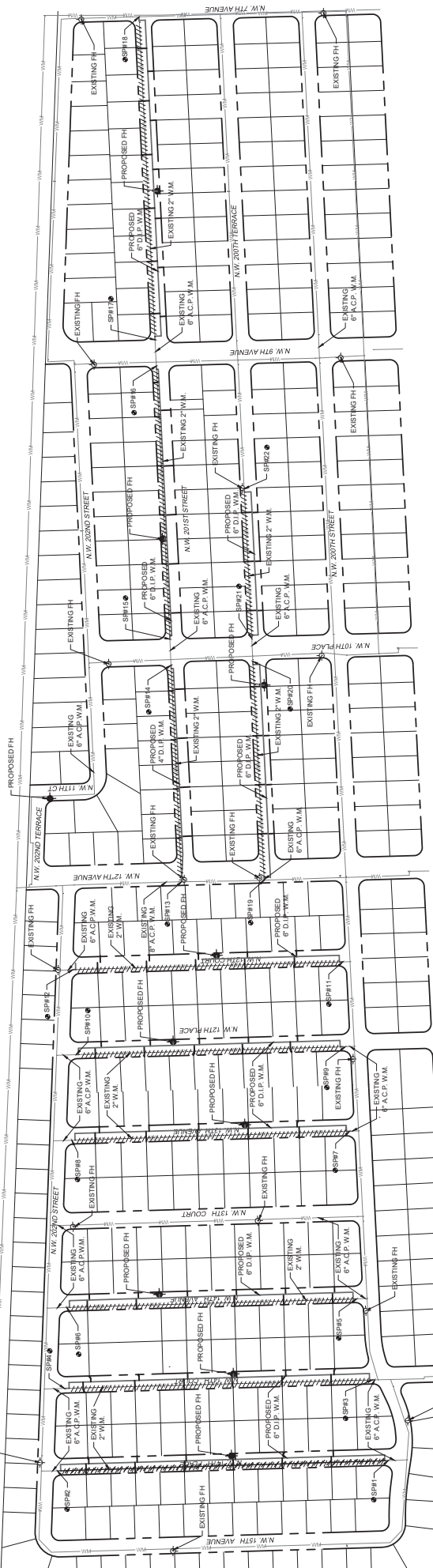
DESIGNED	CHECKED	NAME	DATE	NAME	DATE
		PPJ	1/22/16	JA	1/22/16
		TJH	3/1/16	PPJ	3/1/16
		BTJ/H		BT	

DATE	BY	DESCRIPTION
		ENGINEERING REVISION

DATE	BY	DATE	BY



- LEGEND:**
- EXISTING WATER MAIN
 - EXISTING WATER MAIN TO BE ABANDONED
 - PROPOSED WATER MAIN
 - EXISTING FIRE HYDRANT
 - PROPOSED FIRE HYDRANT
 - EXISTING FIRE HYDRANT
 - PROPOSED FIRE HYDRANT
 - BACTERIOLOGICAL SAMPLING POINT



Timothy James Hall, P.E., State of Florida,
Professional Engineer, License No. 00865.
The documents herein are prepared and sealed
by Timothy James Hall, P.E. on 3/2/16.
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Digitally signed
by Timothy James Hall
James Hall
Date: 2016.03.02 11:03:00 -0400

Timothy James Hall
Florida P.E. No. 00868
April 24, 2011



PROJECT # 15-0085-001-01

REVISIONS		REVISIONS		REVISIONS		REVISIONS		REVISIONS		REVISIONS	
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

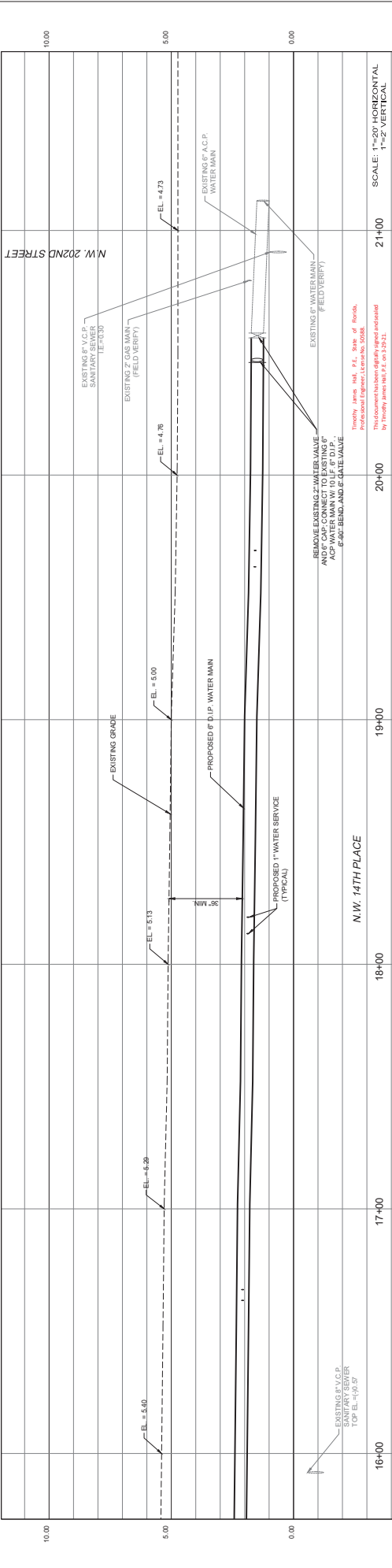
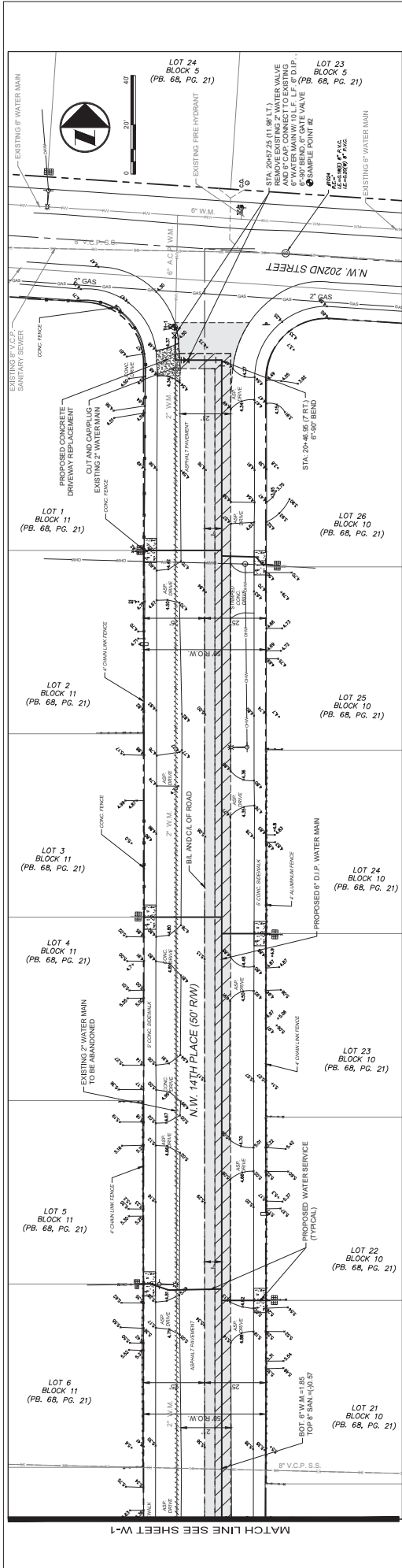
DESIGNED		PPJ	1/22/16	NAME	JA	DATE	1/22/16
CHECKED		TJH	3/11/16	DRAWN	BT	CHECKED	PPJ
SUPERVISED		BTJ/H					3/11/16

HONEY HILL WATER SYSTEM BETTERMENT
PREPARED FOR:
CITY OF NORTH MIAMI BEACH
NMB WATER

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Miami, FL 33123-8649
TEL: (305) 238-6400
FAX: (305) 238-6400
www.craiven.com



SHEET NO.
K-2



EXISTING LEGEND:

- ANCHOR
- ROD & PIPE VALVE
- CONCRETE LIGHT POLE
- CONCRETE POWER POLE
- CURB VALVE
- ELECTRICAL PANEL
- ELECTRICAL OUTLET
- ELECTRICAL PANEL
- NON-VEHICULAR ACCESS LINE
- WATER METER
- WATER BLOW OFF
- WATER VALVE
- POSS. OVERHEAD WIRE
- TOP OF WALK
- TOP OF SLOPE
- WATER MAIN
- GLANDWELL
- WATER METER
- WATER BLOW OFF
- WATER VALVE
- POSS. OVERHEAD WIRE
- TOP OF WALK
- TOP OF SLOPE
- WATER MAIN
- GLANDWELL
- NON-VEHICULAR ACCESS LINE

PROPOSED WATER AND SEWER LEGEND:

- FIRE HYDRANT ASSEMBLY
- GATE VALVE
- WATER METER
- SAMPLING POINT
- REDUCER
- BACKFLOW PREVENTER
- SIAMSE FIRE CONNECTION
- PLUS

NOTES:

- WATER MAINS WATER SERVICES ARE PROPOSED TO BE INSTALLED THROUGH HORIZONTAL DIRECTIONAL DRILLING UNDER THE ROADWAY. IF THE LONG WATER SERVICE IS INSTALLED THROUGH OPEN TRENCHING, THE FULL ROADWAY SHALL BE MILLED AND RESURFACED.
- THE FIRE MAIN RAMPERS SHOWN WERE ADDED BASED ON AERIAL PHOTOGRAPHS TAKEN DURING CONSTRUCTION. THEY SHALL BE RECONSTRUCTED WITH CAST IN PLACE DETECTABLE WARNING SURFACE SHALL BE APPROVED BY THE CITY OF MIAMI OFFICIALS. THIS STATION IS LOCATED AT THE CORNER OF THE PLACE/W 20TH TERRACE WATER SYSTEM BETTERMENT.

KEY MAP:

Scale: 1" = 20' HORIZONTAL, 1" = 2' VERTICAL

DATE: 1/22/16
DESIGNED: PPJ
CHECKED: TJH
DATE: 3/1/16
DESIGNED: PPJ
CHECKED: BT
DATE: 3/1/16
DESIGNED: PPJ
CHECKED: BT
DATE: 3/1/16

REVISIONS:

NO.	DESCRIPTION	DATE	BY
1	ISSUED FOR PERMIT	1/22/16	PPJ
2	ISSUED FOR PERMIT	3/1/16	BT

PROJECT # 15-0085-001-01

WATER MAIN PLAN AND PROFILE
 N.W. 14TH PLACE

CITY OF NORTH MIAMI BEACH
 NMB WATER

PREPARED FOR:
 HONEY HILL WATER SYSTEM BETTERMENT

DATE: 1/22/16
DESIGNED: PPJ
CHECKED: TJH
DATE: 3/1/16
DESIGNED: PPJ
CHECKED: BT
DATE: 3/1/16

REVISIONS:

NO.	DESCRIPTION	DATE	BY
1	ISSUED FOR PERMIT	1/22/16	PPJ
2	ISSUED FOR PERMIT	3/1/16	BT

SHRUB NO.: W-2

Timothy James Hall
 P.E. No. 05588
 Florida P.E. No. 05588
 1101-44-04100
 4447 241 2411

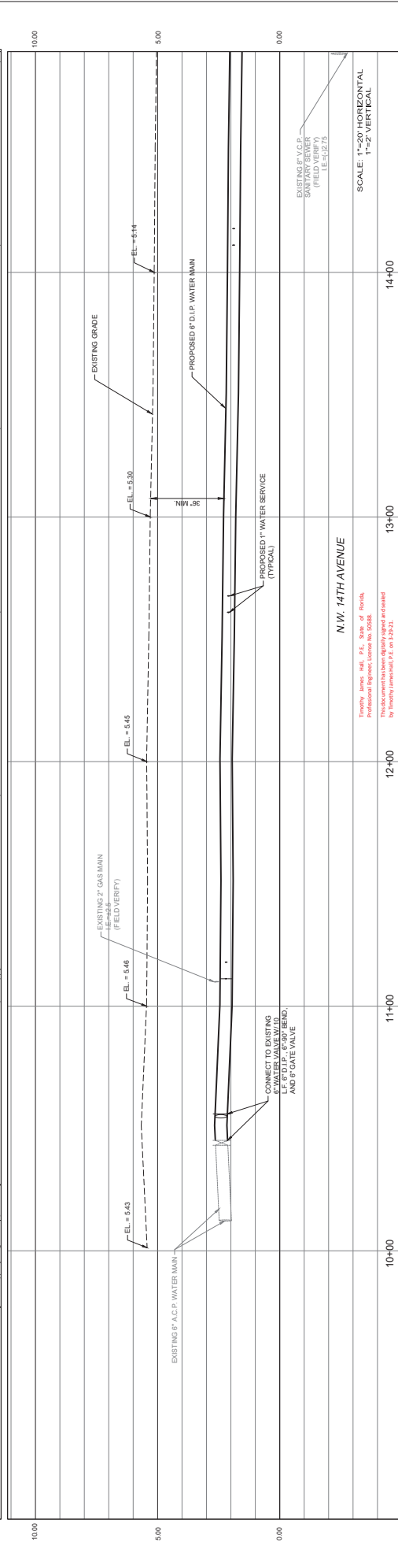
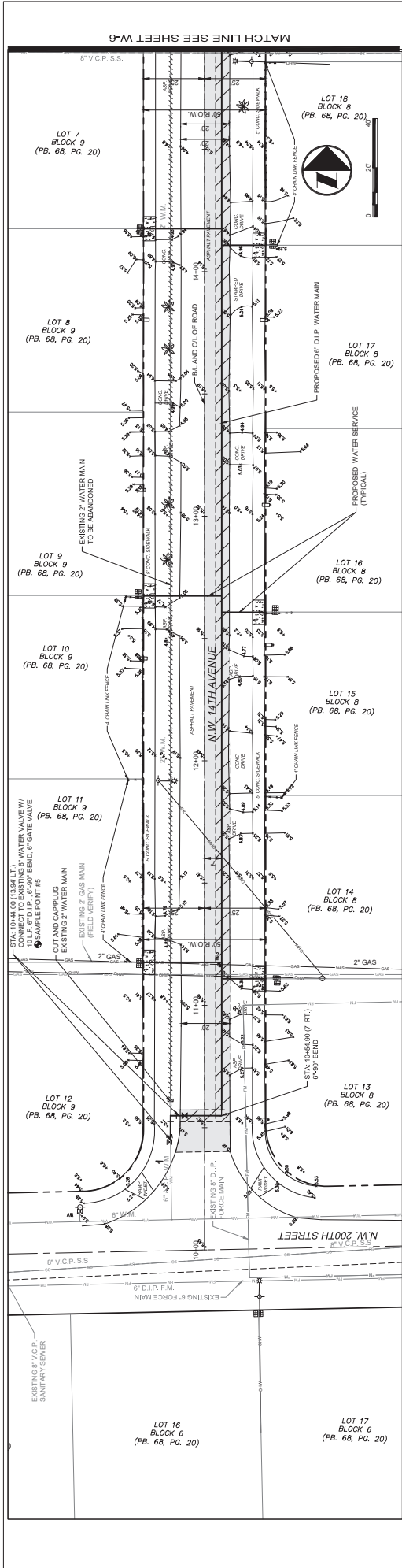
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PROJECT # 15-0085-001-01

SHRUB NO.: W-2



EXISTING LEGEND:

- ANCHOR
- 8\"/>

PROPOSED WATER AND SEWER LEGEND:

- FIRE HYDRANT ASSEMBLY
- WATERMETER
- WATER VALVE
- GATE VALVE
- WATER METER
- SAMPLING POINT
- REDUCER
- BACKFLOW PREVENTER
- SIMMER FIRE CONNECTOR
- CONFLICT CALLOUT

NOTES:

- IF THE LONG WATER SERVICE IS INSTALLED THROUGH OPEN TRENCHING, THE FULL ROADWAY SHALL BE MAINTAINED AND RESURFACED.
- THE PEDESTRIAN RAMPS SHOWN WERE ADDED BASED ON AERIAL PHOTOGRAPHS AND FIELD SURVEY. IF ANY CHANGES ARE REQUIRED DURING CONSTRUCTION, THEY SHALL BE APPROVED BY THE CITY OF MIAMI BEACH. THE PEDESTRIAN RAMPS SHALL BE CONSTRUCTED WITH CAST IN PLACE DETECTABLE WARNING SURFACE SHALL BE APPROVED BY THE CITY OF MIAMI BEACH. THE PEDESTRIAN RAMPS SHALL BE CONSTRUCTED WITH CAST IN PLACE DETECTABLE WARNING SURFACE SHALL BE APPROVED BY THE CITY OF MIAMI BEACH. THE PEDESTRIAN RAMPS SHALL BE CONSTRUCTED WITH CAST IN PLACE DETECTABLE WARNING SURFACE SHALL BE APPROVED BY THE CITY OF MIAMI BEACH.

KEY MAP:

Timothy James Hall
 13959 5400
 Phone: 305-881-4441
 Fax: 305-881-4442
 Email: tjhall@timothyjameshall.com

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PROJECT # 15-0068-001-01

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION
1/22/16	PPJ	DESIGNED	1/22/16	JA	CHECKED
3/11/16	TJH	CHECKED	3/11/16	BT	CHECKED
3/11/16	BT	SUPERVISED	3/11/16	PPJ	SUPERVISED

REVISIONS:

NO.	DESCRIPTION	DATE
1	ISSUED FOR PERMITS	1/22/16

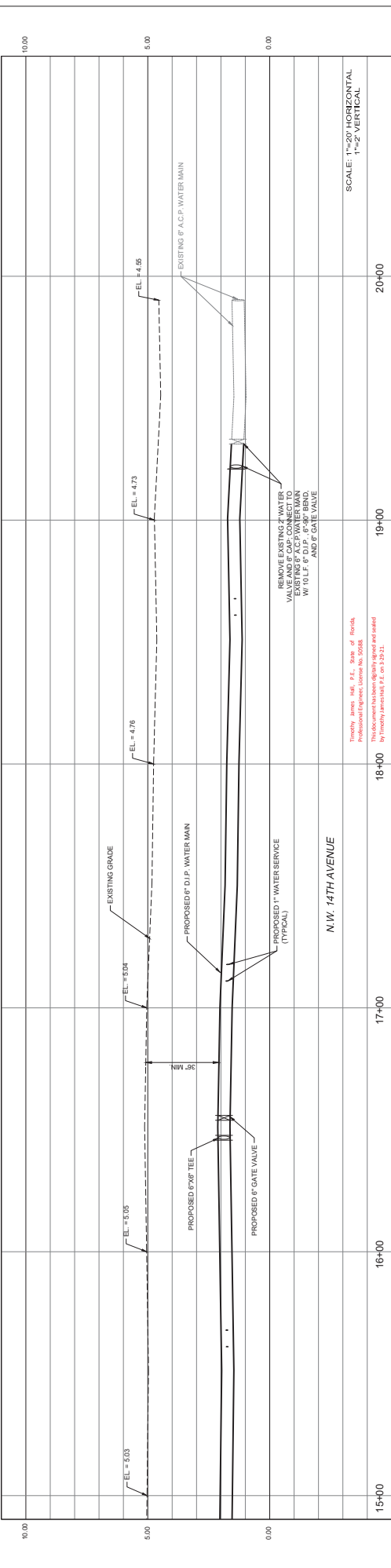
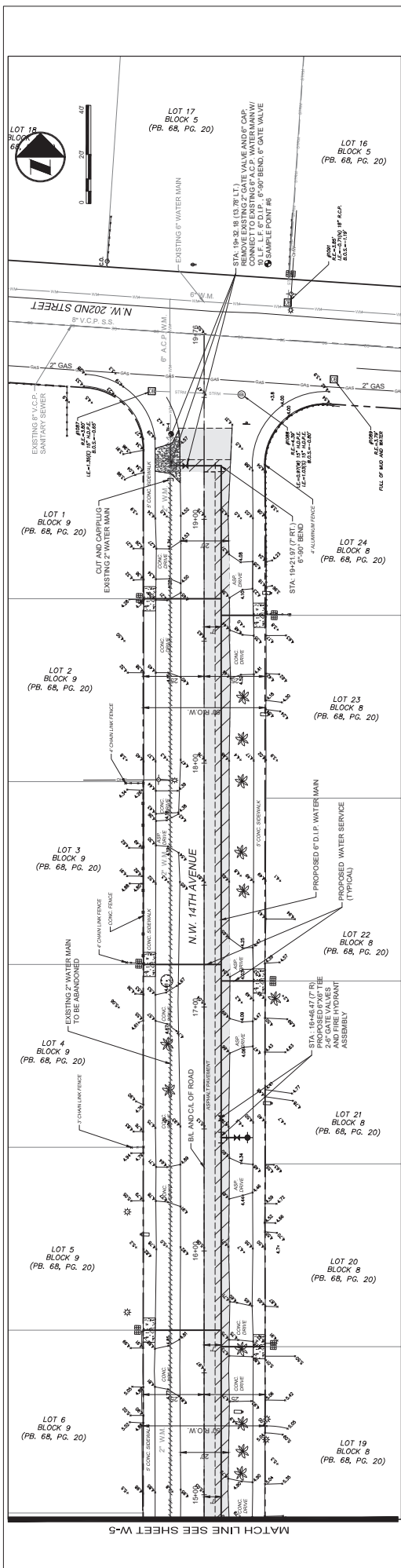
WATER MAIN PLAN AND PROFILE
 N.W. 14TH AVENUE
 NMB WATER

CITY OF NORTH MIAMI BEACH
 HONEY HILL WATER SYSTEM BETTERMENT
 PREPARED FOR:

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 PHONE: (305) 238-6600 FAX: (305) 238-6600
 WWW.CTASINC.COM

SCALE: 1"=20' HORIZONTAL
 1"=2' VERTICAL

SHEET NO.: W-5



EXISTING LEGEND:

- ANCHOR
- 8\"/>

PROPOSED WATER AND SEWER LEGEND:

- FIRE HYDRANT ASSEMBLY
- WATER MAIN RESTORATION
- ASPHALT PAVEMENT RESTORATION
- 1\"/>

NOTES:

- WHERE LONG WATER SERVICES ARE PROPOSED TO BE INSTALLED THROUGH HORIZONTAL DIRECTIONAL DRILLING UNDER THE ROADWAY, IF THE LONG WATER SERVICE IS INSTALLED THROUGH OPEN TRENCHING, THE FULL ROADWAY SHALL BE FILLED AND RESURFACED.
- THE PEDESTRIAN RAMPS SHOWN WERE ADDED BASED ON AERIAL PHOTOGRAPHS AND FIELD SURVEY. IF ANY PEDESTRIAN RAMPS ARE DISTURBED DURING CONSTRUCTION THEY SHALL BE RECONSTRUCTED WITH CAST IN PLACE DETECTABLE WALKING SURFACE. THIS SURFACE SHALL BE APPROVED BY THE CITY OF MIAMI OFFICIALS. THIS SURFACE SHALL BE INSTALLED IN THE CORNER OF THE DRIVE/WALKWAY TERRACE WERE SHIFTED BASED ON AERIAL PHOTOGRAPHS.

REVISIONS:

NO.	DATE	DESCRIPTION
1	1/22/16	PPJ
2	3/11/16	TJH
3	3/11/16	PPJ

SCALE: 1"=20' HORIZONTAL
1"=2' VERTICAL

PROJECT # 15-0065-001-01

WATER MAIN PLAN AND PROFILE
N.W. 14TH AVENUE

PREPARED FOR:
CITY OF NORTH MIAMI BEACH

DATE: 1/22/16

DRAWN BY: PPJ

CHECKED BY: TJH

DATE: 3/11/16

CHECKED BY: PPJ

DATE: 3/11/16

CHECKED BY: PPJ

DATE: 3/11/16

CHECKED BY: PPJ

WATER MAIN PLAN AND PROFILE
N.W. 14TH AVENUE

PREPARED FOR:
CITY OF NORTH MIAMI BEACH

DATE: 1/22/16

DRAWN BY: PPJ

CHECKED BY: TJH

DATE: 3/11/16

CHECKED BY: PPJ

DATE: 3/11/16

CHECKED BY: PPJ

DATE: 3/11/16

CHECKED BY: PPJ

ENGINEERS: CRAVEN + THOMPSON AND ASSOCIATES, INC.

PLANNERS: SURVEYORS

DATE: 1/22/16

DRAWN BY: PPJ

CHECKED BY: TJH

DATE: 3/11/16

CHECKED BY: PPJ

DATE: 3/11/16

CHECKED BY: PPJ

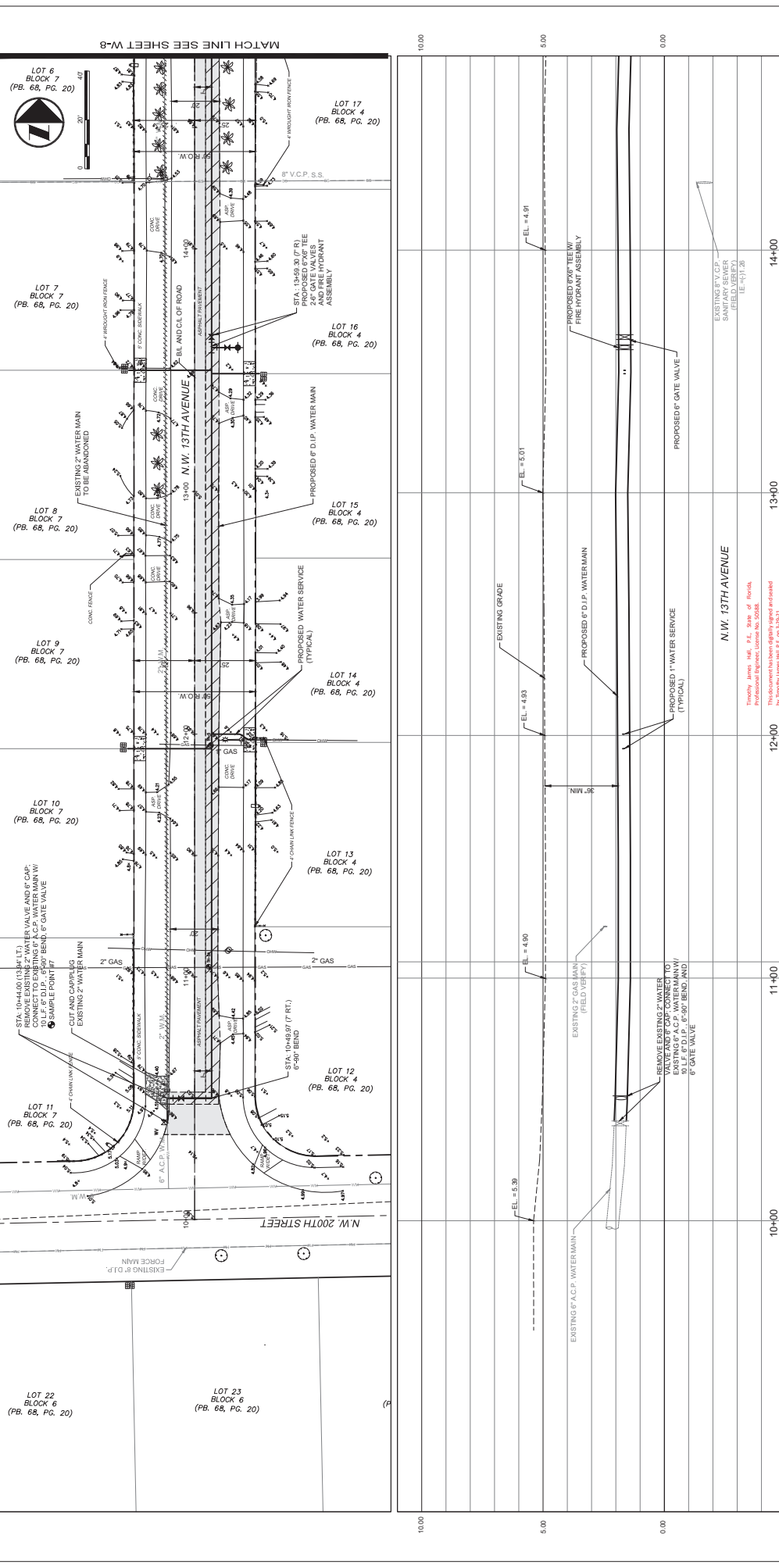
KEY MAP:

Timothy James Hall
Digitally signed by Timothy James Hall
DN: cn=Timothy James Hall, o=Sunshine811.com, ou=Sunshine811.com, email=timothy@sunshine811.com

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CITY OF NORTH MIAMI BEACH



EXISTING LEGEND:

ANCHOR	WATER VALVE	CONCRETE LIGHT POLE	CONCRETE POWER POLE	CONCRETE WALL	CONCRETE FOUNDATION WALL	CONCRETE PILE	CONCRETE PILE (WITH OR WITHOUT BRACE)	CONCRETE PILE (WITH OR WITHOUT BRACE) - 12" DIA.	CONCRETE PILE (WITH OR WITHOUT BRACE) - 18" DIA.	CONCRETE PILE (WITH OR WITHOUT BRACE) - 24" DIA.	CONCRETE PILE (WITH OR WITHOUT BRACE) - 36" DIA.
ANCHOR	WATER VALVE	CONCRETE LIGHT POLE	CONCRETE POWER POLE	CONCRETE WALL	CONCRETE FOUNDATION WALL	CONCRETE PILE	CONCRETE PILE (WITH OR WITHOUT BRACE)	CONCRETE PILE (WITH OR WITHOUT BRACE) - 12" DIA.	CONCRETE PILE (WITH OR WITHOUT BRACE) - 18" DIA.	CONCRETE PILE (WITH OR WITHOUT BRACE) - 24" DIA.	CONCRETE PILE (WITH OR WITHOUT BRACE) - 36" DIA.
ANCHOR	WATER VALVE	CONCRETE LIGHT POLE	CONCRETE POWER POLE	CONCRETE WALL	CONCRETE FOUNDATION WALL	CONCRETE PILE	CONCRETE PILE (WITH OR WITHOUT BRACE)	CONCRETE PILE (WITH OR WITHOUT BRACE) - 12" DIA.	CONCRETE PILE (WITH OR WITHOUT BRACE) - 18" DIA.	CONCRETE PILE (WITH OR WITHOUT BRACE) - 24" DIA.	CONCRETE PILE (WITH OR WITHOUT BRACE) - 36" DIA.

PROPOSED WATER AND SEWER LEGEND:

WATER METER	WATER METER	WATER METER	WATER METER	WATER METER	WATER METER
WATER METER	WATER METER	WATER METER	WATER METER	WATER METER	WATER METER
WATER METER	WATER METER	WATER METER	WATER METER	WATER METER	WATER METER

REVISIONS:

NO.	DATE	DESCRIPTION	BY	DATE	DESCRIPTION
1	1/22/16	INITIAL DESIGN	TJH	3/1/16	REVISED: BT/JJH
2	3/1/16	CHECKED	PPJ		
3	1/22/16	CHECKED	JA		
4	1/22/16	DESIGNED	PPJ		

NOTES:

- EXISTING WATER SERVICES ARE PROPOSED TO BE RETAINED THROUGH HORIZONTAL DIRECTIONAL DRILLING UNDER THE ROADWAY. IF THE LONG WATER SERVICE IS INSTALLED THROUGH OPEN TRENCHING, THE FULL ROADWAY SHALL BE MAINTAINED AND REPAVED. THE PEDESTRIAN RAMPS SHOWN WERE ADDED BASED ON AERIAL PHOTOGRAPHS AND VISUAL SURVEY. THE EXISTING WATER SERVICES WERE RECONSTRUCTED WITH CAST-IN-PLACE DETECTABLE WALKING SURFACE SHALL BE APPROVED BY THE CITY OF MIAMI OFFICIALS. THIS STATION IS LOCATED AT THE CORNER OF THE PLACE/AVENUE 200TH TERRACE WERE SHIFTED BASED ON AERIAL.
- THE PEDESTRIAN RAMPS SHOWN WERE ADDED BASED ON AERIAL PHOTOGRAPHS AND VISUAL SURVEY. THE EXISTING WATER SERVICES WERE RECONSTRUCTED WITH CAST-IN-PLACE DETECTABLE WALKING SURFACE SHALL BE APPROVED BY THE CITY OF MIAMI OFFICIALS. THIS STATION IS LOCATED AT THE CORNER OF THE PLACE/AVENUE 200TH TERRACE WERE SHIFTED BASED ON AERIAL.

KEY MAP:

CRAVEN + THOMPSON AND ASSOCIATES, INC.
ENGINEERS + PLANNERS + SURVEYORS
 1000 N.W. 13th Avenue, Suite 1000
 North Miami Beach, FL 33162
 Phone: (305) 750-2500
 Fax: (305) 750-2500
 Email: info@craven.com

Timothy James Hall
 P.E., State of Florida
 Professional Engineers License No. 50888
 Timothy James Hall
 13584-0907
 10107 SW 27th Ave, Suite 1000
 North Miami Beach, FL 33162

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PROJECT #15-0068-001-01
WATER MAIN PLAN AND PROFILE
 N.W. 13TH AVENUE
 NMB WATER

PREPARED FOR:
 CITY OF NORTH MIAMI BEACH
 NMB WATER

DATE 1/22/16
BY T.J.H.
CHECKED PPJ
DATE 3/1/16
BY PPJ
CHECKED JA
DATE 1/22/16
BY T.J.H.

REVISIONS:

NO.	DATE	DESCRIPTION	BY	DATE	DESCRIPTION
1	1/22/16	INITIAL DESIGN	TJH	3/1/16	REVISED: BT/JJH
2	3/1/16	CHECKED	PPJ		
3	1/22/16	CHECKED	JA		
4	1/22/16	DESIGNED	PPJ		

WATER MAIN PLAN AND PROFILE
 N.W. 13TH AVENUE
 NMB WATER

PROJECT #15-0068-001-01

DATE 1/22/16
BY T.J.H.
CHECKED PPJ
DATE 3/1/16
BY PPJ
CHECKED JA
DATE 1/22/16
BY T.J.H.

REVISIONS:

NO.	DATE	DESCRIPTION	BY	DATE	DESCRIPTION
1	1/22/16	INITIAL DESIGN	TJH	3/1/16	REVISED: BT/JJH
2	3/1/16	CHECKED	PPJ		
3	1/22/16	CHECKED	JA		
4	1/22/16	DESIGNED	PPJ		

SHIBET NO.
 W-7

WATER MAIN PLAN AND PROFILE
 N.W. 13TH AVENUE
 NMB WATER

PREPARED FOR:
 CITY OF NORTH MIAMI BEACH
 NMB WATER

DATE 1/22/16
BY T.J.H.
CHECKED PPJ
DATE 3/1/16
BY PPJ
CHECKED JA
DATE 1/22/16
BY T.J.H.

REVISIONS:

NO.	DATE	DESCRIPTION	BY	DATE	DESCRIPTION
1	1/22/16	INITIAL DESIGN	TJH	3/1/16	REVISED: BT/JJH
2	3/1/16	CHECKED	PPJ		
3	1/22/16	CHECKED	JA		
4	1/22/16	DESIGNED	PPJ		

WATER MAIN PLAN AND PROFILE
 N.W. 13TH AVENUE
 NMB WATER

PROJECT #15-0068-001-01

DATE 1/22/16
BY T.J.H.
CHECKED PPJ
DATE 3/1/16
BY PPJ
CHECKED JA
DATE 1/22/16
BY T.J.H.

