Comprehensive Agreement

Between

CITY OF FORT LAUDERDALE

And

DAVID MANCINI & SONS, INC.

For

DESIGN/BUILD SERVICES FOR

A COMPLETE 48-INCH WATER TRANSMISSION MAIN FOR THE
PROSECT LAKE CLEAN WATER CENTER

COMPREHENSIVE AGREEMENT

This Comprehensive Agreement (this "Agreement") made and entered into this_____day of _____, 2024, between the CITY OF FORT LAUDERDALE, FLORIDA, a municipal corporation of the State of Florida, hereinafter referred to as "CITY" and DAVID MANCINI & SONS, INC., a Florida corporation, hereinafter referred to as "DESIGN/BUILD FIRM," or collectively the "Party" or "Parties."

STATEMENT OF BACKGROUND AND PURPOSE

WHEREAS, on February 7, 2023, the CITY entered in a comprehensive agreement with PROSPECT LAKE WATER LP, to construct a new water treatment plant. Part of that agreement requires the City to construct enabling projects and one of those enabling project is a new 48-inch product water transmission main from the Prospect Lake Clean Water Center (PLCWC) to a connection point at Fish Ash Water Treatment Plant; and

WHEREAS, on July 28, 2023, the CITY received an unsolicited proposal from the DESIGN/BUILD FIRM pursuant to Section 255.065, Florida Statutes, for the design and construction of a new 48-inch product water transmission main from the proposed Prospect Lake Clean Water Center to a connection point at Fiveash Water Treatment Plant; and

WHEREAS, pursuant to Resolution No. 23-226, the City Commission, at its meeting on October 3, 2023, declared its intent to enter into a Comprehensive Agreement with the DESIGN/BUILD FIRM for a qualifying project encompassing the design and construction of a new 48-inch product water transmission main from the proposed Prospect Lake Clean Water Center to a connection point at Fiveash Water Treatment Plant.

WHEREAS, an Evaluation Committee evaluated the proposal. The proposal by DESIGN/BUILD FIRM, meets all the requirements of an unsolicited proposal and has been deemed the most responsive and responsible; and

WHEREAS, the CITY and the DESIGN/BUILD FIRM agree that all prerequisites to the execution of this Agreement required pursuant to Section 255.065, Fla. Statutes have been met and this Agreement complies with the requirements of Sec. 255.065, Florida Statutes; and

NOW THEREFORE, in consideration of the mutual terms and conditions, promises, covenants and payments hereinafter set forth, CITY and DESIGN/BUILD FIRM agree as follows:

ARTICLE 1 - DEFINITIONS AND IDENTIFICATIONS

For the purposes of this Agreement and the various covenants, conditions, terms and provisions which follow, the definitions set forth below are assumed to be true and correct and are agreed upon by the Parties.

Agreement - This document, inclusive and including all exhibits and documents that are expressly incorporated by reference.

Applicable Laws - All federal, state, county, and local statutes, codes, laws, rules, regulations, ordinances, orders and standards applicable to the Project and any other such law hereafter enacted, and any rules adopted pursuant thereto, as all such laws may be amended from time to time to perform the Work.

Change Order - A written order executed by both Parties to the DESIGN/BUILD FIRM approved by the CITY authorizing a revision of this Agreement between the CITY and DESIGN/BUILD FIRM 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 this Agreement.

CITY - The CITY (or Owner) shall mean the City of Fort Lauderdale, a Florida municipal corporation. In all respects hereunder, CITY's performance is pursuant to CITY's position as the owner of a construction project. In the event CITY exercises its regulatory authority as a governmental body, the exercise of such regulatory authority and the enforcement of any rules, regulations, laws and ordinances shall be deemed to have occurred pursuant to the CITY's regulatory authority as a governmental body and shall not be attributable in any manner to CITY as a party to this Agreement.

City Commission - City Commission shall mean the governing body of the CITY.

City Manager - City Manager shall mean the Chief Administrative Officer of the CITY.

Construction Documents Phase - The phase in which DESIGN/BUILD FIRM will consult with Project Manager and prepare the Construction Documents for the Project, based upon the information provided in the PLCWC comprehensive agreement for review and approval of the CITY (including, without limitation, any and all applicable CITY departments) and any applicable regulatory agencies.

Construction Manager - The Construction Manager is the authorized individual or firm which is the representative of the DESIGN/BUILD FIRM, who/which will administer/manage the construction effort on behalf of the DESIGN/BUILD FIRM.

Construction Phase - The phase which constitutes DESIGN/BUILD FIRM's administration of the construction of the Project and all activities necessary for the completion of the Project.

Consultant - The person or entity who is a registered architect, professional engineer, professional land surveyor, and/or registered landscape architect having a contract with DESIGN/BUILD FIRM to provide professional services for the design of the Project, and who is licensed by the State of Florida to provide said services.

Contract Documents - This Agreement, as approved by CITY and its exhibits, attachments and forms, any addenda, performance bond and payment bond, plans and specifications (as approved and permitted) as prepared by the DESIGN/BUILD FIRM in accordance with the information provided in the PLCWC comprehensive agreement, Notice of Award, Notice(s) to Proceed, and any and all agreed upon contract and/or design modifications, including but not limited to change orders, Project Schedule, a schedule of values, and any additional documents the submission of which is required by this Agreement. When reference is made in the Contract Documents to publications, standards or codes issued by associations or societies, the intent shall be to specify the current or adopted edition of such publication or standard including revision in effect on the date of all applicable permit applications.

Contract Time - The time between the Project Initiation Date specified in the Notice to Proceed and final completion, including any milestone dates thereof, established in the Agreement, as may be amended by Change Order.

Contract Price - The Not to Exceed Guaranteed Maximum Price agreed to between DESIGN/BUILD FIRM and the CITY. The Contract Price is not subject to increase, except as expressly allowed within the Contract Documents.

Design/Build Firm - DAVID MANCINI & SONS, INC.**,** is the DESIGN/BUILD FIRM selected to perform the Work pursuant to this Agreement and is the entity liable for the acceptable performance of, and payment of, all legal debts pertaining to the Project. All references in the Contract Documents to third parties under contract or control of DESIGN/BUILD FIRM shall be deemed to be a reference to DESIGN/BUILD FIRM. The DESIGN/BUILD FIRM will be responsible for the provision, installation, and performance of all equipment, materials, services and Work.

Field Order or Supplemental Instruction - A written order for minor changes or interpretations of the Contract Documents, but which does not involve a change in the Lump Sum Guaranteed maximum Price or Contract Time.

Final Completion - The date certified by the CITY that all conditions of the permits and regulatory agencies have been met; all construction, including corrective and punch list work, has been performed and accepted by the CITY; all administrative requirements of the Contract Documents have been completed; and CITY has received from DESIGN/BUILD FIRM all necessary documentation, as deemed required by the CITY including, but not limited to, the following: all final releases of liens, consent of surety, release of claims by DESIGN/BUILD FIRM, correct as-built drawings, a final bill of materials, executed final adjusted Change Orders, final invoice, copies of pertinent test results, correspondence, warranties, guarantees, operational manuals, spare parts, and service contracts.

LUMP SUM GUARANTEED MAXIMUM PRICE - THE MUTUALLY AGREED UPON CONTRACT PRICE TO BE PAID OF **$48,590,888.90** TO THE DESIGN/BUILD FIRM, AND THAT THE DESIGN/BUILD FIRM GUARANTEES NOT TO EXCEED, FOR ALL LABOR, EQUIPMENT, AND MATERIALS TO DESIGN, PERMIT (AS REQUIRED BY THE CONTRACT DOCUMENTS), ADMINISTER, COORDINATE, INSPECT, CONSTRUCT AND INSTALL THE PROJECT WITHIN THE CONTRACT TIME. THE DOLLAR AMOUNT SHALL INCLUDE, BUT NOT BE LIMITED TO ALL PROFIT, OVERHEAD, ON-SITE AND OFF-SITE CONDITIONS (KNOWN AND UNKNOWN) AND ADMINISTRATIVE COSTS.

THE LUMP SUM GUARANTEED MAXIMUM PRICE IS NOT SUBJECT TO INCREASE EXCEPT AS EXPRESSLY ALLOWED.

Holidays - Those designated non-workdays as established by the City Commission of the City of Fort Lauderdale.

Notice to Proceed - One or more written notice(s) to DESIGN/BUILD FIRM issued by the Project Manager authorizing the commencement of specified Work.

Owners Representative - The individual or entity who/which holds a current certificate as a registered engineer under Chapter 471 to practice engineering and who/which is employed by or retained by the CITY to provide professional services in compliance with the requirements of Section 287.055, Florida Statutes (2023), and who/which shall review and provide recommendations regarding the Construction Documents prepared by the DESIGN/BUILD FIRM for the Project, and evaluate compliance of Project construction with the requirements of this Agreement.

Plans and Specifications - The official graphic representations of the Project as prepared, signed and sealed by Architect/Engineer and which, upon written approval of CITY, shall become a part of the Contract Documents.

Project - The design/construction Project described in the Contract Documents.

Project Manager/Contract Administrator - 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. The Project Manager, or designee, shall be the authorized agent for the CITY unless otherwise specified. The terms Project Manager and Contract Administrator are used interchangeably.

Punch List - The CITY's list of Work yet to be completed or be corrected by the DESIGN/BUILD FIRM before the final completion date can be determined by the CITY.

Shop Drawings - Drawings, diagrams and schedules, and other data specially prepared by the DESIGN/BUILD FIRM or its subcontractors, sub-subcontractors, manufacturer, supplier or distributor to illustrate some portion of the Work.

Substantial Completion - The date, as certified by the CITY, that all conditions of the permits and regulatory agencies have been met for the CITY's stated use of the Project, and all construction has been performed therein in accordance with the Contract Documents so CITY can beneficially enjoy, use or occupy and can operate it in all respects for its intended purpose.

Surety - The surety company which is bound by the performance bond and payment bond with and for DESIGN/BUILD FIRM, who is primarily liable, and which surety company is responsible for DESIGN/BUILD FIRM's acceptable performance of the Work under the Contract and for the payment of all debts pertaining thereto in accordance with Section 255.05, Florida Statutes (2023).

Work - The totality of the obligations, including design, permitting, governmental entitlements, site plan approvals and construction and all other services required by the Contract Documents, whether completed or partially completed, including all labor, materials, equipment and services provided to or to be provided by DESIGN/BUILD FIRM to fulfill its obligations.

ARTICLE 2 - GENERAL PROVISIONS

2.1 DESIGN/BUILD FIRM hereby agrees to furnish all of the labor, materials, equipment, Work, services and incidentals necessary to complete the Project, in accordance with the Contract Documents, within the Contract Time and for the Not to Exceed Guaranteed Maximum Price.

2.2 Relationship of CITY and DESIGN/BUILD FIRM: The DESIGN/BUILD FIRM accepts the relationship of trust and confidence established between it and the CITY by this Agreement. The DESIGN/BUILD FIRM warrants and represents to CITY that it will furnish its best skill and judgment in performing the Work and shall always act to further the interest of the CITY in the expeditious completion of the Project at the lowest cost to the CITY, and in strict accordance with the Contract Documents and prudent and customary construction practices.

2.3 By signing this Agreement, the DESIGN/BUILD FIRM accepts a fiduciary duty with the CITY and warrants and represents to the CITY that the DESIGN/BUILD FIRM: (a) has all licenses and certifications required by applicable laws; (b) is experienced in all aspects of pre-construction and construction planning for projects similar to the Project; (c) will act in the CITY's highest and best interests in performing the Work; and (d) that no employees or affiliates of the DESIGN/BUILD FIRM, including all Consultants, any subconsultants, subcontractors, and suppliers, at any tier, have been convicted of a public entity crime, fraud, theft, and/or a property damage crime within the preceding thirty-six) months from the time this Agreement is executed, as required pursuant to Section 287.133, Florida Statutes (2023).

2.4 Intention of Contract Documents: It is the intent of the Contract Documents to describe a functionally complete Project to be designed and constructed in accordance with the Contract Documents. Any Work, design, construction, other professional services, materials or equipment that may reasonably be inferred from the Contract Documents as being required to produce the intended result shall be supplied by the DESIGN/BUILD FIRM, whether or not specifically called for by the Contract Documents. When words, which have a well-known technical or trade meaning are used to describe Work, such words shall be interpreted in accordance with that meaning. Reference to standard specifications, manuals, or codes of any technical society, organization or association, or to the laws or regulations of any governmental authority, whether such reference is specific or by implication, shall mean the latest standard specification, manual, code or laws or regulations in effect at the time of permit issuance. CITY shall have no duties other than those duties and obligations expressly set forth within the Contract Documents.

2.5 DESIGN/BUILD FIRM shall plan, record, and update, at least monthly, the design and construction schedule of the Project. The Project Schedule shall indicate the dates for the commencement and completion of the various stages of design and construction and shall be revised at least monthly and as required by the conditions of the Work. The Project Schedule shall encompass all of the Work of all professions and trades necessary for the construction of the Project and shall be sufficiently complete and comprehensive to enable progress to be monitored on a weekly basis. DESIGN/BUILD FIRM shall be responsible

to have available to it all materials, supplies, and appropriate personnel, trades, etc., necessary to complete the Work in accordance with the Project Schedule.

ARTICLE 3 - PROJECT MANAGER

3.1 The Project Manager is hereby designated by the CITY as Daniel Fisher, Project Manager, whose address is 101 NE 3rd Avenue, Suite 1420, Fort Lauderdale, Florida 33301. The Project Manager will assume all duties and responsibilities and will have the rights and authority 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

4.1 The Contract Documents shall be followed as to Work, materials and dimensions except with the Project Manager may authorize, in his sole discretion, and in writing, minor changes that do not affect Agreement time or price.

4.2 Dimensions given in figures are to hold preference over scaled measurements from the drawings; however, all discrepancies shall be decided upon by the Consultant, with concurrent written notice to Contract Administrator/ Project Manager. DESIGN/BUILD FIRM shall not proceed when in doubt as to any dimension or measurement but shall seek clarification from the Consultant, with concurrent written notice to Project Manager.

4.3 DESIGN/BUILD FIRM shall maintain two (2) copies of the Contract Documents, one of which shall be preserved and always kept accessible at the site for the Project Manager, and/or authorized representatives.

4.4 The Contract Documents shall have the following order of precedence, beginning with the most important:

A. This Agreement and all exhibits, addendums, and amendments thereto;

B. Change Orders (to the extent permitted under this Agreement);

C. The Specifications, as approved and permitted;

D. The Plans, as approved and permitted;

E. All other information provided in the PLCWC comprehensive agreement; and

F. CPM Project Schedule and Schedule of Values.

ARTICLE 5 - SCOPE OF WORK

DESIGN/BUILD FIRM agrees to complete the Project, generally described as Design Build Services for the 48-inch water main transmission main from PLCWC to a connection point at Five Ash Water Treatment Plant as described in PLCWC comprehensive agreement and David Mancini & Sons, Inc.'s unsolicited proposal.

The Work to be accomplished under this Agreement includes, but is not limited to; the design, permitting, and construction of the 48-inch water transmission main, and all associated restoration, located along the selected and agreed route, in the city of Fort Lauderdale, including all other aspects of the Project.

The Project shall be construed in accordance with the requirements and provisions of said Contract Documents and for the Lump Sum Guaranteed Maximum Price.

5.1 DESIGN/BUILD FIRM agrees to meet with the Project Manager or his respective designees at reasonable times and with reasonable notice.

5.2 Prior to the Final Completion of construction services under this Agreement, and as a condition precedent to final payment, there shall be established a record set of plans and a record set of Specifications, both of which shall bear the written approvals of the DESIGN/BUILD FIRM and the CITY's Project Manager. Such approval shall be indicated by the written signature of both Parties. In addition, electronic copies on USB drives of the record set plans, non- compressed, formatted in the latest version of AutoCAD and of the record set of Specifications.

5.3 DESIGN/BUILD FIRM herein represents that Construction Manager, at a minimum, will provide the following services:

5.3.1 At least five (5) days prior to the commencement of the construction phase of the Project, the DESIGN/BUILD FIRM will identify and provide the qualifications of a suitably qualified and experienced Construction Manager, approved by the CITY, who will be on site full time at the Project. No more than twenty percent (20%) of the proposed team can be changed and such change will require CITY approval.

5.3.2 DESIGN/BUILD FIRM will use reasonable efforts to have the same Construction Manager on the Project, full time, to its conclusion, and any new representative will first be approved in writing by Project Manager before permanent assignment. Approval shall not be unreasonably withheld.

5.3.3 The Construction Manager will conduct weekly meetings with the DESIGN/BUILD FIRM and its subcontractors at regular times, as previously agreed upon and approved by the Project Manager and shall issue weekly reports on the progress of the Work and the minutes of the previous meeting.

5.3.4 The Construction Manager will administer the DESIGN/BUILD FIRM's Work.

5.3.5 The Construction Manager shall coordinate the processing of shop drawings and material submittals.

5.3.6 The Construction Manager will achieve satisfactory performance by DESIGN/BUILD FIRM and, if required, will require corrections to DESIGN/ BUILD Firm's Work including, but not limited to, maintaining punch lists and observing testing.

5.3.7 The Construction Manager will monitor the cost of the Project, including payment applications and the preparation thereof.

5.3.8 The Construction Manager will assist in the preparation of record drawings and shall transmit to the Consultant requests for additional information concerning the design. In addition, the Project Manager shall be copied on these requests for monitoring purposes.

5.3.9 The Construction Manager will observe testing, start-up activities, and commissioning of Project scope.

5.3.10 The Construction Manager will secure all equipment brochures and warranties from the DESIGN/BUILD FIRM.

5.3.11 The Construction Manager will coordinate the correction and completion of the Work including that required by the punch list.

5.4 DESIGN/BUILD FIRM herein represents that Consultant, at a minimum, will provide the following services:

5.4.1 Consultant shall perform all of the architectural and engineering services necessary to describe, detail and design the Project in accordance with the Contract Documents.

5.4.2 Consultant shall design the Project so as to comply with all Applicable Laws.

5.4.3 Consultant shall prepare the Plans and Specifications, as well as obtain all required and necessary reviews and approvals (or take other appropriate action upon) for same, and/or other submittals including, but not limited to, shop drawings, product data, and samples.

5.4.4 Consultant shall also submit the Plans and Specifications to the Owners Representative, with a copy to Project Manager, for his review and written approval. Owners Representative shall expeditiously review and approve the Plans and Specifications in accordance with the accepted Project Schedule. Owners Representative's approval of the Plans and Specifications shall not constitute acceptance of any design work which does not comply with Applicable Laws, information provided in the technical specifications, and/or with the terms of this Agreement. Except as provided herein, and to the extent limited by, the preceding sentence, the approval of the Plans and Specifications by the Owners Representative shall constitute a representation by the Owners Representative that the Project, if constructed as required by the Contract Documents, will be sufficient for its purposes. The Plans and Specifications shall include technical drawings, schedules, diagrams, and specifications setting forth in detail the requirements for construction of the Project; provide information necessary for the use of DESIGN/BUILD FIRM subcontractors and those in the building trade; and include documents necessary for regulatory agencies and other governmental approvals.

5.4.5 Consultant shall prepare construction change directives, if necessary, at no additional cost to the CITY, and authorize minor changes in the Work, as provided in the Contract Documents.

5.4.6 Consultant shall receive and review for compliance with the Contract Documents, all written warranties and related documents required hereby to be assembled upon substantial completion and issue applications for payment performed in compliance with the requirements of the Contract Documents.

5.5 The approved and permitted Plans and Specifications shall constitute a representation by Consultant to CITY that the Project, constructed as required by the Contract Documents, will be sufficient for its purposes. The Plans and Specifications include technical drawings, schedules, diagrams, and specifications setting forth in detail the requirements for construction of the Project; provide information necessary for the use of DESIGN/BUILD FIRM, subcontractors, and those in the building trade; and include documents necessary for regulatory agencies and other governmental approvals.

5.6 Project Manager will provide the following services:

5.6.1 The Project Manager shall review applications for payment and coordinate the processing thereof with the CITY.

5.6.2 The Project Manager shall monitor the schedule(s).

5.6.3 The Project Manager shall track, log and review all required Project related documents and subsequently address all concerns with DESIGN/BUILD FIRM including request for additional information, request for change proposals, material substitution request, request for substantial and final completion.

5.6.4 The Project Manager shall review and observe the Work and testing thereof for conformance and compliance with the requirements of the Contract Documents.

5.6.5 The Project Manager shall attend all required meetings and maintain and distribute meeting minutes.

5.6.6 At all times, the Project Manager will act as liaison between the Parties to this Agreement.

ARTICLE 6 - CONTRACT TIME AND COMPLETION DATE

6.1 Time is of the essence for the DESIGN/BUILD FIRM's performance of the Work pursuant to this Agreement. The DESIGN/BUILD FIRM agrees to complete the Work in accordance with the approved and accepted Project Schedule and to achieve substantial completion of the Work, in accordance with this Agreement, and within the Contract Time. The DESIGN/BUILD FIRM acknowledges that failure to achieve substantial completion will result in substantial damages to the CITY, such as loss of beneficial use and/or occupancy of the Project.

6.2 DESIGN/BUILD FIRM shall execute the Agreement immediately. DESIGN/BUILD FIRM shall immediately commence scheduling activities, surveying and geotechnical investigations, preparation of final design documents and other preconstruction Work after the Notice to Proceed.

6.3 The DESIGN/BUILD FIRM shall complete the Construction Documents Phase.

6.4 The DESIGN/BUILD FIRM shall meet the following construction milestones:

Milestone	**CALENDAR DAYS FROM NOTICE TO PROCEED (COMPLETETION DATE)**
Assume Notice to Proceed Date	TBD
Submission of 60% Design Plans	March 20 ,2024
Substantial Completion of the Project	August 14, 2025
Final Completion of the Project	October 13, 2025

ARTICLE 7 - LIQUIDATED DAMAGES

7.1 Failure of the DESIGN/BUILD FIRM to substantially complete the Project in accordance with Section 6.4 above, or to meet any of the milestones as indicated in Section 6.4 above, DESIGN/BUILD FIRM shall pay to the CITY the sum of Five Thousand **($5,000.00)** for each calendar day that the completion of the Work is delayed beyond the time after the time specified in Article 6 Section 6.4 above (plus any approved time extensions at the sole discretion of the CITY) that DESIGN/BUILD FIRM fails to meet time specified in Section 6.4 above.

7.2 The time frame for liquidated damages shall not commence and thus shall not be tolled until the Project Manager submits the punch list to the DESIGN/BUILD FIRM.

7.3 DESIGN/BUILD FIRM and CITY HEREBY MUTUALLY AGREE ANDACKNOWLEDGE THAT THE LIQUIDATED DAMAGES AMOUNTS SET FORTH HEREIN are not penalties but are liquidated damages to CITY for its inability to obtain full beneficial occupancy and/or use of the Project. Liquidated damages are hereby 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 said damages and the cost and effect of the failure of DESIGN/BUILD FIRM 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.

7.4 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 DESIGN/BUILD FIRM the amount of liquidated damages, and if the amount retained by the CITY is insufficient to pay in full such liquidated damages, the DESIGN/BUILD FIRM shall pay all liquidated damages in full. The DESIGN/BUILD FIRM shall be responsible for reimbursing the CITY, in addition to liquidated damages or other damages for delay, for all costs of engineering 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 DESIGN/BUILD FIRM whichever is later.

7.5 The CITY is authorized to deduct liquidated damages from monies withheld due to DESIGN/BUILD FIRM for the Work under this Agreement or as much thereof as CITY may, in its sole discretion, deem just and reasonable.

ARTICLE 8 - CHANGE OF THE CONTRACT TIME

8.1 The Contract Time may only be changed by a written and fully executed 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 written Change Order.

8.2 The Contract Time will be extended in an amount equal to time lost due to delays beyond the control of the DESIGN/BUILD FIRM if a claim is made there for as provided in paragraph 8.1. Such delays shall include but not be limited to, acts or neglect by the CITY, or to fires, floods, labor disputes, abnormal weather conditions, or acts of God.

8.3 All time limits stated in the Contract Documents are of the essence. The provisions of this Article shall not exclude recovery for damages for delay by the DESIGN/BUILD FIRM.

8.4 Delays caused by or resulting from entities, contractors or subcontractors who are not affiliated with DESIGN/BUILD FIRM shall not give rise to a claim by the DESIGN/BUILD FIRM for damages for increases in material and/or labor costs.

ARTICLE 9 - CONTRACT PRICE (NOT TO EXCEED PRICE) AND METHOD OF PAYMENT

9.1 The Contract Price is the Lump Sum Guaranteed Maximum Price agreed to by the DESIGN/BUILD FIRM and the CITY under this Agreement, payable to complete the Work in accordance with the Agreement, and, to the extent permitted by this Agreement, as may be increased or decreased by a written and fully executed Change Order.

9.2 The Contract Price for the Project, which is also the Lump Sum Guaranteed Maximum Price is $48,590,888.90. This includes bonds, allowances and material change. The CITY will reimburse actual cost of permit(s) upon submission of paid permit receipts.

9.3 In the event that the DESIGN/BUILD FIRM's total approved expenditures for the Project exceed the Lump Sum Guaranteed Maximum Price, the DESIGN/BUILD Firm shall pay such excess from its own funds. CITY shall not be required to pay any amount that exceeds the Lump Sum Guaranteed Maximum Price and the DESIGN/BUILD FIRM shall have no claim against the CITY on account thereof.

9.4 METHOD OF BILLING AND PAYMENT

9.4.1 During the Construction Documents Phase, DESIGN/BUILD FIRM may submit a request for payment monthly based upon percentage of completion of the permitted Plans and Specifications. During the Construction Phase, DESIGN/BUILD FIRM may submit a request for payment thirty (30) calendar

days after beginning survey and geotechnical investigation subject to the Notice to Proceed, and every thirty (30) calendar days thereafter. Payment will be based upon percentage of work completed for each item in the approved Schedule of Values. DESIGN/BUILD FIRM's requisition for payment shall show a complete breakdown of the Project components, and the amount due, together with such supporting evidence, as may be required by the Project Manager.

At a minimum, the requisition for payment shall be accompanied by a completed certification of Work; consent of surety in the applicable amount; list of subcontractors that performed Work during the payment application period being submitted; releases of liens from the DESIGN/BUILD FIRM for the previous period being billed; releases of liens from subcontractors that have performed Work during the previous billing period unless payment for the previous period has not been received by the DESIGN/BUILD FIRM; aerials and photographs of the areas of Work for the applicable billing period; an accepted, updated Project Schedule (as approved); and back up for all items being billed. The certification of Work will mean compliance by DESIGN/BUILD FIRM with the approved Project Schedule; that as-built drawings of improvements are current for the prior period; and Applicable Laws are being met and complied with. Each requisition for payment shall be submitted to the Project Manager for approval. Payment for Work performed will be made in accordance with the Florida Prompt Payment Act, Sections 255.0705 - 255.078, Florida Statutes (2023), as may be amended or revised, but not more frequently than once a month. The Project Manager shall verify completion of the various phases, as noted, and authorize payment accordingly.

Material purchases can be invoiced to the CITY, upon receipt of invoice and documentation of order placement must be accompanied by a bill of sale from the manufacturer or supplier. Any invoices that are not considered valid will be returned immediately for correction or additional documentation. No more than eight percent (8%) contractor's mark-up will be allowed for materials.

9.4.2 CITY agrees that it will pay DESIGN/BUILD FIRM in accordance with the Florida Prompt Payment Act, as provided above.

9.4.2.1 CITY will review DESIGN/BUILD FIRM's invoices and, if inaccuracies or errors are discovered in said invoice, CITY will inform DESIGN/BUILD FIRM within ten (10) working days by fax and/or by email of such inaccuracies or errors and request that revised copies of all such documents be re-submitted by DESIGN/BUILD FIRM to CITY.

9.4.2.2 Payments are scheduled to be made by CITY to DESIGN/BUILD FIRM by check.

9.4.2.3 Payment may be made to DESIGN/BUILD FIRM at:

Name: David Mancini & Sons, Inc.
Address: 2601 Wiles Road, Pompano Beach, FL 33073
Telephone #: 954-977-3556

Email Address: dmancininijr@dmsi.co

9.4.2.4 The DESIGN/BUILD FIRM shall use the sums paid to it solely for the performance of the Work and the construction, furnishing and equipping of the Work in accordance with the Contract Documents and payment of bills incurred by the DESIGN/BUILD FIRM in performance of the Work.

9.4.3 DESIGN/BUILD FIRM shall remain liable for subcontractors' work and for any unpaid laborers, material suppliers of subcontractors in the event it is after discovered that said work is deficient or that any subcontractors, laborers, or material suppliers did not receive payments due to them on the Project.

9.4.4 Pursuant to Florida Statutes, Section 255.078 (2023), five percent (5%) of all monies earned by DESIGN/BUILD FIRM shall be retained by the CITY until the Project has obtained Final Completion and been accepted by the CITY. The CITY may incrementally reduce the rate of retainage pursuant to a schedule provided for in the Agreement, or from releasing at any point or a portion of any retainage withheld by the CITY which is attributable to the labor, services, or materials supplied by the DESIGN/BUILD FIRM or by one or more subcontractors or suppliers, if applicable and determined to be in the CITY's best interest. If the CITY makes any payment of retainage to DESIGN/BUILD FIRM which is attributable to the labor, services, or materials supplied by one or more subcontractors or suppliers, the DESIGN/BUILD FIRM must timely remit payment of such retainage to those subcontractors and suppliers.

9.5 Upon receipt of written notice from DESIGN/BUILD FIRM that the Project is ready for final inspection and acceptance, the Project Manager shall, within seven (7) calendar days, make an inspection thereof. If the Project Manager finds the Project acceptable under the Contract Documents and the Project fully performed, a Final Certificate of Payment shall be issued by the Contract Administrator over his own signature, stating that the Work required by this Agreement has been completed and is accepted under the terms and conditions thereof.

9.6 Before issuance of the Final Certificate for Payment, DESIGN/BUILD FIRM shall deliver to the Project Manager a complete release of all liens arising out of this Agreement, or receipts in full in lieu thereof, and an affidavit certifying that all suppliers, consultant, subcontractors, and subconsultants have been paid in full, and that all other indebtedness connected with the Project has been paid, and a consent of the surety to final payment. All as-builts, warranties, guarantees, operational manuals, and instructions in operation must be delivered to CITY at this time. The warranties provided after the initial warranty period of year one will be covered under the warranty bond attached as an Exhibit to this Agreement. DESIGN/BUILD FIRM shall submit a completed as-built drawings package signed and sealed by a land surveyor registered in the State of Florida and as approved by the CITY's Public Works Department, and proof that all permits have been closed, which shall be delivered prior to requesting final payment.

9.7 CITY may withhold final payment or any progress payment to such extent as may be necessary on account of:

A. Defective Work not remedied;

B. Claims filed or written notices of nonpayment indicating probable filing of claims as may be prescribed by law by other parties against DESIGN/BUILD FIRM;

C. Failure of DESIGN/BUILD FIRM to make payments properly to Consultant, subcontractors or subconsultants, or for material or labor;

D. Damage to another subcontractor, subconsultant, supplier, material, person, as provided for in Chapter 713, Florida Statutes (2023), party or person not remedied which are attributable to DESIGN/BUILD FIRM, its agents, servants, employees, contractor, consultant, subconsultants, subcontractors, sub-subcontractors, sub-subconsultants, material person and suppliers;

E. Liquidated damages pursuant to Article 7 herein;

F. As-built drawings not being in a current and acceptable state.

9.8 When the above grounds in 9.7 are removed or resolved, or DESIGN/BUILD FIRM provides a surety bond or a consent of surety satisfactory to CITY which will protect CITY in the amount withheld, payment may be made in whole or in part, as applicable.

9.9 If the Project Manager, in his reasonable judgment, determines that the portion of the Not To Exceed Price then remaining unpaid will not be sufficient to complete the Work in accordance with the Contract Documents, no additional payments will be due to the DESIGN/BUILD FIRM hereunder unless and until the DESIGN/BUILD FIRM, at its sole cost, performs a sufficient portion of the Work so that such portion of the Not To Exceed Price then remaining unpaid is determined by the Project Manager to be sufficient to so complete the Work.

9.10 The making of the final payment shall constitute a waiver of all claims by CITY, other than those arising from faulty or defective Work, failure of the Project to comply with requirements of the Contract Documents, or terms of any warranties required by the Contract Documents. It shall also constitute a waiver of all claims by DESIGN/BUILD FIRM, except those previously made in writing and identified by DESIGN/BUILD FIRM as unsettled at the time of the final application for payment.

9.11 The DESIGN/BUILD FIRM warrants to the CITY that all materials and equipment furnished under this Agreement will be new unless otherwise specified, and that all Work will be of good quality and in conformance with the Contract Documents. Any warranties that are extended to the CITY beyond the standard warranty are to be in writing with the servicing firm information attached as an Exhibit. All Work not conforming to these requirements, including substitutions not properly approved and authorized by the Project Manager, may be considered defective. If required by the CITY, the DESIGN/BUILD FIRM shall furnish satisfactory evidence as to the origin, nature and quality of materials and equipment used for the Project. DESIGN/BUILD FIRM shall properly store and protect all construction materials. Materials which become defective through improper storage shall be replaced with new materials at no additional costs. The DESIGN/BUILD FIRM's warranty excludes damage or defect caused by abuse, modifications not executed by the DESIGN/BUILD FIRM, improper or insufficient maintenance, improper operation, or normal wear and tear under normal usage.

ARTICLE 10 - ADDITIONAL SERVICES AND CHANGES IN SCOPE OF WORK

10.1 Without invalidating the Agreement and without notice to any surety, CITY reserves and shall have the right to make such changes from time to time in the character and quantity of the Work as may be considered necessary or desirable to complete fully and acceptably the Project in a satisfactory manner. The CITY may order additions, deletions or revisions in the Work and/or Schedule of Values. Upon receipt of a written and fully executed Change Order, the DESIGN/BUILD FIRM shall proceed with the Work involved. All Work shall be executed under the applicable conditions of the Contract Documents.

10.2 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 DESIGN/BUILD FIRM.

ARTICLE 11 - DESIGN/BUILD FIRM'S RESPONSIBILITIES

11.1 The Parties acknowledge and agree that the DESIGN/BUILD FIRM will be responsible for the design, construction and construction management of the Project according to the PLCWC Comprehensive Agreement.

11.2 The DESIGN/BUILD FIRM will be responsible for securing, with full cooperation of the CITY, all permits for the Project, including without limitation, South Florida Water Management District, Broward County, Army Corps of Engineers and Florida Department of Environmental Protection. The DESIGN/BUILD FIRM shall be fully responsible for any and all other permits and approvals from all governmental authorities having jurisdiction over the Project. All permits and licenses require by federal, state or local laws, rules, and regulations necessary for the prosecution of the Project by DESIGN/BUILD FIRM pursuant to this Agreement shall be secured by the DESIGN/BUILD FIRM and paid for by the CITY. It is the DESIGN/BUILD FIRM's responsibility to have and maintain appropriate certificate(s) of competency, valid for the Work to be performed, and for all persons working on the Project for whom a certificate of competency is required.

11.3 DESIGN/BUILD FIRM shall be fully responsible for the actions of all its agents, servants, employees, including, but not limited to, the contractor, consultant, subcontractors, sub-consultants, sub-subcontractors, materials persons, pursuant to Chapter 713, Florida Statutes 2023, and any and all other persons working for it in conjunction with the design and construction of the Project.

11.4 DESIGN/BUILD FIRM shall be fully responsible for all acts or omissions of its contractor, consultant, subcontractors, subconsultants, sub-subcontractors, sub-subconsultants, materials suppliers, and any and all other persons working for DESIGN/BUILD FIRM in conjunction with the design and construction of the Project; any and all persons working for contractor, consultant, subcontractors or sub-consultant; and any and all persons for whose acts any of the aforesaid may be liable, to the same extent DESIGN/BUILD FIRM is responsible for the acts and omissions of persons directly employed by DESIGN/BUILD FIRM. Nothing in this Agreement shall create any contractual relationship between CITY and consultant, or CITY and any subcontractor, subconsultant, sub-subcontractor, sub-subconsultant, or any other

person working either for DESIGN/BUILD FIRM or for any of the aforementioned Parties in conjunction with the design and construction of the Project, including, without limitation, any obligation on the part of the CITY to pay or to see the payment of any monies due to any of the aforementioned Parties pursuant to this Section.

11.5 DESIGN/BUILD FIRM agrees to bind its consultant, subcontractors, and subconsultants to the applicable terms and conditions of this Agreement for the benefit of the CITY.

11.6 Unless otherwise provided herein, DESIGN/BUILD FIRM shall provide and pay for all architecture, engineering, landscape architecture, land surveying services, materials, construction and other labor, water, tools, equipment, light, power, transportation, and other facilities and services necessary for the proper execution and completion of the design and construction of the Project, whether temporary or permanent, and whether or not incorporated or to be incorporated in the Project.

11.7 DESIGN/BUILD FIRM shall at all times enforce strict discipline and good order among its employees, consultants, subcontractors and subconsultants at the Project site, and shall not employ on the Project any unfit person or anyone not skilled in the work and/or services assigned to him or her.

11.8 DESIGN/BUILD FIRM shall keep itself fully informed of, and shall take into account and comply with any and all Applicable Laws affecting those engaged or employed in the Project; or the materials used or employed in the design and construction of the Project; or in any way affecting the conduct of the Project, including, without limitation, all such orders and decrees of bodies or tribunals having any jurisdiction or authority over the same and of all provisions required by law to be made a part of this Agreement, all of which provisions are hereby incorporated by reference and made a part hereof. If any specification or contract for this Project is in violation of any such Applicable Laws, DESIGN/BUILD FIRM shall forthwith report the same to the Project Manager in writing. DESIGN/BUILD FIRM shall cause all its employees, agents, consultant, subcontractors, subconsultants, sub-subconsultants and sub-subcontractors to observe and comply with all Applicable Laws.