REVISIONS:

NO.	DATE	DESCRIPTION	BY	DATE	DESCRIPTION
1	1/22/16	INITIAL DESIGN	TJH	3/1/16	REVISED: BT/JJH
2	3/1/16	CHECKED	PPJ		
3	1/22/16	CHECKED	JA		
4	1/22/16	DESIGNED	PPJ		

WATER MAIN PLAN AND PROFILE
 N.W. 13TH AVENUE
 NMB WATER

PROJECT #15-0068-001-01

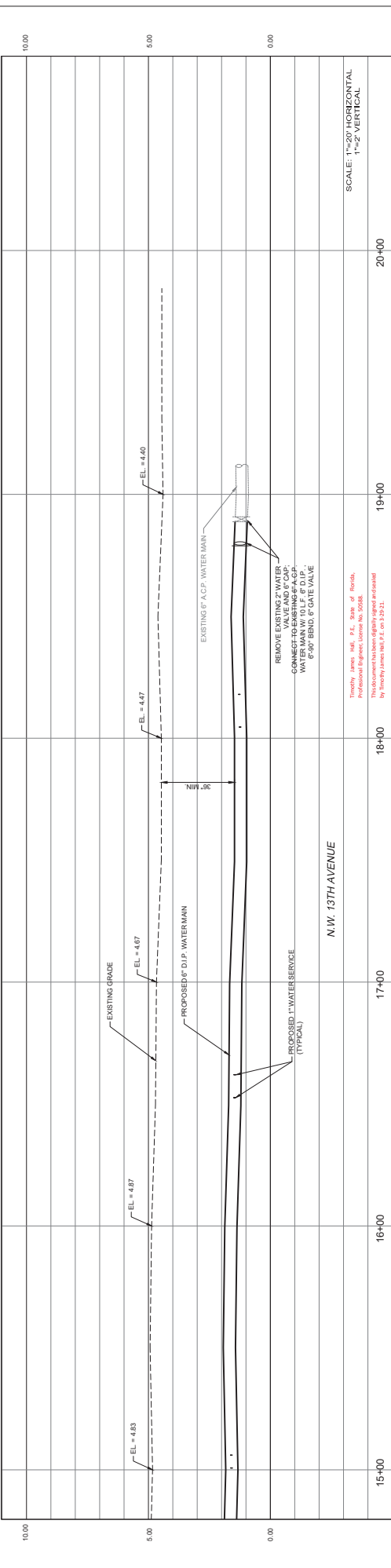
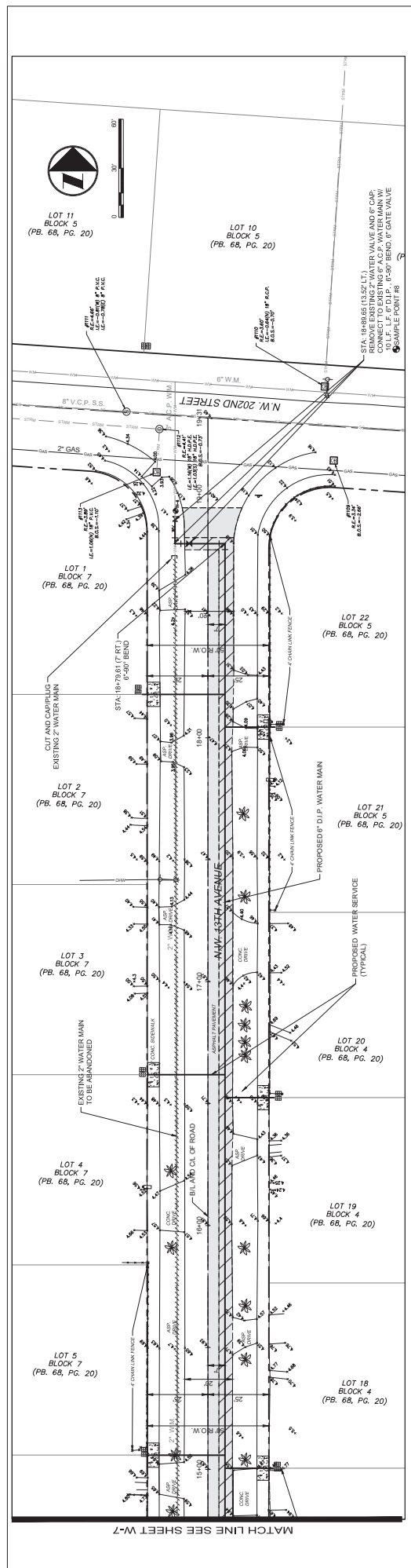
DATE 1/22/16
BY T.J.H.
CHECKED PPJ
DATE 3/1/16
BY PPJ
CHECKED JA
DATE 1/22/16
BY T.J.H.

REVISIONS:

NO.	DATE	DESCRIPTION	BY	DATE	DESCRIPTION
1	1/22/16	INITIAL DESIGN	TJH	3/1/16	REVISED: BT/JJH
2	3/1/16	CHECKED	PPJ		
3	1/22/16	CHECKED	JA		
4	1/22/16	DESIGNED	PPJ		

WATER MAIN PLAN AND PROFILE
 N.W. 13TH AVENUE
 NMB WATER

PROJECT #15-0068-001-01



EXISTING LEGEND:

- ANCHOR
- BOX JUNCTION
- CONCRETE LIGHT POLE
- CONCRETE POWER POLE
- CURB VALVE
- ELECTRICAL OUTLET
- ELECTRICAL PANEL
- FLANGE
- GROUNDING WIRE
- MANHOLE
- METAL LIGHT POLE
- NON-FORMING WELL
- PIPE
- PARKING LIGHT SQUARE
- SAFETY MANHOLE
- SAFETY MANHOLE
- RAMP WITH OBSTRUCTIBLE WARNING SURFACE
- W/SLT.

PROPOSED WATER AND SEWER LEGEND:

- WATER METER
- WATER FLOW OFF
- WATER VALVE
- POSS. OVERHANG
- TOP OF MANHOLE
- TOP OF RAMP
- WATER MAIN
- GLAND
- NON-VEHICULAR ACCESS LINE

NOTES:

- WHERE LONG WATER SERVICES ARE PROPOSED TO BE INSTALLED THROUGH HORIZONTAL DIRECTIONAL DRILLING UNDER THE ROADWAY, TRENCHING, THE FULL ROADWAY SHALL BE MILLED AND RESURFACED.
- THE PEDESTRIAN RAMPS SHOWN WERE ADDED BASED ON AERIAL PHOTOGRAPHS AND FIELD SURVEY. THESE RAMPS SHALL BE CONSTRUCTED WITH CAST IN PLACE DETECTABLE WALKING SURFACE. THESE RAMPS SHALL BE APPROVED BY THE CITY OF MIAMI BEACH. THESE RAMPS SHALL BE CONSTRUCTED WITH CAST IN PLACE DETECTABLE WALKING SURFACE.

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION
1/22/16	PPJ	CHECKED	3/11/16	TJH	CHECKED
1/22/16	PPJ	DRAWN	3/11/16	BT	CHECKED
1/22/16	PPJ	DATE	1/22/16	JA	DATE

REVISIONS:

NO.	DATE	DESCRIPTION
1		

PROPOSED WATER AND SEWER LEGEND:

- FIRE HYDRANT ASSEMBLY
- GATE VALVE
- WATER METER
- SAMPLING POINT
- REDUCER
- BACKFLOW PREVENTER
- SIAMISE FIRE CONNECTION
- CONFLICT CALLOUT

WATER MAIN PLAN AND PROFILE
 N.W. 13TH AVENUE
 NMB WATER

SCALE: 1"=20' HORIZONTAL
 1"=2' VERTICAL

KEY MAP:

PROJECT #15-0068-001-01

Timothy James Hall, P.E., State of Florida, Professional Engineer, License No. 36208
 By Timothy James Hall (P.E.) on 1/22/16
 Printed and sealed and the signature must be verified on my electronic copies.

Timothy James Hall
 Digitally signed
 Timothy James Hall
 2021.05.24
 10:58:12 -0500
 Timothy James Hall
 Florida P.E. No. 36208
 April 24, 2021

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CITY OF NORTH MIAMI BEACH
 PREPARED FOR:
 HONEY HILL WATER SYSTEM BETTERMENT

CRAVEN + THOMPSON AND ASSOCIATES, INC.
 ENGINEERS • PLANNERS • SURVEYORS
 1101 N.W. 13TH AVENUE, SUITE 100
 NORTH MIAMI BEACH, FL 33162
 PHONE: (305) 750-6600 FAX: (305) 750-6600
 WWW.CTASUN.COM

PROJECT #15-0068-001-01

WATER MAIN PLAN AND PROFILE
 N.W. 13TH AVENUE
 NMB WATER

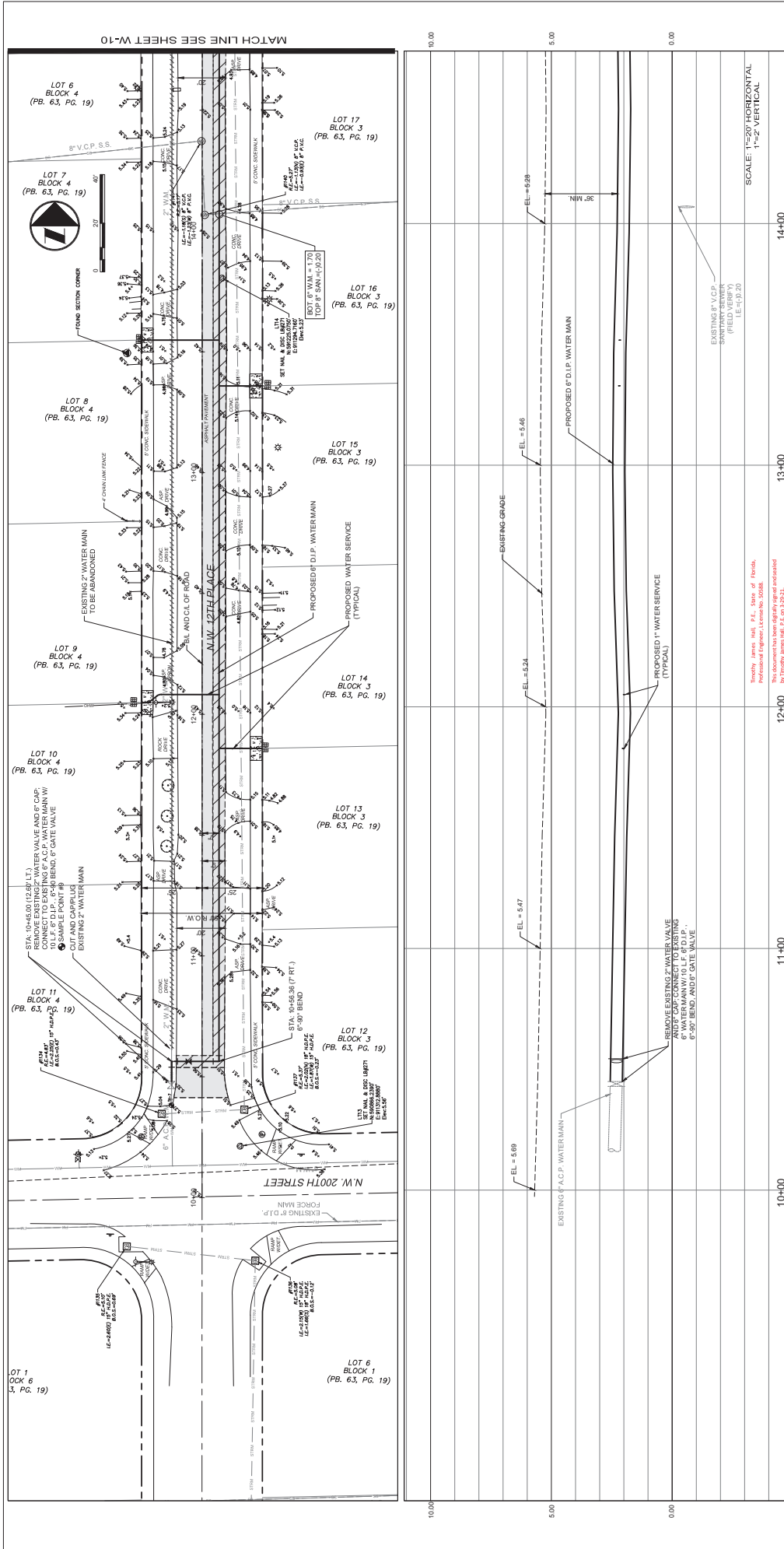
PREPARED FOR:
 HONEY HILL WATER SYSTEM BETTERMENT

DATE: 1/22/16
BY: PPJ
CHECKED: TJH
DATE: 3/11/16
BY: BT
CHECKED: PPJ

DATE: 1/22/16
BY: PPJ
CHECKED: TJH
DATE: 3/11/16
BY: BT
CHECKED: PPJ

DATE: 1/22/16
BY: PPJ
CHECKED: TJH
DATE: 3/11/16
BY: BT
CHECKED: PPJ

DATE: 1/22/16
BY: PPJ
CHECKED: TJH
DATE: 3/11/16
BY: BT
CHECKED: PPJ



EXISTING LEGEND:

SYMBOL	DESCRIPTION	DATE	BY
ANCHOR	ANCHOR		
BODYPipe Valve	BODYPipe Valve		
CONCRETE LIGHT POLE	CONCRETE LIGHT POLE		
CONCRETE POWER POLE	CONCRETE POWER POLE		
CURB VALVE	CURB VALVE		
ELECTRICAL OUTLET	ELECTRICAL OUTLET		
ELECTRICAL PANEL	ELECTRICAL PANEL		
FLY/CT.	FLY/CT.		
ELECTRICAL MANHOLE	ELECTRICAL MANHOLE		
HEADWALL	HEADWALL		
METAL LIGHT POLE	METAL LIGHT POLE		
MONY FORMING WELL	MONY FORMING WELL		
PIPE	PIPE		
PARKING LIGHT SQUARE	PARKING LIGHT SQUARE		
SAFETY MANHOLE	SAFETY MANHOLE		
RAMP WITH OBSTRUCTIBLE WARNING SURFACE	RAMP WITH OBSTRUCTIBLE WARNING SURFACE		

PROPOSED WATER AND SEWER LEGEND:

SYMBOL	DESCRIPTION	DATE	BY
WATER METER	WATER METER		
WATER BLOW OFF	WATER BLOW OFF		
WATER VALVE	WATER VALVE		
POSTED DRIVE POLE	POSTED DRIVE POLE		
FIBRE	FIBRE		
TOP OF FIBRE	TOP OF FIBRE		
TOP OF SLOPE	TOP OF SLOPE		
WATER MAIN	WATER MAIN		
MANHOLE	MANHOLE		
NON-VEHICULAR ACCESS LINE	NON-VEHICULAR ACCESS LINE		
DESIGNED / CHECKED	PPJ / TJH	1/22/16	3/1/16
DATE			
REVISIONS			
NO. / DATE			
DESCRIPTION			
DATE			
BY			

PROPOSED WATER AND SEWER LEGEND (Continued):

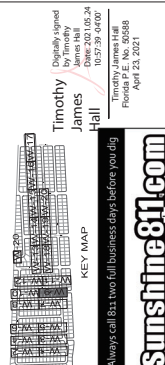
SYMBOL	DESCRIPTION
FIRE HYDRANT ASSEMBLY	FIRE HYDRANT ASSEMBLY
GATE VALVE	GATE VALVE
WATER METER	WATER METER
SAMPLING POINT	SAMPLING POINT
REDUCER	REDUCER
BACKFLOW PREVENTER	BACKFLOW PREVENTER
SHIMASE FIRE CONNECTION	SHIMASE FIRE CONNECTION
PLUS	PLUS

NOTES:

- WHERE LONG WATER SERVICES ARE PROPOSED TO BE INSTALLED THROUGH HORIZONTAL DIRECTIONAL DRILLING UNDER THE ROADWAY, IF THE LONG WATER SERVICE IS INSTALLED THROUGH OPEN TRENCHING, THE FULL ROADWAY SHALL BE MILLED AND REPAVED.
- THE FEDESTRIAN RAMPS SHOWN WERE ADDED BASED ON AERIAL PHOTOGRAPHS AND FIELD SURVEY. ALL CONSTRUCTION SHALL BE RECONSTRUCTED WITH CAST IN PLACE DETECTABLE WARNING SURFACE. ANY STATIONS LOCATED IN THE CONDUIT WITHIN THE TRENCH SHALL BE SHIFTED TO THE ADJACENT SIDEWALK WITHIN PLACE/NW 20TH TERRACE WERE SHIFTED BASED ON AERIAL PHOTOGRAPHS AND FIELD SURVEY.

Timothy James Hall, P.E., State of Florida, Professional Engineer, License No. 50588
 11010 NW 22nd Avenue, Suite 201, North Miami Beach, FL 33162
 By Timothy James Hall, P.E. on 3/25/21.
 Printed on 100% recycled paper with soy ink. Signature must be signed and sealed and the signature must be verified on any electronic copy.

WATER MAIN PLAN AND PROFILE
 N.W. 12TH PLACE
 CITY OF NORTH MIAMI BEACH
 NMB WATER
 PROJECT # 15-0068-001-01
 SHEET NO. W-9



NOTES:
 1. WHERE LONG WATER SERVICES ARE PROPOSED TO BE INSTALLED THROUGH HORIZONTAL DIRECTIONAL DRILLING UNDER THE ROADWAY, IF THE LONG WATER SERVICE IS INSTALLED THROUGH OPEN TRENCHING, THE FULL ROADWAY SHALL BE MILLED AND REPAVED.
 2. THE FEDESTRIAN RAMPS SHOWN WERE ADDED BASED ON AERIAL PHOTOGRAPHS AND FIELD SURVEY. ALL CONSTRUCTION SHALL BE RECONSTRUCTED WITH CAST IN PLACE DETECTABLE WARNING SURFACE. ANY STATIONS LOCATED IN THE CONDUIT WITHIN THE TRENCH SHALL BE SHIFTED TO THE ADJACENT SIDEWALK WITHIN PLACE/NW 20TH TERRACE WERE SHIFTED BASED ON AERIAL PHOTOGRAPHS AND FIELD SURVEY.

WATER MAIN RESTORATION:
 ASPHALT PAVEMENT RESTORATION
 ASPHALT PAVEMENT / 1" SP-9 ASPHALT OVERLAY
DRIVEWAY RESTORATION:
 SIDEWALK RESTORATION
 CONFLICT CALLOUT

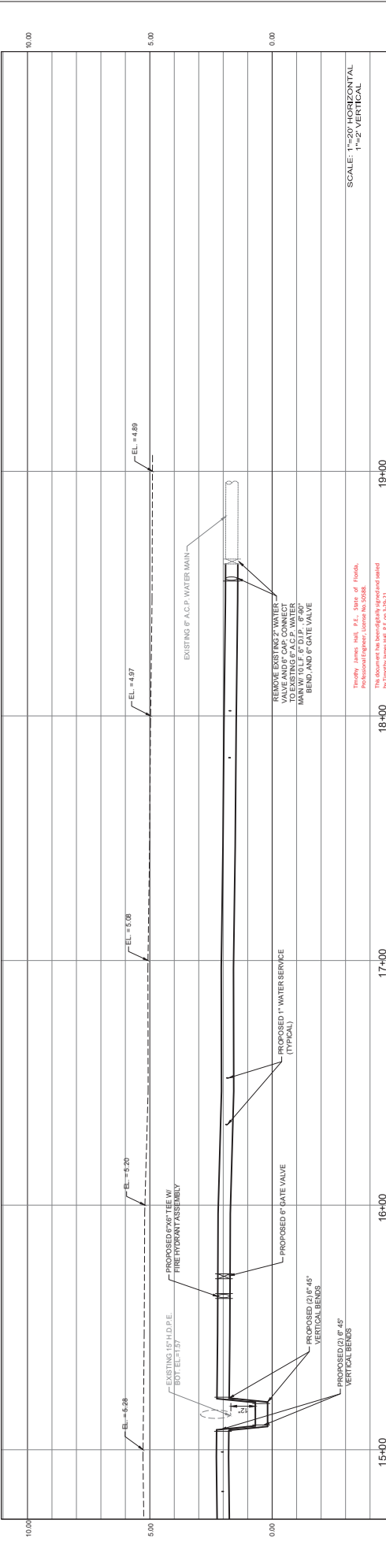
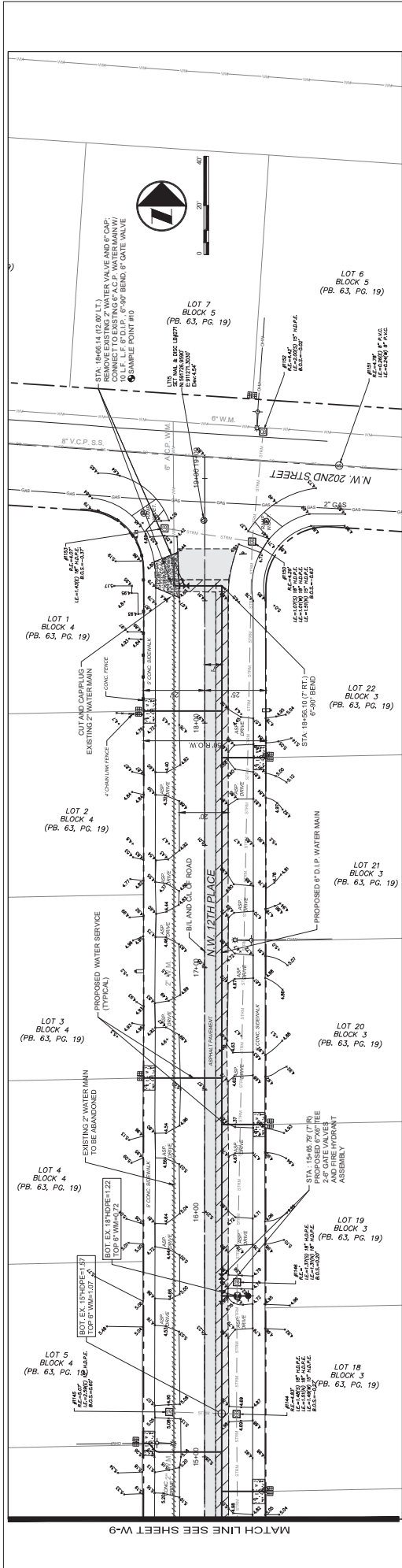
WATERMETER
 WATER BLOW OFF
 WATER VALVE
 POSTED DRIVE POLE
 FIBRE
 TOP OF FIBRE
 TOP OF SLOPE
 WATER MAIN
 MANHOLE
 NON-VEHICULAR ACCESS LINE

DESIGNED / CHECKED
 PPJ / TJH
 1/22/16 / 3/1/16
 DATE

REVISIONS
 NO. / DATE
 DESCRIPTION
 DATE
 BY

WATER MAIN RESTORATION
 ASPHALT PAVEMENT RESTORATION
 ASPHALT PAVEMENT / 1" SP-9 ASPHALT OVERLAY
DRIVEWAY RESTORATION:
 SIDEWALK RESTORATION
 CONFLICT CALLOUT

WATERMETER
 WATER BLOW OFF
 WATER VALVE
 POSTED DRIVE POLE
 FIBRE
 TOP OF FIBRE
 TOP OF SLOPE
 WATER MAIN
 MANHOLE
 NON-VEHICULAR ACCESS LINE



EXISTING LEGEND:

SYMBOL	DESCRIPTION
[Symbol]	ANCHOR
[Symbol]	8" D.P. VALVE
[Symbol]	8" D.P. VALVE
[Symbol]	CONCRETE PORT
[Symbol]	CONCRETE POWER POLE
[Symbol]	CURB VALVE
[Symbol]	ELECTRICAL PANEL
[Symbol]	ELECTRICAL PANEL
[Symbol]	PIPE
[Symbol]	PARALLEL LIGHT SQUARE
[Symbol]	SAFETY MANSOLE
[Symbol]	RAMP WITH 6% SLOPE (TABLE WARNING SURFACE)
[Symbol]	WATER METER
[Symbol]	WATER METER CLEAN OUT
[Symbol]	WATER METER
[Symbol]	POSS. OVERHOLE
[Symbol]	TOP OF MARK
[Symbol]	TOP OF SLOPE
[Symbol]	WATER MAIN
[Symbol]	GUARDRAIL
[Symbol]	NON-VEHICULAR ACCESS LINE

PROPOSED WATER AND SEWER LEGEND:

SYMBOL	NAME	DATE	BY	CHECKED	DATE	BY	CHECKED
[Symbol]	FIRE HYDRANT ASSEMBLY	1/22/16	PPJ	TJH	3/11/16	PPJ	TJH
[Symbol]	GATE VALVE	1/22/16	PPJ	TJH	3/11/16	PPJ	TJH
[Symbol]	WATER METER	1/22/16	PPJ	TJH	3/11/16	PPJ	TJH
[Symbol]	SAMPLING POINT	1/22/16	PPJ	TJH	3/11/16	PPJ	TJH
[Symbol]	REDUCER	1/22/16	PPJ	TJH	3/11/16	PPJ	TJH
[Symbol]	BACKFLOW PREVENTER	1/22/16	PPJ	TJH	3/11/16	PPJ	TJH
[Symbol]	SIAMSE FIRE CONNECTION	1/22/16	PPJ	TJH	3/11/16	PPJ	TJH

NOTES:

- IF THE LONG WATER SERVICE IS INSTALLED THROUGH OPEN TRENCHING, THE FULL ROADWAY SHALL BE MILLED AND RESURFACED.
- THE PEDESTRIAN RAMPS SHOWN WERE ADDED BASED ON AERIAL PHOTOGRAPHS AND VISUAL INSPECTION. ANY PEDESTRIAN RAMPS ARE TO BE RECONSTRUCTED DURING CONSTRUCTION. THEY SHALL BE RECONSTRUCTED WITH CAST IN PLACE DETECTABLE WARNING SURFACE SHALL BE APPROVED BY THE CITY OF MIAMI OFFICIALS. THIS STATION IS LOCATED AT THE CORNER OF THE PLACE/W/ 20TH TERRACE WERE SHIFTED BASED ON AERIAL PHOTOGRAPHS AND VISUAL INSPECTION.

SCALE: 1"=20' HORIZONTAL, 1"=2' VERTICAL

KEY MAP: [Map showing project location on a grid]

Timothy James Hall, P.E., State of Florida, Professional Engineer, License No. 50588

James Hall, P.E., State of Florida, Professional Engineer, License No. 50588

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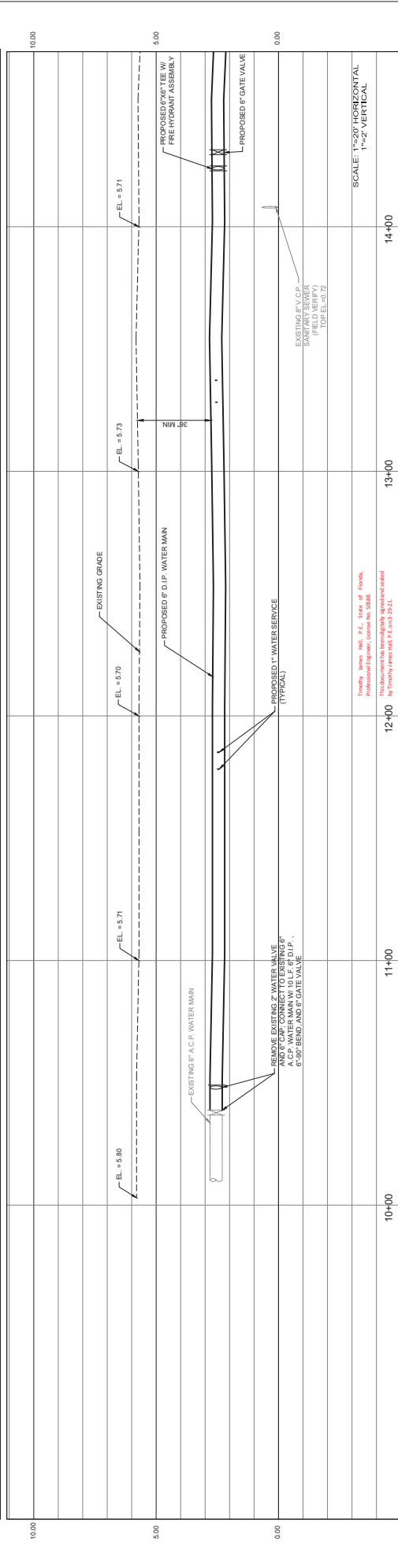
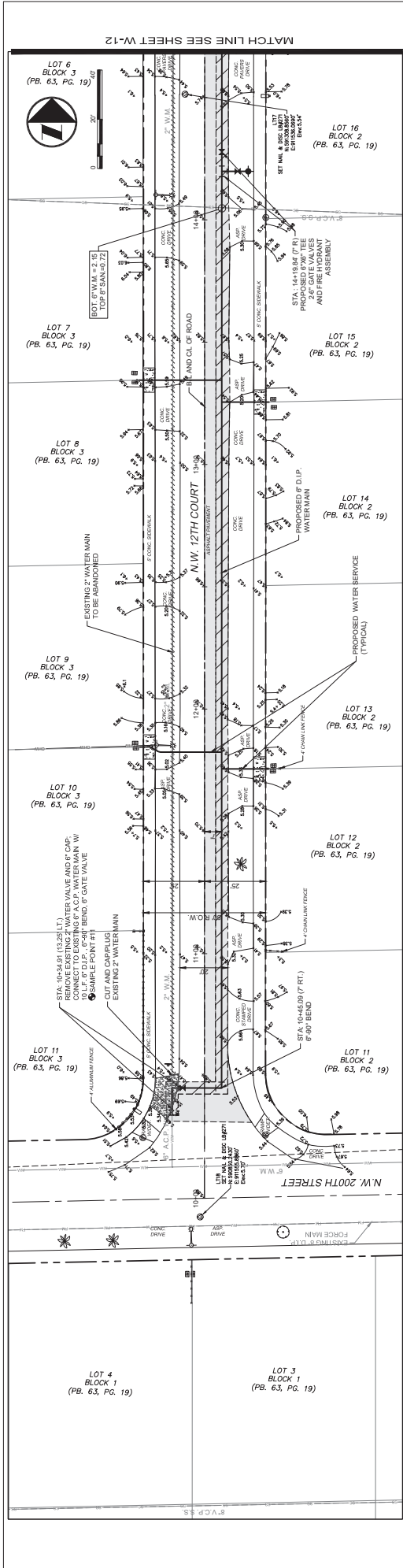
PROJECT # 15-0065-001-01

PREPARED FOR: CITY OF NORTH MIAMI BEACH

WATER MAIN PLAN AND PROFILE

N.W. 12TH PLACE

SHBET NO. W-10



EXISTING LEGEND:

DESCRIPTION	DATE	BY

NOTES:

- WHERE LONG WATER SERVICES ARE PROPOSED TO BE INSTALLED THROUGH HORIZONTAL DIRECTIONAL DRILLING UNDER THE ROADWAY, IF THE LONG WATER SERVICE IS INSTALLED THROUGH OPEN TRENCHING, THE FULL ROADWAY SHALL BE MILLED AND REPAVED.
- THE FEEDER TRAMMS SHOWN WERE ADDED BASED ON AERIAL PHOTOGRAPHS AND FIELD SURVEY. THEY SHALL BE RECONSTRUCTED WITH CAST IN PLACE DETECTABLE WARNING SURFACE SHALL BE APPROVED BY THE CITY OF MIAMI OFFICIALS. THIS STATION IS LOCATED AT THE CORNER WITH PLACE/W/ 200th TERRACE WERE SHIFTED BASED ON AERIAL PHOTOGRAPHS.

DATE: 1/22/16 BY: J.A. CHECKED: P.P.J. DATE: 3/1/16 BY: T.H. CHECKED: B.T.H.

REVISIONS:

NO.	DESCRIPTION	DATE
1	ISSUED FOR PERMITS	1/22/16
2	ISSUED FOR PERMITS	3/1/16

PROPOSED WATER AND SEWER LEGEND:

DESCRIPTION	DATE	BY

WATERMAIN RESTORATION, ASPHALT PAVEMENT RESTORATION, DRIVEWAY RESTORATION, SIDEWALK RESTORATION, CONFLICT CALLOUT.

KEY MAP

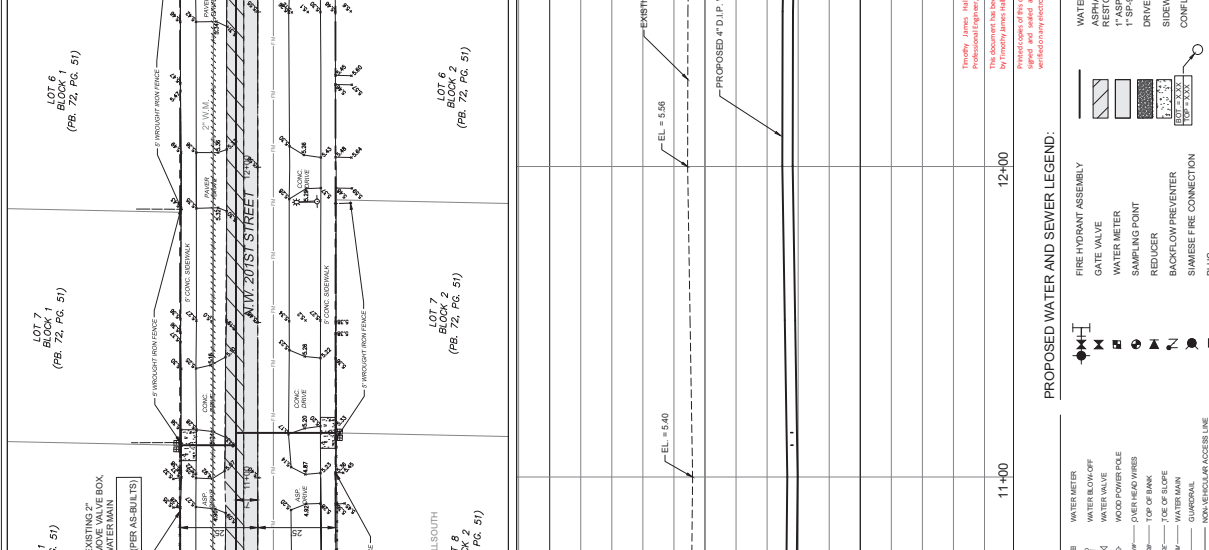
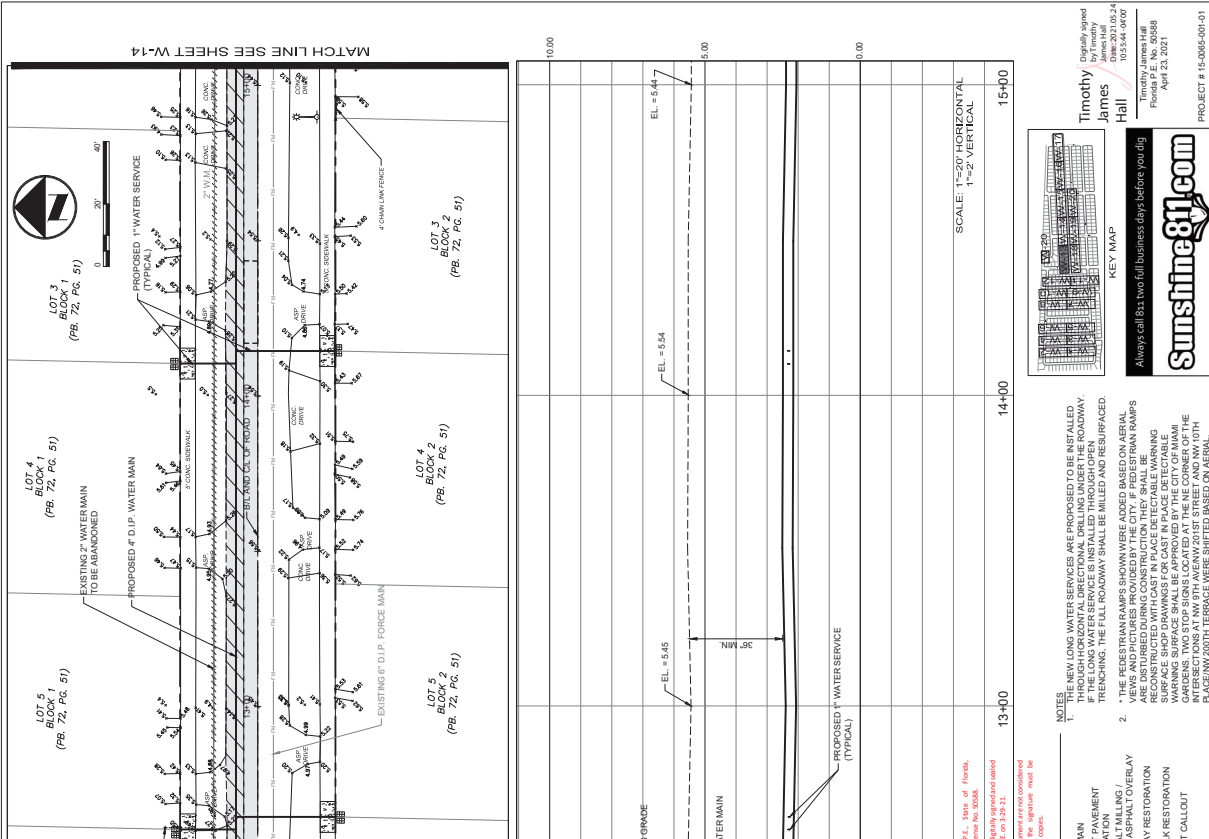
SCALE: 1" = 20' HORIZONTAL, 1" = 2' VERTICAL

14+00 13+00 12+00 11+00 10+00

REVISIONS:

NO.	DESCRIPTION	DATE

DATE: 1/22/16 BY: J.A. CHECKED: P.P.J. DATE: 3/1/16 BY: T.H. CHECKED: B.T.H.



DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION
1/22/16	PPJ	DESIGNED	1/22/16	JA	CHECKED
3/11/16	TJH	CHECKED	3/11/16	PPJ	CHECKED
		SUPERVISED		BTJ/H	SUPERVISED

EXISTING LEGEND:
 ANCHOR
 6\"/>

PROPOSED WATER AND SEWER LEGEND:
 FIRE HYDRANT ASSEMBLY
 GATE VALVE
 WATER METER
 SAMPLING POINT
 REDUCER
 BACKFLOW PREVENTER
 SIMMER FIRE CONNECTION

NOTES:
 1. MAIN LINES WATER SERVICES ARE PROPOSED TO BE INSTALLED THROUGH HORIZONTAL DIRECTIONAL DRILLING UNDER THE ROADWAY. IF THE LONG WATER SERVICE IS INSTALLED THROUGH OPEN TRENCHING, THE FULL ROADWAY SHALL BE MILLED AND RESURFACED.
 2. THE PEDESTRIAN RAMPS SHOWN WERE ADDED BASED ON AERIAL PHOTOGRAPHS AND FIELD SURVEY. ALL PEDESTRIAN RAMPS ARE TO BE CONSTRUCTED WITH CAST-IN-PLACE DETECTABLE WALKING SURFACE. ALL PEDESTRIAN RAMPS SHALL BE APPROVED BY THE CITY OF MIAMI BEACH. PEDESTRIAN RAMPS ARE TO BE CONSTRUCTED WITH A 1:12 SLOPE AND A 1\"/>

WATER MAIN PLAN AND PROFILE
 N.W. 201ST STREET
 NMB WATER

SCALE: 1\"/>

PROJECT # 15-0085-001-01
 SHEET NO. W-13

Craven + Thompson and Associates, Inc.
 ENGINEERS • PLANNERS • SURVEYORS
 1111 N.W. 20th Street, Suite 200
 Fort Lauderdale, FL 33311
 Phone: (954) 739-6400 Fax: (954) 739-6400
 www.ctai.com

Timothy James Hall, P.E., State of Florida, Professional Engineer, License No. 20088
 Prepared by Timothy James Hall, P.E., License No. 20088
 Checked by Christopher L. S. Jones, P.E., License No. 20001
 Project Engineer: Christopher L. S. Jones, P.E., License No. 20001

Photocopies of this document are not considered signed and sealed and the signature must be witnessed in electronic copies.

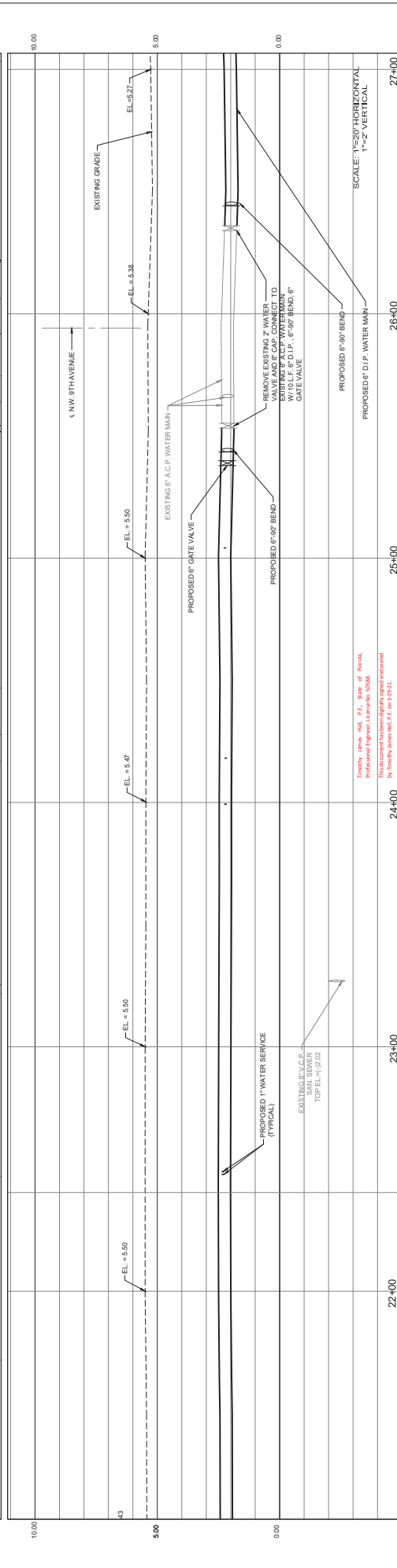
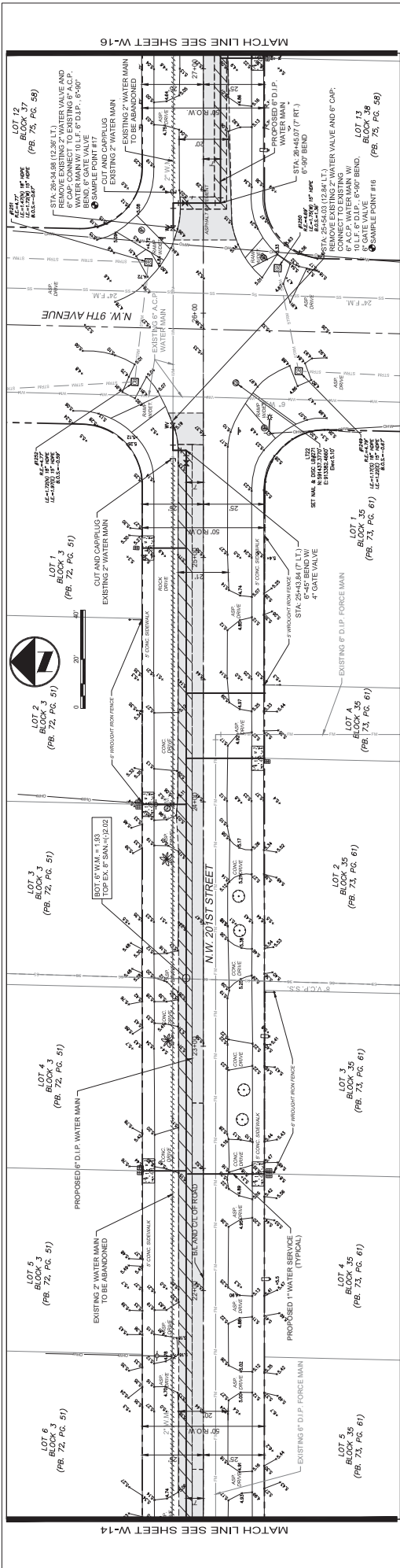
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KEY MAP

Timothy James Hall
 P.E. License No. 20088
 State of Florida
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 Fort Lauderdale, FL 33311
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 www.ctai.com

City of North Miami Beach
 PROJECT # 15-0085-001-01

8/17/2021 12:14 PM



EXISTING LEGEND:

- ANCHOR
- BODYPipe VALVE
- CONCRETE LIGHT POLE
- CONCRETE POWER POLE
- CURB INLET
- ELECTRICAL PANEL
- ELECTRICAL PULL BOX
- ELECTRICAL MANHOLE
- HEADWALL
- METAL LIGHT POLE
- MONUMENT FOUNDATION
- PIPE
- PARKING LIGHT SQUARE
- SAWTOOTH MANHOLE
- RAMP WITH DETECTABLE WARNING SURFACE
- WATER METER
- WATER BLOW OFF
- WATER VALVE
- POSD-DRAINAGE POLE
- TOP OF WALK
- TOP OF SLOPE
- WATER MAIN
- WATER MAIN MANHOLE
- NON-VEHICULAR ACCESS LINE

PROPOSED WATER AND SEWER LEGEND:

- FIRE HYDRANT ASSEMBLY
- GATE VALVE
- WATER METER
- SAMPLING POINT
- REDUCER
- BACKFLOW PREVENTER
- SIAMISE FIRE CONNECTION
- WATER MAIN RESTORATION
- ASPHALT PAVEMENT RESTORATION
- ASPHALT OVERLAY
- DRIVEWAY RESTORATION
- SIDEWALK RESTORATION
- CONFLICT CALLOUT

DATE	BY	DESCRIPTION	REVISIONS	
			DATE	DESCRIPTION

DATE	CHECKED	DATE	CHECKED	NAME	DATE	NAME	DATE

NOTES:

- IF THE LONG WATER SERVICE IS INSTALLED THROUGH TRENCHING, THE FULL ROADWAY SHALL BE MILLED AND RESURFACED.
- THE PEDESTRIAN RAMPS SHOWN WERE ADDED BASED ON AERIAL PHOTOGRAPHS AND FIELD SURVEY. THESE RAMPS ARE TO BE CONSTRUCTED WITH CAST IN PLACE DETECTABLE WARNING SURFACE. THIS SURFACE SHALL BE APPROVED BY THE CITY OF MIAMI BEACH. THE STATIONS LOCATED AT THESE CROSSINGS WITH PLACEMENT OF RAMPS WERE SHIFTED BASED ON AERIAL PHOTOGRAPHS.

PROJECT # 15-0068-001-01

CITY OF NORTH MIAMI BEACH

HONEY HILL WATER SYSTEM BETTERMENT

N.W. 20TH STREET

WATER MAIN PLAN AND PROFILE

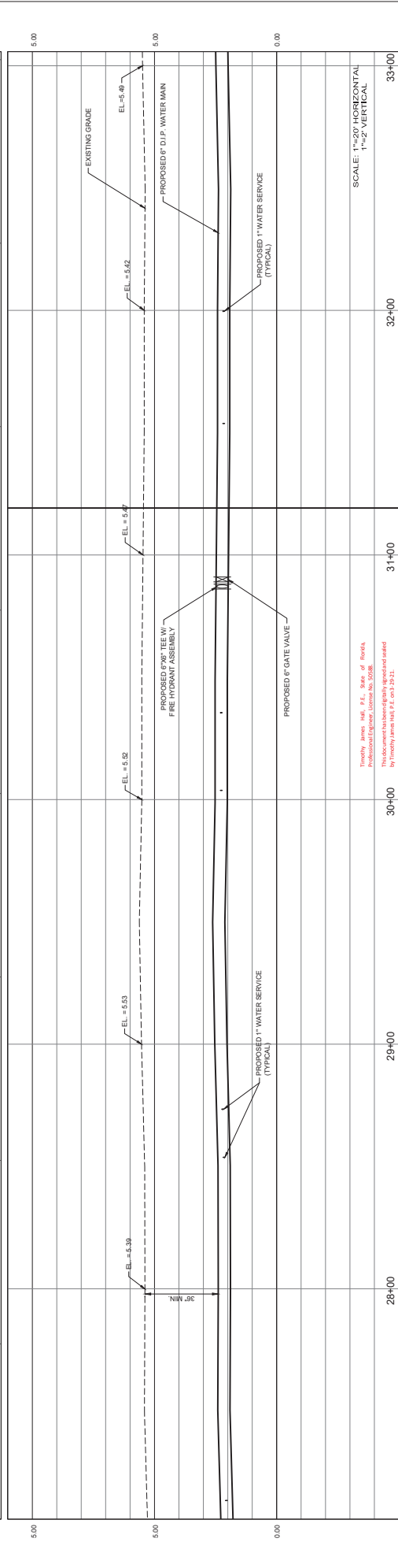
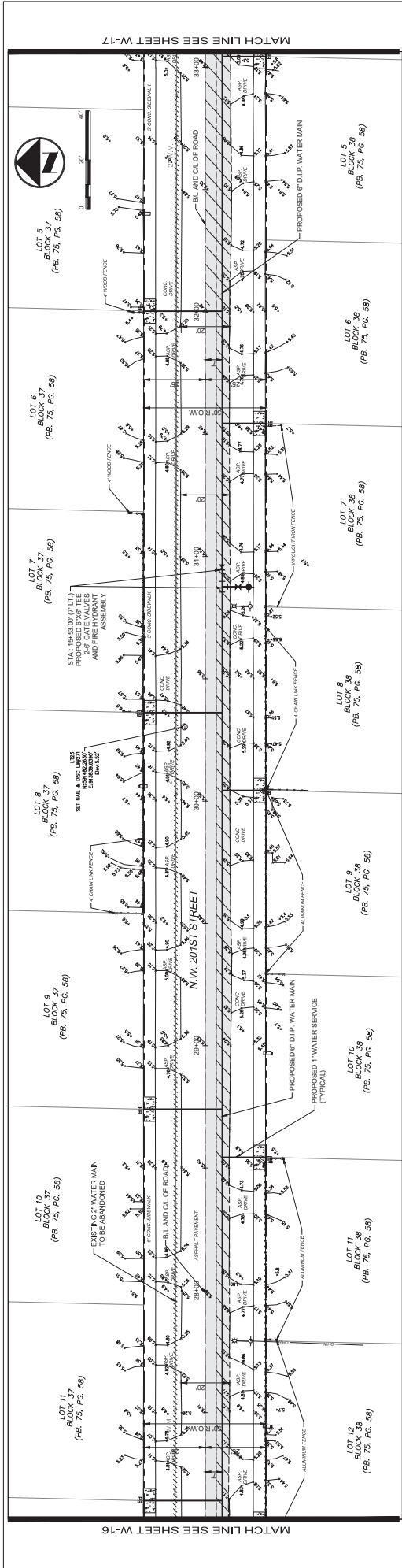
NMB WATER

Timothy James Hall, P.E., State of Florida
Professional Engineer License: 10000
by Timothy James Hall on 04/21/2021

Timothy James Hall
162547 0400
02/07/2024

Digitally signed by Timothy James Hall
DN: cn=Timothy James Hall, email=timothy@hall.com, o=Hall, ou=Professional Engineer, c=US

SCALE: 1"=20' HORIZONTAL
1"=2' VERTICAL



EXISTING LEGEND:

- ANCHOR
- BOX JUNCTION
- CONCRETE LIGHT POLE
- CONCRETE POWER POLE
- CURB ISLET
- ELECTRICAL OUTLET
- ELECTRICAL PANEL
- ELECTRICAL PULL BOX
- ELECTRICAL MANHOLE
- HEADWALL
- METAL LIGHT POLE
- MONUMENT
- PIPE
- PARKING LIGHT SQUARE
- PARALLEL
- RAMP WITH OBSTACLE (WARNING SURFACE)
- SAFETY MANHOLE
- STANDARD
- STORM MANHOLE
- TELEPHONE MANHOLE
- TELEPHONE PEDestal
- TELEPHONE PULL BOX
- TRANSFORMER PAD
- TRANSFORMER PAD
- WATER METER
- WATER BLOW OFF
- WATER VALVE
- WOOD OVERHANG POLE
- TOP OF BANK
- TOP OF SLOPE
- WATER MAIN
- WATER MAIN
- NON-VEHICULAR ACCESS LINE

PROPOSED WATER AND SEWER LEGEND:

- FIRE HYDRANT ASSEMBLY
- GATE VALVE
- WATER METER
- SAMPLING POINT
- REDUCER
- BACKFLOW PREVENTER
- SIEMENS FIRE CONNECTION
- WATER MAIN RESTORATION
- ASPHALT PAVEMENT RESTORATION
- 1" SP-9.9 ASPHALT OVERLAY
- DRIVEWAY RESTORATION
- SIDEWALK RESTORATION
- CONFLICT CALLOUT
- WATER MAIN RESTORATION
- ASPHALT PAVEMENT RESTORATION
- 1" SP-9.9 ASPHALT OVERLAY
- DRIVEWAY RESTORATION
- SIDEWALK RESTORATION
- CONFLICT CALLOUT

REVISIONS

NO.	DATE	DESCRIPTION	BY
1	1/22/16	DESIGNED	PPJ
2	3/11/16	CHECKED	TJH
3	1/22/16	DRAWN	JA
4	3/11/16	CHECKED	BT
5	3/11/16	SUPERVISED	BT/TJH

NOTES:

- MAIN LINES WATER SERVICES ARE PROPOSED TO BE INSTALLED THROUGH HORIZONTAL DIRECTIONAL DRILLING UNDER THE ROADWAY. IF THE LONG WATER SERVICE IS INSTALLED THROUGH OPEN TRENCHING, THE FULL ROADWAY SHALL BE INILLED AND RESURFACED.
- THE PEDESTRIAN RAMPS SHOWN WERE ADDED BASED ON AERIAL PHOTOGRAPHS. DURING CONSTRUCTION THEY SHALL BE RECONSTRUCTED WITH CAST IN PLACE DETECTABLE WALKING SURFACE SHALL BE APPROVED BY THE CITY OF MIAMI OFFICIALS. THIS INFORMATION IS FOR YOUR INFORMATION ONLY. PLACE/WALK SURFACE SHALL BE SHIFTED BASED ON AERIAL PHOTOGRAPHS.

SCALE: 1"=50' HORIZONTAL
1"=2' VERTICAL

33+00
32+00
31+00
30+00
29+00
28+00

PROJECT # 15-0068-001-01

PREPARED FOR: CITY OF NORTH MIAMI BEACH
WATER MAIN PLAN AND PROFILE
N.W. 201ST STREET

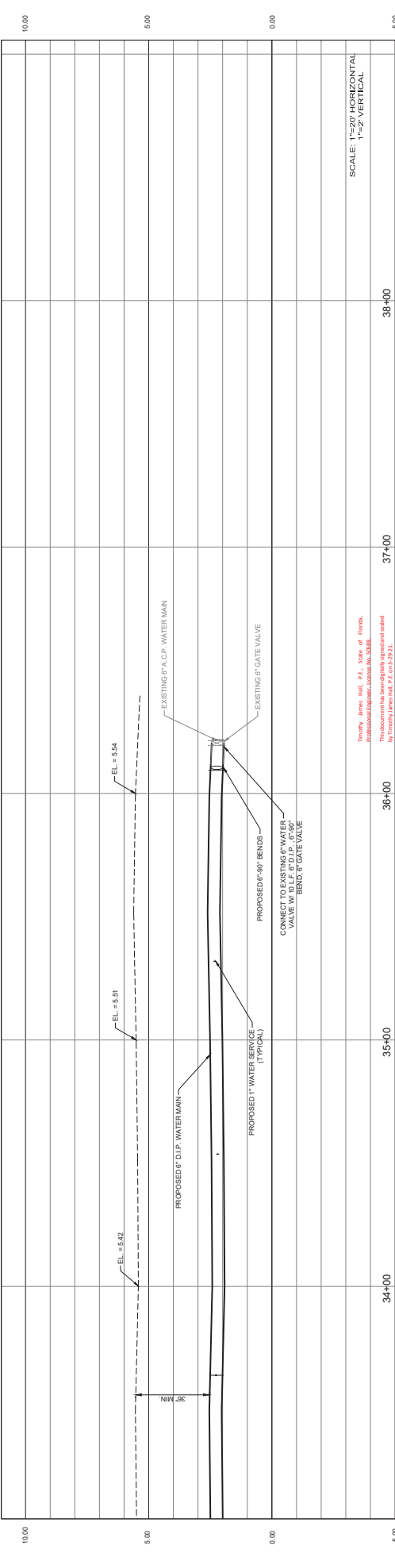
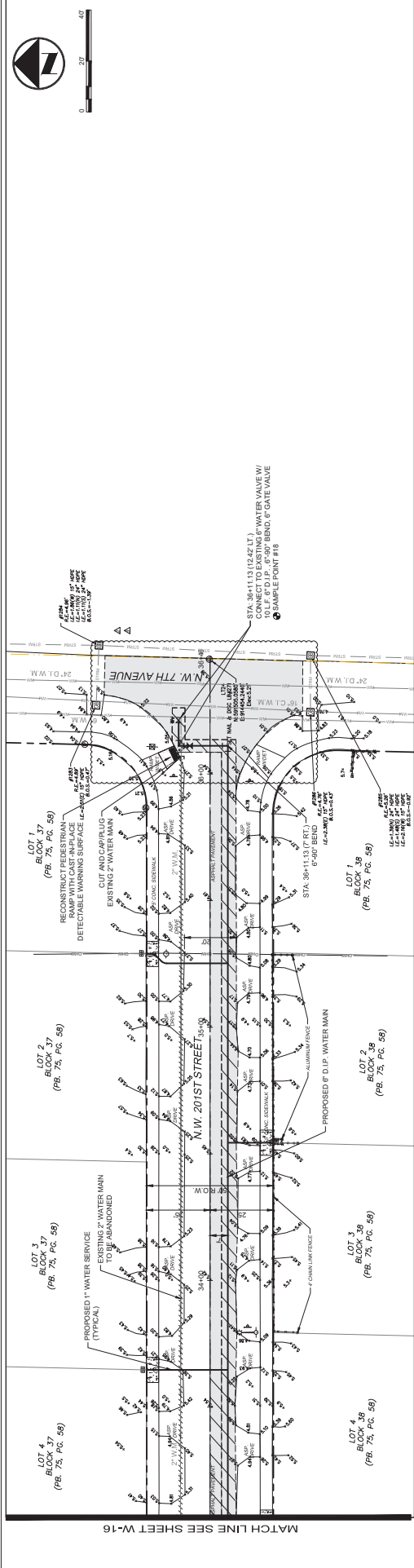
Timothy James (Digitally signed by Timothy James)

Hail (Digitally signed by Hail)

Timothy James Ltd
Florida P.E. No. 05588
April 24, 2021

SUNSHINE 811

Always call 811 two full business days before you dig



EXISTING LEGEND: ANCHOR 6\"/>			WATER METER WATER VALVE FIRE HYDRANT ASSEMBLY GATE VALVE WATER METER SAMPLING POINT REDUCER BACKFLOW PREVENTER SIMMER FIRE CONNECTION	FIRE HYDRANT ASSEMBLY WATERMAN RESTORATION ASPHALT PAVEMENT RESTORATION ASPHALT PAVEMENT RESTORATION WITH T-399 ASPHALT OVERLAY DRIVEWAY RESTORATION SIDEWALK RESTORATION CONFLICT CALLOUT	Timothy James Hall, P.E., State of Florida, Professional Engineer: License No. 30885. This document has been digitally signed and sealed by Timothy James Hall (2018-02-27) 05:13:39 AM. The digital signature is located in the upper right-hand corner of this drawing. The signature must be verified using electronic copies. CRAWEN + THOMPSON AND ASSOCIATES, INC. ENGINEERS • PLANNERS • SURVEYORS 13800 N.W. 36th Ave., Suite 200 Fort Lauderdale, FL 33309-4000 Phone: (954) 759-8400 Fax: (954) 759-8900 www.crawenthompson.com License # 0009671
REVISIONS		DATE 1/22/16 CHECKER PPJ DATE 3/11/16 CHECKER BT DATE 1/22/16 DATE 3/11/16 DRAWN PPJ DESIGNED TJH SUPERVISED BT/TJH		PROJECT # 15-0085-001-01 CITY OF NORTH MIAMI BEACH WATER MAIN PLAN AND PROFILE N.W. 201ST STREET SHEET NO. WW-17	

NOTES

- WHERE LONG WATER SERVICES ARE PROPOSED TO BE INSTALLED THROUGH HORIZONTAL DIRECTIONAL DRILLING UNDER THE ROADWAY, IF THE LONG WATER SERVICE IS INSTALLED THROUGH OPEN TRENCHING, THE FULL ROADWAY SHALL BE MILLED AND RESURFACED.
- THE PEDESTRIAN RAMPS SHOWN WERE ADDED BASED ON AERIAL PHOTOGRAPHS AND FIELD SURVEY. IF ANY OF THE RAMPS ARE DISTURBED DURING CONSTRUCTION THEY SHALL BE RECONSTRUCTED WITH CAST-IN-PLACE DETECTABLE WALKING SURFACE. THESE RAMPS SHALL BE APPROVED BY THE CITY OF MIAMI OFFICIALS. THE RAMPS ARE TO BE CONSTRUCTED WITH PLACE/WALK TERRACE. THE RAMPS SHALL BE SHIFTED BASED ON AERIAL PHOTOGRAPHS.

SCALE: 1"=50' HORIZONTAL
 1"=2' VERTICAL

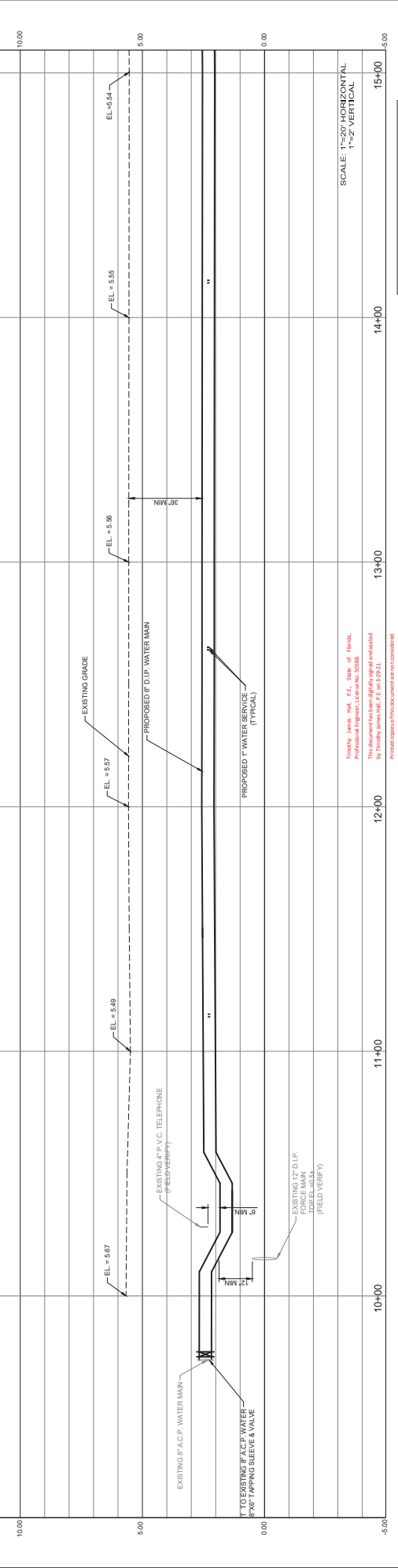
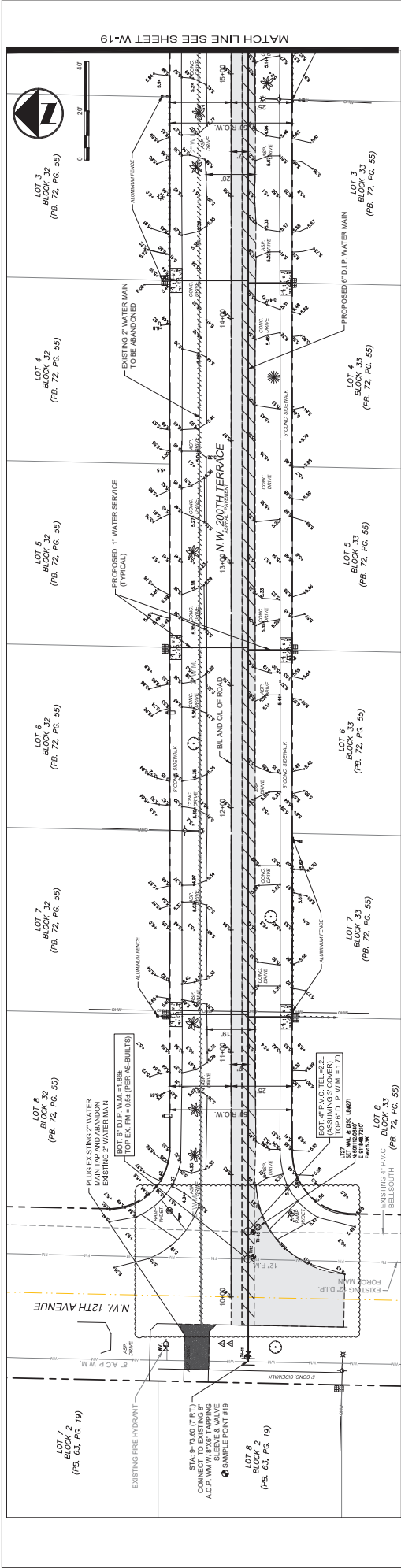
KEY MAP

Always call 811 two full business days before you dig

Sunshine 811.com

Project: 15-0085-001-01
 City: City of North Miami Beach
 Date: 1/22/16

Timothy James Hall
 Professional Engineer
 License No. 30885
 State of Florida
 2018-02-27 05:13:39 AM



PROPOSED WATER AND SEWER LEGEND:

- FIRE HYDRANT ASSEMBLY
- GATE VALVE
- WATER METER
- SAMPLING POINT
- REDUCER
- BACKFLOW PREVENTER
- SIMISEE FIRE CONNECTION
- PLUS
- DATE
- NAME

DATE	NAME	DATE	NAME
1/22/16	PPJ	1/22/16	JJA
3/1/16	TJH	3/1/16	PPJ

NOTES:

- FOR ALL LONG WATER SERVICES, PROPOSED TO BE INSTALLED THROUGH HORIZONTAL DIRECTIONAL DRILLING UNDER THE ROADWAY. IF THE LONG WATER SERVICE IS INSTALLED THROUGH OPEN TRENCHING, THE FULL ROADWAY SHALL BE MILLED AND RESURFACED.
- THE PEDESTRIAN RAMPS SHOWN WERE ADDED BASED ON AERIAL PHOTOGRAPHS. RECONSTRUCTION DURING CONSTRUCTION THEY SHALL BE RECONSTRUCTED WITH CAST IN PLACE DETECTABLE WALKING SURFACE. THIS SHALL BE APPROVED BY THE CITY OF MIAMI. THESE RAMPS ARE LOCATED AT THE INTERSECTION OF N.W. 200TH PLACE AND N.W. 200TH TERRACE. THESE RAMPS WERE SHIFTED BASED ON AERIAL PHOTOGRAPHS.

SCALE: 1"=50' HORIZONTAL, 1"=2' VERTICAL

SCALE: 1"=50' HORIZONTAL, 1"=2' VERTICAL

KEY MAP

Always call 811 two full business days before you dig

Sunshine811.com

PROJECT # 15-0068-001-01

WATER MAIN PLAN AND PROFILE

N.W. 200TH TERRACE

SHRETT NO. W-18

PREPARED FOR: CITY OF NORTH MIAMI BEACH

DATE: 1/22/16

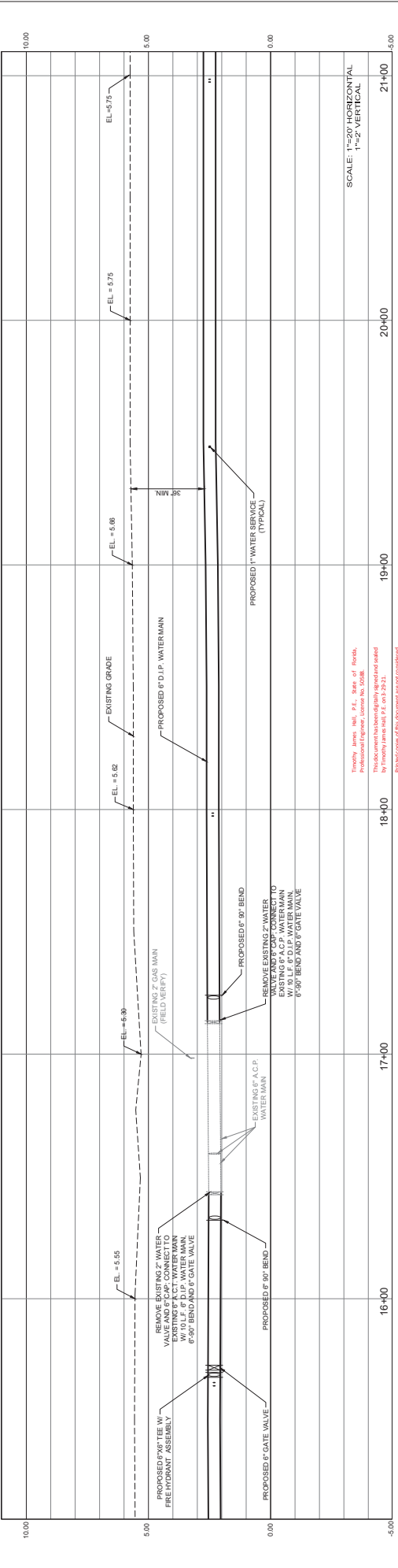
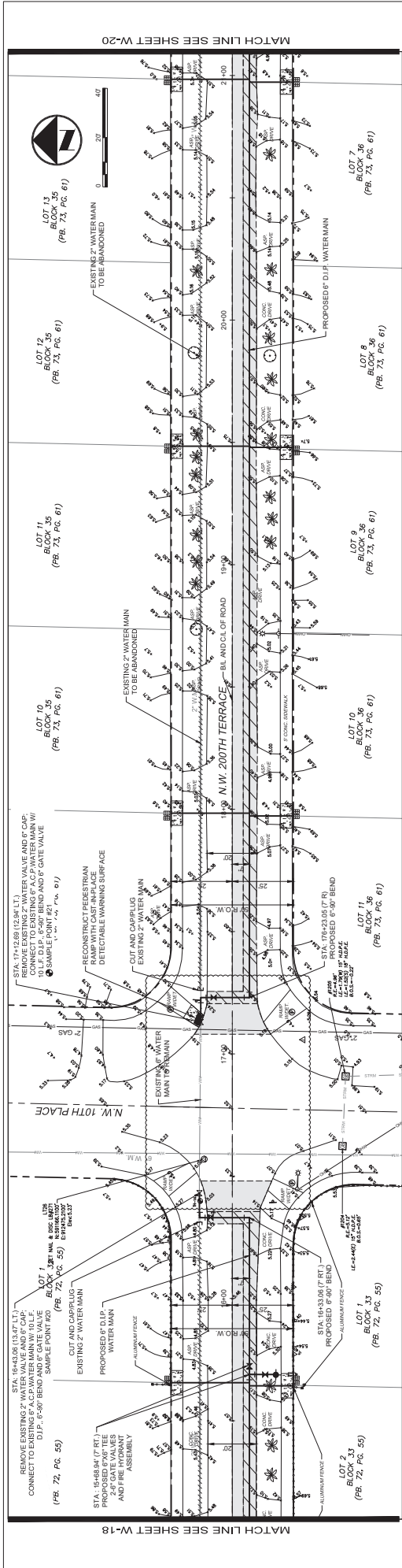
ENGINEER: CRAVEN + THOMPSON AND ASSOCIATES, INC.