11.9 DESIGN/BUILD FIRM shall pay all applicable sales, consumer, use and other taxes required by law. DESIGN/BUILD FIRM is responsible for reviewing the pertinent state statutes involving state taxes and complying with all requirements.

11.10 If DESIGN/BUILD FIRM has knowledge that the Contract Documents do not comply with Applicable Laws, in any respect, the DESIGN/BUILD FIRM shall promptly notify the Project Manager, in writing, and any necessary changes shall be adjusted by appropriate revisions. If the DESIGN/BUILD FIRM performs any Work not in accordance with Applicable Laws, and without such notice to the Project Manager, the DESIGN/BUILD FIRM shall assume full responsibility therefore and shall bear all costs attributable thereto. DESIGN/BUILD FIRM warrants to CITY that it has thoroughly reviewed and studied the PLCWC Comprehensive Agreement and has determined that it is in conformance with Applicable Laws and is complete and sufficiently coordinated to perform the Work for the Not To Exceed Price and the Contract Time. DESIGN/BUILD FIRM warrants to CITY that the *Product Water Transmission to Fiveash Water Treatment Plant* project identified in Annex B-2 of PLCWC comprehensive agreement is practical, feasible and constructible. DESIGN/BUILD FIRM further warrants to CITY that the Work described in the

PLCWC comprehensive agreement for the Not To Exceed Price and the Contract Time.

THE CITY DISCLAIMS ANY WARRANTY THAT THE CRITERIA FOR THE PROJECT IS ACCURATE, PRACTICAL, CONSISTENT, AND/OR CONSTRUCTIBLE.

11.11 DESIGN/BUILD FIRM accepts the Project site in its observable and/or documented condition existing at the time of this Agreement, or conditions ordinarily encountered and generally recognized as inherent to the character of the Work to be provided for in this Project. By signing this Agreement, the DESIGN/BUILD FIRM represents to the CITY that it has: (a) visited the Project site to become familiar with the conditions under which the Work is to be performed; (b) become familiar with all information provided (without warranty) by the CITY pertaining to the Project site; and (c) correlated its observations with the information furnished by the CITY (without warranty), and the Contract Documents. The DESIGN/BUILD FIRM hereby waives additional time or compensation for additional work made necessary by observable and/or documented conditions existing at the Project site, or conditions ordinarily encountered and generally recognized as inherent to the character of the Work to be provided for in this Project.

11.12 The DESIGN/BUILD FIRM agrees specifically that no Change Orders shall be required by the DESIGN/BUILD FIRM or considered by the CITY for reasons involving conflicts in the Contract Documents; questions of clarity with regard to the Contract Documents; and incompatibility or conflicts between the Contract Documents and the existing Project site conditions excluding, without limitation, utilities and unforeseen underground conditions at the discretion of the CITY and will not be unreasonably withheld. The DESIGN/BUILD FIRM acknowledges that it has ascertained all correct locations for points of connection for all utilities required for this Project.

11.13 The DESIGN/BUILD FIRM shall comply with all conditions of any permits issued by government authorities.

11.14 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 DESIGN/BUILD FIRM; the CITY reserves the right to approve all suppliers and materials.

11.15 The DESIGN/BUILD FIRM 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 DESIGN/BUILD FIRM hereby expressly binds itself to indemnify and save harmless the CITY from all such claims and fees and from any and all suits and actions 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.

11.16 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

7:00 am to 7:00 pm, Monday through Friday. The DESIGN/BUILD FIRM will not permit overtime work or the performance of Work on Saturday, Sunday or any legal holiday designated by the CITY 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 DESIGN/BUILD FIRM 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 DESIGN/BUILD FIRM and no extra payment shall be made to the DESIGN/BUILD FIRM for overtime work. The cost to the DESIGN/BUILD FIRM to reimburse the CITY for overtime inspections 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 DESIGN/BUILD FIRM at the actual rate accrued.

CITY Inspector Hours: 8:00 am to 4:30 pm

11.17 If DESIGN/BUILD FIRM requests to work during other than regular hours that conform to the standard hours listed in the CITY's Noise Ordinance Section 17-8 (1), a written request must be submitted to the CITY Project Manager with seven (7) business days in advance of scheduled work. The request shall include the following information:

- Cover page with DESIGN/BUILD FIRM name, Project name, and location.
- Description of work to be performed outside of normal work hours.
- Site plan and location map.
- Legal description.
- Justification for work and why extended work hours are being requested.
- Commencement date and duration of work.
- List of DESIGN/BUILD FIRM contacts, including those on site.
- Details on type of equipment to be used during extended work hours.
- Details on noise levels that may be produced by range of decibels, including current ambient levels at site and levels predicted from proposed construction impacts.
- Details on vibratory control measures to be implemented.
- Details on how neighbors in vicinity of work area will be notified.
- Details on how complaints will be resolved and/or mitigated.
- Maintenance of Traffic plans approved by CITY's Transportation and Mobility Department (TAM) and any other agencies (if applicable).

11.17.1 If no lane closure or traffic impacts are necessary, the DESIGN/BUILD FIRM request must be submitted seven (7) business days in advance of scheduled work. If the Work requires lane closures, request should be submitted at least ten (10) business days in advance, along with MOT plans approved by CITY's TAM, and any other agencies if necessary, to allow time for City Manager consideration and approval, CITY MOT permit issuance, and notification to the public.

11.17.2 The DESIGN/BUILD FIRM will not be permitted overtime work or the performance of work on Saturday, Sunday or any legal holiday (designated by the City of Fort Lauderdale) without the City Manager's written consent at least seventy- two (72) hours in advance of the period proposed for such overtime work. Hours of work shall conform to the requirements of the CITY's Noise Ordinance.

11.17.3 If the DESIGN/BUILD FIRM requests to work outside regular hours that require a special exemption from the provisions of Section 17-7.4, it shall follow the CITY's Department of Sustainable Development's process for "Requesting Exemption from the Noise Ordinance," located at:

Building Permit General Info | City of Fort Lauderdale, FL

11.17.4 The DESIGN/BUILD FIRM will not permit overtime work or the performance of work on Saturday, Sunday or any legal holiday designated by the CITY without the approval from the City Manager or CITY Commission approval at least seventy-two (72) hours in advance of starting such work.

In the event of an emergency affecting the safety or protection of persons or the Work or property at the site or adjacent thereto, DESIGN/BUILD FIRM, without special instruction or authorization from the CITY is obligated to act to prevent threatened damage, injury or loss. DESIGN/BUILD FIRM shall give the Project Manager prompt written notice of any significant changes in the Work or deviations from the Contract Documents caused thereby.

11.18 Upon issuance of a hurricane watch by the National Weather Service, DESIGN/BUILDFIRM 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 DESIGN/BUILD FIRM 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 DESIGN/BUILD FIRM has not already done so, the DESIGN/BUILD FIRM 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 DESIGN/BUILD FIRM to any additional compensation. DESIGN/BUILD FIRM shall be entitled to request an extension of time for completion of the Work, in accordance with the provision of Article 8 of this Agreement, equal to the time it is shut down for implementation of the preparedness plan, the duration of the storm and a reasonable period to restore the Premises.

11.19 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 these 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 respective 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 DESIGN/BUILD FIRM 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 DESIGN/BUILD FIRM shall use its reasonable efforts to minimize such delays. The DESIGN/BUILD FIRM shall promptly provide an estimate of the anticipated additional time required to complete the Project.

ARTICLE 12 - CITY'S RESPONSIBILITIES

12.1 CITY shall assist DESIGN/BUILD FIRM by placing at its disposal any available information pertinent to the Project including previous reports, laboratory tests and inspections of samples, materials and equipment, property, boundary, easement, rights-of-way, topographic and utility surveys; property descriptions; and known zoning, deed and other land use restrictions.

12.2 CITY shall arrange for access to and make all provisions for DESIGN/BUILD FIRM to enter upon public property as required for DESIGN/BUILD FIRM to perform its services.

12.3 CITY shall render decisions under this Agreement in a timely manner.

ARTICLE 13 - SUPERINTENDENCE AND SUPERVISION

13.1 The orders of the CITY are to be given through the Project Manager, whose instructions are to be strictly and promptly followed in every case, provided that they are in accordance with this Agreement and the other Contract Documents. Construction Manager shall keep on the Project during its progress, a full-time, competent, English-speaking supervisor, who shall be the Construction Manager Representative and who shall serve as the superintendent, and any necessary assistants, all satisfactory to the Project Manager.

13.2 Construction Manager or Construction Manager Representative shall prepare, on a daily basis, and keep on the Project site, a bound log setting forth at a minimum, for each day: the weather conditions and how any weather conditions affected progress of the Work; time of commencement of Work for the day; the Work performed; materials, labor, personnel, equipment and subcontractors used for the Work; any idle

equipment and reasons for idleness; visitors to the Project site; any special or unusual conditions or occurrences encountered; any materials delivered to the Project site; and the time of termination of Work for the day. The daily bound log shall be available for inspection by the CITY, or its authorized designee, at all times during the Project, without previous notice.

13.3 If DESIGN/BUILD FIRM, in the course of the Project, finds any discrepancy between the Contract Documents and the physical conditions of the site, or any errors or omissions in the Contract Documents including, but not limited to, the Plans and Specifications, it shall be DESIGN/BUILD FIRM's sole obligation and duty to immediately inform the Project Manager, in writing, and the Project Manager will promptly verify same. Any Work done prior to or after such discovery will be done at DESIGN/BUILD FIRM's sole risk. NOTWITHSTANDING THE PRECEDING, OR ANY OTHER TERM OR CONDITION OF THIS AGREEMENT, DESIGN/BUILD FIRM HEREBY ACKNOWLEDGES AND AGREES THAT THIS IS A DESIGN/BUILD PROJECT AND, ACCORDINGLY, ANY ERRORS OR OMISSIONS SHALL BE CORRECTED AT THE SOLE COST AND EXPENSE OF DESIGN/BUILD FIRM AND WITHOUT A CLAIM FOR ADJUSTMENT IN THE CONTRACT TIME OR CONTRACT PRICE.

13.4 DESIGN/BUILD FIRM shall coordinate, supervise and direct the Project competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform and complete the Project in accordance with the Contract Documents. DESIGN/BUILD FIRM shall be solely responsible for the design, preparation of Construction Documents, means, methods, techniques, safety, sequences and procedures of construction. DESIGN/BUILD FIRM shall give efficient supervision to the Work, using DESIGN/BUILD FIRM's best skill, attention and judgment.

ARTICLE 14 - RESOLUTION OF DISPUTES

14.1 Questions, claims, difficulties and disputes of whatever nature which may arise relative 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 CITY Project Manager and DESIGN/BUILD FIRM Project Manager shall be submitted to the City Manager or his designee and DESIGN/BUILD FIRM's representative for resolution.

14.2 All non-technical administrative disputes (such as billing and payment) shall be determined by the Project Manager.

14.3 During the pendency of any dispute and after a determination thereof, DESIGN/BUILD FIRM, and CITY shall act in good faith to mitigate any potential damages including using construction schedule changes and alternate means of construction. During the pendency of any dispute arising under this Agreement, other than termination herein, DESIGN/BUILD FIRM shall proceed diligently with performance of this Agreement and CITY shall continue to make payments for undisputed amounts in accordance with the Contract Documents.

14.4 In the event a resolution of a dispute under this section cannot be resolved, the issue shall be submitted by the DESIGN/BUILD FIRM to the City Manager or designee,

in writing within ten (10) days of the impasse. The notice must state the basis of the dispute and the DESIGN/BUILD FIRM's proposed resolution. The notice given by the DESIGN/BUILD FIRM must include a written notarized certification that any Lump Sum adjustment claimed is the entire adjustment to which the DESIGN/BUILD FIRM has reason to believe it is entitled to as a result of the question, claim, difficulty or dispute. Resolution of such dispute shall be made by the City Manager or designee. The City Manager's decision shall be final and binding on the Parties subject to mediation and judicial review.

14.5 Prior to any litigation being commenced, for any disputes which remain unresolved, within sixty (60) days after Final Completion of the Work, the Parties shall participate in mediation to address all unresolved disputes to a mediator mutually agreed upon by the Parties. Should any objection not be resolved in mediation, the Parties retain all their legal rights and remedies provided under the laws of Florida. Failure by a Party to comply in strict accordance with the requirements of this Article, then said Party specifically waives all of its rights provided hereunder, including its rights and remedies under the laws of Florida.

ARTICLE 15 - CITY'S RIGHT TO TERMINATE AGREEMENT

15.1 If DESIGN/BUILD FIRM fails to begin the design and construction of the Project within the time specified, or fails to perform the Project with sufficient workers and equipment or with sufficient materials to insure the prompt completion of the Project, in accordance with the Contract Documents and schedules, or shall perform the Work unsuitably, or cause it to be rejected as defective and unsuitable; or shall discontinue the prosecution of the Project, except for excused delays in accordance with this Agreement; or if DESIGN/BUILD FIRM shall become insolvent or be declared bankrupt, or commit any act of bankruptcy or insolvency, or shall make an assignment for the benefit of creditors; or shall not carry on the Project in accordance with the Contract Documents, then the CITY shall give notice, in writing, to DESIGN/BUILD FIRM and its surety of such delay, neglect or default, specifying the same. If DESIGN/BUILD FIRM within a period of ten (10) calendar days after such notice, shall not proceed in accordance therewith, then CITY may, upon written notice from the Project Manager of the fact of such delay, neglect or default and DESIGN/BUILD FIRM's failure to comply with such notice, terminate the services of DESIGN/BUILD FIRM, exclude DESIGN/BUILD FIRM from the Project site, and take the prosecution of the Project out of the hands of DESIGN/BUILD FIRM, as appropriate, or use any or all materials and equipment on the Project site as may be suitable and acceptable, in the CITY's reasonable discretion. In such case, DESIGN/BUILD FIRM shall not be entitled to receive any further payment until the Project is finished. In addition, CITY may enter into an Agreement for the completion of the Project according to the terms and provisions of the Contract Documents, or use such other methods as in its opinion shall be required for the completion of the Project in an acceptable manner. All damages, costs and charges incurred by CITY shall be deducted from any monies due or which may become due to said DESIGN/BUILD FIRM. Actions will be instituted to recover on the posted bonds. If such damages and costs exceed the unpaid balance, then DESIGN/BUILD FIRM shall be liable and shall pay to CITY the amount of said excess.

15.2 If, after Notice of Termination of DESIGN/BUILD FIRM's right to proceed, it is

determined for any reason that DESIGN/BUILD FIRM was not in default, the rights and obligations of CITY and DESIGN/BUILD FIRM 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 15.3 below.

15.3 Notwithstanding any other provision in this Agreement, the performance of Work under this Agreement may be terminated in writing by CITY, for convenience and without cause, upon ten (10) business days from the date of DESIGN/BUILD FIRM's receipt of the written notice to DESIGN/BUILD FIRM of intent to terminate and the date on which such termination becomes effective. In such case, DESIGN/BUILD FIRM shall be paid for all Work executed and approved, and reasonable expenses incurred, such as materials stored, cost of severance of leases/contracts directly associated with the Project, and reasonable demobilization prior to termination. PAYMENT SHALL INCLUDE REASONABLE PROFIT FOR SERVICES ACTUALLY PERFORMED IN FULL AND ACCEPTED PRIOR TO TERMINATION DATE, BUT SHALL EXCLUDE ALL LOSS PROFITS, INDIRECT CONSEQUENTIAL, SPECIAL OR OTHER DAMAGES.

15.4 Upon receipt of Notice of Termination pursuant to Sections 15.1 and 15.2 above, DESIGN/BUILD FIRM shall, at its sole cost and expense (other than demobilization as a result of the Notice of Termination pursuant to Section 15.3 which shall be paid for by the CITY) and as a condition precedent to any further payment obligation by the CITY, promptly discontinue all affected work, unless the Notice of Termination directs otherwise, and deliver to CITY within seven (7) calendar days of termination, 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. Compensation shall be withheld until all documents are produced to CITY pursuant to this Article.

ARTICLE 16 - DESIGN/BUILD FIRM'S RIGHT TO STOP WORK OR TERMINATECONTRACT

16.1 If the Project should be stopped under any order of any court or other public authority for a period of more than ninety (90) calendar days, through no act or fault of DESIGN/BUILD FIRM or of anyone employed by DESIGN/BUILD FIRM, or if the Project Manager should fail to review and approve or state in writing reasons for non-approval of any requisition for payment within twenty (20) business days after it is presented; or if CITY fails to pay DESIGN/BUILD FIRM after submittal of a proper an d co m p l et e requisition for payment, as approved by the Project Manager and in accordance with the Florida Prompt Payment Act, then DESIGN/BUILD FIRM may give written notice to CITY, of such delay, neglect or default, specifying same. If CITY, within a period of ten (10) business days after such written notice, shall not remedy the delay, neglect, or default upon which notice is based, then DESIGN/BUILD FIRM may stop work until payment is made, or terminate this Agreement and recover from CITY payment for all Work executed and approved and reasonable expenses sustained, but excluding any claim for payments for loss profits, indirect, special, consequential or other damages.

ARTICLE 17 - NOTICES

17.1 Whenever either Party desires to give notice to the other, such notice must be in writing with proof of delivery or receipt. The notice shall be address to the Party for whom it is intended at the place last specified; and the place for giving of notice shall remain until it shall have been changed by written notice in compliance with the provisions of this paragraph. For the present, the Parties designate the following as the respective places for giving notice:

FOR THE CITY City Manager City of Fort Lauderdale 101 NE 3rd Avenue Fort Lauderdale Florida 33301 With copies to: Project Manager and City Attorney City of Fort Lauderdale 1 East Broward Boulevard, Suite 1605 Fort Lauderdale, Florida 33301	FOR THE DESIGN/BUILD FIRM David Mancini Jr. 2601 Wiles Road Pompano Beach, Florida 33070 754-264-9594 dmancinijr@dmsi.co

ARTICLE 18 – BONDS AND INSURANCE

18.1 DESIGN/BUILD FIRM shall furnish, or cause to be furnished, on or before seven (7) days after execution of this Agreement, the following:

18.1.1 Performance Bond and Payment Bond (Surety)
THE DESIGN/BUILD FIRM shall execute and record in the Public Records of Broward County, Florida, a payment and performance bond in an amount at least equal to the Contract Price guaranteeing to CITY the completion and performance of the Project covered in this Agreement as well as full payment of all suppliers, material persons, laborers, or subcontractors employment pursuant to the Project. The Payment and Performance Bond shall be with a surety insurer authorized to do business in the state of Florida as surety ("Bond"), in accordance with Section. 255.05, Florida Statutes, as may be amended or revised, as security for the faithful performance and payment of all of the DESIGN/BUILD FIRM's obligations under the Contract Documents. The performance and payment bond shall remain in full force and effect during the Project and sixty (60) days beyond the contract term for close out.

18.2 Insurance Requirements
As a condition precedent to the effectiveness of this Agreement, during the term of this Agreement and during any renewal or extension term of this Agreement, DESIGN/BUILD FIRM, at its sole expense, shall provide insurance of such types and with such terms and limits as noted below. Providing proof of and maintaining adequate insurance coverage are material obligations of shall provide the CITY a certificate of insurance evidencing such coverage. DESIGN/BUILD FIRM's insurance coverage shall be primary insurance

for all applicable policies, in respect to the CITY's interests. The limits of coverage under each policy maintained by shall not be interpreted as limiting 's liability and obligations under this Agreement. All insurance policies shall be through insurers authorized or eligible to write policies in the State of Florida and possess an A.M. Best rating of A-, VII or better, subject to approval by the City's Risk Manager.

The coverages, limits, and/or endorsements required herein protect the interests of the CITY, and these coverages, limits, and/or endorsements shall in no way be relied upon by for assessing the extent or determining appropriate types and limits of coverage to protect against any loss exposures, whether as a result of this Agreement or otherwise. The requirements contained herein, as well as the CITY's review or acknowledgement, are not intended to and shall not in any manner limit or qualify the liabilities and obligations assumed by under this Agreement.

The following insurance policies and coverages are required:

Commercial General Liability
Coverage must be afforded under a Commercial General Liability policy with limits not than:

- $5,000,000 each occurrence and $5,000,000 aggregate for Bodily Injury, Property Damage, and Personal and Advertising Injury
- $5,000,000 each occurrence and $5,000,000 aggregate for Products and Completed Operations

Policy must include coverage for contractual liability and independent contractors.

The CITY, a Florida municipality, its officials, employees, and volunteers are to be covered as an additional insured with a CG 20 26 04 13 Additional Insured – Designated Person or Organization Endorsement or similar endorsement providing equal or broader Additional Insured Coverage with respect to liability arising out of activities performed by or on behalf of DESIGN/BUILD FIRM. The coverage shall contain no special limitation on the scope of protection afforded to the CITY, its officials, employees, and volunteers.

Professional Liability
Coverage must be afforded for Wrongful Acts in an amount not less than $5,000,000 each claim and $5,000,000 aggregate.

DESIGN/BUILD FIRM must keep the professional liability insurance in force until the third anniversary of expiration or early termination of this Agreement or the third anniversary of acceptance of work by the CITY, whichever is longer, which obligation shall survive expiration or early termination of this Agreement.

Pollution and Remediation Legal Liability (Hazardous Materials)
For the purpose of this section, the term "hazardous materials" includes all materials and substances that are designated or defined as hazardous by Florida or federal law or by the rules or regulations of Florida or any federal agency. If work being performed involves hazardous materials, DESIGN/BUILD FIRM shall procure and maintain any or all of the following coverages (which will be specifically addressed upon review of exposure):

DESIGN/BUILD FIRM Pollution Liability Coverage

For sudden and gradual occurrences and in an amount not less than $1,000,000 per claim arising out of this Agreement, including but not limited to, all hazardous materials identified under the Agreement.

Hazardous Waste Transportation Coverage

DESIGN/BUILD FIRM shall designate the hauler and furnish a Certificate of Insurance from the hauler for Automobile Liability insurance with Endorsement MCS90 for liability arising out of the transportation of hazardous materials in an amount not less than $1,000,000 per claim limit and provide a valid EPA identification number.

Disposal Coverage

DESIGN/BUILD FIRM shall designate the disposal site and furnish a Certificate of Insurance from the disposal facility for Environmental Impairment Liability insurance, covering liability for sudden and accidental occurrences in an amount not less than $1,000,000 per claim and shall include liability for non-sudden occurrences in an amount not less than $1,000,000 per claim.

Crane and Rigging Liability

Coverage must be afforded for any crane operations under the Commercial General or Business Automobile Liability policy as necessary, in line with the limits of the associated policy.

Business Automobile Liability

Coverage must be afforded for all Owned, Hired, Scheduled, and Non-Owned vehicles for Bodily Injury and Property Damage in an amount not less than $1,000,000 combined single limit each accident.

If DESIGN/BUILD FIRM does not own vehicles, DESIGN/BUILD FIRM shall maintain coverage for Hired and Non-Owned Auto Liability, which may be satisfied by way of endorsement to the Commercial General Liability policy or separate Business Auto Liability policy.

Workers' Compensation and Employer's Liability

Coverage must be afforded per Chapter 440, Florida Statutes (2023). Any person or entity performing work for or on behalf of the City must provide Workers' Compensation insurance. Exceptions and exemptions will be allowed by the City's Risk Manager, if they are in accordance with Florida Statutes.

DESIGN/BUILD FIRM waives, and DESIGN BUILD/FIRM shall ensure that DESIGN/BUILD FIRM's insurance carrier waives, all subrogation rights against the CITY, its officials, employees, and volunteers for all losses or damages. The CITY requires the policy to be endorsed with WC 00 03 13 Waiver of our Right to Recover from Others or equivalent.

DESIGN/BUILD FIRM must be in compliance with all applicable State and federal workers' compensation laws, including the U.S. Longshore and Harbor Workers' Compensation Act and the Jones Act, if applicable.

Insurance Certificate Requirements

a) DESIGN/BUILD FIRM shall provide the CITY with valid Certificates of Insurance (binders are unacceptable) no later than ten (10) days prior to the start of work contemplated in this Agreement.
b) DESIGN/BUILD FIRM shall provide to the CITY a Certificate of Insurance having a thirty (30) day notice of cancellation; ten (10) days' notice if cancellation is for nonpayment of premium.
c) In the event that the insurer is unable to accommodate the cancellation notice requirement, it shall be the responsibility of DESIGN/BUILD FIRM to provide the proper notice. Such notification will be in writing by registered mail, return receipt requested, and addressed to the certificate holder.
d) In the event the Agreement term or any surviving obligation of DESIGN/BUILD FIRM following expiration or early termination of the Agreement goes beyond the expiration date of the insurance policy, DESIGN/BUILD FIRM shall provide the CITY with an updated Certificate of Insurance no later than ten (10) days prior to the expiration of the insurance currently in effect. The City reserves the right to suspend the Agreement until this requirement is met.
e) The Certificate of Insurance shall indicate whether coverage is provided under a claims-made or occurrence form. If any coverage is provided on a claims-made form, the Certificate of Insurance must show a retroactive date, which shall be the effective date of the initial contract or prior.
f) The CITY shall be covered as an Additional Insured on all liability policies, with the exception of Workers' Compensation and Professional Liability.
g) The CITY shall be granted a Waiver of Subrogation on DESIGN/BUILD FIRM's Workers' Compensation insurance policy.
h) The title of the Agreement, Bid/Contract number, event dates, or other identifying reference must be listed on the Certificate of Insurance.

The Certificate Holder should read as follows:
City of Fort Lauderdale
1 East Broward Boulevard
Fort Lauderdale, FL 33301

18.3 The DESIGN/BUILD FIRM has the sole responsibility for all insurance premiums and shall be fully and solely responsible for any costs or expenses as a result of a coverage deductible, co-insurance penalty, or self-insured retention; including any loss not covered because of the operation of such deductible, co-insurance penalty, self-insured retention, or coverage exclusion or limitation. Any costs for adding the CITY as an Additional Insured shall be at the DESIGN/BUILD FIRM's expense.

If the DESIGN/BUILD FIRM primary insurance policy/policies do not meet the minimum requirements, as set forth in this Agreement, the DESIGN/BUILD FIRM may provide an Umbrella/Excess insurance policy to comply with this requirement.

The DESIGN/BUILD FIRM's insurance coverage shall be primary insurance as respects to the CITY, a Florida municipal corporation, its officials, employees, and volunteers. Any insurance or self-insurance maintained by the CITY, a Florida municipal corporation, its officials, employees, or volunteers shall be non-contributory.

Any exclusions or provisions in any insurance policy maintained by the DESIGN/BUILD FIRM that excludes coverage required in this Agreement shall be deemed unacceptable and shall be considered breach of contract.

All required insurance policies must be maintained until the contract work has been accepted by the CITY, or until this Agreement is terminated, whichever is later. Any lapse in coverage shall be considered breach of contract. In addition, DESIGN/BUILD FIRM must provide to the CITY confirmation of coverage renewal via an updated certificate should any policies expire prior to the expiration of this Agreement. The CITY reserves the right to review, at any time, coverage forms and limits of DESIGN/BUILD FIRM's insurance policies.

The DESIGN/BUILD FIRM shall provide notice of any and all claims, accidents, and any other occurrences associated with this Agreement to the DESIGN/BUILD FIRM's insurance company or companies and the CITY's Risk Management office, as soon as practical.

It is the DESIGN/BUILD FIRM's responsibility to ensure that any and all of the DESIGN/BUILD FIRM independent contractors and subcontractors comply with these insurance requirements. All coverages for independent contractors and subcontractors shall be subject to all of the applicable requirements stated herein. Any and all deficiencies are the responsibility of the DESIGN/BUILD FIRM.

Certificates will indicate no modification or change in insurance shall be made without thirty (30) days in advance notice to the certificate holder. Compliance with the foregoing requirements shall not relieve the DESIGN/BUILD FIRM of its liability and obligation under this section or under any other Section of this Agreement.

18.4 The DESIGN/BUILD FIRM 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 DESIGN/BUILD FIRM shall be responsible for submitted 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 DESIGN/BUILD FIRM in conjunction with the violation of the terms and conditions of the Agreement.

NOTE: CITY PROJECT NUMBER, AND PROJECT NAME MUST APPEAR ON EACH CERTIFICATE, AND THE CITY OF FORTLAUDERDALE MUST BE NAMED ON THE CERTIFICATE AS AN "ADDITIONAL INSURED" ON ALL REQUIRED LIABILITY POLICIES.

ARTICLE 19 - SUBSTANTIAL COMPLETION

19.1 When DESIGN/BUILD FIRM considers that the Project, or a designated portion thereof, is substantially complete, the DESIGN/BUILD FIRM shall so notify the Project Manager, in writing, and shall prepare for submission to the Project Manager a thorough list of items to be completed or corrected, together with a schedule for completion of all items. The failure to include any items on such list does not alter the responsibility of DESIGN/BUILD FIRM to complete all Work in accordance with the Contract Documents. The Project Manager, and such other persons as they may deem necessary, shall conduct a joint inspection to determine that the Project (or designated portion thereof) is substantially complete.

19.2 The Project Manager will prepare and deliver to the DESIGN/BUILD FIRM a Certificate of Substantial Completion which shall establish the date of Substantial Completion for the Project (or that portion of the Project). DESIGN/BUILD FIRM shall have sixty (60) days to complete the punch list items listed therein required for Final Completion. Warranties required by the Contract Documents and submitted in appropriate form to the Project Manager, shall commence on the date of Substantial Completion of the Project (or for that portion of the Project).

ARTICLE 20 - FINAL COMPLETION

20.1 When the DESIGN/BUILD FIRM considers that the Project, or a designated portion thereof, is finally complete, DESIGN/BUILD FIRM shall notify the Project Manager, in writing, that the Work is complete, and that the DESIGN/BUILD FIRM has satisfied all prerequisites to Final Completion. The DESIGN/BUILD FIRM and the Project Manager and such other persons as they may deem necessary, shall conduct a final inspection . The Project Manager will provide written notice if this inspection reveals that the Work is incomplete, non-conforming or defective. DESIGN/BUILD FIRM shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies and shall notify all Parties that the Project (or designated portion thereof) is finally complete.

Acceptance of Final Completion by CITY shall be based upon compliance with the Contract Documents and Applicable Laws. Warranties required by the Contract Documents and submitted in appropriate form to the Project Manager shall commence on the date of Final Completion of the Project (or for that portion of the Project).

ARTICLE 21 - SHOP DRAWINGS AND SCHEDULE OF VALUES

21.1 DESIGN/BUILD FIRM shall submit Shop Drawings for all equipment, apparatus, machinery, fixtures, piping, wiring, fabricated structures and manufactured articles.

21.2 DESIGN/BUILD FIRM shall thoroughly review and check the Shop Drawings and each and every copy shall show DESIGN/BUILD FIRM's approval thereon.

21.3 If the Shop Drawings show or indicate departures from the Agreement requirements, DESIGN/BUILD FIRM shall make specific mention thereof in its shop drawing submittal and in a separate letter. Failure to point out such departures shall not relieve DESIGN/BUILD FIRM from its responsibility to comply with the Contract Documents. Project Manager shall determine acceptability of change and, in considering said change, may require data, technical comparisons, cost comparisons, quality comparisons and/or

calculations to determine the equality of deviations. Contract Administrator is not obligated to accept deviations.

21.4 No acceptance will be given to partial submittal of Shop Drawings for items which interconnect and/or are interdependent. It is DESIGN/BUILD FIRM's responsibility to assemble the Shop Drawings for all such interconnecting and/or independent items, check them, and then make one (1) submittal to the Project Manager, along with DESIGN/BUILD FIRM's comments as to compliance, noncompliance, or features requiring special attention.

21.5 If catalog sheets or prints of manufacturers' standard drawings are submitted as Shop Drawings, any additional information or changes on such drawings shall be typewritten or lettered in ink. Catalog sheet with multiple options shall be highlighted to depict specific pertinent data including options.

21.6 DESIGN/BUILD FIRM shall submit to Project Manager five (5) copies of Shop Drawings. Re-submissions of Shop Drawings shall be made in the same quantity until final acceptance is obtained.

21.7 Project Manager's acceptance of the Shop Drawings, as approved by DESIGN/BUILD FIRM, will be for general compliance with the Plans and Specifications, and shall not relieve DESIGN/BUILD FIRM of responsibility for the accuracy of such Drawings, nor for the proper fittings and construction of the Work, nor for the furnishing of the materials or Work required by the Agreement and not indicated on the Drawings.

21.8 DESIGN/BUILD FIRM shall keep one (1) set of Shop Drawings, marked with the Project Manager's acceptance, as the Project site at all times.

21.9 The DESIGN/BUILD FIRM shall submit a Schedule of Values to the Project Manager as specified in the Technical Specifications. DESIGN/BUILD FIRM shall submit to the Project Manager a separate Schedule of Values for demolition, abatement, and site work ten (10) calendar days prior to commencing such portion of the Work. The schedule will be typed on 8½" x 11" white paper listing: title of Project, location, Project number, Consultant, Contractor, Contract designation and date of submission. The schedule shall list the installed value of the component parts of the Work in sufficient detail to serve as a basis for computing values for progress payments during the construction. The table of contents of the specifications shall establish the format for listing the component items. Each line item will be identified by the number and title of the respective major section of the specifications. For each line item, DESIGN/BUILD FIRM shall list the sub-values of major products or operations under the item. Each item shall include the proportion of DESIGN/BUILD FIRM's overhead and profit. For any items for which progress payments will be requested for stored materials, the value will be broken down with:

A. Schedule must include the following but is not limited to:

Separate identifiable activity on the critical path, an activity labeled "Other Conditions Allowance." This activity duration shall be thirty (30) calendar days and inserted at the end of the schedule prior to Substantial Completion. This allowance may or may not be used at the discretion of the CITY. Use of this activity shall be subject to the review and approval of the CITY and the Design Criteria Professional. The duration of the "Other Conditions Allowance" activity shall be reduced as other conditions are experienced and inserted in the schedule;

B. The cost of materials delivered, unloaded, properly stored and safeguarded, with taxes paid; and

C. The total installed value review.

ARTICLE 22 - FIELD ENGINEERING

22.1 The DESIGN/BUILD FIRM shall provide and pay for field engineering services required for the Project. This Work shall include the following elements:

A. Survey work required in execution of the Project;

B. Civil, structural or other professional engineering, architectural, landscape architectural, or land surveying services specified, or required to execute the DESIGN/BUILD FIRM's construction methods;

C. The survey completed by DESIGN/BUILD FIRM will identify the qualified engineer or registered land surveyor, acceptable to the CITY, and he or she shall be retained by the DESIGN/BUILD FIRM at the outset of this Project;

D. The survey will locate and protect control points prior to starting site work, and will preserve all permanent reference points during construction;

E. No changes or relocations will be made without prior written notice to the Project Manager;

F. A written report shall be made to the Project Manager when any reference point is lost or destroyed, or requires relocation because of necessary changes in grades or locations;

G. The surveyor shall be required to replace Project control points which may be lost or destroyed. The surveyor shall be duly registered as a surveyor or mapper, as required by state law;

H. Replacement shall be established based upon original survey control.

22.2 The survey completed by DESIGN/BUILD FIRM will identify the qualified engineer or registered land surveyor, acceptable to the CITY, and he or she shall be retained by the DESIGN/BUILD FIRM at the outset of this Project.

22.2.1 The survey will locate and protect control points prior to starting sitework and will preserve all permanent reference points during construction.

22.2.2 No changes or relocations will be made without prior written notice to the Project Manager.

22.2.3 A written report shall be made to the Project Manager when any reference point is lost or destroyed or requires relocation because of necessary changes in grades or locations.

22.2.4 The surveyor shall be required to replace Project control points which may be lost or destroyed. The surveyor shall be duly registered as a surveyor or mapper, as required by state law.

22.2.5 Replacements shall be established based upon original survey control.

ARTICLE 23 - FIELD LAYOUT OF THE WORK AND RECORD DRAWINGS

23.1 The entire responsibility for establishing and maintaining a line and grade in the field lies with DESIGN/BUILD FIRM. DESIGN/BUILD FIRM shall maintain an accurate and precise horizontal and vertical record of the existing pavement conditions; final pavement conditions; and all pipelines, conduits, structures, underground utility access portals, handholes, fittings, etc. encountered or installed during construction. DESIGN/BUILD FIRM shall deliver these records in good order to the Contract Administrator as the Work is completed. These records shall serve as a basis for "as-built" drawings. The cost of all such field layout and recording work is included in the Contract Price.

23.2 DESIGN/BUILD FIRM shall maintain in a safe place at the site, one (1) record copy of the Plans and Specifications, addenda, written amendments, Change Orders and written interpretations and clarifications, in good order and annotated to show all changes made during construction. These record documents, together with all approved samples and a counterpart of all approved Shop Drawings, will be available to Contract Administrator for reference. Upon completion of the Project, these record documents, samples and Shop Drawings shall be delivered to Contract Administrator.

23.3 At the completion of the Project, the DESIGN/BUILD FIRM shall turn over to the CITY asset of reproducible drawings and a complete set of all drawings in the latest version of AutoCAD on Compact Disk, not compressed, which accurately reflect the "as-built" conditions of the new facilities. All changes made to the Construction Documents, either as clarifications or as changes, will be reflected in the plans. The changes shall be submitted at least monthly to the Project Manager. These "as-built" drawings are to be AutoCAD version 2018 and to CITY Standard Details and CADD Standards. Format media must be delivered and found to be acceptable prior to final payment being made.