PLANNERS: ENGINEERS

SURVEYORS: PROFESSIONAL ENGINEERS

REGISTERED PROFESSIONAL ENGINEER: License No. 15-0068-001-01

REGISTERED PROFESSIONAL SURVEYOR: License No. 15-0068-001-01



EXISTING LEGEND:

- ANCHOR
- 10 LF
- 12 LF
- 18 LF
- 24 LF
- 30 LF
- 36 LF
- 42 LF
- 48 LF
- 54 LF
- 60 LF
- 66 LF
- 72 LF
- 78 LF
- 84 LF
- 90 LF

PROPOSED WATER AND SEWER LEGEND:

- WATER METER
- WATER BLOW OFF
- WATER VALVE
- WATER MAIN
- POSS. OVERHOLE
- TOP OF MANHOLE
- TOP OF BENCH MARK
- TOP OF SLOPE
- WATER MAIN
- GUARDRAIL
- NON-VEHICULAR ACCESS LINE

NOTES:

- NEW 18" LONG WATER SERVICES ARE PROPOSED TO BE INSTALLED THROUGH HORIZONTAL DIRECTIONAL DRILLING UNDER THE ROADWAY. IF THE LONG WATER SERVICE IS INSTALLED THROUGH OPEN TRENCHING, THE FULL ROADWAY SHALL BE MILLED AND RESURFACED.
- THE PEDESTRIAN RAMPS SHOWN WERE ADDED BASED ON AERIAL PHOTOGRAPHS. THESE RAMPS SHALL BE CONSTRUCTED WITH A DETECTABLE WARNING SURFACE. THESE RAMPS SHALL BE APPROVED BY THE CITY OF MIAMI OFFICIALS. THESE RAMPS ARE LOCATED AT THE INTERSECTION OF N.W. 200TH TERRACE AND N.W. 10TH PLACE. THESE RAMPS WERE SHIFTED BASED ON AERIAL PHOTOGRAPHS.

KEY MAP: Shows the project location within the city grid.

SCALE: 1"=20' HORIZONTAL, 1"=2' VERTICAL

DATE: 1/22/16
DESIGNED: P.P.J.
CHECKED: T.U.H.
DATE: 3/1/16
DESIGNED: P.P.J.
CHECKED: P.P.J.
DATE: 3/1/16

REVISIONS:

NO.	DESCRIPTION	DATE	BY
1	REVISIONS		

WATER MAIN PLAN AND PROFILE
 N.W. 200TH TERRACE

PROJECT # 15-0065-001-01

PREPARED FOR: CITY OF NORTH MIAMI BEACH
DATE: 1/22/16

PREPARED BY: NMB WATER

SHEET NO.: W-19

DATE: 1/22/16

DESIGNED: P.P.J.
CHECKED: T.U.H.
DATE: 3/1/16

DESIGNED: P.P.J.
CHECKED: P.P.J.
DATE: 3/1/16

REVISIONS:

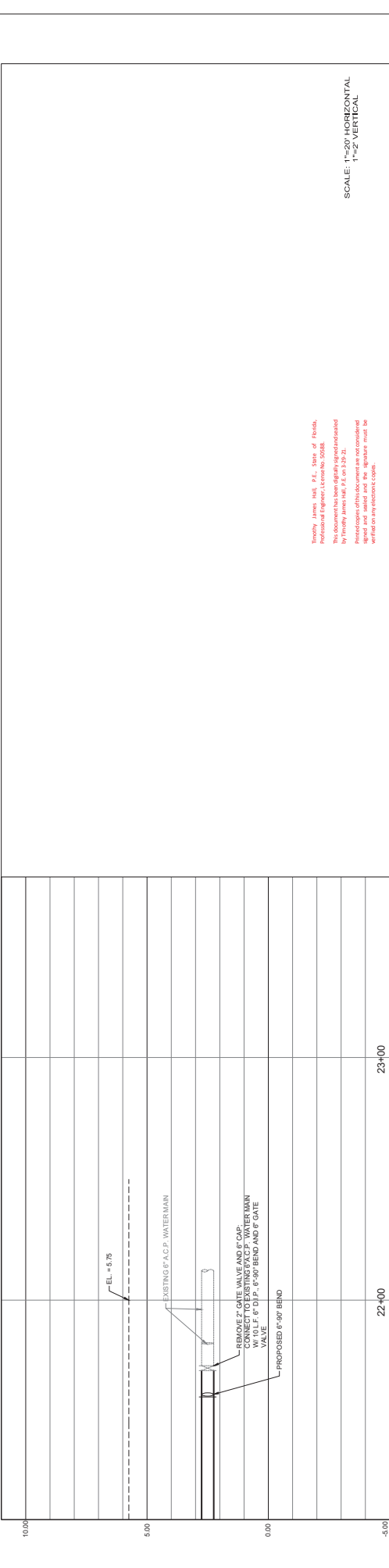
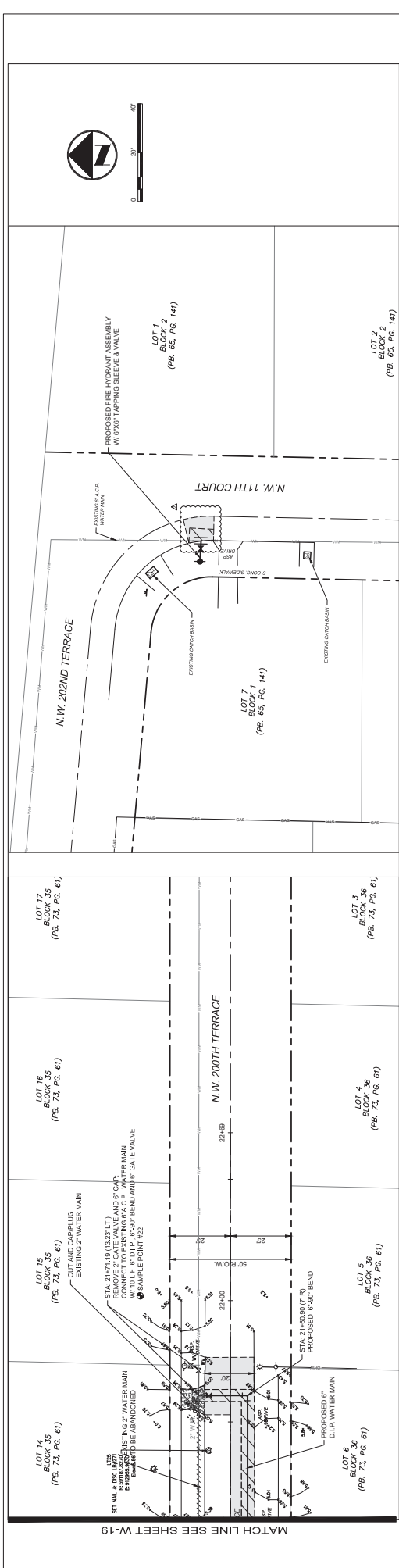
NO.	DESCRIPTION	DATE	BY
1	REVISIONS		

CRAVEN + THOMPSON AND ASSOCIATES, INC.
 ENGINEERS • PLANNERS • SURVEYORS
 1101 N.W. 20th Street, Suite 200
 North Miami Beach, FL 33162
 Phone: (305) 759-6600 Fax: (305) 759-6600
 Email: info@ctai.com Website: www.ctai.com

Timothy James Hill
 Registered Professional Engineer
 License No. 50588
 Florida State Board of Professional Engineers
 1947 E. 1st St.
 Pompano Beach, FL 33069

Hail
 Registered Professional Engineer
 License No. 50588
 Florida State Board of Professional Engineers
 1947 E. 1st St.
 Pompano Beach, FL 33069

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Timothy James Hall, P.E., State of Florida,
Professional Engineer, License No. 50588
10352-42-04-007
This drawing was prepared and checked
by Timothy James Hall (P.E. 50588)
Revisions and modifications are not permitted
without the original engineer's signature and
seal and the signature must be
verified on the electronic copies.

SCALE: 1"=20' HORIZONTAL
1"=2' VERTICAL

Timothy James Hall
P.E. No. 50588
10352-42-04-007
April 24, 2021

PROJECT # 15-0085-001-01

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NOTES:

- NEARBY LONG WATER SERVICES ARE PROPOSED TO BE RETAILED THROUGH HORIZONTAL DIRECTIONAL DRILLING UNDER THE ROADWAY. IF THE LONG WATER SERVICE IS INSTALLED THROUGH OPEN TRENCHING, THE FULL ROADWAY SHALL BE MILLED AND RESURFACED.
- THE FIRE HYDRANT RAMPS SHOWN WERE ADDED BASED ON AERIAL PHOTOGRAPHS. THE EXISTING FIRE HYDRANT RAMPS ARE TO BE RECONSTRUCTED WITH CAST IN PLACE DETECTABLE WARNING SURFACE SHALL BE APPROVED BY THE CITY OF MIAMI BEACH. THE EXISTING RAMPS ARE TO BE RECONSTRUCTED WITH THE DETECTABLE WARNING SURFACE. THE EXISTING RAMPS ARE TO BE RECONSTRUCTED WITH THE DETECTABLE WARNING SURFACE. THE EXISTING RAMPS ARE TO BE RECONSTRUCTED WITH THE DETECTABLE WARNING SURFACE.

WATERMAN ENGINEERS & ASSOCIATES, INC.
ENGINEERS • PLANNERS • SURVEYORS
1100 N.W. 10th St., Suite 200
Miami, FL 33136
Phone: (305) 251-4400
Fax: (305) 251-4401
www.watermaneng.com

KEY MAP

PROPOSED WATER AND SEWER LEGEND:

	FIRE HYDRANT ASSEMBLY		GATE VALVE		WATER METER		SAMPLING POINT		REDUCER		BACKFLOW PREVENTER		SAMESE FIRE CONNECTION
	WATERMAN RESTORATION		ASPHALT PAVEMENT		1-3/8\"/>		1-3/8\"/>		1-3/8\"/>		1-3/8\"/>		1-3/8\"/>

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION
1/22/16	PPJ	DESIGNED	1/22/16	JA	CHECKED
3/11/16	TJH	CHECKED	3/11/16	PPJ	CHECKED
		SUPERVISED			SUPERVISED

REVISIONS	DATE	DESCRIPTION

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION
1/22/16	PPJ	DESIGNED	1/22/16	JA	CHECKED
3/11/16	TJH	CHECKED	3/11/16	PPJ	CHECKED
		SUPERVISED			SUPERVISED

WATER MAIN PLAN AND PROFILE
N.W. 200TH TERRACE

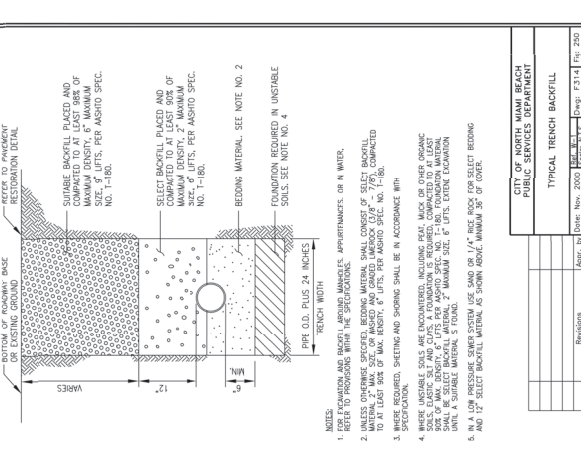
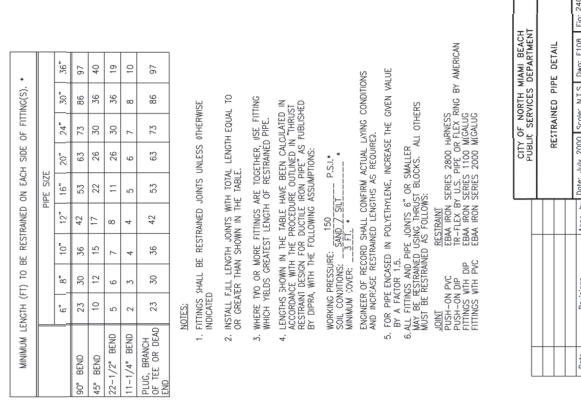
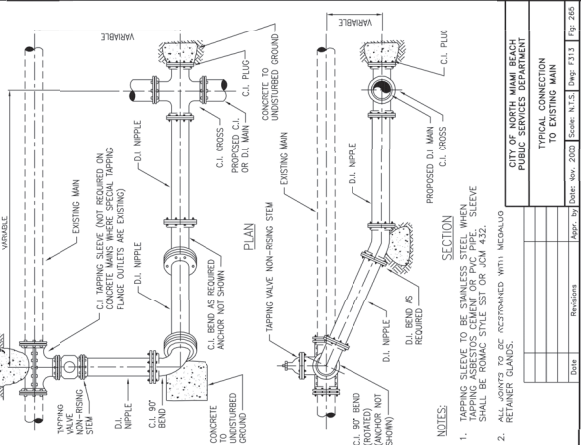
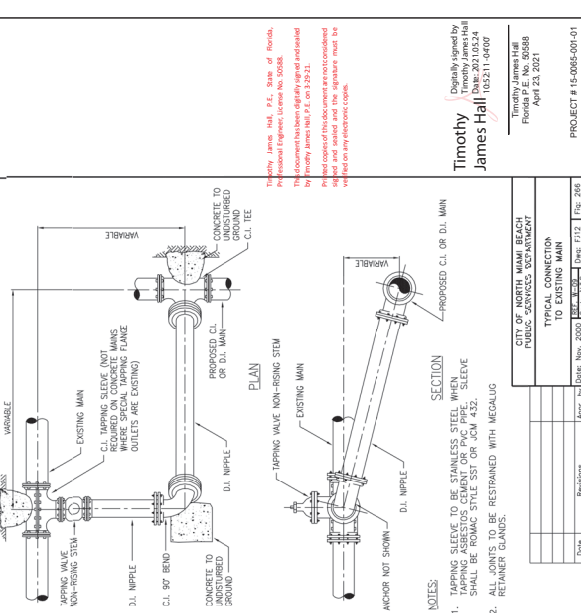
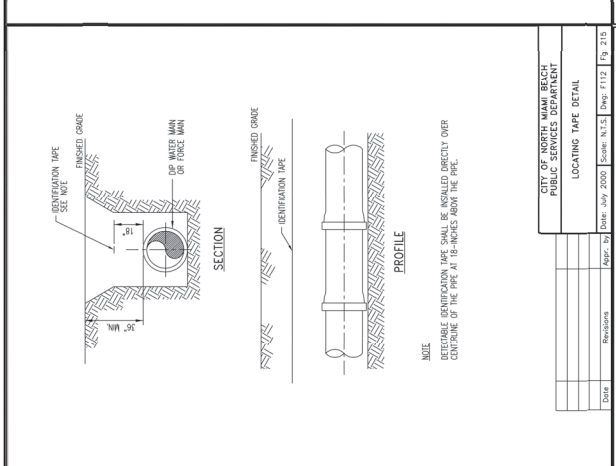
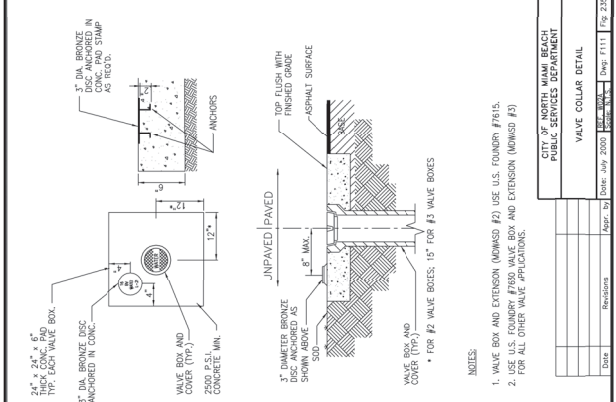
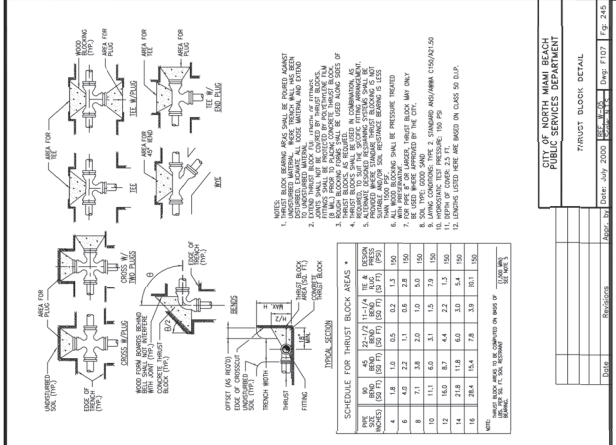
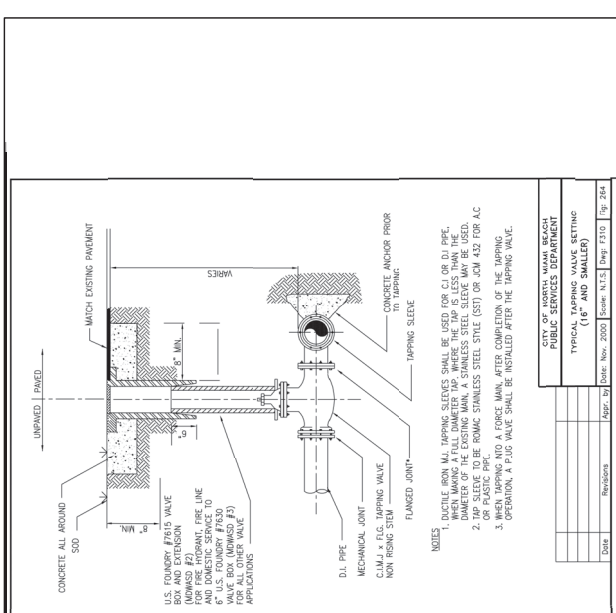
CITY OF NORTH MIAMI BEACH
NMB WATER

HONEY HILL WATER SYSTEM BETTERMENT
PREPARED FOR:

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ENGINEERS • PLANNERS • SURVEYORS
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www.craven.com

PROJECT # 15-0085-001-01

SHEET NO. W-20



Date	Revisions	Scale	Sheet No.	Sheet Total
July 2000		N.E.S.	112	119
July 2000		N.E.S.	113	119
July 2000		N.E.S.	114	119
July 2000		N.E.S.	115	119
July 2000		N.E.S.	116	119
July 2000		N.E.S.	117	119
July 2000		N.E.S.	118	119
July 2000		N.E.S.	119	119

Date	Revisions	Scale	Sheet No.	Sheet Total
July 2000		N.E.S.	120	127
July 2000		N.E.S.	121	127
July 2000		N.E.S.	122	127
July 2000		N.E.S.	123	127
July 2000		N.E.S.	124	127
July 2000		N.E.S.	125	127
July 2000		N.E.S.	126	127
July 2000		N.E.S.	127	127

CITY OF NORTH MIAMI BEACH PUBLIC SERVICES DEPARTMENT
 TYPICAL TAPPING VALVE SETTING (16" AND SMALLER)
 Date: _____ Appr. 30 Date: Nov. 2000 Scale: N.T.S. Sheet: F310 of 264

CITY OF NORTH MIAMI BEACH PUBLIC SERVICES DEPARTMENT
 THRUST BLOCK DETAIL
 Date: _____ Appr. 30 Date: July 2000 Scale: N.T.S. Sheet: F107 of 245

CITY OF NORTH MIAMI BEACH PUBLIC SERVICES DEPARTMENT
 VALVE COLLAR DETAIL
 Date: _____ Appr. 30 Date: July 2000 Scale: N.T.S. Sheet: F111 of 232

CITY OF NORTH MIAMI BEACH PUBLIC SERVICES DEPARTMENT
 LOCATING TAPE DETAIL
 Date: _____ Appr. 30 Date: July 2000 Scale: N.T.S. Sheet: F112 of 215

CITY OF NORTH MIAMI BEACH PUBLIC SERVICES DEPARTMENT
 TYPICAL TRENCH BACKFILL
 Date: _____ Appr. 30 Date: Nov. 2000 Scale: N.T.S. Sheet: F314 of 290

CITY OF NORTH MIAMI BEACH PUBLIC SERVICES DEPARTMENT
 TAPPING VALVE NON-RISING STEM
 Date: _____ Appr. 30 Date: Nov. 2000 Scale: N.T.S. Sheet: F172 of 268

CITY OF NORTH MIAMI BEACH PUBLIC SERVICES DEPARTMENT
 THRUST BLOCK DETAIL
 Date: _____ Appr. 30 Date: July 2000 Scale: N.T.S. Sheet: F107 of 245

CITY OF NORTH MIAMI BEACH PUBLIC SERVICES DEPARTMENT
 VALVE COLLAR DETAIL
 Date: _____ Appr. 30 Date: July 2000 Scale: N.T.S. Sheet: F111 of 232

CITY OF NORTH MIAMI BEACH PUBLIC SERVICES DEPARTMENT
 LOCATING TAPE DETAIL
 Date: _____ Appr. 30 Date: July 2000 Scale: N.T.S. Sheet: F112 of 215

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 TYPICAL TRENCH BACKFILL
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CITY OF NORTH MIAMI BEACH PUBLIC SERVICES DEPARTMENT
 TAPPING VALVE NON-RISING STEM
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CITY OF NORTH MIAMI BEACH PUBLIC SERVICES DEPARTMENT
 LOCATING TAPE DETAIL
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CITY OF NORTH MIAMI BEACH PUBLIC SERVICES DEPARTMENT
 TYPICAL TRENCH BACKFILL
 Date: _____ Appr. 30 Date: Nov. 2000 Scale: N.T.S. Sheet: F314 of 290

DATE	BY	DESCRIPTION	REVISIONS
1/22/16	PPJ	1/22/16	PPJ
3/11/16	TJH	3/11/16	PPJ
3/11/16	BTJH	3/11/16	PPJ

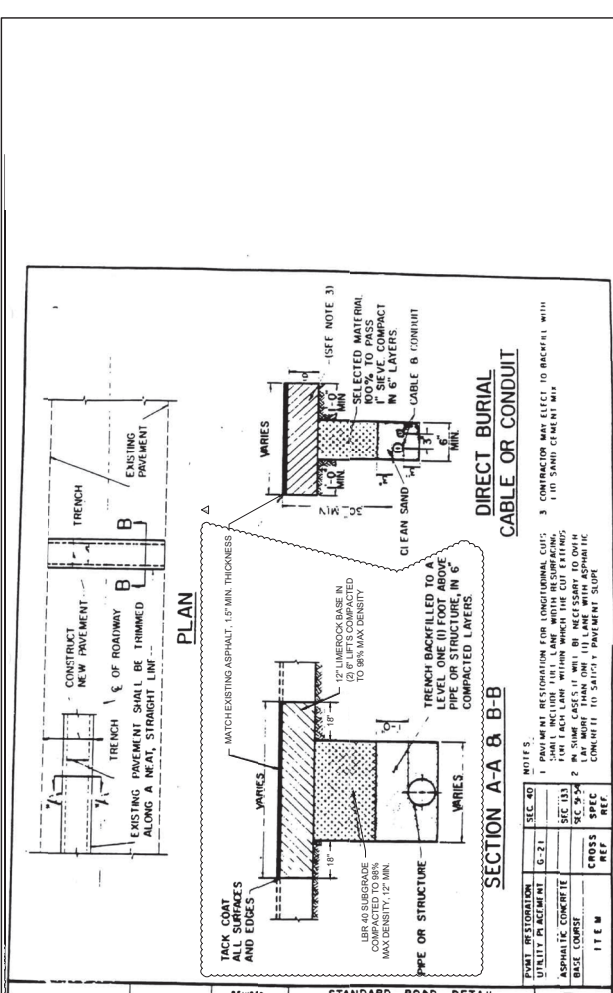
CITY OF NORTH MIAMI BEACH PUBLIC SERVICES DEPARTMENT
 TYPICAL TAPPING VALVE SETTING (16" AND SMALLER)
 Date: _____ Appr. 30 Date: Nov. 2000 Scale: N.T.S. Sheet: F310 of 264

CITY OF NORTH MIAMI BEACH PUBLIC SERVICES DEPARTMENT
 THRUST BLOCK DETAIL
 Date: _____ Appr. 30 Date: July 2000 Scale: N.T.S. Sheet: F107 of 245

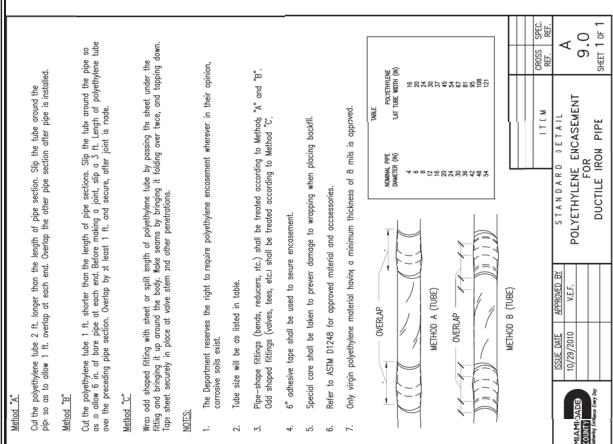
CITY OF NORTH MIAMI BEACH PUBLIC SERVICES DEPARTMENT
 VALVE COLLAR DETAIL
 Date: _____ Appr. 30 Date: July 2000 Scale: N.T.S. Sheet: F111 of 232

CITY OF NORTH MIAMI BEACH PUBLIC SERVICES DEPARTMENT
 LOCATING TAPE DETAIL
 Date: _____ Appr. 30 Date: July 2000 Scale: N.T.S. Sheet: F112 of 215

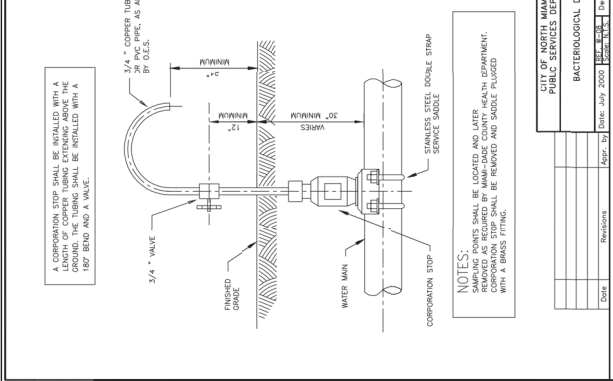
CITY OF NORTH MIAMI BEACH PUBLIC SERVICES DEPARTMENT
 TYPICAL TRENCH BACKFILL
 Date: _____ Appr. 30 Date: Nov. 2000 Scale: N.T.S. Sheet: F314 of 290



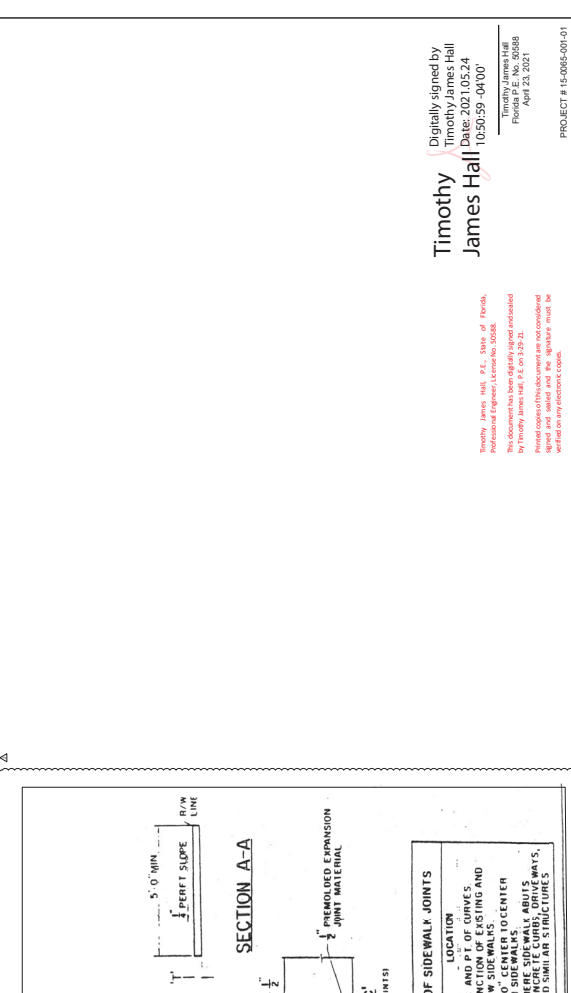
METROPOLITAN DADE COUNTY PUBLIC WORKS DEPARTMENT	APPROVED: E S / E	REVISED: 5/17/22, 14 BC, 6/4/26	STANDARD ROAD DETAIL PAVEMENT RESTORATION FOR TRENCHES CUT IN PUBLIC RIGHTS-OF-WAY	R 2.1
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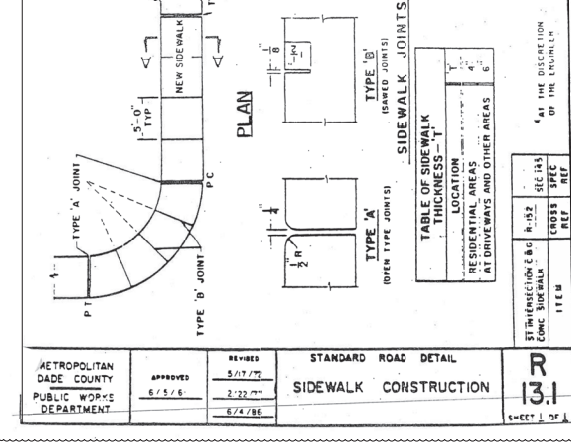
METROPOLITAN DADE COUNTY PUBLIC WORKS DEPARTMENT	APPROVED: 6/5/16, 2/22/21, 6/4/26	REVISED: 5/17/21	STANDARD ROAD DETAIL SIDEWALK CONSTRUCTION	R 13.1
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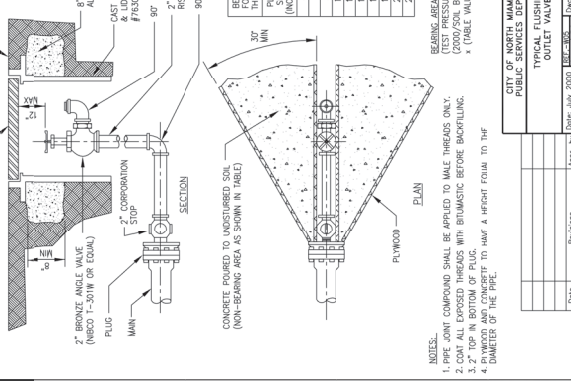
CITY OF NORTH MIAMI BEACH PUBLIC SERVICES DEPARTMENT	DATE: 10/29/2010	REVISED: 10/29/2010	BACTERIOLOGICAL DETAIL	9.0
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METROPOLITAN DADE COUNTY PUBLIC WORKS DEPARTMENT	APPROVED: 6/5/16, 2/22/21, 6/4/26	REVISED: 5/17/21	STANDARD ROAD DETAIL DIRECT BURIAL CABLE OR CONDUIT	R 13.1
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METROPOLITAN DADE COUNTY PUBLIC WORKS DEPARTMENT	APPROVED: 6/5/16, 2/22/21, 6/4/26	REVISED: 5/17/22, 14 BC, 6/4/26	STANDARD ROAD DETAIL PAVEMENT RESTORATION FOR TRENCHES CUT IN PUBLIC RIGHTS-OF-WAY	R 2.1
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CITY OF NORTH MIAMI BEACH PUBLIC SERVICES DEPARTMENT	DATE: 10/29/2010	REVISED: 10/29/2010	BACTERIOLOGICAL DETAIL	9.0
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Digitally signed by Timothy James Hall
 Timothy James Hall
 DN: cn=Timothy James Hall, o=City of North Miami Beach, ou=Public Works Department, email=timothy.james.hall@cityofnmb.com, c=US

PROJECT #15-0085-001-01
 HONEY HILL WATER SYSTEM BETTERMENT
 PREPARED FOR: CITY OF NORTH MIAMI BEACH
 NMB WATER

SHIBET NO. W-23

CRAVEN THOMPSON AND ASSOCIATES, INC.
 ENGINEERS • PLANNERS • SURVEYORS
 11000 N.W. 11th St., Suite 100
 Fort Lauderdale, FL 33304
 Phone: (954) 739-6600
 Fax: (954) 739-6600
 www.ctai.com

DESIGNED: T.J.H. DATE: 1/22/16
 CHECKED: T.J.H. DATE: 3/1/16
 SUPERVISOR: B.T.H.

DATE	BY	DESCRIPTION
1/22/16	PPJ	DESIGNED
3/1/16	T.J.H.	CHECKED
3/1/16	BT	CHECKED
3/1/16	PPJ	DESIGNED

REVISIONS	DATE	BY	DESCRIPTION
1	1/22/16	PPJ	DESIGNED
2	3/1/16	T.J.H.	CHECKED
3	3/1/16	BT	CHECKED
4	3/1/16	PPJ	DESIGNED

DATE	BY	DESCRIPTION
1/22/16	PPJ	DESIGNED
3/1/16	T.J.H.	CHECKED
3/1/16	BT	CHECKED
3/1/16	PPJ	DESIGNED

REVISIONS

DATE: 1/22/16 BY: PPJ DESCRIPTION: DESIGNED

SECTION 4.0 BID SUBMITTAL – REQUIRED FORMS

NAME OF COMPANY:

[]
(NAME OF COMPANY SUBMITTING BID)

SIGNATURE: [] [] []
NAME TITLE DATE

Tax ID No.: []

E-MAIL ADDRESS: []

ADDRESS: []

TELEPHONE NO.: []

FAX NO.: []

Do you give prompt payment discounts?

Yes, Percentage of discount [] % Term [] No

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

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SECTION 5.0 REQUIRED FORMS

The must be completed by an official having legal authorization to contractually bind the company or firm. Each signature represents a binding commitment upon the Bidder to provide the goods and/or services offered to the City if the Bidder is determined to be the most responsive and responsible Bidder.