ARTICLE 24 - NO DAMAGES FOR DELAY

24.1 NO CLAIM FOR DAMAGES OR ANY CLAIM OTHER THAN FOR AN EXTENSION OF TIME SHALL BE MADE OR ASSERTED AGAINST CITY BY REASON OF ANY DELAYS. DESIGN/BUILD FIRM shall not be entitled to an increase in the Contract Price or payment or compensation of any kind from CITY for direct, indirect, consequential, impact, or other costs, expenses or damages including, but not limited to, costs of acceleration or inefficiency arising because of delay, disruption, interference or hindrance from any cause whatsoever, whether such delay, disruption, interference, or hindrance be reasonable or unreasonable, foreseeable or unforeseeable, or avoidable or unavoidable; provided, DESIGN/BUILD FIRM hindrances or delays are not due solely to fraud, bad faith or active interference by the CITY, DESIGN/BUILD FIRM shall be entitled only to extensions of the Contract Time as the sole and exclusive remedy for such resulting delays, in accordance with and to the extent specifically provided above. The specific application of this Article to other provisions of this Agreement shall not be construed as a limitation of any sort upon the further application of this Article. Ten Dollars ($10.00) of DESIGN/BUILD FIRM's fee is acknowledged as separate and independent consideration for the covenants contained in this Article.

ARTICLE 25- LIMITATION OF LIABILITY

25.1.1 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 $1,000.00. For other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the DESIGN/BUILD FIRM hereby expresses its willingness to enter into this Agreement with the knowledge that the DESIGN/BUILD FIRM's recovery from the CITY to any action or claim arising from the Agreement is limited to a maximum amount of $1,000.00, which amount shall be reduced by the amount actually paid by the CITY to the DESIGN/BUILD FIRM 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 beyond the limits established in Section 768.28, Florida Statutes (2023); and no claim or award against the CITY shall include attorney's fees, investigative costs, expert fees, suit costs or pre-judgment interest.

ARTICLE 26 - GOVERNING LAW

26.1 The Agreement shall be interpreted and construed in accordance with, and governed by, the laws of the State of Florida. The Parties agree that the exclusive venue for any lawsuit arising from, related to, or in connection with this Agreement shall be in the state courts of the Seventeenth Judicial Circuit in and for Broward County, Florida. If any claims arising from, related to, or in connection with this Agreement must be litigated in federal court, the Parties agree that the exclusive venue for any such lawsuit shall be in the United States District Court or United States Bankruptcy Court for the Southern District of Florida. **BY ENTERING INTO THIS AGREEMENT, THE PARTIES HEREBY EXPRESSLY WAIVE ANY AND ALL RIGHTS EITHER PARTY MIGHT HAVE TO A TRIAL BY JURY OF ANY ISSUES RELATED TO THIS AGREEMENT. IF A PARTY FAILS TO WITHDRAW A REQUEST FOR A JURY TRIAL IN A LAWSUIT ARISING OUT OF THIS AGREEMENT AFTER WRITTEN NOTICE BY THE OTHER PARTY OF VIOLATION OF THIS SECTION, THE PARTY MAKING THE REQUEST FOR JURY TRIAL SHALL BE LIABLE FOR THE REASONABLE ATTORNEYS' FEES AND COSTS OF THE OTHER PARTY IN CONTESTING THE REQUEST FOR JURY TRIAL, AND SUCH AMOUNTS SHALL BE AWARDED BY THE COURT IN ADJUDICATING THE MOTION.**

ARTICLE 27 - MISCELLANEOUS PROVISIONS

27.1 **OWNERSHIP OF DOCUMENTS:** All finished or unfinished documents, data, studies, surveys, drawings, maps, models, photographs, specifications, plans and reports prepared or provided by DESIGN/BUILD FIRM in connection with this Agreement shall become the property of CITY, whether the Project for which they are made is completed or not, shall become the property of CITY and shall be delivered by DESIGN/BUILD FIRM to Project Manager within fifteen (15) days of the receipt of the written notice of termination or upon completion of the Project. If applicable, CITY may withhold payments then due

to DESIGN/BUILD FIRM until DESIGN/BUILD FIRM complies with the provisions of this section.

27.2 **AUDIT RIGHT AND RETENTION OF RECORDS:** CITY shall have the right to audit the books, records, and accounts of DESIGN/BUILD FIRM that are related to this Project. DESIGN/BUILD TEAM shall keep such books, records, and accounts as may be necessary in order to record complete and correct entries related to the Project. DESIGN/BUILD FIRM shall preserve and make available, at reasonable times for examination and audit by CITY, all financial records, supporting documents, statistical records, and any other documents pertinent to this Agreement for the required retention period of the Florida Public Records Act, Chapter 119, Florida Statutes (2023), or, if the Florida Public Records Act is not applicable, for a minimum period of three (3) years after termination of this Agreement. If any audit has been initiated and audit findings have not been resolved at the end of the retention period or three (3) years, whichever is longer, the books, records, and accounts shall be retained until resolution of the audit findings. If the Florida Public Records Act is determined by CITY to be applicable to DESIGN/BUILD FIRM's records, DESIGN/BUILD FIRM shall comply with all requirements thereof; however, no confidentiality or non-disclosure requirement of either federal or state law shall be violated by DESIGN/BUILD FIRM. Any incomplete or incorrect entry in such books, records, and accounts shall be a basis for CITY's disallowance and recovery of any payment upon such entry.

27.3 **ARCHITECT/ENGINEER:** DESIGN/BUILD FIRM shall use the architect/engineer, including subconsultants, identified in the proposal that were a material part of the selection of the DESIGN/BUILD TEAM to provide the services for this Project. DESIGN/BUILD FIRM shall obtain written approval of CITY's Public Works Director prior to changing or modifying the list of subconsultants submitted by the DESIGN/BUILD FIRM. SEE EXHIBIT A attached hereto and made a part hereof.

27.4 **ASSIGNMENT AND PERFORMANCE:** Neither this Agreement nor any interest herein shall be assigned, transferred, or encumbered without the prior written consent of the other Party.

27.5 **ONE ORIGINAL AGREEMENT:** This Agreement will be executed in one original.

27.6 **ALL PRIOR AGREEMENTS SUPERSEDED:** This Agreement incorporates and includes all prior negotiations, correspondence, conversations, agreements or understandings applicable to the matters contained herein; and the Parties agree that there are no commitments, agreements or understandings concerning the subject matter of this Agreement that are not contained in this Agreement. Accordingly, the Parties agree that no deviation from the terms hereof shall be predicated upon any prior representations or agreements whether oral or written.

27.7 **AMENDMENTS:** No modification, amendment, or alteration in the terms or conditions contained herein shall be effective unless contained in a written document executed by both Parties with the same formality and of equal dignity herewith.

27.8 **INDEPENDENT CONTRACTOR:** DESIGN/BUILD FIRM is an independent

contractor under this Agreement. Services provided by DESIGN/BUILD FIRM shall be subject to the supervision of DESIGN/BUILD FIRM. In providing the services, DESIGN/BUILD FIRM or its agents shall not be acting and shall not be deemed as acting as officers, employees, or agents of the CITY. No partnership, joint venture, or other joint relationship is created hereby. CITY does not extend to DESIGN/BUILD FIRM or its agents any authority of any kind to bind CITY in any respect whatsoever.

27.9 **THIRD PARTY BENEFICIARIES:** Neither DESIGN/BUILD FIRM or CITY intends to directly or substantially benefit a third party by this Agreement. The Parties expressly acknowledge that it is not their intent to create any rights or obligations in any third person or entity under this Agreement. Therefore, the Parties agree that there are no third-party beneficiaries to this Agreement and that no third party shall be entitled to assert a claim against either of them based upon this Agreement.

27.10 **WAIVER OF BREACH AND MATERIALITY:** Failure by the CITY or DESIGN/BUILD FIRM to enforce any provision of this Agreement shall not be deemed a waiver of such provision or modification of this Agreement.

27.11 **MATERIAL TERM:** CITY and DESIGN/BUILD FIRM agree that each requirement, duty, and obligation set forth herein is substantial and important to the formation of this Agreement, and therefore, is a material term hereof.

27.12 **COMPLIANCE WITH LAWS:** DESIGN/BUILD FIRM shall comply with all federal, state, and local laws, codes, ordinances, rules and regulations in performing its duties, responsibilities, and obligations related to this Agreement.

27.13 **NONDISCRIMINATION, EQUAL EMPLOYMENT OPPORTUNITY, AND AMERICANS WITH DISABILITIES ACT:** DESIGN/BUILD FIRM shall not unlawfully discriminate against any person in its operations and activities in its use or expenditure of the funds or any portion of the funds provided by this Agreement and shall affirmatively comply with all applicable provisions of the Americans with Disabilities Act in the course of providing any services funded in whole or in party by CITY, including Titles 1 and 11 of the Act, and all applicable regulations, guidelines and standards.

DESIGN/BUILD FIRM's decisions regarding the delivery of work and services under this Agreement shall be made without regard to or consideration of race, age, religion, color, gender, sexual orientation, national origin, marital status, physical or mental disability, political affiliation, or any other factor which cannot be lawfully or appropriately used as a basis for service delivery.

DESIGN/BUILD FIRM shall comply with Title 1 of the Americans with Disabilities Act regarding nondiscrimination on the basis of disability in employment and further shall not discriminate against any employee or applicant for employment because of race, age, religion, color, gender, sexual orientation, national origin, marital status, political affiliation, or physical or mental disability. In addition, DESIGN/BUILD FIRM shall take affirmative steps to ensure nondiscrimination in employment against disabled persons. Such actions shall include, but not be limited to, the following: employment, upgrading, demotion, transfer, recruitment or recruitment advertising, layoff, termination, rates of

pay, other forms of compensation, terms and conditions of employment, training (including apprenticeship) and accessibility.

DESIGN/BUILD FIRM shall take affirmative action to ensure that applicants are employed and employees are treated without regard to race, age, religion, color, gender, sexual orientation, national origin, marital status, political affiliation, or physical or mental disability during employment. Such actions shall include, but not be limited to, the following: employment, upgrading, demotion, transfer, recruitment or recruitment advertising, layoff, termination, rates of pay, other forms of compensation, terms and conditions of employment, training (including apprenticeship) and accessibility.

27.14 **PUBLIC ENTITY CRIMES ACT:** In accordance with the Public Entity Crimes Act, Section 287.133, Florida Statutes (2023), a person or affiliate who is a contractor, consultant or other provider, who has been placed on the convicted vendor list following a conviction for a Public Entity Crime, may not submit a bid on a contract to provide any goods or services to the CITY, may not submit a bid on a contract with the CITY for the construction or repair of a public building or public work, may not submit bids on leases of real property to the CITY, may not be awarded or perform work as a contractor supplier, subcontractor or consultant under a contract with the CITY and may not transact any business with the CITY in excess of the threshold amount provided in Section 287.017, Florida Statutes (2023), as may be amended or revised, for category two purchases for a period of thirty-six (36) months from the date of being placed on the convicted vendor list. Violation of this Section shall result in cancellation of the CITY purchase and may result in debarment.

27.15 **SEVERANCE:** In the event a portion of this Agreement is found by a court of competent jurisdiction to be invalid, the remaining provisions shall continue to be effective unless CITY elects to terminate this Agreement. The election to terminate this Agreement based upon this provision shall be made within seven (7) days after the finding by the court becomes final.

27.16 **JOINT PREPARATION:** Preparation of this Agreement has been a joint effort of the CITY and DESIGN/BUILD FIRM and the resulting document shall not, solely as a matter of judicial construction, be construed more severely against one of the Parties than any other.

27.17 **PRIORITY OF PROVISIONS:** If there is a conflict or inconsistency between any term, statement, requirement, or provision of any exhibit attached hereto, any document or events referred to herein, or any document incorporated into this Agreement by reference and a term, statement, requirement, or provision of this Agreement, the term, statement, requirement, or provision contained in Articles 1 through 21 shall prevail and be given effect.

In the event of a conflict among the Contract Documents, the most stringent requirements hall control.

27.18 **TAXES:** DESIGN/BUILD FIRM shall pay all applicable sales, consumer, use and other taxes as required by law. DESIGN/BUILD FIRM is responsible for reviewing the pertinent state statutes involving state taxes and complying with all

requirements. All such taxes that are required as of the time of Agreement execution shall be included in the Not-To-Exceed Guaranteed Maximum Price.

27.19 **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, and that it does not have business operations in Cuba or Syria, as provided in Section 287.135, Florida Statutes (2023), as may be amended or revised. The Contractor certifies that it is not on the Scrutinized Companies that Boycott Israel List created pursuant to Section 215.4725, Florida Statutes (2023), as may be amended or revised, and that it is not engaged in a boycott of Israel. 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 (2023), 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 (2023), as may be amended or revised, 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 (2023), as may be amended or revised.

27.20 **PUBLIC RECORDS:**

IF THE DESIGN/BUILD FIRM HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES (2023), TO THE DESIGN/BUILD FIRM'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS AGREEMENT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT CITY CLERK'S OFFICE, 1 EAST BROWARD BOULEVARD, SUITE 444, FORTLAUDERDALE, FLORIDA, 33301,EMAIL: PRRCONTRACT@FORTLAUDERDALE.GOV, PHONE: 954-828-5002.

DESIGN/BUILD FIRM shall:

27.20.1 Keep and maintain public records required by the CITY in order to perform the service. Upon request from the CITY's custodian of public records, provide the CITY with a copy of the requested records or allow the records to be inspected or copied within a reasonable time at a cost that does not exceed the cost provided in Chapter 119, Florida Statutes (2023), as may be amended or revised, or as otherwise provided by law.

27.20.2 Ensure that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law for the duration of the contract term and following completion of this contract if the DESIGN/BUILD FIRM does not transfer the records to the CITY.

27.20.3 Upon completion of the Agreement, transfer, at no cost, to the CITY all public records in possession of the DESIGN/BUILD FIRM or keep and maintain public records required by the CITY to perform the service. If the DESIGN/BUILD FIRM transfers all public records to the CITY upon completion of this Agreement, the DESIGN/BUILD FIRM shall destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. If the DESIGN/BUILD FIRM keeps and maintains public records upon completion of this Agreement, the DESIGN/BUILD FIRM shall meet all applicable requirements for retaining public records. All records stored electronically must be provided to the CITY, upon request from the CITY's custodian of public records, in a format that is compatible with the information technology systems of the CITY.

27.20.4 If the DESIGN/BUILD FIRM keeps and maintains public records upon completion of this Agreement, the DESIGN/BUILD FIRM shall meet all applicable requirements for retaining public records. All records stored electronically must be provided to the CITY, upon request from the CITY's custodian of public records, in a format that is compatible with the information technology systems of the CITY.

27.21 **E-VERIFY**

As a condition precedent to the effectiveness of this Agreement, pursuant to Section 448.095, Florida Statutes (2023), as may be amended or revised, the DESIGN/BUILD FIRM and its subcontractors shall register with and use the E-Verify system to electronically verify the employment eligibility of newly hired employees.

1. The DESIGN/BUILD FIRM shall require each of its subcontractors, if any, to provide the DESIGN/BUILD FIRM with an affidavit stating that the subcontractor does not employ, contract with, or subcontract with an unauthorized alien. The DESIGN/BUILD FIRM shall maintain a copy of the subcontractor's affidavit for the duration of this Agreement and in accordance with the public records requirements of this Agreement.

2. The CITY, the DESIGN/BUILD FIRM, or any subcontractor who has a good faith belief that a person or entity with which it is contracting has knowingly violated Section 448.09(1), Florida Statutes (2023), as may be amended or revised, shall terminate the Agreement with the person or entity.

3. The CITY, upon good faith belief that a subcontractor knowingly violated the provisions of Section 448.095(5), Florida Statutes (2023), as may be amended or revised, but that the DESIGN/BUILD FIRM otherwise complied with Section 448.095(5), Florida Statutes (2023), as may be amended or revised, shall promptly notify DESIGN/BUILD FIRM and order the DESIGN/BUILD FIRM to immediately terminate the contract with the subcontractor, and the DESIGN/BUILD FIRM shall comply with such order.

4. An Agreement terminated under Sections 448.095(5)(c)1. or 2., Florida Statutes (2023), as may be amended or revised, is not a breach of contract and may not be considered as such. If the CITY terminates this Agreement under Section

448.095(5)(c), Florida Statutes (2023), as may be amended or revised, the DESIGN/BUILD FIRM may not be awarded a public contract for at least one year after the date on which the Agreement was terminated. The DESIGN/BUILD FIRM is liable for any additional costs incurred by the CITY as a result of termination of this Agreement.

5. DESIGN/BUILD FIRM shall include in each of its subcontracts, if any, the requirements set forth in this Section, including this subparagraph, requiring any and all subcontractors, as defined in Section 448.095(1)(e), Florida Statutes (2023), as may be amended or revised, to include all of the requirements of this Section 21 in their subcontracts. DESIGN/BUILD FIRM shall be responsible for compliance by any and all subcontractors, as defined in Section 448.095(1)(e), Florida Statutes (2023), as may be amended or revised, with the requirements of Section 448.095, Florida Statutes (2023), as may be amended or revised.

[REMAINDER OF THIS PAGE LEFT INTENTIONALLY BLANK]

CITY

IN WITNESS OF THE FOREGOING**,** the Parties have set their hands and seals the day and year first written above written above.

CITY OF FORT LAUDERDALE, a Florida municipal corporation

By: _____
GREG CHAVARRIA
City Manager

Date: _____

ATTEST:

By: _____
DAVID R. SOLOMAN
City Clerk

Approved as to Legal Form and Correctness:
THOMAS ANSBRO, City Attorney

By: _____
RHONDA MONTOYA HASAN
Assistant City Attorney

DESIGN/BUILD FIRM

WITNESSES:

DAVID MANCINI & SONS, INC.,
a Florida corporation

_____

By:_____
David Mancini, President

_____
Print Name

_____

_____
Print Name

(CORPORATE SEAL) STATE OF :

COUNTY OF _____:

The foregoing instrument was acknowledged before me by means of ☐ physical presence or ☐ online notarization, this _____ day of _____, 2024, by _____David Mancini, as President for David Mancini & Sons, Inc., a Florida corporation.

_____
(Signature of Notary Public - State of Florida)

_____
(Print, Type, or Stamp Commissioned Name of Notary Public)

Personally Known_____ OR Produced Identification_____

Type of Identification Produced: _____

ATTACHMENTS

EXHIBIT A - UNSOLICITED PROPOSAL

EXHIBIT B – TECHNICAL SPECIFICATIONS

CITY OF FORT LAUDERDALE

Unsolicited Proposal

Water Transmission Main from Prospect Lake CWC to Fiveash WTP

DMSI DAVID MANCINI & SONS, INC.

cma

July 2023

Table of Contents

July 28, 2023

Mayor Dean J. Trantalis
Vice Mayor Pamela Beasley-Pittman
Commissioner John C. Herbst
Commissioner Steven Glassman
Commissioner Warren Sturman
City Manager Greg Chavarria
City Attorney D'Wayne Spence
City of Fort Lauderdale
100 N. Andrews Avenue
Fort Lauderdale, FL 33301

RE: Florida Statute 255.065 Unsolicited Proposals – David Mancini & Sons, Inc. (DMSI) and Chen-Moore & Associates (CMA) unsolicited proposal to design and build a Water Transmission Main from Prospect Lake Clean Water Center to Fiveash Water Treatment Plant

Dear Mayor Trantalis, Vice Mayor Beasley-Pittman, Commissioners Herbst, Glassman, and Sturman, Mr. Chavarria, and Mr. Spence:

We are pleased to submit an Unsolicited Proposal for the design and construction of a new 48-inch water transmission main from the proposed Prospect Lake Prospect Lake Clean Water Center to a connection point at Fiveash Water Treatment Plant in compliance with Florida Statutes § 255.065. This new water transmission is necessary as one of the enabling projects outlined in the Comprehensive Agreement with IDE for the Prospect Lake Clean Water Center.

With nearly 36 square miles and an approximate population of 186,000 the City of Fort Lauderdale is the largest Broward County municipality and one of the largest cities in Florida. The City currently owns and operates two water treatment plants (WTP) that provide potable water to its 186,000 residents, 300,000 visitors, and six neighboring municipalities which include the cities of Tamarac, Wilton Manors, Oakland Park, Lauderhill, Sea Ranch Lakes, and Lauderdale by the Sea. The current City water treatment plants are:

- Peele-Dixie WTP: Constructed in 2008 with a maximum capacity of 12 million gallons a day (mgd)
- Fiveash WTP: Constructed in 1953 with a maximum capacity of 70 mgd

Figure #1: Fiveash Water Treatment Plant

1. Description of Project & Background

The last expansion of the Fiveash WTP was completed over 40 years ago in 1983. Since then, the City has commissioned two studies to evaluate the treatment plant condition. One study was completed in 2017 by Reiss Engineering and another study was completed by Carollo Engineers in 2019. Both reports concluded that Fiveash is at the end of its useful life, and that a new water treatment plant is the best option for the City.

In February 2023, the City entered into a Comprehensive Agreement with IDE Technologies (IDE) to design, build, operate and maintain the Prospect Lake Clean Water Center (CWC). As part of the agreement the City shall provide utilities for the supply of electricity, water and sewer services required for the development of the project (*City Infrastructure Obligations* – Annex B of the Comprehensive Agreement, see Table #1 below).

Among the *City Infrastructure Obligations* is the construction of a 48-inch water transmission main (pipeline) connecting at the Prospect Lake CWC to the Fiveash WTP distribution system. The City is responsible for the design, permitting, construction, testing and clearance of the pipeline, and final connection to the Prospect Lake plant. As indicated in Annex B of the Comprehensive Agreement, the pipeline *City Infrastructure Obligations* are as follows:

Item	Location of Tie-In Point	City's Completion Deadline	Size / Quantity	Capacity	Details
Product Water Transmission Line	East site boundary as indicated in TP-05 in Annex E-1	400 days from Effective Date for City to furnish 60% design information **April 18, 2024** 912 days from Effective Date for completion of installation **September 12, 2025**	48-inch connection to the City feedstock water pipeline to Fiveash Water Treatment Plant	50 MGD	48-inch Product Water transmission main (pipe) from tie-in point at Prospect Lake to Fiveash and be available to begin to receive Product Water from the Project in accordance to the agreement

Table #1: City Infrastructure Obligations - Effective Date of March 16th, 2023

To build the required pipeline, the City recently issued a Request for Qualification (RFQ) for General Water and Wastewater Professional Architectural – Engineering Consulting, Continuing Services (Event 50). The RFQ identifies several of the "City Infrastructure Obligations" projects including the 48-inch watermain pipeline. The City is currently negotiating the Event 50 consultant agreements and commission approval is expected in the summer of 2023. Based on our experience, if the City were to design the pipeline under an Event 50 task order, the project would not meet the City Infrastructure Obligations schedule. The completion of the project under Event 50 is anticipated to be a multi-step prolonged process which will include several rounds of procurement, selection and negotiation in addition to design and construction of the pipeline. Based on our extensive experience the following is the anticipated timeline for the design

of the pipeline under the traditional RFQ (Event 50), shown below in Table #2. Assuming an ***optimistic schedule*** and using the traditional RFQ process, Table #2 indicates that the traditional method of procurement will *not meet* the deadlines of April 18th 2024, for the 60% design submittal and September 12, 2025, for completion of the project. By not meeting the deadlines the City will be unable to comply with the "City Infrastructure Obligations" as stipulated in the Comprehensive Agreement with IDE.

Process	Item	Expected Start	Expected Completion	Duration (Days)
Step 1 Hire Design Engineer	Shortlisting	3/16/2023	4/14/2023	29
	Presentations	4/15/2023	4/19/2023	4
	Negotiations & CAM Approval	4/19/2023	8/22/2023	125
	Commission Approval	8/22/2023	8/22/2023	0
	Approved Contract & PO	8/22/2023	9/12/2023	21
	Task Orders to Develop a DCP	9/12/2023	10/3/2023	21
	Approval of Task Order	10/3/2023	11/2/2023	30
	Prepare 30% DCP	11/2/2023	12/17/2023	45
	Prepare Bid Package	12/17/2023	1/16/2024	30
Step 2 Hire Design Build (DB) Contractor	RFP from Design Build Firms (DBF)	1/16/2024	1/16/2024	0
	RFP Bidding Duration	1/16/2024	3/1/2024	45
	Design Build Firms submit Proposal	3/1/2024	3/1/2024	0
	Shortlist DBF	3/1/2024	3/22/2024	21
	Presentation & Selection of DBF	3/22/2024	4/5/2024	14
	Potential Protest of Award	4/5/2024	5/5/2024	30
	Commission Approval	5/5/2024	6/16/2024	42
	Approved Contract & PO for DBF	6/16/2024	7/7/2024	21
DB Period	Time to Complete and Submit 60% design	7/7/2024	11/5/2024	121
	Complete 100% Design	11/5/2024	1/6/2025	62
	Construction of Transmission Main	1/6/2025	4/1/2026	450
			Total Days	1,111

Table #2: Optimistic schedule of project if executed under RFQ – Event 50

On the other hand, by taking a different approach the City of Fort Lauderdale would comply with the agreement requirements by completing the 48-inch water transmission main within the established Comprehensive Agreement schedules.

Pursuant to State statue Section 255.065, the DMSI/CMA team is submitting this Unsolicited Proposal package to design and build the 48-inch transmission water main. Assuming a conservative schedule and by utilizing the Unsolicited Proposal process, we can achieve the goal of completing the transmission main on time. The DMSI motto has always been Never Give Up Never Surrender. With a proven track record, we are committed to getting the job done with whatever it takes. Table #3 outlines the steps for project completion utilizing an Unsolicited Proposal process.

Process	Item	Expected Start	Expected Completion	Duration (Days)
Step 1 Hire DB Contractor	Submit Unsolicited Proposal (UP)	7/28/2023	7/28/2023	0
	Review of UP	7/28/2023	8/22/2023	25
	Commission Meeting Accepting DMSI UP	8/22/2023	8/22/2023	0
	Opening to Public to Submit Proposal	8/22/2023	10/21/2023	60
	Review & Evaluation of UPs	10/21/2023	11/7/2023	17
	Recommendation to Commission	11/7/2023	11/7/2023	0
	Approval of Comprehensive Agreement	11/7/2023	12/19/2023	42
DB Period	Time to Complete and Submit 60% design	12/19/2023	4/18/2024	121
	Complete 100% Design	4/18/2024	6/19/2024	62
	Construction of Transmission Main	6/19/2024	9/12/2025	450
			Total Days	777

Table #3: Conservative project timeline if executed under Unsolicited Proposal process

Table #4 shown on the next page is a comparison using the traditional RFQ method and an Unsolicited proposal. This is a clear indication that the City Infrastructure Obligation will not be met and missing the deadline by 201 days.

Additional benefits using the Unsolicited Proposal process with the DMSI/CMA team:

1. Reduce the risks for City by negating the need to provide initial project design via the RFQ (Event 50) Design-Build delivery method.
2. Free up staff time and workload to focus on the other enabling projects for the Prospect Lake CWC.
3. Avoid inflationary escalation costs if bid in the future.

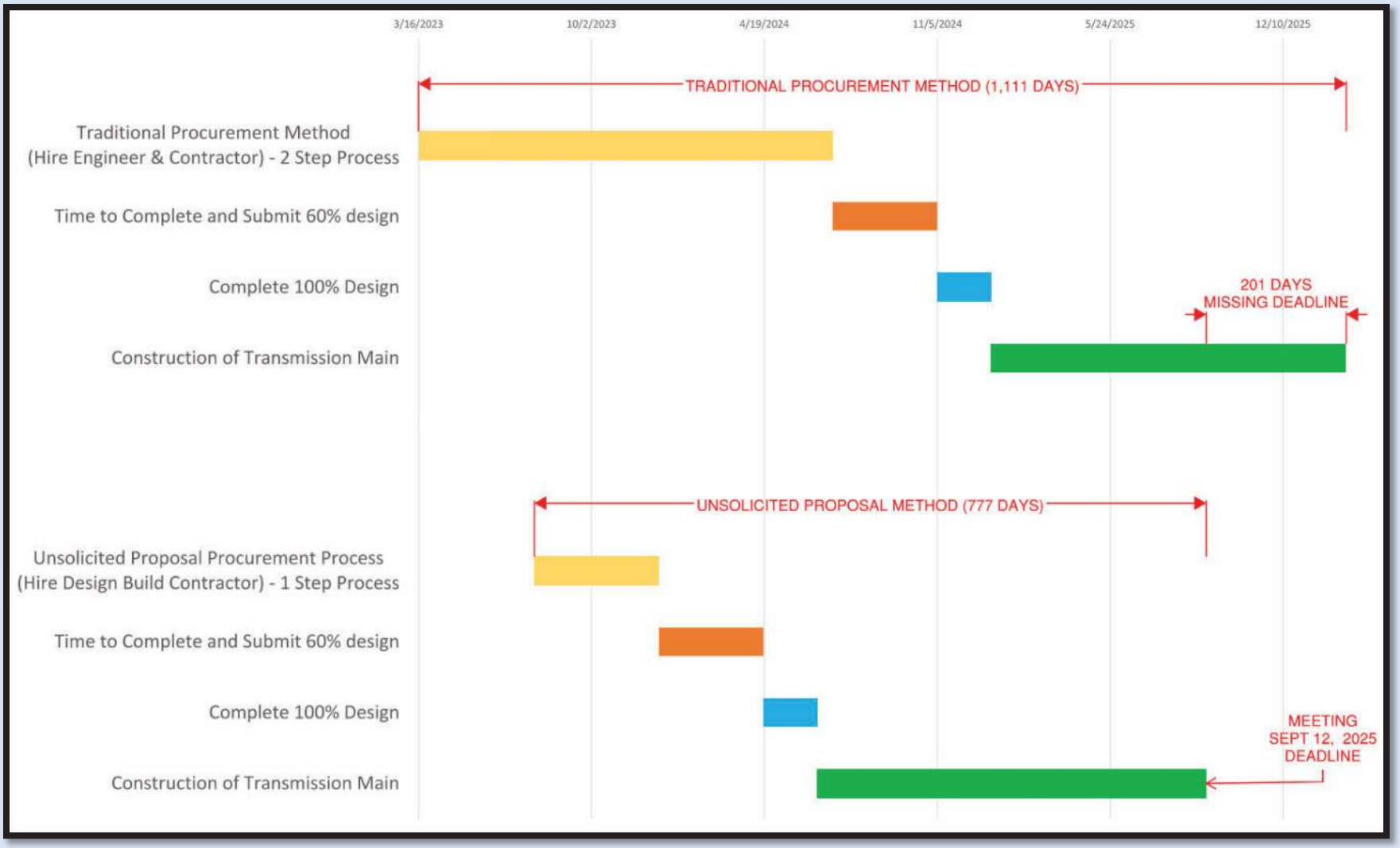
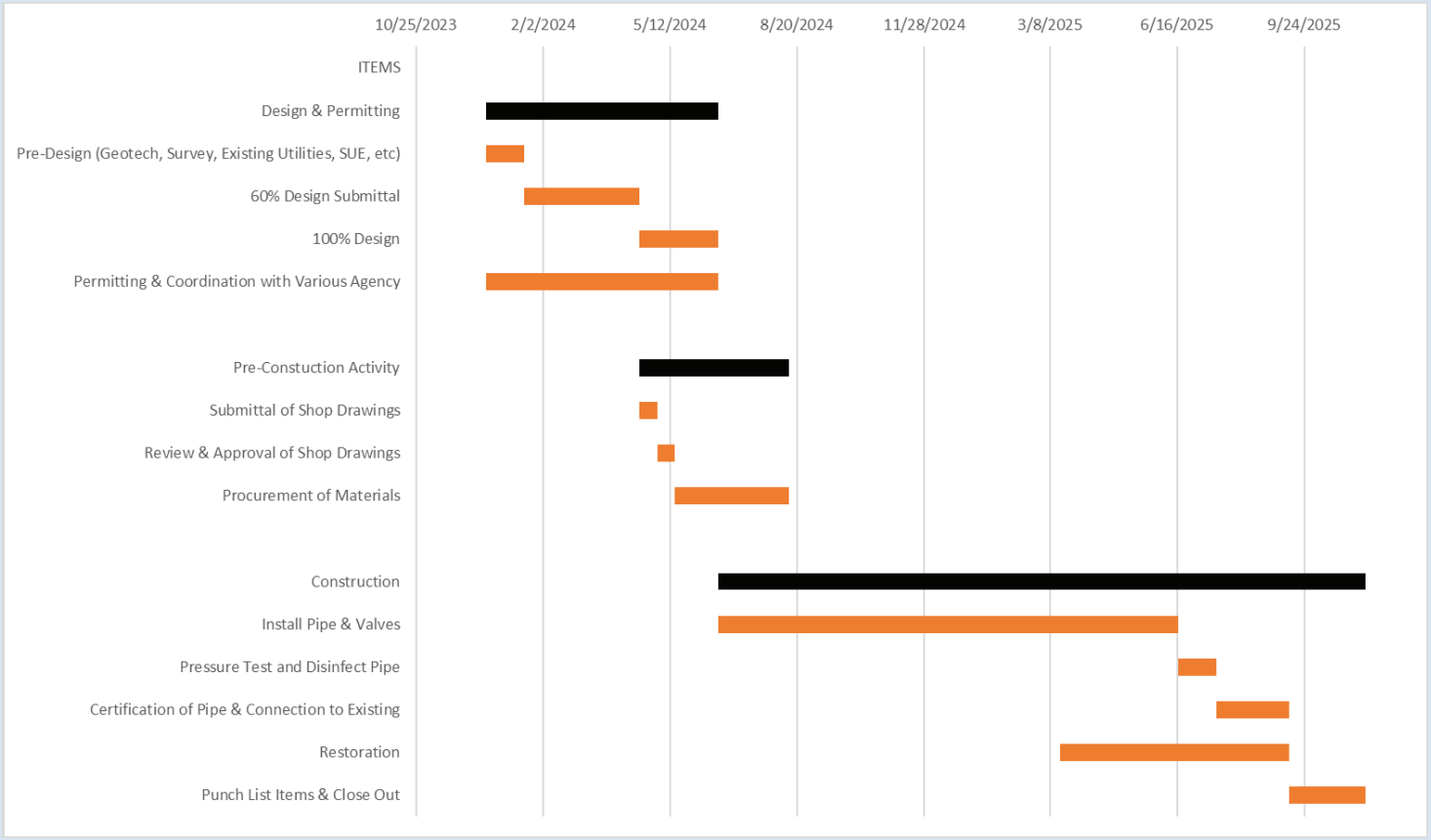


Table #4: Schedule Comparison – Traditional RFQ vs. Unsolicited Process

DMSI/CMA Design-Build Schedule

ITEMS	DATES		DAYS
Design & permitting	**12/19/2023**	**6/19/2024**	**183**
Pre-Design (Geotech, Survey, Existing Utilities, SUE, etc.)	12/19/2023	1/18/2024	30
60% Design Submittal	1/18/2024	4/18/2024	91
100% Design	4/18/2024	6/19/2024	62
Permitting & Coordination with Various Agency	12/19/2023	6/19/2024	183
Pre-Construction Activity	**4/18/2024**	**8/14/2024**	**118**
Submittal of Shop Drawings	4/18/2024	5/2/2024	14
Review & Approval of Shop Drawings	5/2/2024	5/16/2024	14
Procurement of Materials	5/16/2024	8/14/2024	90
Construction	**6/19/2024**	**11/11/2025**	**510**
Install Pipe & Valves	6/19/2024	6/17/2025	363
Pressure Test and Disinfect Pipe	6/17/2025	7/17/2025	30
Certification of Pipe & Connection to Existing (Meeting City Infrastructure Obligation)	7/17/2025	9/12/2025	57
Restoration	3/16/2025	9/12/2025	180
Punch List Items & Close Out	9/12/2025	11/11/2025	60



2. Conceptual Plans of Proposed 48-inch Water Transmission Line

The DMSI/CMA team has extensive experience working on City projects, including large diameter transmission lines, and challenging fast-tracked projects. We have extensive knowledge of the project area, the surrounding neighborhoods, public right of ways, roadways, and potential project challenges. DMSI has assisted the City in multiple emergency projects including the repair of the 42-inch main transmission raw water line at the Prospect Wellfield which feeds the Fiveash WTP.

Figure #2: DMSI mobilized and completed repair of 42-inch raw Water main break in day one (Prospect Wellfield)

A recent successful project delivered for the City was the Redundant Force main which entailed the design, permitting, construction and clearance of 16,000 linear feet of a 54-inch force main across downtown Fort Lauderdale. The project included subaqueous crossings, it was constructed in some of the busiest and challenging neighborhoods in the City, and it was delivered ahead of schedule and within budget.

Figure #3: City Commission Activating the 54-inch Emergency Redundant Sewer Line installed by DMSI

To meet the Comprehensive Agreement schedule, we propose building the new water main via Design-Build delivery method. This will allow us to expedite the project and to successfully deliver the pipeline as previously done by our team on several City projects. Our team has conducted an extensive evaluation of

the area and we have reviewed existing utilities, evaluated right of way constraints, reviewed traffic routes, visited the pipeline connection points, and considered the impact on residents and businesses during construction. Based on our evaluation we propose installation of the new pipe utilizing three installation methods: open-cut, jacking and boring, and horizontal directional drilling (HDD).

The 48-inch transmission line total length is anticipated to be between 17,000 and 19,000 linear feet depending on the selected route. It is anticipated that it will cross several right-of-way jurisdictions including Florida Department of Transportation (FDOT), Broward County and local (City of Oakland Park) roadways. Among the roadways there are 6-lane arterial collectors with fully signalized intersections. In addition, the pipe will have to cross the CSX railroad before connecting to Fiveash WTP distribution system. The proposed routing of the pipeline will avoid the Executive Airport as well as existing contaminated sites in the area.

The water main will connect on the northeast side of the Prospect CWC along NW 31st Avenue, and on the west side of the Fiveash property as shown below.