- 5.1 Drug Free Workplace Program
- 5.2 Solicitation, Giving, and Acceptance of Gifts Policy
- 5.3 Indemnification Clause
- 5.4 Sworn Statement pursuant to section 287.133(3)(a) Florida Statutes on Public Entity Crimes
- 5.5 Anti-Kickback Affidavit
- 5.6 Non-Collusive Affidavit
- 5.7 Bidder Questionnaire
- 5.8 Trench Safety Act Compliance
- 5.9 E-Verify Affirmation Statement

5.1 DRUG-FREE WORKPLACE PROGRAM

In order to have a drug-free workplace program, a business shall:

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 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 bid a copy of the statement specified in subsection (1).
4. In the statement specified in subsection (1), notify the employee that, as a condition of working on the commodities or contractual services that are under bid, the employee will abide by the terms of the statement and will notify the employer of any conviction of, or plea of guilty or nolo contendere to, any violation of chapter 893 or of any controlled substance law of the United States or any state, for a violation occurring in the workplace no later than five (5) days after such conviction.
5. Impose a sanction on, or require the satisfactory participation in a drug abuse assistance or rehabilitation program if such is available in the employee's community, by any employee who is so convicted.
6. Make a good faith effort to continue to maintain a drug-free workplace through implementation of this section.

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

Name:

Title:

Date:

5.2 SOLICITATION, GIVING, AND ACCEPTANCE OF GIFTS POLICY

Florida Statute 112.313 prohibits the solicitation or acceptance of Gifts. - "No Public officer, employee of an agency, or candidate for nomination or election shall solicit or accept anything of value to the recipient, including a gift, loan, reward, promise of future employment, favor, or service, based upon any understanding that the vote, official action, or judgment of the public officer, employee, or candidate would be influenced thereby." "... The term 'public officer' includes any person elected or appointed to hold office in any agency, including any person serving on an advisory body."

The City of North Miami Beach policy prohibits all public officers, elected or appointed, all employees, and their families from accepting any gifts of any value, either directly or indirectly, from any contractor, vendor, consultant, or business with whom the City does business. Only advertising office stationery or supplies of small value are exempt from this policy - e.g. calendars, note pads, pencils.

The State of Florida definition of "gifts" includes the following:

- Real property or its use,
- Tangible or intangible personal property, or its use,
- A preferential rate of terms on a debt, loan, goods, or services,
- Forgiveness of indebtedness,
- Transportation, lodging, or parking,
- Membership dues,
- Entrance fees, admission fees, or tickets to events, performances, or facilities,
- Plants, flowers or floral arrangements.
- Services provided by persons pursuant to a professional license or certificate. Other personal services for which a fee is normally charged by the person providing the services.
- Any other similar service or thing having an attributable value not already provided for in this section.

To this list, the City of North Miami Beach has added food, meals, beverages, and candy.

Any contractor, vendor, consultant, or business found to have given a gift to a public officer or employee, or his/her family, will be subject to dismissal or revocation of contract.

As the person authorized to sign the statement, I certify that this firm will comply fully with this policy.

Name:

Title:

Date:

5.3 INDEMNIFICATION CLAUSE

The Contractor shall indemnify, defend and hold harmless the City Commission, the City of North Miami Beach and their agents and employees from and against all claims, damages, losses and expenses (including attorney's fees) arising out of or resulting from the contractor's performance of the work, provided that any such claim, damage, loss or expense (1) is attributable to bodily injury, sickness, disease or death, or to injury to or damage to or destruction of property including the loss of use resulting there from, and (2) is caused in whole or in part by any breach or default by Contractor or negligent act or

omission of the Contractor, any Subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by a party indemnified hereunder.

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

Name:

Title:

Date:

5.4 SWORN STATEMENT PURSUANT TO SECTION 287.133 (3) (a), FLORIDA STATUTES, ON PUBLIC ENTITY CRIMES

1. This sworn statement is submitted to the **CITY OF NORTH MIAMI BEACH, FLORIDA**

By:

Name:

Title:

For: Legal business name:

Federal Employer I.D. no. (FEIN):

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

).

Whose business address is:

2. I understand that a "public entity crime" as defined in Paragraph 287.133 (1)(g), Florida Statutes, means a violation of any state or federal law by a person with respect to and directly related to the transaction of business with any public entity or with an agency or political subdivision of any other state or of the United States, including but not limited to, any bid or contract for goods or services to be provided to any public entity or an agency or political subdivision of any other state or of the United States and involving antitrust, fraud, theft, bribery, collusion, racketeering, conspiracy, or material misrepresentations.
3. I understand that "convicted" or "conviction" as defined in Paragraph 287.133 (1) (b), Florida Statutes, means a finding of guilt or a conviction of a public entity crime, with or without an adjudication of guilt, in any federal or state trial court of record relating to charges brought by indictment or information after July 1, 1989, as a result of a jury verdict, non-jury trial, or entry of a plea of guilty or non contendere.
4. I understand that an "affiliate" as defined in Paragraph 287.133(1)(a), Florida Statutes, means:
 1. A predecessor or successor of a person convicted of a public entity crime; or
 2. An entity under the control of any natural person who is active in the management of the entity and who has been convicted of a public entity crime. The term "affiliate" includes those officers' directors, executives, partners, shareholders, employees, members, and agents who are active in the management of an affiliate. The ownership by one person of shares constituting a controlling interest in another person, or a pooling of equipment or income among persons when not for fair market value under an arm's length agreement, shall be a prima facie case that one person

controls another person. A person who knowingly enters into a joint venture with a person who has been convicted of a public entity crime in Florida during the preceding 36 months shall be considered an affiliate.

5. I understand that a "person" as defined in Paragraph 287.133(1) (e), Florida Statutes, means any natural person or entity organized under the laws of any state or of the United States with legal power to enter into a binding contract and which bids or applies to bid on contracts for the provision of goods or services let by a public entity, or which otherwise transacts or applies to transact business with a public entity. The term "person" includes those officers, directors, executives, and partners, shareholders, employees, members, and agents who are active in management of an entity.
6. Based on information and belief, the statement, which I have marked below, is true in relation to the entity submitting this sworn statement. (Indicate which statement applies).
 - Neither the entity submitting this sworn statement, nor any of its officers, directors, executives, partners, shareholders, employees, members, or agents who are active in the management of the entity, nor any affiliate of the entity has been charged with and convicted of a public entity crime subsequent to July 1, 1989.
 - The entity submitting this sworn statement, or one or more of its officers, directors, executives, partners, shareholders, employees, members, or agents who are active in the management of the entity, or an affiliate of the entity has been charged with and convicted of a public entity crime subsequent to July 1, 1989.
 - The entity submitting this sworn statement, or one or more of its officers, directors, executives, partners, shareholders, employees, members, or agents who are active in the management of the entity, or an affiliate of the entity has been charged with and convicted of a public entity crime subsequent to July 1, 1989. However, there has been a subsequent proceeding before a Hearing Officer of the State of Florida, Division of Administrative Hearings and the final Order entered by the Hearing Officer determined that it was not in the public interest to place the entity submitting this sworn statement on the convicted vendor list (attach a copy of the final order).

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

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

Name:

Title:

Date:

5.5 ANTI-KICKBACK AFFIDAVIT

I, the undersigned, say that no portion of the sum herein bid will be paid to any employees of the City of North Miami Beach, as a commission, kickback, reward or gift, directly or indirectly by me or any member of my firm or by an officer of the corporation.

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

Name:

Title:

Date:

5.6 NON-COLLUSIVE AFFIDAVIT

a) He/she is the , (Owner, Partner, Officer, Representative or Agent) of the Bidder that has submitted the attached Bid;

b) He/she is fully informed respecting the preparation and contents of the attached Bid and of all pertinent circumstances respecting such Bid;

c) Such Bid is genuine and is not collusive or a sham Bid;

d) Neither the said Bidder nor any of its officers, partners, owners, agents, representatives, employees or parties in interest, including this affiant, have in any way colluded, conspired, connived or agreed, directly or indirectly, with any other Bidder, firm, or person to submit a collusive or sham Bid in connection with the Work for which the attached Bid has been submitted; or to refrain from proposing in connection with such work; or have in any manner, directly or indirectly, sought by person to fix the price or prices in the attached Bid or of any other Bidder, or to fix any overhead, profit, or cost elements of the Bid price or the Bid price of any other Bidder, or to secure through any collusion, conspiracy, connivance, or unlawful agreement any advantage against (Recipient), or any person interested in the proposed work;

e) The price or prices quoted in the attached Bid are fair and proper and are not tainted by any collusion, conspiracy, connivance, or unlawful agreement on the part of the Bidder or any other of its agents, representatives, owners, employees or parties in interest, including this affiant.

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

Name:

Title:

Date:

5.7 BIDDER QUESTIONNAIRE

The completed Vendor Questionnaire should be submitted with the solicitation response.

If a response requires additional information, the Vendor should upload a written detailed response; each response should be numbered to match the question number. The completed questionnaire and attached responses will become part of the procurement record. It is imperative that the person completing the form be knowledgeable about the proposing Vendor's business and operations.

1. Legal business name:

2. Doing Business As/Fictitious Name (if applicable):

3. Federal Employer I.D. no. (FEIN):

4. Dun and Bradstreet No.:

5. Website address (if applicable):

6. Principal place of business address:

7. Office location responsible for this project:

8. Telephone no.:

Fax no.:

9. Type of business (check appropriate box):

Corporation (specify the state of incorporation):

Sole Proprietor

Limited Liability Company (LLC)

Limited Partnership

General Partnership (State and County filled in)

Other – Specify

10. AUTHORIZED CONTACT(S) FOR YOUR FIRM:

Name:

Title:

E-mail:

Telephone No.:

Name:

Title:

E-mail:

Telephone No.:

11. List name and title of each principal, owner, officer, and major shareholder:

a)

b)

c)

d)

12. Affiliated Entities of the Principal(s): List the names and addresses of "affiliated entities" of the Vendor's principal(s) over the last five (5) years (from the solicitation opening deadline) that have acted as a prime Vendor with the City. Affiliated entities of the principal(s) are those entities related to the vendor by the sharing of stock or other means of control, including but not limited to a subsidiary, parent or sibling entity.

a)

b)

c)

d)

13. Has your firm, its principals, officers or predecessor organization(s) been debarred or suspended by any government entity within the last three years? If yes, specify details in an attached written response. Yes No

- 14. Has your firm, its principals, officers or predecessor organization(s) ever been debarred or suspended by any government entity? If yes, specify details in an attached written response, including the reinstatement date, if granted. Yes No
- 15. Specify the type of services or commodities your firm offers:
- 16. How many years has your firm been in business while providing the services and/or products offered within this solicitation?
- 17. Is your firm's business regularly engaged in and routinely selling the product(s) or services offered within this solicitation? Yes No
- 18. Does your firm affirm that it is currently authorized by the manufacturer as a dealer/seller of the product(s) offered herein, and warranty offered is the manufacturer's warranty with the City recorded as the original purchaser? The City reserves the right to verify prior to a recommendation of award. Yes No
- 19. Has your firm ever failed to complete any services and/or delivery of products during the last three (3) years? If yes, specify details in an attached written response. Yes No
- 20. Is your firm or any of its principals or officers currently principals or officers of another organization? If yes, specify details in an attached written response. Yes No
- 21. Have any voluntary or involuntary bankruptcy petitions been filed by or against your firm, its parent or subsidiaries or predecessor organizations during the last three years? If yes, specify details in an attached written response. Yes No
- 22. Has your firm's surety ever intervened to assist in the completion of a contract or have Performance and/or Payment Bond claims been made to your firm or its predecessor's sureties during the last three years? If yes, specify details in an attached a written response, including contact information for owner and surety company. Yes No
- 23. If requested, will your firm extend the same price, terms and conditions to other governmental entities during the period covered by this contract? Yes No

Questions 24 - 27 are only applicable to service contracts or a construction contracts (repair, maintain or furnish and install) solicitations:

24. What similar on-going contracts is your firm currently working on? If additional space is required, provide on separate sheet

- 25. Has your firm completely inspected the project site(s) prior to submitting response? Yes No
- 26. Will your firm need to rent or purchase any equipment for this contract? If yes, please specify details in an attached a written response. Yes No
- 27. What equipment does your firm own that is available for this contract?

28. Indicate registration, license numbers or certificate numbers for the businesses or professions, which are the subject of this ITB. Please attach certificate of competency and/or State registration.

29. Firm has attached a current Certificate of Liability Insurance? Yes No

30. If requested, will your firm extend the same price, terms and conditions to other governmental entities during the period covered by this contract? Check one: Yes No

31. Provide at least three (3) individuals, corporations, agencies, or institutions for which your firm has completed work of a similar nature or in which your firm sold similar commodities in the past three (3) years. Contact persons shall have personal knowledge of the referenced project/contract. If any of the following references are inaccessible or not relevant, additional references may be requested by the City.

Reference 1:

Scope of Work:

Contract/Project Title:

Agency:

Contact Name/Title:

Contact Telephone:

Email:

Contract/Project Dates (Month and Year):

Contract Amount:

Reference 2:

Scope of Work:

Contract/Project Title:

Agency:

Contact Name/Title:

Contact Telephone:

Email:

Contract/Project Dates (Month and Year):

Contract Amount:

Reference 3:

Scope of Work:

Contract/Project Title:

Agency:

Contact Name/Title:

Contact Telephone:

Email:

Contract/Project Dates (Month and Year):

Contract Amount:

32. Disclosure of Conflict of Interest

VENDOR SHALL DISCLOSE BELOW, TO THE BEST OF HIS OR HER KNOWLEDGE, ANY CITY OF NORTH MIAMI BEACH OFFICER OR EMPLOYEE, OR ANY RELATIVE OF ANY SUCH OFFICER OR EMPLOYEE AS DEFINED IN

SECTION 112.3135, *FLORIDA STATUTES*, WHO IS AN OFFICER, PARTNER, DIRECTOR OR PROPRIETOR OF, OR HAS A MATERIAL INTEREST IN THE VENDOR'S BUSINESS OR ITS PARENT COMPANY, ANY SUBSIDIARY, OR AFFILIATED COMPANY, WHETHER SUCH CITY OFFICIAL OR EMPLOYEE IS IN A POSITION TO INFLUENCE THIS PROCUREMENT OR NOT.

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

NAME

Name:

Title:

Date:

5.8 TRENCH SAFETY ACT COMPLIANCE

Bidder acknowledges that the Florida Trench Safety Act, Section 553.60 et. seq., which became effective October 1, 1990, shall be in effect during the period of construction of the project. The Bidder, by signing and submitting the bids, in writing, assuring that it will perform any trench excavation in accordance with applicable trench safety standards. The Bidder further identifies the following separate item of costs of compliance with the applicable trench safety standards as well as the methods of compliance:

Methods of Compliance

Total

Bidder acknowledges that this cost is included in the applicable items of the Proposal and in the Grand Total Bid Price. Failure to complete the above will result in the bid being declared non-responsive.

The Bidder is, and the Owner and Engineer are not, responsible to review or assess Bidder's safety precautions, programs or costs, or the means, methods, techniques or technique adequacy, reasonableness of cost, sequences or procedures of any safety precaution, program or cost, including but not limited to, compliance with any and all requirements of Florida Statute Section 553.60 et. seq., cited as the "Trench Safety Act". Bidder is, and the Owner and Engineer are not, responsible to determine if any safety or safety related standards apply to the project, including but not limited to, the "Trench Safety Act."

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

Name:
Title:
Date:

5.9 E-VERIFY AFFIRMATION STATEMENT

Contractor/Proposer/Bidder acknowledges and agrees to utilize the U.S. Department of Homeland Security's E-Verify System to verify the employment eligibility of,

- (a) all persons employed by Contractor/Proposer/Bidder to perform employment duties within Florida during the term of the Contract, and,
- (b) all persons (including subcontractors/vendors) assigned by Contractor/Proposer/Bidder to perform work pursuant to the Contract.

The Contractor/Proposer/Bidder acknowledges and agrees that use of the U.S. Department of Homeland Security's E-Verify System during the term of the Contract is a condition of the Contract.

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

Name:
Title:
Date:

BYRD ANTI-LOBBYING AMENDMENT CERTIFICATION**(To be submitted with each bid or offer exceeding \$100,000)**

The undersigned certifies, to the best of his or her knowledge and belief, that:

- (1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
- (2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.
- (3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31, U.S.C. § 1352 (as amended by the Lobbying Disclosure Act of 1995). Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure. CONTRACTOR certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, CONTRACTOR understands and agrees that the provisions of 31 U.S.C. § 3801 et seq., apply to this certification and disclosure, if any.

CONTRACTOR Name

Signature of Contractor's Authorized Official

Name and Title of Contractor's Authorized Official

Date

DISCLOSURE OF LOBBYING ACTIVITIES

Complete this form to disclose lobbying activities pursuant to 31 U.S.C. 1352

(See reverse for public burden disclosure.)

1. Type of Federal Action: <input type="checkbox"/> a. contract <input type="checkbox"/> b. grant <input type="checkbox"/> c. cooperative agreement <input type="checkbox"/> d. loan <input type="checkbox"/> e. loan guarantee <input type="checkbox"/> f. loan insurance	2. Status of Federal Action: <input type="checkbox"/> a. bid/offer/application <input type="checkbox"/> b. initial award <input type="checkbox"/> c. post-award	3. Report Type: <input type="checkbox"/> a. initial filing <input type="checkbox"/> b. material change For Material Change Only: year _____ quarter _____ date of last report _____
4. Name and Address of Reporting Entity: <input type="checkbox"/> Prime <input type="checkbox"/> Subawardee Tier _____, <i>if known</i> : Congressional District, <i>if known</i> : 4c	5. If Reporting Entity in No. 4 is a Subawardee, Enter Name and Address of Prime: Congressional District, <i>if known</i> :	
6. Federal Department/Agency:	7. Federal Program Name/Description: CFDA Number, <i>if applicable</i> : _____	
8. Federal Action Number, if known:	9. Award Amount, if known: \$ _____	
10. a. Name and Address of Lobbying Registrant <i>(if individual, last name, first name, MI):</i>	b. Individuals Performing Services <i>(including address if different from No. 10a)</i> <i>(last name, first name, MI):</i>	
11. Information requested through this form is authorized by title 31 U.S.C. section 1352. This disclosure of lobbying activities is a material representation of fact upon which reliance was placed by the tier above when this transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352. This information will be available for public inspection. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.	Signature: _____ Print Name: _____ Title: _____ Telephone No.: _____ Date: _____	
Federal Use Only:		Authorized for Local Reproduction Standard Form LLL (Rev. 7-97)

INSTRUCTIONS FOR COMPLETION OF SF-LLL, DISCLOSURE OF LOBBYING ACTIVITIES

This disclosure form shall be completed by the reporting entity, whether subawardee or prime Federal recipient, at the initiation or receipt of a covered Federal action, or a material change to a previous filing, pursuant to title 31 U.S.C. section 1352. The filing of a form is required for each payment or agreement to make payment to any lobbying entity for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with a covered Federal action. Complete all items that apply for both the initial filing and material change report. Refer to the implementing guidance published by the Office of Management and Budget for additional information.

1. Identify the type of covered Federal action for which lobbying activity is and/or has been secured to influence the outcome of a covered Federal action.
2. Identify the status of the covered Federal action.
3. Identify the appropriate classification of this report. If this is a followup report caused by a material change to the information previously reported, enter the year and quarter in which the change occurred. Enter the date of the last previously submitted report by this reporting entity for this covered Federal action.
4. Enter the full name, address, city, State and zip code of the reporting entity. Include Congressional District, if known. Check the appropriate classification of the reporting entity that designates if it is, or expects to be, a prime or subaward recipient. Identify the tier of the subawardee, e.g., the first subawardee of the prime is the 1st tier. Subawards include but are not limited to subcontracts, subgrants and contract awards under grants.
5. If the organization filing the report in item 4 checks "Subawardee," then enter the full name, address, city, State and zip code of the prime Federal recipient. Include Congressional District, if known.
6. Enter the name of the Federal agency making the award or loan commitment. Include at least one organizational level below agency name, if known. For example, Department of Transportation, United States Coast Guard.
7. Enter the Federal program name or description for the covered Federal action (item 1). If known, enter the full Catalog of Federal Domestic Assistance (CFDA) number for grants, cooperative agreements, loans, and loan commitments.
8. Enter the most appropriate Federal identifying number available for the Federal action identified in item 1 (e.g., Request for Proposal (RFP) number; Invitation for Bid (IFB) number; grant announcement number; the contract, grant, or loan award number; the application/proposal control number assigned by the Federal agency). Include prefixes, e.g., "RFP-DE-90-001."
9. For a covered Federal action where there has been an award or loan commitment by the Federal agency, enter the Federal amount of the award/loan commitment for the prime entity identified in item 4 or 5.
10. (a) Enter the full name, address, city, State and zip code of the lobbying registrant under the Lobbying Disclosure Act of 1995 engaged by the reporting entity identified in item 4 to influence the covered Federal action.

(b) Enter the full names of the individual(s) performing services, and include full address if different from 10 (a). Enter Last Name, First Name, and Middle Initial (MI).
11. The certifying official shall sign and date the form, print his/her name, title, and telephone number.

According to the Paperwork Reduction Act, as amended, no persons are required to respond to a collection of information unless it displays a valid OMB Control Number. The valid OMB control number for this information collection is OMB No. 0348-0046. Public reporting burden for this collection of information is estimated to average 10 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0046), Washington, DC 20503.

SECTION 6.0 SAMPLE AGREEMENT (DO NOT COMPLETE)

**AGREEMENT No. (BID NUMBER)
BETWEEN THE CITY OF NORTH MIAMI BEACH AND
(VENDOR NAME)**

THIS AGREEMENT is made and entered into as of this ____ day of _____, **2020**, by and between **(Vendor Name)** a corporation organized and existing under the laws of the **State of Florida**, having its principal office at **(Vendor Address)** (hereinafter referred to as the "CONTRACTOR"), and the City of North Miami Beach, a political subdivision of the State of Florida, having its principal office at 17011 NE 19th Avenue, North Miami Beach, Florida 33162 (hereinafter referred to as the "CITY"),

RECITALS

WHEREAS, the CONTRACTOR has offered to provide the services and to be bound by the terms and conditions of the **Invitation to Bid (ITB) No. BID NUMBER (Solicitation Title)** which includes the General Terms and Conditions, Special Conditions, Scope of Services, and associated addenda attached hereto and incorporated herein as Exhibit "A", and the assertions included in the Contractor's Proposal attached hereto and incorporated herein as Exhibit "B";

WHEREAS, the CITY desires to procure from the CONTRACTOR such services for the CITY, in accordance with the terms and conditions of this Agreement.

NOW, THEREFORE, in consideration of the mutual covenants, terms, and provisions contained herein, the parties do hereby agree as follows:

ARTICLE 1 - DEFINITIONS

Whenever used in this Agreement or in other Contract Documents, the following terms have the meanings indicated which are applicable to both the singular and plural forms:

- 1.1 Agreement - This written agreement between the City and the Contractor covering the work to be performed including other Contract Documents that are attached to or incorporated in the Agreement.
- 1.2 Application for Payment - The form accepted by the City which is to be used by the Contractor in requesting progress or final payment and which is to include such supporting documentation as is required by the Contract Documents
- 1.3 Approve - The word approve is defined to mean review of the material, equipment or methods for general compliance with design concepts and with the design concepts and with the information given in the Contract Documents. It does not imply a responsibility on

the part of the City to verify in every detail conformance with plans and specifications.

- 1.4 Bid – The offer or Bid of the Contractor submitted on the prescribed form setting forth the total prices for the Work to be performed.
- 1.5 Bid Documents – This Agreement, advertisement for Invitation to Bids, the Instructions to Bidders, the Bid Form (with supplemental affidavits and agreements), the Contract Forms, General Conditions, the Supplementary Conditions, the Specifications, and the Plans, which documents all become an integral part of the Contract Documents.
- 1.6 Certificate of Substantial Completion - Certificate provided by the City certifying that all Work, excluding the punch list items, has been completed, inspected, and accepted by the City.
- 1.7 Change Order - A change order is defined as a written order to a contractor approved by the city, authorizing a revision of an underlying agreement between the city and a contractor that is directly related to the original scope of work or an adjustment in the original contract price or the contract time directly related to the original scope of work, issued on or after the effective date of the contract.
- 1.8 City – The City of North Miami Beach, Florida including but not limited to its employees, agents, officials, representatives, contractors, subcontractors, volunteers, successors and assigns, with whom the Contractor has entered into the Agreement and for whom the Work is to be provided. The Project Manager, or designee, shall be the authorized agent for the City unless otherwise specified.
- 1.9 Contract Documents – The Contract Documents shall consist of this Agreement, Exhibits to this Agreement, Public Construction Bond, Performance Bond, Payment Bond and Certificates of Insurance, Notice of Award and Notice to Proceed, General Conditions as amended by the Special Conditions, Technical Specifications, Plans/Drawings, Addenda, Bid Form and supplement Affidavits and Agreements, all applicable provisions of State and Federal Law and any modification, including Change Orders or written amendments duly delivered after execution of Agreement, Invitation to Bid, Instructions to Bidders and Bid Bond, Contractor's response to the City's Invitation to Bid, Schedule of Completion and Schedule of Values, all amendments, modifications and supplements, change orders and work directive changes issued on or after the Effective Date of the Agreement, as well as any additional documents that are required to be submitted under the Agreement.

Permits on file with the City and or those permits to be obtained shall be considered directive in nature and will be considered a part of this Agreement. A copy of all permits shall be given to the City for inclusion in the Contract Documents. Terms of permits shall be met prior to acceptance of the Work and release of the final payment.

- 1.10 Contract Price – The monies payable to the Contractor by the City under the Contract Documents and in accordance with the line item unit prices listed in the Bid.
- 1.11 Contract Time – The number of calendar days stated in the Agreement for the completion of the Work. The dates on which the work shall be started and shall be completed as stated in the Notice to Proceed.

- 1.12 Contractor – The person, firm, company, or corporation with whom the City has entered into the Agreement, including but not limited to its employees, agents, representatives, contractors, subcontractors, their subcontractors and their other successors and assigns.
- 1.13 Day – A calendar day of twenty-four (24) hours ending at midnight.
- 1.14 Defective – An adjective which when modifying the word “Work” refers to work that is unsatisfactory, faulty, or deficient, or does not conform to the Contract Documents or does not meet the requirements of any inspection, test or approval referred to in the Contract Documents, or has been damaged prior to the Project Manager’s recommendation of final payment.
- 1.15 Effective Date of the Agreement – The date specified in the Notice to Proceed given by the City to the Contractor indicating when the Contract Time will commence to run and on which the Agreement becomes effective, but if no such date is indicated, it means the date on which the Agreement is approved by the City Commission or if City Commission approval is not required it is the date on which the Agreement is fully executed by the City.
- 1.16 Final Completion Date – The date the Work is completed, including completion of the final punch list, and delivered along with those items specified in the Contract Documents and is accepted by the City.
- 1.17 Hazardous Materials (HAZMAT) - Any solid, liquid, or gaseous material that is toxic, flammable, radioactive, corrosive, chemically reactive, or unstable upon prolonged storage in quantities that could pose a threat to life, property, or the environment defined in Section 101(14) of Comprehensive Environmental Response, Compensation and Liability Act of 1980 and in 40 CFR 300.6. Also defined by 49 CFR 171.8 as a substance or material designated by the Secretary of Transportation to be capable of posing an unreasonable risk to health, safety, and property when transported in commerce and which has been so designated.
- 1.18 Hazardous Substance - As defined by Section 101(14) of the Comprehensive Environmental Response, Compensation and Liability Act; any substance designated pursuant to Section 311(b) (2) (A) of the Clean Water Act; any element, compound, mixture, solution or substance designated pursuant to Section 102 identified under or listed pursuant to Section 3001 of the Solid Waste Disposal Act {but not including any waste listed under Section 307[a] of the Clean Water Act}; any hazardous air pollutant listed under Section 112 of the Clean Air Act; and any imminently hazardous chemical substance or mixture pursuant to Section 7 of the Toxic Substances Control Act. The term does not include petroleum, including crude oil or any fraction thereof, which is not otherwise specifically listed or designated as a hazardous substance in the first sentence of this paragraph, and the term does not include natural gas, natural gas liquids, liquefied natural gas, or synthetic gas usable for fuel (or mixtures of natural gas and such synthetic gas).
- 1.19 Hazardous Waste - Those solid wastes designated by OSHA in accordance with 40 CFR 261 due to the properties of ignitability, corrosively, reactivity, or toxicity. Any material that is subject to the Hazardous Waste Manifest requirements of the EPA specified in 40 CFR Part 262.

- 1.20 Holidays - Those designated non-work days as established by the City Commission of the City of North Miami Beach.
- 1.21 Inspection - The term "inspection" and the act of inspecting as used in this Agreement is defined to mean the examination of construction to ensure that it conforms to the design concept expressed in the plans and specifications. This term shall not be construed to mean supervision, superintending and/or overseeing.
- 1.22 Notice of Award - The written notice by City to the Contractor stating that upon compliance by the Contractor with the conditions precedent enumerated therein, within the time specified that the City will sign and deliver this Agreement.
- 1.23 Notice to Proceed - A written notice given by the City to the Contractor fixing the date on which the Contract Time will commence to run and on which the Contract Time will end.
- 1.24 Plans - The drawings which show the character and scope of the work to be performed and which have been prepared or approved by the City and are referred to in the Contract Documents.
- 1.25 Premises (otherwise known as Site or Work Site) - means the land, buildings, facilities, etc. upon which the Work is to be performed.
- 1.26 Project - The total construction of the Work to be provided as defined in the Contract Documents.
- 1.27 Project Manager - The employee of the City, or other designated individual who is herein referred to as the Project Manager, will assume all duties and responsibilities and will have the rights and authorities assigned to the Project Manager in the contract Documents in connection with completion of the Work in accordance with this Agreement.
- 1.28 Punch List - The City's list of Work yet to be done or be corrected by the Contractor, before the Final Completion date can be determined by the City.
- 1.29 Record Documents - A complete set of all specifications, drawings, addenda, modifications, shop drawings, submittals and samples annotated to show all changes made during the construction process.
- 1.30 Record Drawings or "As-Built" - A set of drawings which show significant changes in the work made during construction and which are usually based on drawings marked up in the field and other data furnished by the contractor. These documents will be signed and sealed by the Engineer of Record or a Professional Land Surveyor licensed in the State of Florida.
- 1.31 Substantially Completed Date - A date when the Contractor has requested in writing, stating that the Work is substantially completed and is ready for an inspection and issuance of a final punch list for the Project.
- 1.32 Work - The entire completed delivered product or the various separately identifiable parts thereof required to be furnished under the Contract Documents. Work is the result of performing services, furnishing labor and furnishing and incorporating material and equipment into the product, all as required by the Contract Documents

ARTICLE 2 – SCOPE OF WORK

- 2.1 The Contractor shall complete all work as specified or indicated in the Contract Documents. The Project for which the Work under the Contract Documents may be the whole or only part is generally described as follows: **“(BID NO. and Title)”**.
- 2.2 All Work for the Project shall be constructed in accordance with the Drawings and Specifications. The Work generally involves:

PROJECT DESCRIPTION

The Work of the Contract comprises the (Project Title and Description)

The proposed modifications are located in the City of North Miami Beach, Florida, in an area located at (Project Location).

- 2.3 Within ten (10) days of the execution of this Agreement, the Contractor shall submit a Construction Schedule, Schedule of Values and a listing of those subcontractors that will be utilized by the Contractor. The general sequence of the work shall be submitted by the Contractor and approved by the City before any work commences. The City reserves the right to issue construction directives necessary to facilitate the Work or to minimize any conflict with operations.

ARTICLE 3 – PROJECT MANAGER

- 3.1 The Project Manager is hereby designated by the City as Judeen Johnson, Public Works Director whose address is 17050 NE 19th Ave. North Miami Beach, FL 33162. The Project Manager will assume all duties and responsibilities and will have the rights and authorities assigned to the Project Manager in the Contract Documents in connection with completion of the Work in accordance with this Agreement.

ARTICLE 4 – CONTRACT DOCUMENTS

The Contract Documents which comprise the entire Agreement between the City and Contractor are attached to this Agreement, are made a part hereof and consist of the following:

- 4.1 This Agreement.
- 4.2 Public Construction Bond, Performance Bond, Payment Bond and Certificates of Insurance.
- 4.3 Notice of Award and Notice to Proceed.
- 4.4 General Conditions as amended by the Special Conditions.
- 4.5 Technical Specifications.
- 4.6 Plans/Drawings

- 4.7 Bid Form and supplement Affidavits and Agreements.
- 4.8 All applicable provisions of State and Federal Law and any modification, including Change Orders or written amendments duly delivered after execution of Agreement.
- 4.9 Invitation to Bid No., , Instructions to Bidders and Bid Bond.
- 4.10 Contractor's response to the City's Invitation to Bid No., , dated _____, 20__.
- 4.11 Schedule of Completion and Schedule of Values.
- 4.12 All amendments, modifications and supplements, change orders and work directive changes, issued on or after the Effective Date of the Agreement.
- 4.13 Any Additional documents that are required to be submitted under the Agreement.
- 4.14 Permits on file with the City and or those permits to be obtained shall be considered directive in nature and will be considered a part of this Agreement. A copy of all permits shall be given to the City for inclusion in the Contract Documents. Terms of permits shall be met prior to acceptance of the Work and release of the final payment.

There are no Contract Documents other than those listed in this Article 4. The Contract Documents may only be altered, amended, or repealed in accordance with the provisions of the terms of this Agreement.

In the event of any conflict between the documents or any ambiguity or missing specification or instruction, the following priority is established:

- a. Specific direction from the City Manager (or designee)
- b. This Agreement dated _____, and any attachments.
- c. Invitation to Bid No., and the specifications prepared by the City.
- d. Contractor's response to the City's Invitation to Bid No., , dated _____, 20__.
- e. Schedule of Values.
- f. Schedule of Completion.

If during the performance of the Work, Contractor finds a conflict, error or discrepancy in the Contract Documents, Contractor shall so report to the Project Manager, in writing, at once and before proceeding with the Work affected shall obtain a written interpretation or clarification from the City.

It is the intent of the specifications and plans to describe a complete Project to be constructed in accordance with the Contract Documents. Any Work that may reasonably be inferred from the specifications or plans as being required to produce the intended result shall be supplied whether or not it is specifically called for. When words which have a well-known technical or trade meaning

are used to describe Work, materials, or equipment, such works shall be interpreted in accordance with such meaning. Reference to standard specifications, manuals or codes of any technical society, organization or associations, or to the code of any governmental authority whether such reference be specific or implied, shall mean the latest standard specification, manual or code in effect as of the Effective Date of this Agreement, except as may be otherwise specifically stated. However, no provision of any referenced standard specification, manual or code (whether or not specifically incorporated by reference in the Contract Documents) shall change the duties and responsibilities of the City, the Contractor, or any of their agents or employees from those set forth in the Contract Documents.

ARTICLE 5 – CONTRACT TIME

- 5.1 The Contractor recognizes that TIME IS OF THE ESSENCE. Each work order shall commence within _____calendar days of the date of the Notice to Proceed.
- 5.2 The Work shall be Substantially Completed within _____calendar days after the date when the Contract Time commences to run as provided in the Notice to Proceed.
- 5.3 The Work shall be finally completed on the Final Completion Date and ready for final payment in accordance with this Agreement within _____calendar days after the date when the Contract Time commences to run as provided in the Notice to Proceed.
- 5.4 The initial contract term shall commence upon date of award by the City and shall expire _____year from that date. The City reserves the right to extend the contract for_____, additional _____year terms, providing all terms conditions and specifications remain the same, both parties agree to the extension, and such extension is approved by the City.
- 5.5 In the event services are scheduled to end because of the expiration of this contract, the Contractor shall continue the service upon the request of the City as authorized by the awarding authority. The extension period shall not extend for more than ninety (90) days beyond the expiration date of the existing contract. The Contractor shall be compensated for the service at the rate in effect when this extension clause is invoked by the City.