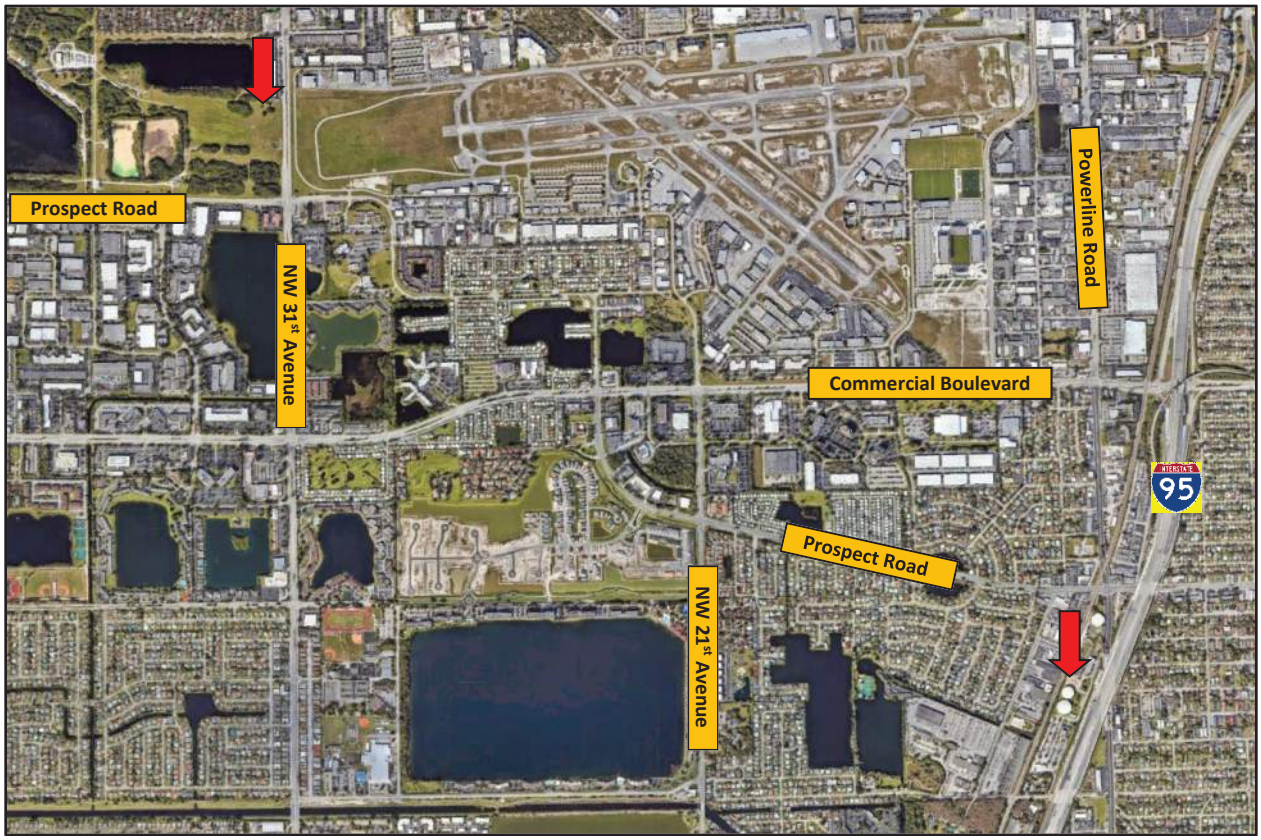


Figure #4: Connection Points at Fiveash WTP and Prospect Lake CWC

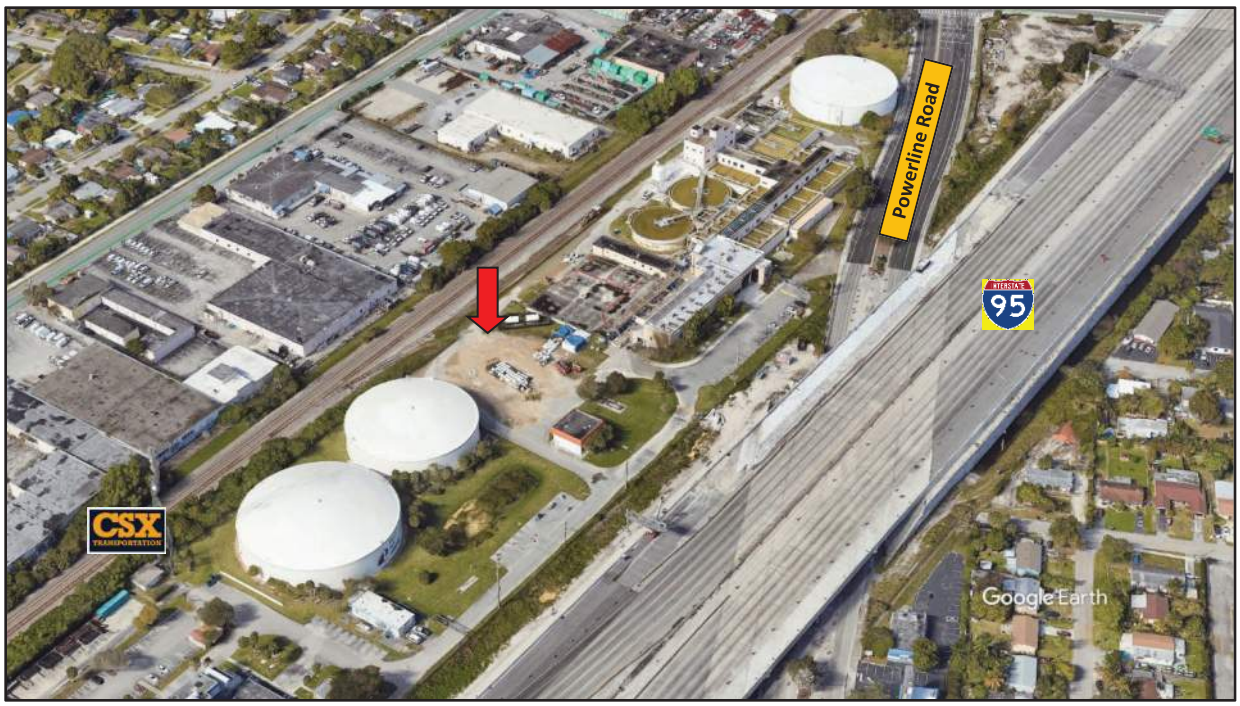


Figure #5: Connection at Fiveash WTP

Figure #6: Connection at Prospect Lake CWC

The DMSI team has FOUR GENERATIONS and SIX DECADES of experience installing large diameter transmission lines utilizing different technologies and we believe our approach will provide the City with the best value while meeting the agreement schedules. Furthermore, the DMSI/CMA approach has taken into consideration construction expediency and project budget, while putting City of Fort Lauderdale residents and businesses needs first. As indicated, the proposed watermain will be a combination of open cut installation and horizontal directional drilling.

In the following pages you will find the selected pipeline route, challenges and jurisdictional requirements as follows:

- Exhibit A: Proposed 48-inch Water main Route
- Exhibit B: Right-of-Way Ownership Map
- Exhibit C: Required Project Permits
- Exhibit D1: Major Crossings / Challenges
- Exhibit D2: Major Crossings / Challenges
- Exhibit D3: Major Crossings / Challenges
- Exhibit E: Contaminated Sites
- Exhibit F: Land Use & Stakeholders

This proposed water main route is preliminary and based on the best information available to the DMSI/CMA team. Once selected our team will work with City staff to determine the most cost-effective and optimal route.

The DMSI/CMA team is committed to sustainability and resiliency. Sustainability and resilience are two sides of the same coin. Sustainable design and construction seek to protect the environment from damage from infrastructure construction and operation. We believe that engineers and contractors should be good stewards of the environment in order to preserve and protect our world for future generations. Resilience seeks to protect infrastructure and its operation from the environment. Resilience includes the ability to prepare and plan for, absorb, recover from, and more successfully adapt to adverse conditions and events. Attention to sustainable and resilient design and construction practices is critical to the health of our community and the planet, and vital to the long-term interests of our clients as conditions change in our environment.


EXHIBIT A
N
PROSPECT LAKE WATER TREATMENT PLANT
FORT LAUDERDALE EXECUTIVE AIRPORT
Legend
Existing Water Treatment Plant
Proposed Water Treatment Plant
Railroad
Proposed 48-inch Water Main
PROSPECT RD
PROSPECT RD
PROSPECT RD
PROSPECT RD
COMMERCIAL BLVD
PROSPECT RD
NW 31ST AVE
NW 21ST AVE
NW 10TH AVE
NW 38TH ST
POWERLINE RD
POWERLINE RD
POWERLINE RD
I-95
FIVEASH REGIONAL WATER TREATMENT PLANT
PROSPECT LAKE 48" WATER MAIN

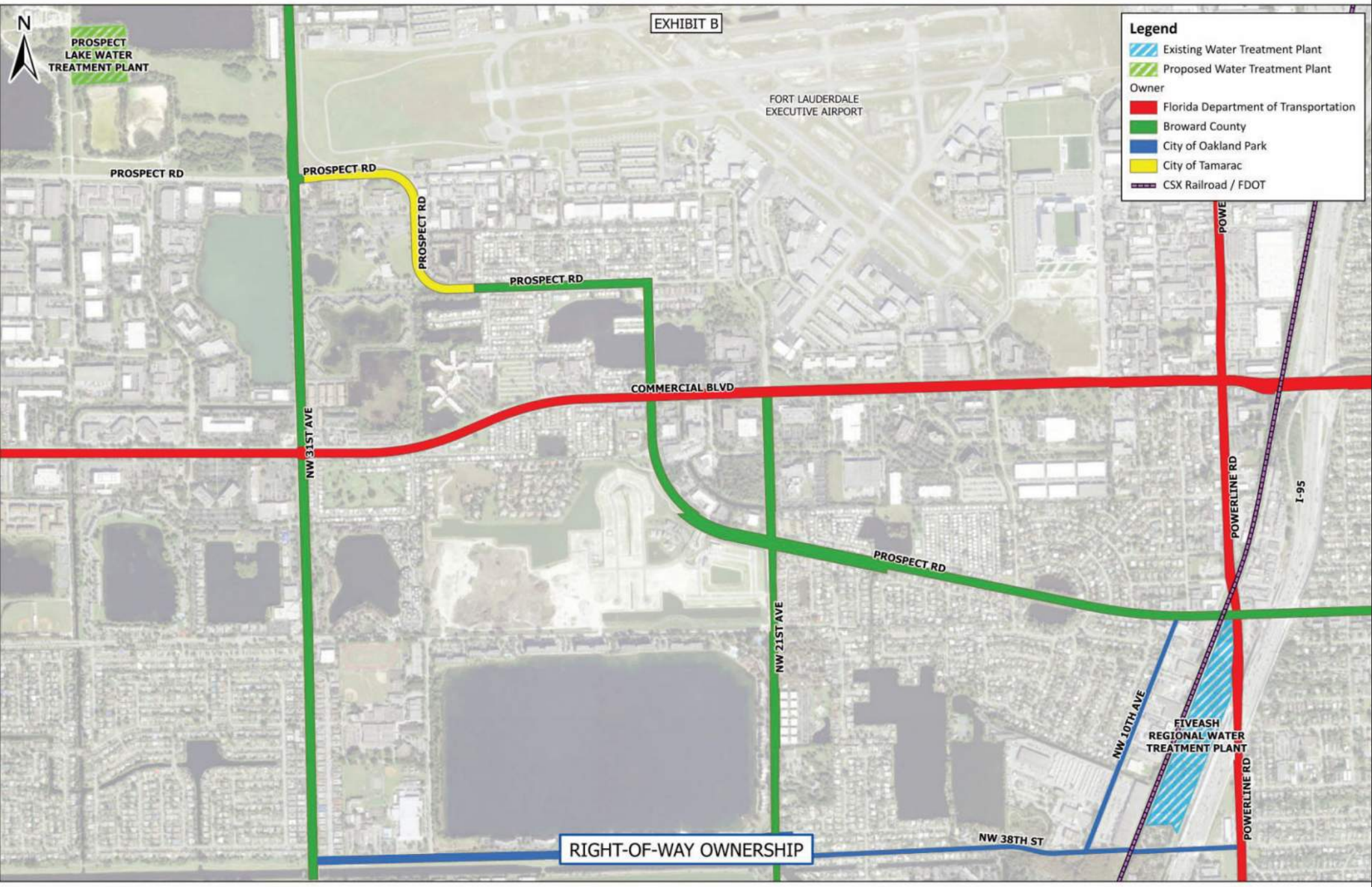


EXHIBIT B
N
PROSPECT LAKE WATER TREATMENT PLANT
FORT LAUDERDALE EXECUTIVE AIRPORT
PROSPECT RD
PROSPECT RD
PROSPECT RD
PROSPECT RD
COMMERCIAL BLVD
NW 31ST AVE
NW 21ST AVE
POWERLINE RD
I-95
NW 10TH AVE
FIVEASH REGIONAL WATER TREATMENT PLANT
NW 38TH ST
RIGHT-OF-WAY OWNERSHIP
Legend
Existing Water Treatment Plant
Proposed Water Treatment Plant
Owner
Florida Department of Transportation
Broward County
City of Oakland Park
City of Tamarac
CSX Railroad / FDOT

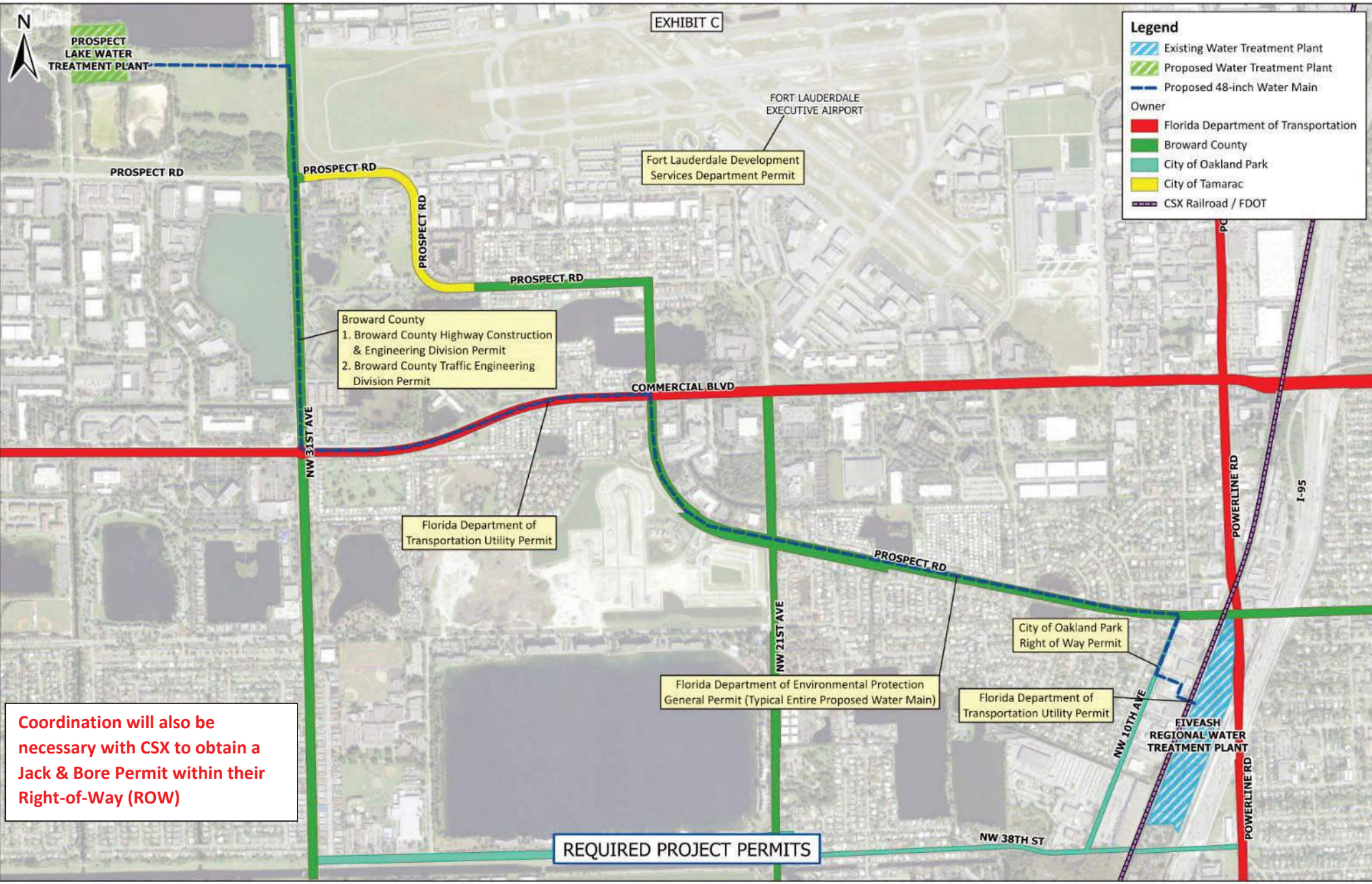


EXHIBIT C
N
PROSPECT LAKE WATER TREATMENT PLANT
PROSPECT RD
PROSPECT RD
PROSPECT RD
PROSPECT RD
FORT LAUDERDALE EXECUTIVE AIRPORT
Fort Lauderdale Development Services Department Permit
Broward County
1. Broward County Highway Construction & Engineering Division Permit
2. Broward County Traffic Engineering Division Permit
COMMERCIAL BLVD
NW 31ST AVE
Florida Department of Transportation Utility Permit
PROSPECT RD
NW 21ST AVE
Florida Department of Environmental Protection General Permit (Typical Entire Proposed Water Main)
City of Oakland Park Right of Way Permit
Florida Department of Transportation Utility Permit
NW 10TH AVE
FIVEASH REGIONAL WATER TREATMENT PLANT
POWERLINE RD
POWERLINE RD
I-95
NW 38TH ST
Legend
Existing Water Treatment Plant
Proposed Water Treatment Plant
Proposed 48-inch Water Main
Owner
Florida Department of Transportation
Broward County
City of Oakland Park
City of Tamarac
CSX Railroad / FDOT
Coordination will also be necessary with CSX to obtain a Jack & Bore Permit within their Right-of-Way (ROW)
REQUIRED PROJECT PERMITS