ARTICLE 6 – CONTRACT PRICE

- 6.1 City shall pay Contractor for performance of the Work in accordance with Article 7, subject to additions and deletions by Change Order, as provided for in this Agreement.

The parties expressly agree that the Contract Price which shall not exceed the amount of \$ _____constitutes the total maximum compensation payable to the Contractor for performing the Work, plus any Work done pursuant to a Change Order. Contract Price is in accordance with the line item unit prices listed in the Bid. Line items are based on a unit price cost multiplied by a defined quantity. Any additional duties, responsibilities and obligations assigned to or undertaken by Contractor shall be at Contractor's expense without change to the Contract Price.

- 6.2 The Contract Price constitutes the compensation payable to Contractor for performing the Work plus any Work done pursuant to a Change Order. All duties responsibilities and obligations assigned to or undertaken by Contractor shall be at Contractor's expense

without change in the Contract price.

ARTICLE 7 – PAYMENT PROCEDURES

- 7.1 Contractor shall submit Applications for Payment in accordance with the Contract Documents. Applications for Payment will be processed by City as provided in the General Conditions.
- 7.2 Progress Payments. City shall make progress payments on account of the Contract Price on the basis of Contractor's monthly Applications for Payment, which shall be submitted by the Contractor between the first (1st) and the tenth (10th) day after the end of each calendar month for which payment is requested. All progress payments will be made on the basis of the progress of the Work completed.
- 7.3 Prior to Final Completion, progress payments will be made in an amount equal to ninety percent (90%) of the value of Work completed less in each case the aggregate of payments previously made.
- 7.4 Final Payment. Upon final completion of the Work in accordance with the General Conditions, as may be supplemented, the City shall pay Contractor an amount sufficient to increase total payments to one-hundred percent (100%) of the Contract Price. However, not less than ten percent (10%) of the Contract Price shall be retained until Record Drawings (as-built), specifications, addenda, modifications and shop drawings. Including all manufacturers' instructional and parts manuals are delivered to and accepted by the City.
- 7.5 The City shall make payment to the Contractor in accordance with the Florida Prompt Payment Act, Section 218.70, Florida Statutes.

ARTICLE 8 – CONTRACTOR'S REPRESENTATIONS

In order to induce the City to enter into this Agreement, Contractor makes the following representations upon which the City has relied:

- 8.1 Contractor is qualified in the field of public construction and in particular to perform the Work and services set forth in this Agreement.
- 8.2 Contractor has visited the Work Site, has conducted extensive tests, examinations and investigations and represents and warrants a thorough familiarization with the nature and extent of the Contract Documents, the Work, locality, soil conditions, moisture conditions and all year-round local weather and climate conditions (past and present), and, in reliance on such tests, examination and investigations conducted by Contractor and the Contractor's experts, has determined that no conditions exist that would in any manner affect the Proposed Price and that the project can be completed for the Proposed Price submitted within the Contract Time as defined in this Agreement. Furthermore, Contractor warrants and confirms that he is totally familiar with, understands and obligates Contractor to comply with all federal, state and local laws, ordinances, rules, regulations and all market conditions that affect or may affect the cost and price of materials and labor needed to fulfill all provisions of this Agreement or that in any manner may affect cost, progress or

performance of the Work.

- 8.3 The Contractor has satisfied itself as to the nature and location of the Work under the Contract Documents, the general and local conditions of the Project, particularly those bearing upon availability of transportation, disposal, handling and storage of materials, availability of labor, water, electric power, and roads, the conformation and conditions at the ground based on City provided reports, the type of equipment and facilities needed preliminary to and during the prosecution of the Work and all other matters which can in any way affect the Work or the cost thereof under the Contract Documents.
- 8.4 The Contractor has also studied carefully all reports of investigations and tests of subsurface and latent physical conditions at the site or otherwise affecting cost, progress or performance of the Works, and finds and has further determined that no conditions exist that would in any manner affect the Proposed Price and that the project can be completed for the Proposed Price submitted.
- 8.5 Contractor has made or caused to be made examinations, investigations, tests and studies of such reports and related data in addition to those referred to in Paragraphs 8.2, 8.3 and 8.4 above as he deems necessary for the performance of the Work at the Contract Prices, within the Contract Time and in accordance with the other terms and conditions of the Contract Documents; and no additional examinations, investigations, tests, reports or similar data are, or will be, required by Contractor for such purposes.
- 8.6 Contractor has correlated the results of all such observations, examinations, investigations, tests, reports and data with the terms and conditions of the Contract Documents.
- 8.7 Contractor has given City written notice of all conflicts, errors or discrepancies that he has discovered in the Contract Documents and the written resolution by City is acceptable to the Contractor.
- 8.8 Labor
- 8.8.1 The Contractor shall provide competent, suitable qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. The Contractor shall at all times maintain good discipline and order at the site.
- 8.8.2 The Contractor shall, at all times, have a competent superintendent, capable of reading and thoroughly understanding the drawings and specifications, as the Contractor's agent on the Work, who shall, as the Contractor's agent, supervise, direct and otherwise conduct the Work.
- 8.8.3 The Contractor shall designate the superintendent on the job to the City, in writing, immediately after receipt of the Notice to Proceed. The Contractor understands and agrees that the superintendent's physical presence on the job site is indispensable to the successful completion of the Work. If the superintendent is frequently absent from the job site, the Project Manager may deliver written notice to the Contractor to stop work or terminate the Contract in accordance with Article 17.

8.8.4 The Contractor shall assign personnel to the job site that have successfully completed training programs related to trench safety, confined space and maintenance of traffic. A certified "competent person" shall be assigned to the job site. Personnel certified by the International Municipal Signal Associations with Florida Department of Transportation qualifications are required relative to maintenance of traffic. Failure to pursue the Work with the properly certified supervisory staff may result in notice to stop work or terminate the Contract in accordance with Article 17.

8.9 Materials:

8.9.1 The Contractor shall furnish all materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water and sanitary facilities and all other facilities and incidentals necessary for the execution, testing, initial operation and completion of Work.

8.9.2 All material and equipment shall be of good quality and new, except as otherwise provided in the Contract Documents. Suppliers shall be selected and paid by the Contractor; the City reserves the right to approve all suppliers and materials.

8.10 Work Hours:

8.10.1 Except in connection with the safety or protection of persons, or the Work, or property at the site or adjacent thereto, and except as otherwise indicated in the Supplementary Conditions, all work at the site shall be performed during regular working hours between 7 a.m. and 6:00 p.m., Monday through Friday. The Contractor will not permit overtime work or the performance of work on Saturday, Sunday or any legal holiday (designated by the City of North Miami Beach) without the Project Manager's written consent at least seventy two (72) hours in advance of starting such work. If the Project Manager permits overtime work, the Contractor shall pay for the additional charges to the City with respect to such overtime work. Such additional charges shall be a subsidiary obligation of the Contractor and no extra payment shall be made to the Contractor for overtime work. The cost to the Contractor to reimburse the City for overtime inspection is established at direct-labor and overtime costs for each person or inspector required. Incidental overtime costs for engineering, testing and other related services will also be charged to the Contractor at the actual rate accrued.

8.11 Patent Fee and Royalties: The Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work, or any invention, design, process, product or device which is the subject of patent rights or copyrights held by others. The Contractor hereby expressly binds himself or itself to indemnify and save harmless the City from all such claims and fees and from any and all suits and action of every name and description that may be brought against City on account of any such claims, fees, royalties, or costs for any such invention or patent, and from any and all suits or actions that may be brought against said City for the infringement of any and all patents or patent rights claimed by any person, firm corporation or other entity.

- 8.12 Permits: The Contractor shall obtain and pay for all permits and licenses. There shall be no allowance for Contractor markup, overhead or profit for permits and licenses. The Contractor shall pay all government charges which are applicable at the time of opening of proposals. It shall be the responsibility of the Contractor to secure and pay for all necessary licenses and permits of a temporary nature necessary for the prosecution of Work.
- 8.13 Law and Regulations: The Contractor shall give all notices and comply with all laws, ordinances, rules and regulations applicable to the Work. If the Contractor observes that the specifications or plans are at variance therewith, the Contractor shall give the Project Manager prompt written notice thereof, and any necessary changes shall be adjusted by any appropriate modifications. If the Contractor performs any work knowing or having reason to know that it is contrary to such laws, ordinances, rules and regulations, and without such notice to the Project Manager, the Contractor shall bear all costs arising therefrom; however, it shall not be the Contractor's primary responsibility to make certain that the specifications and plans are in accordance with such laws, ordinances, rules and regulations.
- 8.14 Taxes: The Contractor shall pay all sales, consumer, use and other similar taxes required to be paid by him in accordance with the laws of the City of North Miami Beach, County of Dade, and State of Florida.
- 8.15 Contractor Use of Premises: The Contractor shall confine construction equipment, the storage of materials and equipment and the operations of workmen to areas permitted by law, ordinances, permits and/or the requirements of the Contract Documents, and shall not unreasonably encumber the premises with construction equipment or other materials or equipment.

The Contractor shall not enter upon private property for any purpose without first securing the permission of the property owner in writing and furnishing the Project Manager with a copy of said permission. This requirement will be strictly enforced, particularly with regard to such vacant properties as may be utilized for storage or staging by the Contractor.

The Contractor shall conduct his work in such a manner as to avoid damage to adjacent private or public property. Any damage to existing structures of work of any kind, including permanent reference markers or property corner markers, or the interruption of a utility service, shall be repaired or restored promptly at no expense to the City or property owner.

The Contractor will preserve and protect all existing vegetation such as trees, shrubs and grass on or adjacent to the site which do not reasonably interfere with the construction, as determined by the Project Manager. The Contractor will be responsible for repairing or replacing any trees, shrubs, lawns and landscaping that may be damaged due to careless operation of equipment, stockpiling of materials, tracking of grass by equipment or other construction activity. The Contractor will be liable for, or will be required to replace or restore at no expense to the City all vegetation not protected or preserved as required herein that may be destroyed or damaged.

During the progress of the work, the Contractor shall keep the premises free from accumulations of waste materials, rubbish and debris resulting from the Work. At the completion of the Work, the Contractor shall remove all waste materials, rubbish and debris from and about the premises as well as all tools, appliances, construction equipment and machinery, and surplus materials and

shall leave the site clean and ready for occupancy by the City. The Contractor shall restore to their original condition those portions of the site not designated for alteration by the Contract Documents at no cost to the City.

- 8.16 Project Coordination: The Contractor shall provide for the complete coordination of the construction effort. This shall include, but not necessarily be limited to, coordination of the following:
- 8.16.1 Flow of material and equipment from suppliers.
 - 8.16.2 The interrelated work with affected utility companies.
 - 8.16.3 The interrelated work with the City where tie-ins to existing facilities are required.
 - 8.16.4 The effort of independent testing agencies.
 - 8.16.5 Notice to affected property owners as may be directed by the Project Manager.
- 8.17 Project Record Documents and As-Built (Record Drawings): The Contractor shall keep one record copy of all specifications, plans addenda, modifications, shop drawings and samples at the site, in good order and annotated to show all changes made during the construction process. These shall be available to the Project Manager for examination and shall be delivered to the Project Manager upon completion of the Work. Upon completion of the project and prior to final payment, an as-built (record drawings) of the Project shall be submitted to the Project Manager.

The as-built drawings shall be signed and sealed by a Florida Registered Professional Surveyor and Mapper, Engineer, Architect or Landscape Architect depending on the type of drawing.

8.18 Safety and Protection:

- 8.18.1 The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. The Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:
- 8.18.1.1 All employees working on the project and other persons who may be affected thereby.
 - 8.18.1.2 All the Work and all materials or equipment to be incorporated therein, whether in storage on or off the site.
 - 8.18.1.3 Other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.
- 8.18.2 The Contractor shall comply with all applicable laws, ordinances, rules, regulations and orders of any public body having jurisdiction for the safety of persons or property or to protect them from damage, injury or loss; and shall erect and maintain all necessary safeguards for such safety and protection. The Contractor shall notify owners of adjacent property and utilities when execution of the Work may affect them at least seventy two (72) hours in advance (unless otherwise required). All damage, injury or loss to any property

caused, directly or indirectly, in whole or in part by the Contractor, any subcontractor or anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, shall be remedied by the Contractor.

The Contractor's duties and responsibilities for safety and protection of the Work shall continue until such time as all the Work is completed and accepted by the City.

- 8.19 Emergencies: In emergencies affecting the safety or protection of persons or the Work or property at the site or adjacent thereto, the Contractor, without special instruction or authorization from the City is obligated to act to prevent threatened damage, injury or loss. The Contractor shall give the Project Manager prompt written notice of any significant changes in the Work or deviations from the Contract Documents caused thereby.
- 8.20 Risk of Loss: The risk of loss, injury or destruction shall be on the Contractor until acceptance of the Work by the City. Title to the Work shall pass to the City upon acceptance of the Work by the City.
- 8.21 Environmental: The Contractor has fully inspected the Premises and agrees, except as to the presence of any asbestos, to accept the Premises in an "as is" physical condition, without representation or warranty by the City of any kind, including, without limitation, any and all existing environmental claims or obligations that may arise from the presence of any "contamination" on, in or about the Premises. Further, Contractor and all entitles claiming by, through or under the Contractor, releases and discharges the City, from any claim, demand, or cause of action arising out of or relating to the Contractor's use, handling, storage, release, discharge, treatment, removal, transport, decontamination, cleanup, disposal and/or presence of any hazardous substances including asbestos on, under, from or about the Premises. The Contractor shall have no liability for any pre-existing claims or "contamination" on the Premises.

The Contractor shall not use, handle, store, discharge, treat, remove, transport, or dispose of Hazardous Substances including asbestos at, in, upon, under, to or from the Premises until receipt of instructions from the City. At such time, a City approved Change Order, which shall not include any profit, shall authorize the Contractor to perform such services.

The Contractor shall immediately deliver to the Project Manager complete copies of all notices, demands, or other communications received by the Contractor from any governmental or quasi-governmental authority or any insurance company or board of fire underwriters or like or similar entities regarding in any way alleged violations or potential violations of any Environmental Law or otherwise asserting the existence or potential existence of any condition or activity on the Premises which is or could be dangerous to life, limb, property, or the environment.

For other and additional consideration, the Contractor hereby agrees, at its sole cost and expense, to indemnify and protect, defend, and hold harmless the City and its respective employees, agents, officials, officers, representatives, contractors and subcontractors, successors, and assigns (hereafter the "City") from and against any and all claims, demands, losses, damages, costs, expenses, including but not limited to mitigation,

restoration, and natural restoration expenses, liabilities, assessments, fines, penalties charges, administrative and judicial proceedings and orders, judgments, causes of action, in law or in equity, remedial action requirements and/or enforcement actions of any kind (including, without limitation, attorneys' fees and costs) directly or indirectly arising out of or attributable to, in whole or in part, the Contractor's use, handling, storage, release, threatened release, discharge, treatment, removal, transport, decontamination, cleanup, disposal and/or presence of a Hazardous Substance (excluding asbestos) on, under, from, to or about the Premises or any other activity carried on or undertaken on or off the Premises by the Contractor or its employees, agents or subcontractors, in connection with the use, handling, storage, release, threatened release, discharge, treatment, mitigation, natural resource restoration, removal, transport, decontamination, cleanup, disposal and/or presence or any Hazardous Substance including asbestos located, transported, or present on, undue, from, to, or about the Premises. This indemnity is intended to be operable under 42 U.S.C. sections 9607, as amended, and any successor section.

The scope of the indemnity obligations includes, but is not limited to: (a) all consequential damages; (b) the cost of any required or necessary repair, cleanup, or detoxification of the applicable real estate and the preparation and implementation of any closure, remedial or other required plan, including without limitation; (i) the costs of removal or remedial action incurred by the United States government or the State of Florida or response costs incurred by any other person, or damages from injury to destruction of, or loss of, natural resources, including the cost of assessing such injury, destruction, or loss, incurred pursuant to the Comprehensive Environmental Response, Compensation and Liability Act, as amended; (ii) the clean-up costs, fines, damages, or penalties incurred pursuant to any applicable provisions of Florida law; and (iii) the cost and expenses of abatement, correction or cleanup, fines, damages, response costs, or penalties which arise from the provisions of any other statute, law, regulation, code ordinance, or legal requirement state or federal; and (c) liability for personal injury or property damage arising under any statutory or common law tort theory, including damages assessed for the maintenance of a public private nuisance, response costs, or for the carrying on of an abnormally dangerous activity.

- 8.22 No Extended Damages: For other and additional good and valuable consideration the receipt and sufficiency of which is hereby acknowledged, the Contractor covenants and agrees that in the event of any delay of construction or for any other reason or allegation or claim, and notwithstanding the reason of the delay, reason, claim or allegation or who caused them or the construction delay or whether they were caused by the City, that there will be no entitlement to Contractor to or for any direct or indirect financial damages or losses for extended corporate overhead impact, extended project overhead impacts, project support services, mobilization or demobilization or by whatever other label or legal concept or theory and types of names or labels or basis such claims may have, or any business damages or losses of whatever type or nature, and Contractor hereby waives any right to make any such claim or claims. This provision will have application and effect when construction delays are anticipated and agreed upon by both the City and the Contractor.
- 8.23 No Liens: If any Subcontractor, supplier, laborer, or materialmen of Contractor or any other person directly or indirectly acting for or through Contractor files or attempts to file a mechanic's or construction lien against the real property on which the work is performed or any part or against any personal property or improvements or claim against any monies due or to become due from the City to Contractor or from Contractor to a

Subcontractor, for or on account of any work, labor, services, material, equipment, or other items furnished in connection with the Work or any Change Order, Contractor agrees to satisfy, remove, or discharge such lien or claim at its own expense by bond, payment, or otherwise within twenty (20) days of the filing or from receipt of written notice from the City.

Additionally, until such time as such lien or claim is satisfied, removed or discharged by Contractor, all monies due to Contractor, or that become due to Contractor before the lien or claim is satisfied, removed or otherwise discharged, shall be held by City as security for the satisfaction, removal and discharge of such lien and any expense that may be incurred while obtaining such. If Contractor shall fail to do so, City shall have the right, in addition to all other rights and remedies provided by this Agreement or by law, to satisfy, remove, or discharge such lien or claim by whatever means City chooses at the entire and sole cost and expense of Contractor which costs and expenses shall, without limitation, include attorney's fees, litigation costs, fees and expenses and all court costs and assessments.

8.24 Weather Emergencies: Upon issuance of a Hurricane Watch by the National Weather Service, the Contractor shall submit to the City a plan to secure the work area in the event a Hurricane Warning is issued. The plan shall detail how the Contractor will secure the Premises, equipment and materials in a manner as to prevent damage to the Work and prevent materials and equipment from becoming a hazard to persons and property on and around the Premises. The plan shall include a time schedule required to accomplish the hurricane preparations and a list of emergency contacts that will be available and in the City before, during and immediately after the storm.

Upon issuance of a Hurricane Warning by the National Weather Service, if the Contractor has not already done so, the Contractor shall implement its hurricane preparedness plan. Cost of development and implementation of the hurricane preparedness plan shall be considered as incidental to construction. Cost of any clean up and rework required after the storm will be considered normal construction risk within Florida and shall not entitle the Contractor to any additional compensation. Contractor shall be entitled to request an extension in time for completion of the Work, in accordance with the provisions of Article 15 of this Agreement, equal to the time he is shut down for implementation of the preparedness plan, the duration of the storm and a reasonable period to restore the Premises.

8.25 Force Majeure: No Party shall hold the other responsible for damages or for delays in performance caused by force majeure, acts of God, or other acts or circumstances beyond the control of the other party or that could not have been reasonably foreseen and prevented. For this purposes, such acts or circumstances shall include, but not be limited to weather conditions affecting performance, floods, epidemics, war, riots, strikes, lockouts, or other industrial disturbances, or protest demonstrations. Should such acts or circumstances occur, the parties shall use their best efforts to overcome the difficulties arising therefrom and to resume the Work as soon as reasonably possible with the normal pursuit of the Work.

Inclement weather, continuous rain for less than three (3) days or the acts or omissions of subcontractors, third-party contractors, materialmen, suppliers, or their subcontractors, shall not be considered acts of force majeure.

No Party shall be liable for its failure to carry out its obligations under the Agreement during a

period when such Party is rendered unable by force majeure to carry out its obligation, but the obligation of the Party or Parties relying on such force majeure shall be suspended only during the continuance of the inability and for no longer period than the unexpected or uncontrollable event.

The Contractor further agrees and stipulates, that its right to excuse its failure to perform by reason of force majeure shall be conditioned upon giving written notice of its assertion that a Force Majeure delay has commenced within 96 hours after such an occurrence. The CONTRACTOR shall use its reasonable efforts to minimize such delays. The CONTRACTOR shall promptly provide an estimate of the anticipated additional time required to complete the Project.

8.26 PARTICIPATION BY DISADVANTAGED BUSINESS ENTERPRISES IN DEPARTMENT OF TRANSPORTATION FINANCIAL ASSISTED CONTRACTS:

The recipient shall not discriminate on the basis of race, color, national origin, or sex in the award and performance of any DOT-assisted contract or in the administration of its DBE program or the requirements of 49 CFR part 26. The recipient shall take all necessary and reasonable steps under 49 CFR part 26 to ensure nondiscrimination in the award and administration of DOT-assisted contracts. The recipient's DBE program, as required by 49 CFR part 26 and as approved by DOT, is incorporated by reference in this agreement. Implementation of this program is a legal obligation and failure to carry out its terms shall be treated as a violation of this agreement. Upon notification to the recipient of its failure to carry out its approved program, the Department may impose sanctions as provided for under Part 26 and may, in appropriate cases, refer the matter for enforcement under 18 U.S.C. 1001 and/or the Program Fraud Civil Remedies Act of 1986 (31 U.S.C. 3801 et seq.).

Additionally, the contractor assures that **they, the** sub recipient or **the** subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate. (This additional language must be included in each subcontract the prime contractor signs with a subcontractor.)

ARTICLE 9 – CITY’S RESPONSIBILITIES

- 9.1 The City shall furnish the data required of the City under the Contract Documents promptly and shall make payments to the Contractor promptly after they are due as provided in Article 7.
- 9.2 The City’s duties in respect of providing lands and easements and providing engineering surveys to establish reference points are set forth in the Contract Documents.
- 9.3 Technical Clarifications and Interpretations:
- 9.3.1 The City shall issue, with reasonable promptness, such written clarifications or interpretations of the Contract Documents as it may determine necessary, which shall be consistent with or reasonably inferable from the overall intent of the

Contract Documents. Should the Contractor fail to request interpretation of questionable items in the Contract Documents, the City shall not entertain any excuse for failure to execute the Work in a satisfactory manner.

9.3.2 The City shall interpret and decide matters concerning performance under the requirements of the Contract Documents, and shall make decisions on all claims, disputes or other matters in question. Written notice of each claim, dispute or other matter will be delivered by claimant to the other Party but in no event later than five (5) days after the occurrence of event, and written supporting data will be submitted to the other Party within five (5) days after such occurrence. All written decisions of the City on any claim or dispute will be final and binding.

9.4 The Contractor shall perform all Work to the reasonable satisfaction of the City in accordance with the Contract Documents. In cases of disagreement or ambiguity, the City shall decide all questions, difficulties, and disputes of whatever nature, which may arise under or by reason of this Agreement or the quality, amount and value of the Work, and the City's decisions on all claims, questions and determination are final.

ARTICLE 10 – BONDS AND INSURANCE

10.1 Public Construction and Other Bonds:

The Contractor shall furnish Public Construction or Performance and Payment Bonds ("Bond"), each in an amount at least equal to the Contract Price as security for the faithful performance and payment of all the Contractor's obligations under the Contract Documents. These Bonds shall remain in effect until at least one (1) year after the date of final payment, except as otherwise provided by law. All Bonds shall be furnished and provided by the surety and shall be in substantially the same form as prescribed by the Contract Documents and be executed by such sureties as (i) are licensed to conduct business in the State of Florida, and (ii) are named in the current list of Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies as published in Circular 570 (amended) by the Audit Staff Bureau of Accounts, U.S. Treasury Department and (iii) otherwise meet the requirements set forth herein that apply to sureties. All Bonds signed by an agent must be accompanied by a certified copy of the authority to act.

10.1.1 Performance Bond: The Contractor shall execute and record in the public records of Dade County, Florida a payment and performance bond in an amount at least equal to the Contract Price with a surety insurer authorized to do business in the State of Florida as surety ("Bon"), in accordance with Section 255.05, Florida Statutes (2014) as may be amended or revised, as security for faithful performance and payment of all of the Contractors obligations under the Contract Documents.

A Corporate Surety Bond legally issued, meeting the approval of the City in an amount not less than the Contract Price of such improvements, conditioned that the Contractor shall maintain and make all repairs to the improvements constructed by the Contractor at their own expense and free of charge to the City, for the period of one (1) year after the date of acceptance of the Work within such period by reason of any imperfection of the material used or by reason of any defective

workmanship, or any improper, imperfect or defective preparation of the base upon which any such improvement shall be laid.

10.2 Disqualification of Surety: If the Surety on any Bond furnished by the Contractor is declared bankrupt or becomes insolvent or its right to do business is terminated in the State of Florida or it ceases to meet the requirements of clauses (i) and (ii) of Paragraph 10.1, the Contractor shall within five (5) days thereafter substitute another Bond and Surety, both of which shall be acceptable to the City.

10.3 Insurance

10.3.1 Contractor shall provide and shall require all of its sub-contractors to provide, pay for, and maintain in force at all times during the term of the Agreement, such insurance, including Property Insurance (Builder's Risk), Commercial General Liability Insurance, Business Automobile Liability Insurance, Workers' Compensation Insurance, Employer's Liability Insurance, and Umbrella/Excess Liability, as stated below. Such policy or policies shall be issued by companies authorized to do business in the State of Florida and having agents upon whom service of process may be made in the State of Florida. A Sample Insurance Certificate shall be included with the bid to demonstrate the firm's ability to comply with insurance requirements. Provide a previous certificate or other evidence listing the insurance companies' names for all required coverage, and the dollar amounts of coverage.

A. The City is required to be named as additional insured on the Commercial General Liability insurance policy. BINDERS ARE UNACCEPTABLE. The insurance coverage required shall include those classifications, as listed in standard liability insurance manuals, which most nearly reflect the operations of the Contractor. Any exclusions or provisions in the insurance maintained by the Contractor that precludes coverage for the work contemplated in this Agreement shall be deemed unacceptable, and shall be considered a breach of contract.

B. The Contractor shall provide the City an original Certificate of Insurance for policies required by Article 10. All certificates shall state that the City shall be given ten (10) days' notice prior to expiration or cancellation of the policy. The insurance provided shall be endorsed or amended to comply with this notice requirement. In the event that the insurer is unable to accommodate, it shall be the responsibility of the Contractor to provide the proper notice. Such notification will be in writing by registered mail, return receipt requested and addressed to the Finance Department. Such policies shall: (1) name the insurance company or companies affording coverage acceptable to the City, (2) state the effective and expiration dates of the policies, (3) include special endorsements where necessary. Such policies provided under Article 10 shall not be affected by any other policy of insurance, which the City may carry in its own name.

C. Contractor shall as a condition precedent of this Agreement, furnish to the City of North Miami Beach, c/o Project Manager, 17050 NE 19th Ave., 2nd Floor, North Miami Beach, FL 33162. Certificate(s) of Insurance upon

execution of this Agreement, which indicate that insurance coverage has been obtained which meets the requirements as outlined below:

10.3.2 Property Insurance (Builder’s Risk): The Contractor shall purchase and maintain property insurance upon the Work at or off the site of 100% of the contract completed value. These policies shall insure the interest of the owner, contractor and subcontractors in the Work, and shall insure against “all risks” of physical loss and damage including theft, vandalism and malicious mischief, collapse and water damage. All such insurance required by this paragraph shall remain in effect until the Work is completed and accepted by the City.

10.3.3 Commercial General Liability

- A. Limits of Liability:
 - Bodily Injury and Property Damage - Combined Single Limit
 - Each Occurrence \$1,000,000
 - Project Aggregate \$1,000,000
 - General Aggregate \$2,000,000
 - Personal Injury \$1,000,000
 - Products/Completed Operations \$1,000,000

- B. Endorsements Required:
 - City of North Miami Beach included as an Additional Insured Broad Form
 - Contractual Liability
 - Waiver of Subrogation
 - Premises/Operations
 - Products/Completed
 - Operations Independent Contractors
 - Owners and Contractors Protective Liability
 - Contractors Pollution Liability

10.3.4 Business Automobile Liability

- A. Limits of Liability:
 - Bodily Injury and Property Damage - Combined Single Limit
 - All Autos used in completing the contract Including Hired, Borrowed or Non-Owned Autos
 - Any One Accident \$1,000,000

- B. Endorsements Required:
 - Waiver of Subrogation

10.3.5 Workers’ Compensation and Employer’s Liability Insurance

Limits: Workers’ Compensation – Per Florida Statute 440
 Employers’ Liability - \$500,000

Any firm performing work on behalf of the City of North Miami Beach must provide Workers' Compensation insurance. Exceptions and exemptions can only be made if they are in accordance with Florida Law.

Contractor must be in compliance with all applicable State and Federal workers' compensation laws, including the U.S. Longshore Harbor Workers' Act or Jones Act.

10.3.6 Umbrella/Excess Liability: The Contractor shall provide umbrella/excess coverage with limits of no less than \$2,000,000 excess of Commercial General Liability, Automobile Liability and Employer's Liability.

10.3.7 All insurance policies required above shall be issued by companies authorized to do business under the laws of the State of Florida, with the following qualifications:

The Contractor's insurance must be provided by an A.M. Best's "A-" rated or better insurance company authorized to issue insurance policies in the State of Florida, subject to approval by the City's Risk Manager. Any exclusions or provisions in the insurance maintained by the Contractor that precludes coverage for work contemplated in this project shall be deemed unacceptable, and shall be considered breach of contract.

NOTE: CITY BID NUMBER MUST APPEAR ON EACH CERTIFICATE.

Compliance with the foregoing requirements shall not relieve the Contractor of their liability and obligation under this section or under any other section of this Agreement.

The Contractor shall be responsible for assuring that the insurance certificates required in conjunction with this Section remain in force for the duration of the Project. If insurance certificates are scheduled to expire during the contractual period, the Contractor shall be responsible for submitting new or renewed insurance certificates to the City at a minimum of thirty (30) calendar days in advance of such expiration. In the event that expired certificates are not replaced with new or renewed certificates that cover the contractual period, the City shall:

- A. Suspend the Agreement until such time as the new or renewed certificates are received by the City.
- B. The City may, at its sole discretion, terminate the Agreement for cause and seek damages from the Contractor in conjunction with the violation of the terms and conditions of the Agreement.

ARTICLE 11- WARRANTY AND GUARANTEE, TESTS AND INSPECTIONS, CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

11.1 Warranty: The Contractor warrants and guarantees to the City that all Work will be in

accordance with the Contract Documents and will not be defective. Prompt notice of all defects shall be given to the Contractor. All defective work, whether or not in place, may be rejected, corrected or accepted as provided in this Article.

11.1.1 Warranty of Title: The Contractor warrants to the City that it possesses good, clear and marketable title to all equipment and materials provided and that there are no pending liens, claims or encumbrances against the equipment and materials.

11.1.2 Warranty of Specifications: The Contractor warrants that all equipment, materials and workmanship furnished, whether furnished by the Contractor, its subcontractors or suppliers, will comply with the specifications, drawings and other descriptions supplied or adopted and that all services will be performed in a workmanlike manner.

11.1.3 Warranty of Merchantability: The Contractor warrants that any and all equipment to be supplied pursuant to this Agreement is merchantable, free from defects, whether patent or latent in material or workmanship, and fit for the ordinary purposes for which it is intended.

11.2 Tests and Inspections: The Contractor shall give the Project Manager timely (minimum of thirty six (36) hours) notice of readiness of the Work for all required inspections, tests, or approvals.

11.2.1 If any law, ordinance, rule, regulation, code or order of any public body having jurisdiction requires any Work (or part thereof) to specifically be inspected, tested or approved, the Contractor shall assume full responsibility, pay all costs in connection therewith and furnish the Project Manager the required certificates of inspection, testing or approval. The Contractor shall also be responsible for and shall pay all costs in connection with any inspection or testing required in connection with the City's acceptance of a manufacturer, fabricator, supplier or distributor of materials or equipment submitted for approval prior to the Contractor's purchase thereof for incorporation of the Work.

11.2.2 All inspections, tests or approvals other than those required by law, ordinance, rule, regulation, code or order of any public body having jurisdiction shall be performed by the City or by a professional testing firm designated by the City. The City will pay for sampling and testing if the test results are passing. The Contractor will reimburse the City for sampling, testing, and retesting costs associated with failing tests.

11.2.3 Neither observations by the Project Manager nor inspections, tests or approvals by others shall relieve the Contractor from his obligations to perform the Work in accordance with Contract Documents.

11.3 Uncovering Work: If any work that is to be inspected, tested or approved is covered without approval or consent of the Project Manager, it must, if requested by the Project Manager, be uncovered for observation and/or testing. Such uncovering and replacement shall be at the Contractor's sole expense unless the Contractor has given the Project Manager timely notice of the Contractor's intention to cover such Work and the Project Manager has not acted with reasonable promptness in response to such notice.

11.3.1 If the Project Manager considers it necessary or advisable that Work covered in accordance with Paragraph 11.2.1, 11.2.2 and 11.2.3 be observed by the City or inspected or tested by others, the Contractor at the City's request, shall uncover, expose or otherwise make available for observation, inspection or testing as the Project Manager may require, that portion of the Work in question, furnishing all necessary labor, material and equipment. If it is found that such Work is defective, the Contractor shall bear all the expenses of such uncovering, exposure, observation, inspection and testing and of satisfactory reconstruction, including compensation for additional professional services, and an appropriate deductive Change Order shall be issued. If, however, such work is not found to be defective, the Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Time, or both, directly attributable to such uncovering, exposure, observation, inspection testing and reconstruction if he makes a claim therefore as provided in Articles 14 and 15.

11.4 City May Stop the Work: If the Work is defective, or the Contractor fails to supply sufficient skilled supervisory personnel or workmen or suitable materials or equipment or the work area is deemed unsafe, the City may order the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of the City to stop the Work shall not give rise to any duty on the part of the City to exercise this right for the benefit of the Contractor or any other party.

The City will not award any increase in Contract Price or Contract Time if the Work is stopped due to the circumstances described herein.

11.5 Correction or Removal of Defective Work Before Final Payment: If required by the Project Manager, the Contractor shall promptly, without cost to the City and as Specified by the Project Manager, either correct any defective Work, whether or not fabricated, installed or completed, or if the Work has been rejected by the City remove it from the site and replace it with non-defective Work.

11.6 One Year Correction Period After Final Payment: If within one (1) year after the date of final acceptance, or such longer period of time as may be prescribed by law or by the terms of any applicable special guarantee required by the Contract Documents, any work is found to be defective, the Contractor shall promptly, without cost to the City and in accordance with the City's written instructions, either correct such defective Work, or, if it has been rejected by the City, remove it from the site and replace it with non-defective Work.

If The Contractor does not promptly comply with the terms of such instructions or in an emergency where delay would cause serious risk of loss or damage, the City may have the defective Work corrected or the rejected Work removed and replaced, and all direct and indirect costs for such removal and replacement, including compensation for additional professional services, shall be paid by the Contractor.

11.7 Acceptance of Defective Work, Deductions: If, instead of requiring correction or removal and replacement of defective Work, the City, at the city's sole option, prefers to accept it, the City may do so. In such a case, if acceptance occurs prior to the Project Manager's recommendation of final payments, a Change Order shall be issued incorporating the

necessary revisions in the Contracts Documents, including appropriate reduction in the Contract Price; or if the acceptance occurs after such recommendation, an appropriate amount shall be paid by the Contractor to the City.

- 11.8 City May Correct Defective Work: If the Contractor fails within a reasonable time after written notice of the Project Manager to proceed to correct defective Work or to remove and replace rejected Work as required by the Project Manager in accordance with Paragraph 11.5, or if the Contractor fails to perform the Work in accordance with the Contract Documents, the City may, after seven (7) days written notice to the Contractor, correct and remedy any such deficiency. In exercising its rights under this paragraph, the City shall proceed expeditiously. To the extent necessary to complete corrective and remedial action, the City may exclude the Contractor from all or part of the site, take possession of all or part of the Work, suspend the Contractor's services related thereto and take possession of the Contractor's tools, construction equipment and materials stored at the site or elsewhere. The Contractor shall allow the City's representative agents and employees such access to the site as may be necessary to enable the City to exercise its rights under this paragraph. All direct and indirect costs of the City in exercising such rights shall be charged against the Contractor in an amount verified by the Project Manager, and a Change Order shall be issued incorporating the necessary revisions in the Contract Documents and a reduction in the Contract Price. Such direct and indirect costs shall include, in particular but without limitation, compensation for additional professional services required and costs of repair and replacement of work of others destroyed or damaged by correction, removal or replacement of the Contractor's defective Work. The Contractor shall not be allowed an extension of the Contract Time because of any delay in performance of the Work attributable to the exercise by the City of the City's right hereunder.

ARTICLE 12 – INDEMNIFICATION

- 12.1 Disclaimer of Liability: The City shall not at any time, be liable for injury or damage occurring to any person or property from any cause, whatsoever, arising out of Contractor's construction and fulfillment of this agreement.
- 12.2 Indemnification: For other, additional good valuable consideration, the receipt and sufficiency of which is hereby acknowledged:
- 12.2.1 Contractor shall, at its sole cost and expense, indemnify and hold harmless the City, its representatives, employees and elected and appointed officials from or on account of all claims, damages, losses, liabilities and expenses, direct, indirect or consequential including but not limited to fees and charges of engineers, architects, attorneys, consultants and other professionals and court costs arising out of or in consequence of the performance of this Agreement at all trial and appellate levels. Indemnification shall specifically include but not be limited to claims, damages, losses, liabilities and expenses arising out of or from (a) the negligent or defective design of the project and Work of this Agreement; (b) any act, omission or default of the Contractor, its Subcontractors, agents, servants or employees; (c) any and all bodily injuries, sickness, disease or death; (d) injury to or destruction of tangible property, including any resulting loss of use; (e) other such damages, liabilities, or losses received or sustained by any person or persons during or on account of any operations connected with the construction

of this Project including the warranty period; (f) the use of any improper materials; (g) any construction defect including both patent and latent defects; (h) failure to timely complete the work;

(i) The violation of any federal, state, county or city laws, ordinances or regulations by Contractor, its subcontractors, agents, servants, independent contractors or employees; (j) the breach or alleged breach by Contractor of any term of the Agreement, including the breach or alleged breach of any warranty or guarantee.

12.2.2 Contractor agrees to indemnify, defend, save and hold harmless the City, its officers, agents and employees, from all damages, liabilities, losses, claims, fines and fees, and from any and all suits and actions of every name and description that may be brought against City, its officers, agents and employees, on account of any claims, fees, royalties, or costs for any invention or patent and/or for the infringement of any and all copyrights or patent rights claimed by any person, firm, or corporation.

12.2.3 Contractor shall pay all claims, losses, liens, settlements or judgments of any nature in connection with the foregoing indemnifications including, but not limited to, reasonable attorney's fees and costs for trials and appeals.

12.2.4 If any Subcontractor, supplier, laborer, or materialmen of Contractor or any other person directly or indirectly acting for or through Contractor files or attempts to file a mechanic's or construction lien against the real property on which the work is performed or any part or against any personal property or improvements thereon or make a claim against any monies due or to become due from the City to Contractor or from Contractor to a Subcontractor, for or on account of any work, labor, services, material, equipment, or other items furnished in connection with the Work or any change order, Contractor agrees to satisfy, remove, or discharge such lien or claim at its own expense by bond, payment, or otherwise within five (5) days of the filing or from receipt of written notice from the City.

Additionally, until such time as such lien or claim is satisfied, removed or discharged by Contractor, all monies due to Contractor, or that become due to Contractor before the lien or claim is satisfied, removed or otherwise discharged, shall be held by City as security for the satisfaction, removal and discharge of such lien and any expense that may be incurred while obtaining the discharge. If Contractor shall fail to do so, City shall have the right, in addition to all other rights and remedies provided by this Agreement or by law, to satisfy, remove, or discharge such lien or claim by whatever means City chooses at the entire and sole cost and expense of Contractor which costs and expenses shall, without limitation, include attorney's fees, litigation costs, fees and expenses and all court costs and assessments, and which shall be deducted from any amount owing to Contractor. In the event the amount due Contractor is less than the amount required to satisfy Contractor's obligation under this, or any other article, paragraph or section of this Agreement, the Contractor shall be liable for the deficiency due the City.

12.2.5 The Contractor and the City agree that Section 725.06(2), Florida Statutes controls the extent and limits of the indemnification and hold harmless provisions

of this Agreement, if any, and that the parties waive any defects in the wording of this Article that runs afoul of said statutory section.

ARTICLE 13 – CHANGES IN THE WORK

- 13.1 Without invalidating this Agreement, the City may, at any time or from time to time order additions, deletions or revisions in the Work through the issuance of Change Orders. Upon receipt of a Change Order, the Contractor shall proceed with the Work involved. All Work shall be executed under the applicable conditions of the Contract Documents. If any Change Order causes an increase or decrease in the Contract Price or an extension or shortening of the Contract Time, an equitable adjustment will be made as provided in Article 14 or Article 15 on the basis of a claim made by either Party.
- 13.2 The Project Manager may authorize minor changes in the work not involving an adjustment in the Contract Price or the Contract Time, which are consistent with the overall intent of the Contract Documents. Such changes must be in writing and signed by the City and the Contractor.
- 13.3 If notice of any change affecting the general scope of the Work or change in the Contract Price is required by the provisions of any Bond to be given to the Surety, it will be the Contractor's responsibility to so notify the Surety, and the amount of each applicable Bond shall be adjusted accordingly. The Contractor shall furnish proof of such adjustment to the City.

ARTICLE 14 – CHANGE OF CONTRACT PRICE

Change of Contract Price, approved by CITY, shall be computed as follows:

- 14.1 Cost of the Work: The term "Cost of the Work" means the sum of all direct costs necessarily incurred and paid by Contractor in the proper performance of the Work. Except as otherwise may be agreed to in writing by the City, these costs shall be in amounts no higher than those prevailing in the City and shall include only the following items and shall not include any of the costs itemized in Paragraph 14.2.
- 14.1.1 Payroll costs for employees in the direct employ of the Contractor in the performance of the Work under schedules of job classifications agreed upon by the City and the Contractor. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus and cost of fringe benefits which shall include social security contributions, unemployment, excise and payroll taxes, worker's compensation, health and retirement benefits, bonuses, sick leave, vacation and applicable holiday pay.
- 14.1.2 Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage, and required suppliers and field services. All cash discounts, rebates and refunds and all returns from sale of surplus materials and equipment shall accrue to the City, and the Contractor shall make provisions so that they may be obtained.

14.1.3 Supplemental costs including the following:

- 14.1.3.1 Cost, including transportation and maintenance of all materials, supplies, equipment, machinery, appliances, office and temporary facilities at the site and hand tools not owned by the workers, which are consumed in the performance of the Work.
- 14.1.3.2 Rentals of all construction equipment and machinery and the parts whether rented from the Contractor or others in accordance with rental agreements approved by the City, and the costs of transporting, loading, unloading, installation, dismantling and removal. The rental of any such equipment, machinery or parts shall cease when the use is no longer necessary for the Work.
- 14.1.3.3 Sales, consumer, use or similar taxes related to the Work and for which the Contractor is liable, imposed by laws and regulations.
- 14.1.3.4 Royalty payments and fees for permits and licenses.
- 14.1.3.5 The cost of utilities, fuel and sanitary facilities at the Work site.
- 14.1.3.6 Minor expenses such as telegrams, long distance telephone calls, telephone service at the site, expressage and similar petty cash items in connection with the Work.
- 14.1.3.7 Cost of premiums for additional bonds and insurance required because of changes in the Work.

14.2 The Contract Price may only be increased by a Change Order when Work is modified in accordance with Article 13 and approved by the CITY in writing. Any claim for an increase in the Contract Price resulting from a Change Order shall be based on written notice delivered to the Project Manager within ten (10) days of the occurrence of the Change Order giving rise to the claim. Notice of the amount of the claim with supporting data shall be included in the Change Order and delivered within twenty (20) days of such occurrence unless Project Manager allows an additional period of time to ascertain accurate cost data. Any change in the Contract Price resulting from any such claim shall be incorporated in the Change Order.

14.3 Not Included in the Cost of the Work: The term “cost of the Work” shall not include any of the following:

14.3.1 Payroll costs and other compensation of the Contractor’s officers executives, principals (of partnership and sole proprietorships), general managers, engineers, architects, estimators, attorneys, auditor, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks and other personnel employed by the Contractor whether at the site or in the Contractor’s principal or branch office for general administration of the work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 14.1.1, all of which are to be considered administrative costs covered by the Contractor’s fee.

- 14.3.2 Expenses of the Contractor's principal and branch offices other than the Contractor's office at the site.
- 14.3.3 Any part of the Contractor's capital expenses, including interest on the Contractor's capital employed for the Work and charges against the Contractor for delinquent payments.
- 14.3.4 Cost of premiums for all bonds and for all insurance whether or not the Contractor is required by the Contract Documents to purchase and maintain the same.
- 14.3.5 Costs due to the negligence of the Contractor, any subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied and making good any damage to property.
- 14.3.6 Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraph 14.1
- 14.4 Basis of Compensation: The Contractor's compensation, allowed to the Contractor for overhead and profit, shall be determined as follows:
- 14.4.1 A mutually acceptable negotiated fee:
- 14.4.1.1 For costs incurred under Paragraphs 14.1.1 and 14.1.2, the Contractor's fee shall not exceed five percent (5%).
- 14.4.1.2 No fee shall be payable on the basis of costs itemized under Paragraphs 14.1.3.1, 14.1.3.2, 14.1.3.3, 14.1.3.4, 14.1.3.5, 14.1.3.6, 14.1.3.7, 14.3.1, 14.3.2, 14.3.3, 14.3.4, 14.3.5 and 14.3.6.
- 14.4.1.3 The amount of credit to be allowed by the Contractor to the City for any such change which results in a net decrease plus a deduction in the Contractor's fee by an amount equal to five percent (5%) for the net decrease.
- 14.4.1.4 When both additions and credits are involved in any one change the combined overhead and profit shall be figured on the basis of net increase if any, however, not to exceed five percent (5%) of the agreed compensation. Profit will not be paid on any Work not performed.
- 14.5 Cost Breakdown Required: Whenever the cost of any Work is to be determined pursuant to this Article, the Contractor will submit in form acceptable to the City an itemized cost breakdown together with supporting documentation. Whenever a change in the Work is to be based upon mutual acceptance of a lump sum, whether the amount is an addition, credit, or no-charge-in-cost, the Contractor shall submit an

estimate substantiated by a complete itemized breakdown:

14.5.1 The breakdown shall list quantities and unit prices for materials, labor, equipment and other items of cost.

14.5.2 Whenever a change involves the Contractor and one (1) or more subcontractors and the change is an increase in the agreed compensation, the overhead and profit percentage for the Contractor and each subcontractor shall be itemized separately.

14.6 Time for the City to Approve Extra Work: Any Extra Work in an amount up to and not exceeding a cumulative amount of \$50,000 for a specific project can be approved by the City Manager and shall require a written Change Order proposal to be submitted to the Public Works Director for submittal and approval by the City Manager. Extra Work exceeding the cumulative amount of \$50,000 for a specific project must be approved by the City Commission and a written Change Order proposal must be submitted to the Public Works Director for submittal and approval by the City Manager and City Commission. No financial or time claim for delay to the project resulting from the Change Order approval process outlined above under Section 14.6 will be allowed.

ARTICLE 15 – CHANGE OF THE CONTRACT TIME

15.1 The Contract Time may only be changed by a Change Order. Any claim for an extension in the Contract Time shall be based on written notice delivered to the Project Manager within five (5) days of the occurrence of the event giving rise to the claim. Any change in the Contract Time resulting from any such claim shall be incorporated in a Change Order.

15.2 The Contract Time will be extended in an amount equal to time lost due to delays beyond the control of the Contractor if a claim is made there for as provided in Paragraph 15.1. Such delays shall include but not be limited to, acts or neglect by the City, or to fires, floods, labor disputes, epidemics, abnormal weather conditions, or acts of God.

15.3 All time limits stated in the Contract Documents are of the essence. The provisions of this Article 15 shall not exclude recovery for damages for delay by the Contractor.

15.4 Delays caused by or resulting from entities, contractors or subcontractors who are not affiliated with the CONTRACTOR (non-affiliated Contractors) shall not give rise to a claim by the CONTRACTOR for damages for increases in material and/or labor costs. Such entities, contractors and subcontractors include, but are not limited to, the City's contractors and subcontractors, Florida Power and Light Company, AT&T and Florida East Coast Railway, LLC.

ARTICLE 16 – LIQUIDATED DAMAGES

16.1 Upon failure of the Contractor to complete the Work within the time specified for completion, the Contractor shall pay to the City the sum of **Five Hundred Dollars (\$500.00)** for each and every calendar day that the completion of the Work is delayed beyond the time specified in this Agreement for completion, as fixed and agreed

liquidated damages and not as a penalty, so long as the delay is caused by the Contractor. Should an act of God or the acts or omissions of the City, its agents or representatives, in derogation to the terms of this Agreement cause the delay, the Contractor shall not be responsible for the delay nor liquidated damages. Liquidated damages are fixed and agreed upon between the Parties, recognizing the impossibility of precisely ascertaining the amount of damages that will be sustained by the City as a consequence of such delay and both parties desiring to obviate any question of dispute concerning the amount of damages and the cost and effect of the failure of the Contractor to complete the Work on time. Liquidated damages shall apply separately to each portion of the Work for which a time of completion is given. The City shall have the right to deduct from or retain any compensation which may be due or which may become due and payable to the Contractor the amount of liquidated damages, and if the amount retained by the City is insufficient to pay in full such liquidated damages, the Contractor shall pay all liquidated damages in full. The Contractor shall be responsible for reimbursing the City, in addition to liquidated damages or other damages for delay, for all costs of engineering, architectural fees, and inspection and other costs incurred in administering the construction of the Project beyond the completion date specified or beyond an approved extension of time granted to the Contractor whichever is later. Delays caused by or resulting from entities, contractors or subcontractors who are not affiliated with the Contractor shall not give rise to a claim by Contractor for damages for increase in material and/or labor costs. Such entities, contractors and subcontractors include, but are not limited to, the City's contractors and subcontractors, Florida Power and Light Company, AT&T, and Florida East Coast Railway, LLC.

- 16.2 No Extended Damages: For other and additional good and valuable consideration the receipt and sufficiency of which is hereby acknowledged, the Contractor covenants and agrees that in the event of any delay of construction or for any reason, allegation or claim, and notwithstanding the reason of the delay, reason, claim or allegation or who caused them or the construction delay or whether they were caused by the City, that there will be no entitlement to Contractor to or for any direct or indirect financial damages or losses for extended corporate overhead impact, extended project overhead impacts, project support services, mobilization or demobilization or by whatever other label or legal concept or theory and types of names or labels or basis such claims may have, or any business damages or losses of whatever type or nature, and Contractor hereby waives any right to make any such claim or claims. This provision will have application and effect when construction delays are anticipated and agreed upon by both the City and the Contractor.

ARTICLE 17 – SUSPENSION OF WORK AND TERMINATION

- 17.1 City May Suspend Work: The City may, at any time and without cause, suspend the Work or any portion of the Work for a period of not more than ninety (90) days by notice in writing to the Contractor which shall fix the date on which Work shall be resumed. The Contractor shall resume the Work on the date fixed. The Contractor will be allowed an increase in the Contract Price or an extension of the Contract Time, or both, directly attributable to any suspension, if the Contractor makes a claim as provided in Articles 14 and 15.
- 17.2 City May Terminate Work: The City retains the right to terminate this Agreement, with thirty (30) days prior written notice. Additionally, the City may also terminate this Agreement

upon 15 days' notice upon the occurrence of any one or more of the following events:

- 17.2.1 If the Contractor commences a voluntary case or a petition is filed against the Contractor, under any chapter of the Bankruptcy Code, or if the Contractor takes any equivalent or similar action by filing a petition or otherwise under any other federal or state law in effect at such time relating to the bankruptcy or insolvency.
 - 17.2.2 If the Contractor makes a general assignment for the benefit of creditors.
 - 17.2.3 If a trustee, receiver, custodian or agent of the Contractor is appointed under applicable law or under Contract, whose appointment or authority to take charge of property of the Contractor is for the purpose of enforcing a lien against such property or for the purpose of general administration of such property for the benefit of the Contractor's creditors.
 - 17.2.4 If the Contractor persistently fails to perform the Work in accordance with the Contract Documents, including but not limited to, failure to supply sufficient skilled Workers or suitable materials or equipment or failure to adhere to the progress schedule as same may be revised from time to time.
 - 17.2.5 If the Contractor repeatedly fails to make prompt payments to subcontractors or for labor, material or equipment.
 - 17.2.6 If the Contractor repeatedly disregards proper safety procedures.
 - 17.2.7 If the Contractor disregards any local, state or federal laws or regulations.
 - 17.2.8 If the Contractor otherwise violates any provisions of this Agreement.
- 17.3 If the Contractor, within a period of ten (10) calendar days after such notice, shall not proceed in accordance therewith, the City may exclude the Contractor from the Work site and take the prosecution of the Work out of the hands of the Contractor, and take possession of the Work and all of the Contractor's tools, appliances, construction equipment and machinery at the site and use them without liability to the City for trespass or conversion, incorporate in the Work all materials and equipment stored at the site or for which the City has paid the Contractor but which are stored elsewhere. And Further, the Contractor may be excluded from the Work site and the City take possession of the Work and of all the Contractor's tools, appliances, construction equipment and machinery at the site and use them without liability to the City for trespass or conversion, incorporate in the Work all materials and equipment stored at the site or for which the City has paid the Contractor but which are stored elsewhere, and finish the Work as the City may deem expedient. In this instance, the Contractor shall not be entitled to receive any further compensation until the Work is finished.
- 17.3.1 If after notice of termination of Contractor's right to proceed, it is determined for any reason that Contractor was not in default, the rights and obligations of the City and Contractor shall be the same as if the notice of termination had been issued pursuant to the Termination for Convenience Clause as set forth in Section 17.5 below.

- 17.3.2 Upon receipt of Notice of Termination pursuant to Sections 17.2 or 17.5, Contractor shall promptly discontinue all affected work unless the Notice of Termination directs otherwise and deliver or otherwise make available to City all data, drawings, specifications reports, estimates, summaries and such other information as may have been required by the Contract Documents whether completed or in process.
- 17.4 If the Contractor commits a default due to its insolvency or bankruptcy, the following shall apply:
- 17.4.1 Should this Agreement be entered into and fully executed by the parties, funds released and the Contractor (Debtor) files for bankruptcy, the following shall occur:
- 17.4.1.1 In the event the Contractor files a voluntary petition under 11 U.S.C. 301 or 302, or an order for relief is entered under 11 U.S.C. 303, the Contractor shall acknowledge the extent, validity, and priority of the lien recorded in favor of the City. The Contractor further agrees that in the event of this default, the City shall, at its option, be entitled to seek relief from the automatic stay pursuant to 11 U.S.C. 362. The City shall be entitled to relief from the automatic stay pursuant to 11 U.S.C. 362(d) (1) or (d) (2), and the Contractor agrees to waive the notice provisions in effect pursuant to 11 U.S.C. 362 and any applicable Local Rules of the United States Bankruptcy Court. The Contractor acknowledges that such waiver is done knowingly and voluntarily.
- 17.4.1.2 Agreement constitutes an executory contract within the meaning of 11 U.S.C. 365. The Contractor acknowledges that this Agreement is not capable of being assumed pursuant to 11 U.S.C. 365(c) (2), unless the City expressly consents in writing to the assumption. In the event the City consents to the assumption, the Contractor agrees to file a motion to assume this Agreement within ten (10) days after receipt of written consent from the City, regardless of whether the bankruptcy proceeding is pending under Chapter 7, 11, or 13 of Title 11 of the United States Code. The Contractor further acknowledges that this Agreement is not capable of being assigned pursuant to U.S.C. 365(b) (1).
- 17.5 Termination for Convenience: This Contract may be terminated for convenience in writing by City upon thirty (30) days written notice to Contractor (delivered by certified mail, return receipt requested) of intent to terminate and the date on which such termination becomes effective. In such case, Contractor shall be paid for all work executed and expenses incurred prior to termination. In addition to termination settlement costs reasonably incurred by Contractor relating to commitments which had become firm prior to the termination. Payment shall include reasonable profit for work/services satisfactorily performed. No payment shall be made for profit for work/services which have not been performed.
- 17.6 Where the Contractor's service have been so terminated by the City, the termination shall not affect any rights of the City against the contractor then existing or which may thereafter

accrue. Any retention or payment of moneys due the Contractor by the City will not release the Contractor from liability.

- 17.7 The Contractor has no right, authority or ability to terminate the Work except for the wrongful withholding of any payments due the Contractor from the City.

ARTICLE 18 – DISPUTE RESOLUTION

- 18.1 Resolution of Disputes: Questions, claims, difficulties and disputes of whatever nature which may arise to the technical interpretation of the Contract Documents and fulfillment of this Agreement as to the character, quality, amount and value of any work done and materials furnished, or proposed to be done or furnished under or, by reason of, the Contract Documents which cannot be resolved by mutual agreement of the Contract Administrator and Contractor shall be submitted to the Consultant for resolution. When either party has determined that a disputed question, claim, difficulty or dispute is at an impasse, that party shall notify the other party in writing and submit question, claim, difficulty or dispute to the Consultant for resolution. The parties may agree to a proposed resolution at any time without the involvement and determination of the Consultant.
- 18.1.1 Consultant shall notify Contract Administrator and Contractor in writing of Consultant's decision within twenty-one (21) calendar days from the date of the submission of the question, claim, difficulty or dispute, unless Consultant requires time to gather information or allow the parties to provide additional information.
- 18.1.2 In the event the determination of a dispute by the Consultant under this Article is unacceptable to any of the parties hereto, the party objecting to the determination must notify the other party and the City Manager, in writing within ten (10) days after receipt of the determination. The notice must state the basis of the objection and the proposed resolution. Final resolution of such dispute shall be made by the City Manager. The City Manager's decision shall be final and binding on the parties.
- 18.1.3 All non-technical administrative disputes (such as billing and payment) shall be determined by Contract Administrator.
- 18.1.4 During the dependency of any dispute and after a determination thereof, Contractor, Consultant, and Contract Administrator shall act in good faith to mitigate any potential damages including utilization of construction schedule changes and alternate means of construction. During the pendency of any dispute arising under this Agreement, other than termination herein, Contractor shall carry on the Work and adhere to the progress. The Work shall not be delayed or postpone pending resolution of any disputes or disagreements.
- 18.1.5 For any disputes which remain unsolved, within sixty (60) calendar days after Final Completion of the Work, the parties shall participate in mediation to address all

unresolved disputes. A mediator shall be mutually agreed upon by the parties. Should any objection not be resolved in mediation, the parties retain all their legal rights and remedies under applicable law. If a party objecting to a determination, fails to comply in strict accordance with the requirements of this Article, said party specifically waives all of its rights provided hereunder, including its rights and remedies under applicable law.

ARTICLES 19 - NOTICES

19.1 All notices required by any of the Contract Documents shall be in writing and shall be deemed delivered upon mailing by certified mail, return receipt requested to the following:

To the City:

City Manager’s Office
City of North Miami Beach
17011 NE 19th Ave. 4th Floor
North Miami Beach, Florida
33162
Telephone No. (305) 948-2900
Facsimile No. (305) 957-3602

Office of the City Attorney
City of North Miami Beach
17011 NE 19th Ave. 4th Floor
North Miami Beach, Florida
33162
Telephone No. (305) 948-2939
Facsimile No. (305) 787-6004

With copy to the:

Project Manager
City of North Miami Beach
17050 NE 19th Ave. 2nd Floor
North Miami Beach, FL 33162

To the Contractor:

ARTICLE 20 – LIMITATION OF LIABILITY

- 20.1 The City desires to enter into this Agreement only if in so doing the City can place a limit on the City's liability for any cause of action arising out of this Agreement, so that the City's liability for any breach never exceeds the sum of \$1,000. For other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Contractor expresses its willingness to enter into this Agreement with the knowledge that the Contractor's recovery from the City to any action or claim arising from the Agreement is limited to a maximum amount of \$1,000, which amount shall be reduced by the amount actually paid by the City to the Contractor pursuant to this Agreement, for any action or claim arising out of this Agreement. Nothing contained in this paragraph or elsewhere in this Agreement is in any way intended either to be a waiver of the limitation placed upon the City's liability as set forth in Section 768.28, Florida Statutes, or to extend the City's liability beyond the limits established in said Section 768.28; and no claim or award against the City shall include attorney's fees, investigative costs, expert fees, suit costs or pre-judgment interest.
- 20.2 No Extended Damages: For other and additional good and valuable consideration the receipt and sufficiency of which is hereby acknowledged, the Contractor covenants and agrees that in the event of any delay of construction or for any reason, allegation or claim, and notwithstanding the reason of the delay, reason, claim or allegation or who caused them or the construction delay or whether they were caused by the City, that there will be no entitlement to Contractor to or for any direct or indirect financial damages or losses for extended corporate overhead impact, extended project overhead impacts, project support services, mobilization or demobilization or by whatever other label or legal concept or theory and types of names or labels or basis such claims may have, or any business damages or losses of whatever type or nature, and Contractor hereby waives any right to make any such claim or claims. This provision will have application and effect when construction delays are anticipated and agreed upon by both the City and the Contractor.

ARTICLE 21 – GOVERNING LAW

- 21.1 This Agreement shall be governed by the laws of the State of Florida. Both Parties agree that the courts of the State of Florida shall have jurisdiction of any claim arising in connection with this Agreement. Venue for any claim, objection or dispute arising out of this Agreement shall be in Dade County, Florida. **By entering into this Contract, Contractor and City hereby expressly waive any rights either party may have to a trial by jury or any civil litigation related to, or arising out of the Project. Contractor shall specifically bind all subcontractors to the provisions of this Contract.**

ARTICLE 22 – MISCELLANEOUS

- 22.1 The duties and obligations imposed by this Agreement and the rights and remedies available to the parties and, in particular but without limitation, the warranties, guaranties and obligations imposed upon the Contractor and all of the rights and remedies available to the City, are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by laws or regulations, by special warranty or guarantee or by other provisions of the Contract Documents, and the provisions of this Paragraph will be as effective as if repeated specifically in the Contract Documents, and the provisions of this Paragraph will survive final payment and termination or completion of this Agreement.

- 22.2 The Contractor shall not assign or transfer this Agreement or its rights, title or interests. The obligations undertaken by the Contractor pursuant to this Agreement shall not be delegated or assigned to any other person or firm. Violation of the terms of this Paragraph shall constitute a material breach of Agreement by the Contractor and the City any, at its discretion, cancel this Agreement and all rights, title and interest of the Contractor which shall immediately cease and terminate.
- 22.3 The Contractor and its employees, volunteers and agents shall be and remain an independent contractors and not agents or employees of the City with respect to all of the acts and services performed by and under the terms of this Agreement. This Agreement shall not in any way be constructed to create a partnership, association or any other kind of joint undertaking or venture between the Parties.
- 22.4 The City reserves the right to audit the records of the Contractor relating in any way to the Work to be performed pursuant to this Agreement at any time during the performance and term of this Agreement and for a period of three (3) years after completion and acceptance by the City. If required by the City, the Contractor agrees to submit to an audit by an independent certified public accountant selected by the City. The Contractor shall allow the City to inspect, examine and review the records of the Contractor at any and all times during normal business hours during the term of this Agreement.
- 22.5 The remedies expressly provided in this Agreement to the City shall not be deemed to be exclusive but shall be cumulative and in addition to all other remedies in favor of the City now or later existing at law or in equity.
- 22.6 Should any part, term or provisions of this Agreement be decided by the courts to be invalid, illegal or in conflict with any state or federal law, the validity of the remaining portion or provision shall not be affected.
- 22.7 Prohibition Against Contracting With Scrutinized Companies: Subject to *Odebrecht Construction, Inc., v. Prasad*, 876 F.Supp.2d 1305 (S.D. Fla. 2012), *affirmed*, *Odebrecht Construction, Inc., v. Secretary, Florida Department of Transportation*, 715 F.3d 1268 (11th Cir. 2013), with regard to the "Cuba Amendment," the Contractor certifies that it is not on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List or the Scrutinized Companies that Boycott Israel List created pursuant to Section 215.4725, Florida Statutes (2016), that it is not engaged in a boycott of Israel, and that it does not have business operations in Cuba or Syria, as provided in section 287.135, Florida Statutes (2016), as may be amended or revised. The City may terminate this Agreement at the City's option if the Contractor is found to have submitted a false certification as provided under subsection (5) of section 287.135, Florida Statutes (2016), as may be amended or revised, or been placed on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List or the Scrutinized Companies that Boycott Israel List created pursuant to Section 215.4725, Florida Statutes (2016), or is engaged in a boycott of Israel or has been engaged in business operations in Cuba or Syria, as defined in Section 287.135, Florida Statutes (2016), as may be amended or revised.

- 22.8 The CONTRACTOR understands the City is subject to Florida's Public Records Act, Chapter 119, FL. Stat. and that any such books, records, documents and data maintained by the City are public records unless expressly exempted by general law. CONTRACTOR agrees that all documents and advertisements maintained and generated pursuant to this Agreement shall be subject to all provisions of Chapter 119, Florida Statutes. It is further understood that any report, tracing, plan, map or other work product, without limitation, given by City to CONTRACTOR pursuant to this Agreement shall at all times remain the property of City, shall be returned to City, and shall not be used by CONTRACTOR for any other purpose without the written consent of the City. CONTRACTOR shall comply with the requirements of Florida Statutes 119.071 to the extent applicable to CONTRACTOR.

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 AGREEMENT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT (TELEPHONE NUMBER: (305) 787-6001, E-MAIL ADDRESS: CITYCLERK@CITYNMB.COM, AND MAILING ADDRESS: CITY CLERK, NMB CITY HALL, 17011 N.E. 19 AVENUE, NORTH MIAMI BEACH, FLORIDA 33162-3100).

22.9 ORDER OF PRECEDENCE

In the event there is a conflict between this agreement, the ITB, contractors' response, or scope of work, the order of precedence shall be this agreement, the ITB, and the contractors' response. The city expressly rejects any additional terms or conditions not consistent with the terms herein.

Signature page to follow

IN WITNESS WHEREOF, the parties hereto have made and executed this Agreement on this _____ day of _____, 2020.

CONTRACTOR

CITY OF NORTH MIAMI BEACH

Signature

City Manager

Name

Date

Title

Approved as to form and legal sufficiency:

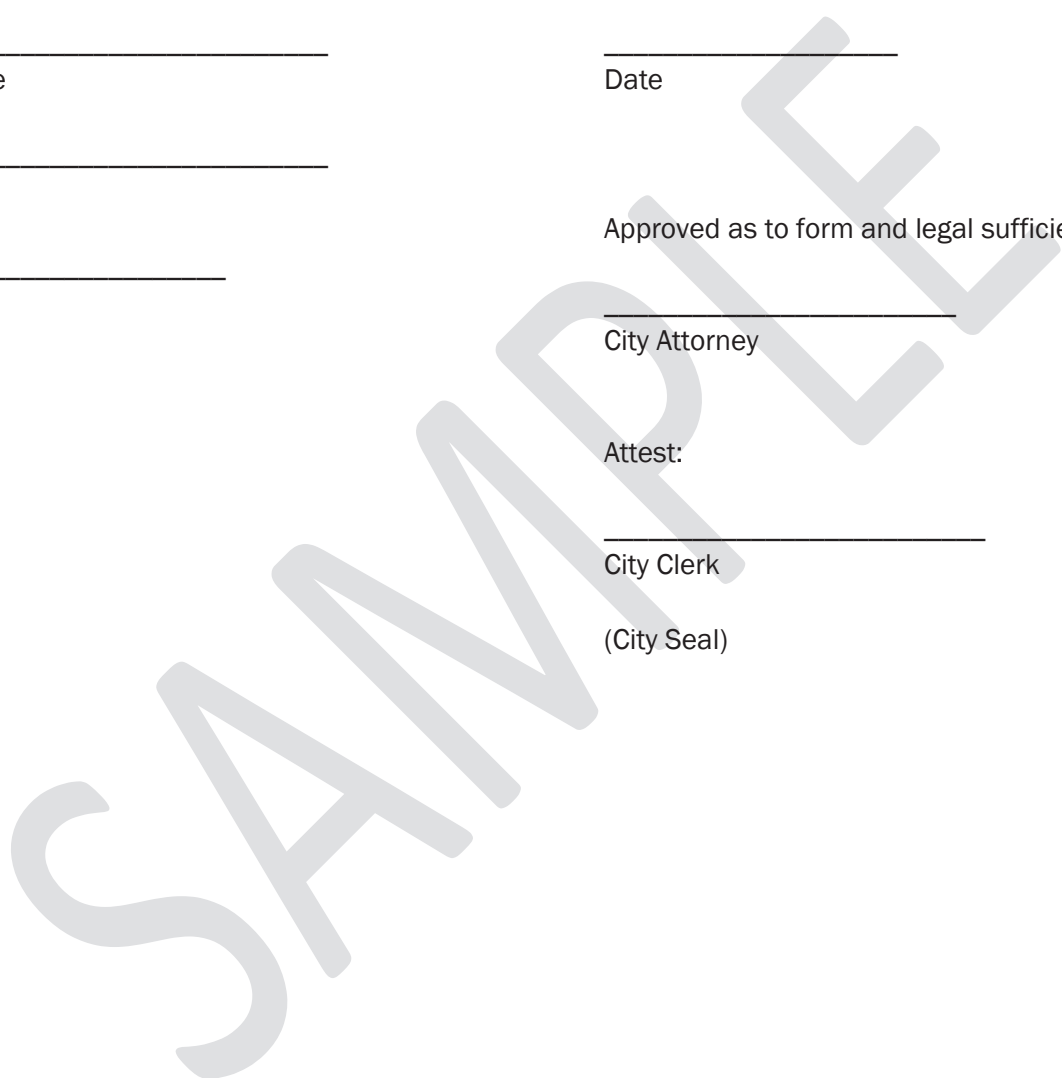
Date

City Attorney

Attest:

City Clerk

(City Seal)



SECTION 01025 - MEASUREMENT AND PAYMENT

PART 1 - GENERAL

1.01 SCOPE

- A. The CITY intends to award the Contract to the lowest qualified Total Base Bid. It is intended that all work required to complete this Project will be included in the various bid items described below. In an effort to minimize pavement restoration, the project is designed with trenchless installation of long water services. Alternative #1 considers the use of open cut installation for these services, however doing so requires resurfacing of the entire roadway. Alternate #1 pricing is not mandatory for a complete bid. Alternative #1 bid items will only be accepted if resulting in a reduction in project costs. Acceptance is at the sole discretion of the CITY. If accepted, the Total Base Bid will be adjusted accordingly.
- B. The prices stated in the Bid include full compensation for overhead and profit, all costs and expenses for taxes, labor, equipment, furnishing and repairing small tools and ordinary equipment, patent fees and royalties, bond, insurance, labor for handling materials during inspection, together with any and all other costs and expenses for performing and completing the work as shown on the Contract Drawings and specified herein.
- C. The prices stated in the Bid include full compensation for removal and disposal of waste, cleanup, and restoration of all improvements incidental to construction for which there are no other bid items; including but not limited to, sprinkler systems, drainage systems, guardrails, landscaping, fences, curbs and gutters, and all other work not included in other bid items.
- D. The CONTRACTOR's attention is called to the fact that the quotations for the various items of work are intended to establish a total price for completing the work in its entirety. Should the CONTRACTOR determine that the Proposal or list of Bid Items has not established a price for some item of work; the CONTRACTOR shall include that work in some other applicable Bid Item, so that the Proposal for the project reflects the CONTRACTOR's total price for completing the work in its entirety.

1.02 PAYMENT ITEMS

The format for Payment Requests shall be as directed by the ENGINEER. This shall include the level of detail and grouping of pay items.

A. **Item No. 1 - Mobilization and Site Preparation and Demolition**

The work and incidental costs specified under Mobilization will be paid lump sum and include full compensation for furnishing all labor, tools, materials and equipment, including but not limited to site preparation, surveying both horizontal and vertical control for construction, surveyed construction as-builts, tree trimming, protection of existing utilities during construction, excavation, dewatering (if necessary), adherence to Trench Safety Act, demolition of existing piping and removal of said piping as shown on the drawings necessary for completion of the item. Includes but not limited to, bonds and insurance, those operations necessary for the movement of personnel, equipment, supplies, and incidentals to the project site and for the establishment of temporary offices, buildings, safety equipment and first aid supplies, sanitary and other facilities. Include any other preconstruction expense, including videography of pre-construction conditions, protection of existing trees with tree barricade, coordination with franchise utilities including holding

of utility poles during construction, necessary for the start of the work, excluding the cost of construction materials. Payment of Mobilization costs exceeding 10% of the total Contract amount will be deferred to substantial completion.

B. Item No. 2 - Testing and Quality Control

Quality Control is a requirement of entire project and therefore does not have a separate pay item. Testing Services will be invoiced monthly by City's approved testing consultant and submitted through CONTRACTOR for processing and payment. In consideration for processing and coordinating Testing Services, CONTRACTOR shall include a 10% mark-up in submitting Testing Services invoice for payment. Refer to Testing and Quality Control Services, Section 01400. Price will be based upon an allowance for such services, payment will be based upon actual of invoices.

C. Item No. 3 - Maintenance of Traffic

Payment for maintenance of traffic will be made in equal monthly draws dispensed over the duration of the contract totaling to the lump sum price named in the Bid Schedule. Refer to Maintenance of Traffic, Section 01570, and all other references to traffic control in this document and any regulatory requirements. Price shall include preparation and processing of Maintenance of Traffic Plans for permit approval by a Florida Licensed Professional Traffic Engineer.

D. Item No. 4 - Environmental Protection Plan (NPDES / SWPPP)

Payment for implementation of the Environmental Protection Plan, as required for compliance with NPDES and SWPPP requirements, will be made in equal monthly draws dispensed over the duration of the contract totaling to the lump sum price named in the Bid Schedule. This item shall include preparing Stormwater Prevention Pollution Plan (SWPPP), submittal of NOI (Notice of Intent), submitting NOI (Notice of Intent) to use Generic Permit for Stormwater Discharge from Construction Activities two (2) days prior to the start of construction to the Florida Department of Environmental Protection (FDEP), retention of records required by the permit, retaining copy of SWPPP at construction site, implementation of the SWPPP, submitting NOT (Notice of Termination) of Generic Permit Coverage to FDEP to discontinue permit coverage, implementation of best management practices (BMP) and environmental pollution protection throughout construction including but not limited to silt fences, temporary stabilized gravel construction entrance(s), concrete wash down area(s), sandbags, straw bales, gutterbuddies adjacent to existing and proposed curb inlets, drainage structure/inlet protection, and turbidity barriers.

E. Item No. 5 - Mill Existing Roadway Pavement

Measurement for payment of milling of existing pavement will be based upon the number of square yards of such existing pavement milled in accordance with the requirements of the Contract Documents. Payment for milling of existing pavement at the depth indicated will be made at the unit price per square yard for such milling as named and at the thickness indicated in the Bid Schedule which price will constitute full compensation for milling, removal of milled material, including restoration of traffic loop detectors, temporary pavement markings, saw cutting of all pavement and cleanup of the area disturbed.

F. Item No. 6 - Pavement Resurfacing

For constructing pavement resurfacing (one-inch thick asphaltic wearing surface overlay), will be paid for at the unit price bid times the number of square yards of overlay, measured,

accepted and installed where directed by the ENGINEER, including from two feet up to lane width or full pavement width, and as shown on the Plans. The price bid shall be full compensation for furnishing all materials, labor, and equipment required for a complete asphaltic concrete surface course installation, including but not limited to, removal and replacement of signs, pavement messages and traffic loops, adjusting manhole steel frames and covers, raise and adjust affected valve boxes and replacement of all other miscellaneous items disturbed by paving repairs. Replacement of permanent pavement markings and reflective pavement markers removed or obliterated by the CONTRACTOR's operation, whether in the area of the new pavement or not, will be included under this pay item. Such amount represents the amount the CONTRACTOR feels is necessary to comply with the governing agency's requirements. The price bid shall be full compensation for furnishing all materials, labor, and equipment for a complete installation. Also to be included in this price is the cost for furnishing all of the materials, supplies and labor required to place temporary pavement markings as directed by the ENGINEER. Pavement resurfacing will usually apply to the combined area of milled and patched surfaces.

G. Item No. 7 - Restoration of Asphalt Driveways and Walkways

Measurement for payment of restoration of existing asphalt driveways/walkways will be based upon the number of square yards of such existing surface restored in accordance with the requirements of the Contract Documents. Payment will be made at the unit price per square yard for such restoration, matching the existing thickness, which price will constitute full compensation for cutting, removal of material, saw cutting, restoration and cleanup of the area disturbed.

H. Item No. 8 - Restoration of Concrete and Paver Driveways/Walkways

Measurement for payment of restoration of existing concrete driveways/walkways will be based upon the number of square yards of such existing surface restored including restoration of any pedestrian ramp with detectable warning in accordance with the requirements of the Contract Documents. Payment will be made at the unit price per square yard for such restoration as indicated in the Bid Schedule, matching the existing thickness, color, and pattern which price will constitute full compensation for cutting, removal of material, saw cutting, restoration and cleanup of the area disturbed. Includes textured and/or colored concrete and supply of all replacement materials.

I. Item No. 9 - Furnish & Install 4" D.I.P. Water Main

Measurement for payment for furnishing and installing water main pipe will be based upon the number of linear feet of pipe constructed as determined by measurement along the centerline of the pipe in place, inclusive of valve structures, vaults and casings, mega-lugs, thrust blocks, and restraints all in accordance with the requirements of the Contract Documents. Plugging and abandoning the corresponding existing 2" water main as shown on plans shall also be included in this bid item unless it is added in some other bid item. Payment for furnishing and installing water main will be made at the unit price per linear foot of pipe named in the Bid Schedule which price shall constitute full compensation for the complete installation of ductile iron pipe and restraints, including but not limited to, providing all necessary pipe excavation, dewatering, bedding backfilling, flowable fill, compaction, pavement restoration including the first lift of asphalt, and temporary relocation and/or restoration of existing utilities as required for a complete and functional installation.

J. Item No. 10 - Furnish & Install 6" D.I.P. Water Main

Measurement for payment for furnishing and installing water main pipe will be based upon the number of linear feet of pipe constructed as determined by measurement along the centerline of the pipe in place, inclusive of valve structures, vaults and casings, megalugs, thrust blocks, and restraints all in accordance with the requirements of the Contract Documents. Plugging and abandoning the corresponding existing 2" water main as shown on plans shall also be included in this bid item unless it is added in some other bid item. Payment for furnishing and installing water main will be made at the unit price per linear foot of pipe named in the Bid Schedule which price shall constitute full compensation for the complete installation of ductile iron pipe and restraints, including but not limited to, providing all necessary pipe excavation, dewatering, bedding backfilling, flowable fill, compaction, pavement restoration including the first lift of asphalt, and temporary relocation and/or restoration of existing utilities as required for a complete and functional installation.

K. Item Nos. 11a to 11f - Furnish and Install Ductile Iron Water Fittings

Measurement of payment for furnish and install fittings shall be based upon the unit bid price for each item named in the Bid Schedule for fittings furnished and installed in accordance with Contract Documents. Payment for furnishing and installing fittings shall be at the unit bid price per each fitting installed and shall include furnishing, complete installation including storing and transporting fittings.

L. Item No. 12 - Furnish and Install Water Service (Short – Single)

“Short-Single” services shall be defined as being on the same side of the roadway as the proposed water main serving a single meter connection. Measurement of payment for furnishing and installing new water service to the existing meter box will be based upon the actual number installed in accordance with the Contract Documents. Price shall constitute full compensation for complete installation of the new water service from the new water main to existing meter, including casing pipe, fittings, service saddle and corporation stop, curb stop, connection to existing meter assembly, adjustments and/or re-setting of meter box, complete restoration including but not limited to paving, existing landscaping, decorative walls, fencing, mail boxes, asphalt, pavers, concrete and all else necessary for a complete and functional installation. Payment for this item shall be made upon completion of all items stated above.

M. Item No. 13 - Furnish and Install Water Service (Short - Double)

“Short-Double” services shall be defined as being on the same side of the roadway as the proposed water main serving a dual meter connection. Measurement of payment for furnishing and installing new water service to the existing meter box will be based upon the actual number installed in accordance with the Contract Documents. Price shall constitute full compensation for complete installation of the new water service from the new water main to existing meters, including casing pipe, fittings, service saddle and corporation stop, dual corporation (curb) stops and meter yoke, connection to existing meter assemblies, adjustments and/or re-setting of meter box, complete restoration including but not limited to paving, existing landscaping, decorative walls, fencing, mail boxes, asphalt, pavers, concrete and all else necessary for a complete and functional installation. Payment for this item shall be made upon completion of all items stated above as related to both service connections.

N. Item No. 14 - Furnish and Install Trenchless Water Service (Long - Single)

“Long-Single” services shall be defined as being on the opposite side of the roadway from the proposed water main serving a single meter connection. Measurement of

payment for furnishing and installing new water service to the existing meter box will be based upon the actual number installed in accordance with the Contract Documents. Price shall constitute full compensation for complete installation of the new water service by trenchless technology from the new water main to existing meter, including casing pipe, fittings, sheeting, dewatering, utility support, service saddle and corporation stop, curb stop, connection to existing meter assembly, adjustments and/or re-setting of meter box, complete restoration any disturbed items including but not limited to paving, existing landscaping, decorative walls, fencing, mail boxes, asphalt, pavers, concrete and all else necessary for a complete and functional installation. Payment for this item shall be made upon completion of all items stated above.

O. Item No. 15 - Furnish and Install Trenchless Water Service (Long - Double)

“Long-Double” services shall be defined as being on the opposite side of the roadway from the proposed water main serving a dual meter connection. Measurement of payment for furnishing and installing new water service to the existing meter box will be based upon the actual number installed in accordance with the Contract Documents. Price shall constitute full compensation for complete installation of the new water service by trenchless technology from the new water main to existing meters, including casing pipe, fittings, service saddle and corporation stop, dual curb stops and meter yoke, connection to existing meter assemblies, adjustments and/or re-setting of meter box, complete restoration any disturbed items including but not limited to paving, existing landscaping, decorative walls, fencing, mail boxes, asphalt, pavers, concrete and all else necessary for a complete and functional installation. Payment for this item shall be made upon completion of all items stated above as related to both service connections.

P. Item No. 16 - Furnish and Install Fire Hydrant Assembly

Measurement for payment to furnish and install fire hydrant assemblies shall be at the unit bid price per each fire hydrant assembly furnished and installed in accordance with the Contract Documents. Payment for furnishing and installing fire hydrant assemblies shall be at the unit bid price per each and shall include furnishing, storing, transporting, and installing. Fire hydrant assemblies shall include the complete fire hydrant, fire hydrant extensions, guard posts, and concrete pad. Pipe, gate valves and other fittings shall not be included in this pay item.

Q. Item No. 17 - Furnish and Install 6” Gate Valve

Measurement for payment to furnish and install valves will be based upon the number of valves furnished and installed, in accordance with the requirements of the Contract Documents. Additional valves incorporated for testing purposes shall be at the sole expense of the CONTRACTOR. Price shall constitute full compensation for the completed installation of the valve, including valve box and extension to finish grade and concrete collar installed in unpaved areas.

R. Item No. 18 - Furnish and Install 4” Gate Valve

Measurement for payment to furnish and install valves will be based upon the number of valves furnished and installed, in accordance with the requirements of the Contract Documents. Additional valves incorporated for testing purposes shall be at the sole expense of the CONTRACTOR. Price shall constitute full compensation for the completed installation of the valve, including valve box and extension to finish grade and concrete collar installed in unpaved areas.

S. Item No. 19 - Connect to Existing Water main

Measurement for payment to connection to existing water main will be based upon the number of connections made in accordance with the Contract Documents. This pay item will address connection of proposed water main to existing 6" stub-outs with cap and 2" gate valve. Cost for the proposed connections to existing 6" valves shown on the plans shall be included in the corresponding watermain installation bid item and will not be paid under this bid item. Price shall constitute full compensation for the completed connection including isolation of valves/mains, accommodations for continuous service, removal of cap, valve, and existing piping as needed, capping of pipe to be abandoned, connection to proposed valve, disinfection, and associated pavement restoration. Contractor has responsibility to verify existing conditions prior to performing work.

T. Item No. 20 - Furnish and Install 8" x 6" Tapping Sleeve and Valve

Measurement of payment to furnish and install tapping sleeve and valve will be based upon actual quantity furnished and installed in accordance with the requirements of the Contract Documents. Payment for connection to existing main with tapping sleeves and valves will be made at the unit price named in the Bid Schedule. Price shall constitute full compensation for the satisfactory connection including furnishing and installation of the tapping sleeve, valve, valve extension and valve box, restraining existing water main a minimum of one (1) joint on each side of the tap or as otherwise directed by plans, dewatering, excavation, backfill, restoration, and all else necessary for a complete and functional installation. Contractor has responsibility to verify existing conditions prior to performing work.

U. Item No. 21 - Furnish and Install 8" x 4" Tapping Sleeve and Valve

Measurement of payment to furnish and install tapping sleeve and valve will be based upon actual quantity furnished and installed in accordance with the requirements of the Contract Documents. Payment for connection to existing main with tapping sleeves and valves will be made at the unit price named in the Bid Schedule. Price shall constitute full compensation for the satisfactory connection including furnishing and installation of the tapping sleeve, valve, valve extension and valve box, restraining existing water main a minimum of one (1) joint on each side of the tap or as otherwise directed by plans, dewatering, excavation, backfill, restoration, and all else necessary for a complete and functional installation. Contractor has responsibility to verify existing conditions prior to performing work.

V. Item No. 22 - Furnish and Install 6" x 6" Tapping Sleeve and Valve

Measurement of payment to furnish and install tapping sleeve and valve will be based upon actual quantity furnished and installed in accordance with the requirements of the Contract Documents. Payment for connection to existing main with tapping sleeves and valves will be made at the unit price named in the Bid Schedule. Price shall constitute full compensation for the satisfactory connection including furnishing and installation of the tapping sleeve, valve, valve extension and valve box, restraining existing water main a minimum of one (1) joint on each side of the tap or as otherwise directed by plans, dewatering, excavation, backfill, restoration, and all else necessary for a complete and functional installation. Contractor has responsibility to verify existing conditions prior to performing work.

W. Item No. 23 - Furnish and Install Sample Point

Measurement for payment for sample points will be based upon the actual number, each, of such sample points furnished and installed, all in accordance with requirements of the Contract Documents. Payment for sample points will be made at the unit price, each, named in the Bid Schedule which price shall constitute full compensation for the complete installation of sample point and removal and disposal after sampling is complete.

X. Item No. 24 - Site Restoration and Cleanup

Payment for performing site restoration and clean-up including but not limited to pavement markings, painting, finish grading, driveways, sod, landscaping and any miscellaneous restoration work including all labor, materials and equipment required shall be made at the contract lump sum price in the Bid Schedule.

Y. Item No. 25 - Indemnification

Measurement and payment for consideration for indemnification of the OWNER and ENGINEER will be based upon the lump sum price named for such work, all in accordance with the requirements of the Contract Documents. Payment will be one hundred dollars for consideration for indemnification named in the Bid Schedule and shall constitute full compensation for indemnifying the OWNER and ENGINEER as specified on the Contract Documents.

Z. Item No. 26 - Dedicated Allowance Unforeseen Conditions

This item accounts for all labor, materials, equipment and services necessary for modification or extra work required to complete the Project because of unforeseen conditions, unforeseen conflicts between existing elements of work and the proposed work; for changes required to resolve any unforeseen conditions, Revised Regulations, Technological and Products Development, Operational Changes, Schedule Requirements, Program Interface, Emergencies and Other Miscellaneous Costs; and for adjustments to estimated quantities installed; and associated time related to work. This item may or may not be used either in part or in whole. Disbursement of this pay item is entirely at the discretion of the Engineer/City and must be ordered by the Engineer and approved by the CITY.

AA. Item No. 27 - TOTAL BASE BID AMOUNT, the sum of Item 1 through Item 26.

This item may be adjusted by Item 28.

BB. Item No. 28 - Alternative #1 Subtotal: Open-Cut Water Service Installation.

This bid item includes alternate bid items A1.a. through A1.e. These items together are meant to eliminate the need for trenchless installation for "long" service connections and are meant to be utilized in place of items No. 14 and 15. Price shall constitute full compensation for complete installation of the new "long" water services from the new water main to existing meters, including casing pipe, fittings, service saddle and corporation stop, curb stops and meter yoke as required, connection to existing meter assemblies, adjustments and/or re-setting of meter box, complete restoration of Right of Way including but not limited to paving, existing landscaping, decorative walls, fencing, mail boxes, asphalt, pavers, concrete and all else necessary for a complete and functional installation. This price shall include milling and resurfacing of the second lane. Measurement will be based upon quantity furnished and installed and payment will be based upon the unit price in the Bid Schedule. Installation must comply with requirements of Contract documents. Payment for this item shall be made upon completion of all items stated above. This item may or may not be used either in part or in whole. Decision to exercise this alternative is at the discretion of the Engineer as approved by City.

CC. **Item No. 29 – TOTAL BASE BID AMOUNT**, the sum of Item 27 adjusted for Item 28, which constitutes the complete costs for the project.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

- END OF SECTION -

Question and Answers for Bid #ITB-21-035-MC - HONEY HILL WATERMAIN SYSTEM REHABILITATION (WATR2010)

Overall Bid Questions

Question 1

what is the engineer's estimate/budget? (Submitted: Jun 9, 2021 8:15:25 AM EDT)

Answer

- \$1.1M (Answered: Jun 22, 2021 9:47:52 AM EDT)

Question 2

how will pre bid be hosted? virtual or in person? please provide details (Submitted: Jun 9, 2021 10:24:17 AM EDT)

Answer

- Join Zoom Meeting

<https://us02web.zoom.us/j/8235709045?pwd=a0VGR0FqbmlIVElSaisxWEVQaVp0UT09>

Meeting ID: 823 570 9045

Passcode: 2kV5Tg (Answered: Jun 10, 2021 2:31:44 PM EDT)

Question 3

The inspectors/reviewers have been requiring zinc coating on dip and fittings in NMBPU but I don't see this in the spec. Please advise. (Submitted: Jun 10, 2021 8:32:24 AM EDT)

Answer

- Ductile iron pipe and fittings for underground service shall receive an exterior zinc coating, 1.0-mil film thickness in accordance with AWWA C-151 and ISO 8179-1. - NMB Water Standards 2021 (2.19 - Material Requirements)

(Answered: Jun 22, 2021 9:47:52 AM EDT)

Question 4

Specs also call for c152 DIP but it has been our experience that the city follows MDWASA with pressure c1350 requirement? (Submitted: Jun 10, 2021 8:32:57 AM EDT)

Answer

- Pipe shall be in accordance with ANSI/AWWA Standards A21.50/C150 and A21.51/C-151. The minimum pressure Class shall be as:

Minimum Pressure Class by Pipe Diameter Size (inches):Pressure Class

4:350

6:350

8:350

10:350

12:350

16:250

18:250

20:250

24:200

- NMB Water Standards 2021 (2.19 - Material Requirements) (Answered: Jun 22, 2021 9:47:52 AM EDT)

Question 5

Please clarify fire hydrant. In the past the city has asked for a 6" valve opening FH with orange/blue/yellow paint pattern, I don't see that in the specs? (Submitted: Jun 10, 2021 8:33:30 AM EDT)

Answer

- Hydrants shall be style B848 and comply with AWWA Standard C-502, "Dry Barrel Fire Hydrants"; and shall be equipped with a minimum of one pumper outlet nozzle 4 ½-inches in diameter and two hose nozzles 2 ½-inches in diameter, all having American National Standard hose threads. Units shall be traffic type with breakable safety clips, or flange, and stem, with safety coupling located below barrel break line to preclude valve opening. Fire hydrant shall be of ample length for depth of burial. Outlet nozzles shall be a minimum distance of 18-inches and no greater than 24-inches from the center of the nozzles to ground line. The valve shall be compression type with 5 ¼-inches minimum valve opening and shoe inlet connection to be 6-inches minimum. Fire hydrants shall be equipped with "O-Ring" packing. All iron parts of the hydrant both inside and outside shall be painted, in accordance with AWWA C-502. All inside surfaces and the outside surfaces below the ground line shall be coated with coal tar varnish, 10-mils min. DFT. The outside of the hydrant above the finished ground shall be painted with two (2) coats of an approved yellow enamel paint on the body, two coats of safety blue enamel on the cover and two coats of orange on the caps. Fire hydrants proposed for high capacity users (i.e. condominiums or high rises) shall have a 6-inch compression valve opening. These shall require approval by NMB Water prior to installation. - NMB Water Standards 2021 (3.03 - Material Requirements) (Answered: Jun 22, 2021 9:47:52 AM EDT)

Question 6

Its also my experience that the city accepts imported fittings except of course on jobs that are federally funded and that require AIS or Buy America compliance. Is this job federally funded or will the city allow imported castings/fittings. (Submitted: Jun 10, 2021 8:34:50 AM EDT)

Answer

- The project is being partially federally funded and is subject to all requirements pertaining thereof. (Answered: Jun 10, 2021 3:56:46 PM EDT)

Question 7

is builders risk required, if we have \$1 million of installation floater coverage? (Submitted: Jun 15, 2021 11:51:14 AM EDT)

Answer

- City will accept the contractor using an installation floater coverage at \$1M. (Answered: Jun 22, 2021 9:47:52 AM EDT)

Question 8

how many days to substantial and final completion? (Submitted: Jun 18, 2021 10:06:36 AM EDT)

Answer

- Substantial Completion 250 Days
Final Completion 60 Days (Answered: Jun 22, 2021 9:47:52 AM EDT)

Question 9

when do you anticipate award? (Submitted: Jun 22, 2021 11:24:23 AM EDT)

Answer

- 30-60 days after bid opening (Answered: Jun 22, 2021 12:31:12 PM EDT)

Question 10

when do you anticipate NTP? (Submitted: Jun 22, 2021 11:25:06 AM EDT)

Answer

- 15-45 days after award (Answered: Jun 22, 2021 12:31:12 PM EDT)

Question 11

who pays for testing i.e, densities, pressure, etc (Submitted: Jun 22, 2021 11:26:59 AM EDT)

Answer

- Bid item 2 includes an allowance for Testing and Quality control (Answered: Jul 1, 2021 8:29:26 AM EDT)

Question 12

who pays for water? (Submitted: Jun 22, 2021 11:27:13 AM EDT)

Answer

- "A. Water required for the project shall be furnished by NMB Water at the Contractor's expense. All temporary piping, valves, hoses, equipment and other items required for handling water shall be furnished by the Contractor. Under no circumstance shall the Contractor utilize a water source until such source has been approved for use by NMB Water.

B. The Contractor can obtain a meter through proper application and payment of deposit fee at NMB Water's Utility Technical Services Office located at 17050 NE 19th Avenue, North Miami Beach. The deposit fee will be refunded to the Contractor upon return of the meter in a sound satisfactory condition. The largest meter available is 2-inches NPS. Any additional fees, which may be required by other governmental agencies for utilizing the fire hydrants shall be borne by the Contractor - NMB Water Standards 2021 (2.23 Water used in construction)

Spec Section 01510-1.03 will be modified as such" (Answered: Jul 1, 2021 8:29:26 AM EDT)

Question 13

Surety 2000 is saying that the City of North Miami Beach is not registered with Surety 2000? Is there another bid bond form we need to use? (Submitted: Jun 22, 2021 12:17:12 PM EDT)

Answer

- I confirmed with Surety 2000 that we are now registered under "City of North Miami Beach", you may also use a "Document A310". (Answered: Jun 22, 2021 12:32:11 PM EDT)

Question 14

Please provide an unlocked PDF plan set to allow for accurate quantity takeoffs to be performed to allow for the best pricing to be provided to the City. (Submitted: Jun 23, 2021 8:51:16 AM EDT)

Answer

- Unlocked PDFs will not be provided as they are not signed and sealed by the EOR. Quantities can be found on the Bid Item List. (Answered: Jul 1, 2021 8:29:26 AM EDT)

Question 15

Typical Water Service Connection Detail on Sheet W-22 calls for casing pipe Schedule 80 PVC pipe, but Specs (Sheet 101) calls for casing pipe Schedule 40 PVC.

Per bid form this project has 56 New Trenchless Water Services. Please clarify the type of casing pipe required.

(Submitted: Jun 23, 2021 10:25:01 AM EDT)

Answer

- Casing pipe shall be Schedule 80 PVC as shown in the detail on sheet W-22. (Answered: Jul 1, 2021 8:29:26 AM EDT)

Question 16

Please provide the geotechnical report associated with this project. (Submitted: Jun 23, 2021 11:37:24 AM EDT)

Answer

- There is no geotechnical report associated with this project. (Answered: Jul 1, 2021 8:29:26 AM EDT)

Question 17

Do inline valves have additional restraint? (Submitted: Jun 23, 2021 12:21:02 PM EDT)

Answer

- Inline valves shall be restrained as if a dead end. (Answered: Jul 1, 2021 8:29:26 AM EDT)

Question 18

Is a piercing tool along with casing acceptable for items 14 and 15? (Submitted: Jun 23, 2021 12:21:25 PM EDT)

Answer

- Yes. The Contractor is required to submit and get approval from the City a work plan detailing the procedure, schedule, equipment, specifications, etc. prior to work per Section 2.20 of NMB Water Standards. (Answered: Jul 1, 2021 8:29:26 AM EDT)

Question 19

Are soil borings available for this project? (Submitted: Jun 23, 2021 12:21:36 PM EDT)

Answer

- There is no geotechnical report associated with this project. (Answered: Jul 1, 2021 8:29:26 AM EDT)

Question 20

Are Thrust Blocks (W-21 Figure 245) to be installed along with mechanical joint restraint for fittings? (Submitted: Jun 23, 2021 12:22:30 PM EDT)

Answer

- Thrust blocks are not required for fittings as long as restraints are installed as per detail 240. (Answered: Jul 1, 2021 8:29:26 AM EDT)

Question 21

1. Note 1 of the General Notes on Sheet TPP-1 says that the Engineer shall designate the locations of the Soil Tracking Prevention Device. I do not see these locations on the plans. Can you please provide them?
2. Note XIV. Engineer's As Built Requirements shown on Sheet GN-1 show to provide one reproducible set and (8) blue or black ones. Note 9 of the City of North Miami Beach General Notes & Specifications shows a different requirement. Which one is correct?
3. Is polyethylene encasement required?
4. Section 02515 says that the meter boxes are existing and Contractor will connect new service lines to existing meter assembly and adjust boxes as necessary. The Contractor will only replace the ones that are broken. The details for water service installation on Sheet W-22 indicate that the new meter boxes are to be provided by the contractor. The measure and payment for services also does not include meter boxes. Is the Contractor to place new meter boxes?
5. Section 02510 states that no trenches are to be backfilled until the trench and installation has been inspected and written approval given by the Engineer. Then it continues to say that the pipe joints have to remain exposed until after the pressure and leakage tests. Will we use road plates to cover these un-backfilled trenches?
6. Section 02710 says that temporary cold patch paving has to be placed the same day as the trench is backfilled. Based on the trench backfill specifications is this temporary patch needed? **(Submitted: Jun 23, 2021 4:17:25 PM EDT)**

Answer

- "1. Disregard note. STP device not required for this project.
- 2. The Contractor shall follow the City of North Miami Beach requirements
- 3. Encasement typically used when watermain located outside of roadway. City may decide, at their discretion, that encasement of services is unnecessary, however bid should reflect the current plans.
- 4. The existing meter boxes are proposed to remain. The note on detail clearly states: "CONTRACTOR SHALL REPLACE THE WATER SERVICE UP TO AND INCLUDING THE CURB VALVE IN THE EXISTING METER BOX." City shall assess condition of boxes prior to connection of services. If deemed necessary, the City shall arrange for box replacement and appropriate compensation to Contractor, to coincide with installation of service.
- 5. The intent is to avoid excavation of pipes in the event they do not pass the pressure test. Additionally, joints and restraints must be visually inspected prior to backfill. Contractor is responsible for OSHA compliant trench protection and MOT.
- 6. Yes, entire lane, including area of patch, to be resurfaced." **(Answered: Jul 1, 2021 8:29:26 AM EDT)**

Question 22

7. Section 1010 says that design plan approvals have been obtained by the City for DERM, City of Miami Gardens, Miami Dade County and City of North Miami Beach. Have any of these permits been obtained and the fees paid?
8. Who is the controlling entity for this project? The specifications show the work hours as 7:30 AM to 6:00 PM but Miami Dade County has a restriction on lane closures from 7:00 AM to 9:00 AM and from 4:00 PM to 6:00 PM. What will the work hours be?
9. The measure and payment for Items 9 and 10 includes flowable fill. Where is flowable fill being used?
10. Both Items 9 and 10 also include "pavement restoration including the first lift of asphalt". Is this not covered in Item 6?
11. The General Notes on the drawings and the trench detail show that the trench is to be over excavated by 6" and rock bedding placed. Section 02222 states that clean sandy excavated material can be used if the trench is dry and not sided by muck. Is rock bedding required? **(Submitted: Jun 23, 2021 4:17:45 PM EDT)**

Answer

- "7. The Health Department permit as well as the Miami Dade Fire Department approval has been obtained by the City. The Dry Run Review has been completed by the City of Miami Gardens and the review fee has been paid to the City of Miami Gardens. The contractor shall apply and obtain the permit from the City of Miami Gardens and any additional fees required shall be paid. Such fees should be incorporated into Pay Item No. 1, Mobilization.
- 8. The controlling entity is NMB Water, however the proposed work is within the right of way of City of Miami Gardens. The City restricts construction from 9 am to 3:30 pm if road closure is involved.

9. Flowable fill is used in situations where in-situ conditions preclude proper compaction. There is not a typical application.

10. The first lift of asphalt refers to the temporary asphalt required to be placed on completion of backfilling.

11. The 6" bedding material shall consist of select backfill material, or washed and graded limerock (3/8"-7/8"), compacted to at least 90% of maximum density per AASHTO T-180, in 6" lifts, up to the pipe spring-line. "

(Answered: Jul 1, 2021 8:29:26 AM EDT)

Question 23

Please advise if ALL DOMESTIC MATERIAL is required for this project. (Submitted: Jun 24, 2021 2:05:24 PM EDT)

Answer

- The project is being partially federally funded (WIFIA) and is subject to all requirements materials sourcing.

(Answered: Jul 1, 2021 8:29:26 AM EDT)

Question 24

Please advise if a Certified FDOT Advanced MOT certification is acceptable to design the Traffic Control Plans.

(Submitted: Jun 24, 2021 2:07:29 PM EDT)

Answer

- This is acceptable as long as the Maintenance of Traffic Advanced Training certification is still active and must provide proof of active certification. (Answered: Jul 1, 2021 8:29:26 AM EDT)

Question 25

To ensure that the City gets an accurate fair pricing, please distinguish between quantities for Item 8 between Paver Driveways vs Concrete Driveways being that the prices are significantly different. (Submitted: Jun 24, 2021 2:11:03 PM EDT)

Answer

- Bid Item 8 has been modified to indicate separate lines for Concrete and Paver. (Answered: Jul 1, 2021 8:29:26 AM EDT)

Question 26

Please advise if the City will pay for Bacteriological testing as a part of their pay testing schedule. (Submitted: Jun 24, 2021 2:12:10 PM EDT)

Answer

- Bid item 2 includes an allowance for Testing and Quality control. (Answered: Jul 1, 2021 8:29:26 AM EDT)

Question 27

Please advise if a field office is mandatory for this project or is up to the discretion of the Contractor. (Submitted: Jun 24, 2021 2:12:57 PM EDT)

Answer

- No Bid item requires the Contractor to provide a field office, and thus it is up to the discretion of the Contractor. However, the Contractor shall be responsible to provide internet access to the City inspector during all working hours for the duration of the project. This may be done via a dedicated onsite hotspot or other means for NMB water inspectors. (Answered: Jul 1, 2021 8:29:26 AM EDT)

Question 28

Please provide a bid bond form or will the form supplied by the surety company suffice. (Submitted: Jun 24, 2021 2:14:32 PM EDT)

Answer

- You may use Surety 2000 to submit an electronic bid bond or you may use the A310 Document. (Answered: Jun 25, 2021 12:16:19 PM EDT)

Question 29

Where in the plans can we find the location for Bid Item No.22, F & I 6"x6" Tapping Sleeve and Valve? (Submitted: Jun 24, 2021 4:28:04 PM EDT)

Answer

- 6"x6" Tapping Sleeve and Valve can be found W-20. (Answered: Jul 1, 2021 8:29:26 AM EDT)