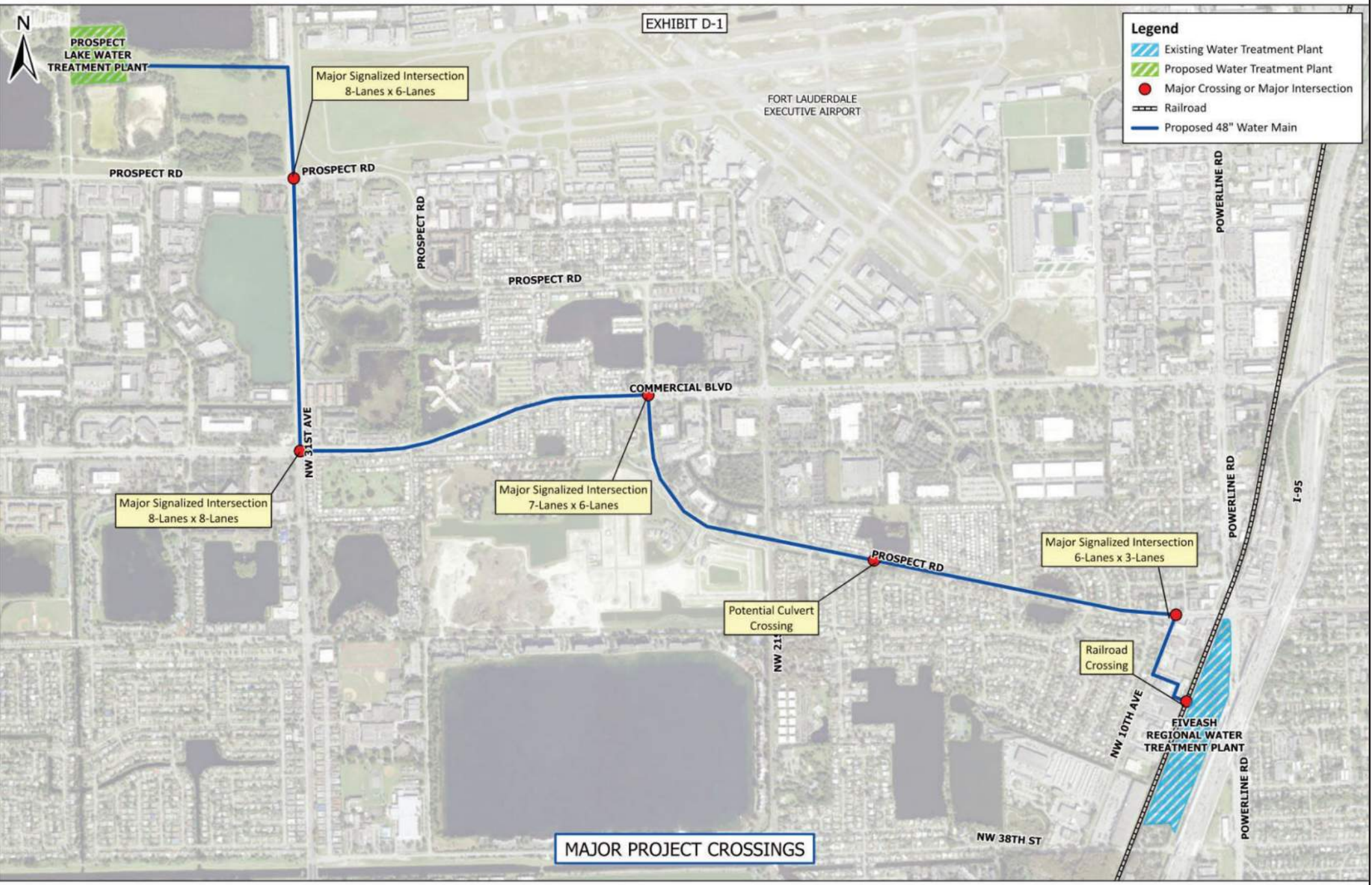
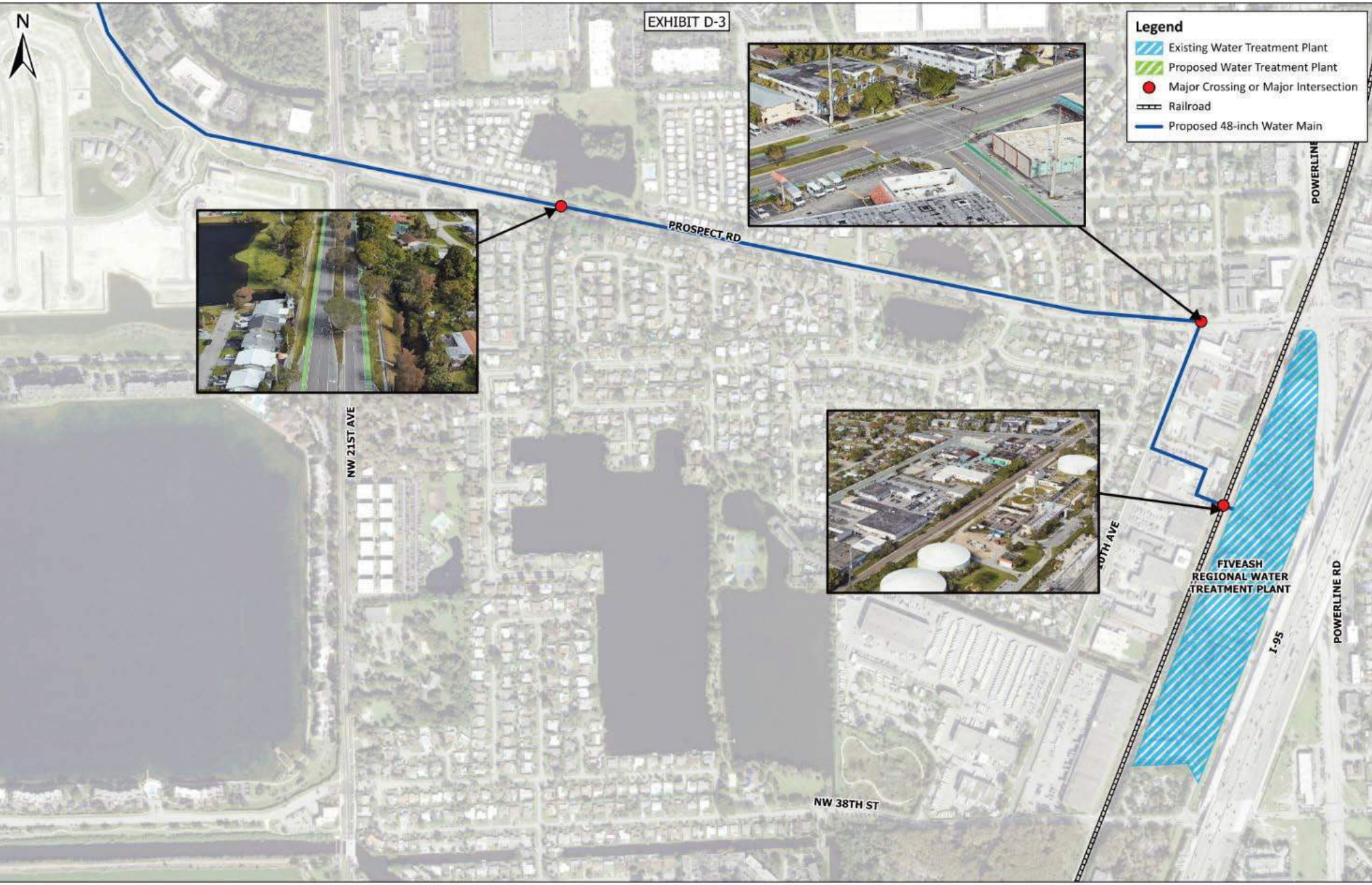


EXHIBIT D-1
N
PROSPECT LAKE WATER TREATMENT PLANT
Major Signalized Intersection 8-Lanes x 6-Lanes
FORT LAUDERDALE EXECUTIVE AIRPORT
Legend
Existing Water Treatment Plant
Proposed Water Treatment Plant
Major Crossing or Major Intersection
Railroad
Proposed 48" Water Main
PROSPECT RD
PROSPECT RD
PROSPECT RD
PROSPECT RD
POWERLINE RD
COMMERCIAL BLVD
NW 31ST AVE
Major Signalized Intersection 8-Lanes x 8-Lanes
Major Signalized Intersection 7-Lanes x 6-Lanes
PROSPECT RD
Major Signalized Intersection 6-Lanes x 3-Lanes
POWERLINE RD
I-95
Potential Culvert Crossing
NW 21
Railroad Crossing
NW 10TH AVE
FIVEASH REGIONAL WATER TREATMENT PLANT
POWERLINE RD
NW 38TH ST
MAJOR PROJECT CROSSINGS


N
EXHIBIT D-2
Legend
Existing Water Treatment Plant
Proposed Water Treatment Plant
Major Crossing or Major Intersection
Proposed 48-inch Water Main
FORT LAUDERDALE
EXECUTIVE AIRPORT
PROSPECT RD
PROSPECT RD
NW 31ST AVE
PROSPECT RD
COMMERCIAL BLVD
NW 21ST AVE


N
EXHIBIT D-3
Legend
Existing Water Treatment Plant
Proposed Water Treatment Plant
Major Crossing or Major Intersection
Railroad
Proposed 48-inch Water Main
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I-95
FIVEASH REGIONAL WATER TREATMENT PLANT

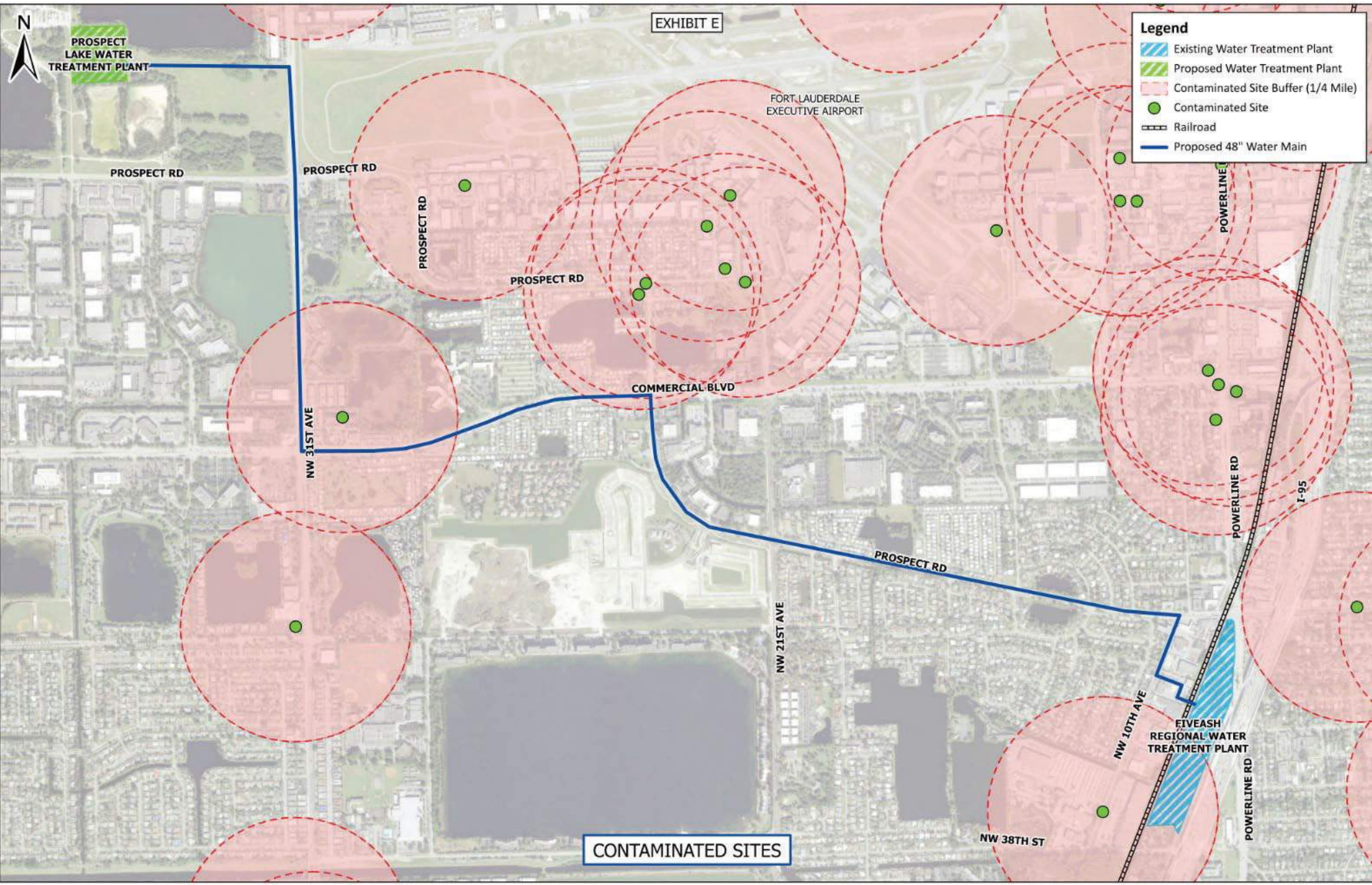
EXHIBIT E
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PROSPECT LAKE WATER TREATMENT PLANT
PROSPECT RD
PROSPECT RD
PROSPECT RD
PROSPECT RD
FORT LAUDERDALE EXECUTIVE AIRPORT
COMMERCIAL BLVD
NW 31ST AVE
NW 21ST AVE
PROSPECT RD
POWERLINE RD
I-95
NW 10TH AVE
FIVEASH REGIONAL WATER TREATMENT PLANT
POWERLINE RD
NW 38TH ST
Legend
Existing Water Treatment Plant
Proposed Water Treatment Plant
Contaminated Site Buffer (1/4 Mile)
Contaminated Site
Railroad
Proposed 48" Water Main
CONTAMINATED SITES

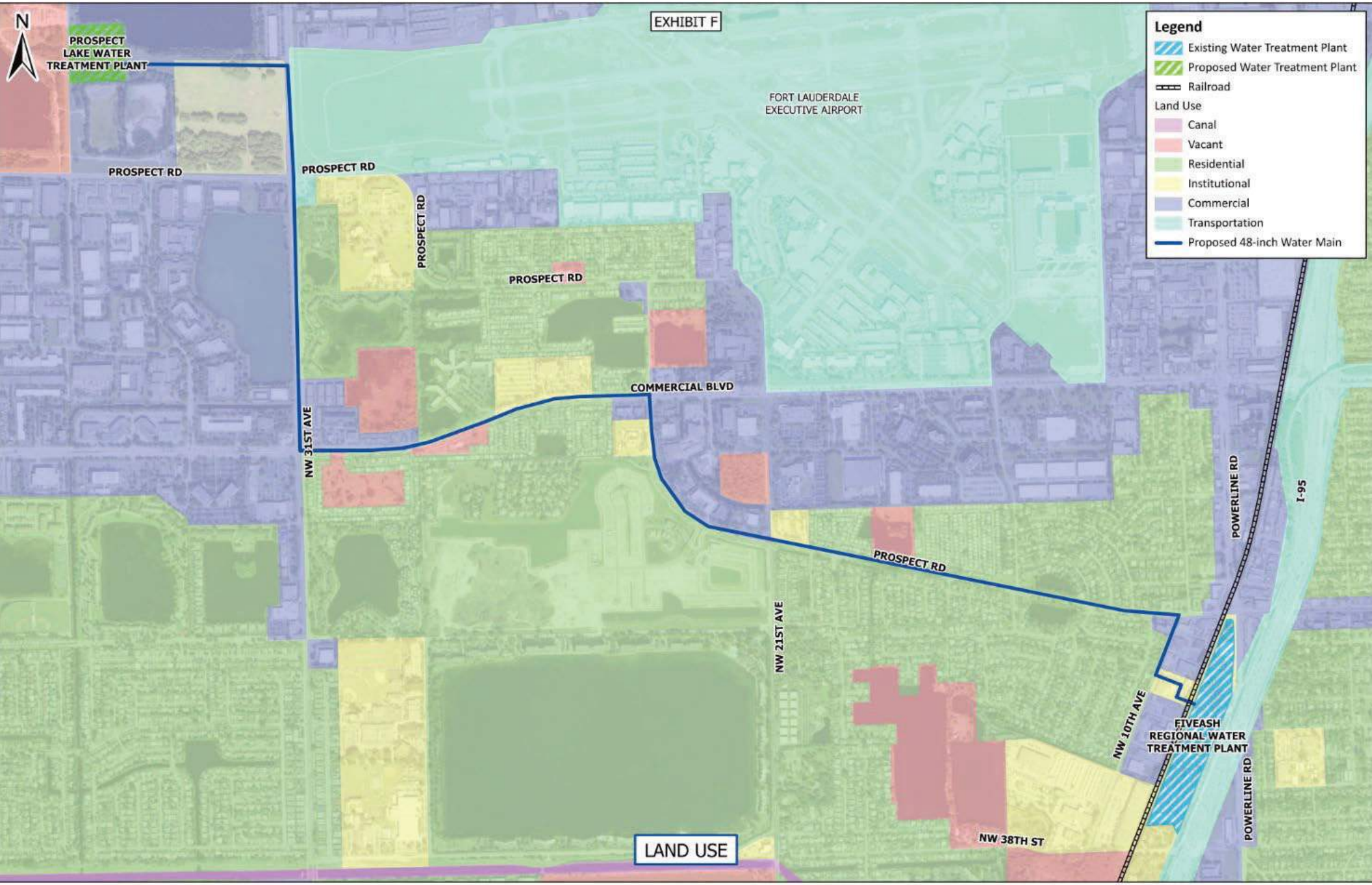


EXHIBIT F
N
PROSPECT LAKE WATER TREATMENT PLANT
PROSPECT RD
PROSPECT RD
PROSPECT RD
PROSPECT RD
FORT LAUDERDALE EXECUTIVE AIRPORT
COMMERCIAL BLVD
NW 31ST AVE
PROSPECT RD
NW 21ST AVE
NW 10TH AVE
FIVEASH REGIONAL WATER TREATMENT PLANT
NW 38TH ST
POWERLINE RD
POWERLINE RD
I-95
Legend
Existing Water Treatment Plant
Proposed Water Treatment Plant
Railroad
Land Use
Canal
Vacant
Residential
Institutional
Commercial
Transportation
Proposed 48-inch Water Main
LAND USE

3. Unsolicited Proposal - Section 255.065, Florida Statutes

The Florida Legislature finds that there is a **public need** for the construction or upgrade of facilities that are used predominantly for public purposes and that it is in the public's interest to provide for the construction or upgrade of such facilities. Section 255.065, Florida Statutes governs unsolicited proposals for a qualifying project.

"Qualifying Project" as defined in Section 255.065 (1)(i):

1. A facility or project that serves a public purpose, including, but not limited to, any ferry or mass transit facility, vehicle parking facility, airport or seaport facility, rail facility or project, fuel supply facility, oil or gas pipeline, medical or nursing care facility, recreational facility, sporting or cultural facility, or educational facility or other building or facility that is used or will be used by a public educational institution, or ***any other public facility or infrastructure that is used or will be used by the public at large*** or in support of an accepted public purpose or activity;
2. An improvement, including equipment, of a building that will be principally used by a public entity or the public at large or that supports a service delivery system in the public sector;
3. ***A water, wastewater***, or surface water management facility or other related infrastructure;

As defined in Section 255.065 (3):

> Procurement Procedure - A responsible public entity may receive unsolicited proposals or may solicit proposals for a qualifying project and may thereafter enter into a comprehensive agreement with a private entity, or a consortium of private entities, for the building, upgrading, operating, ownership, or financing of facilities. Moreover: (a)1. The responsible public entity may establish a reasonable application fee for the submission of an unsolicited proposal under this section. *The City of Fort Lauderdale established an application fee of $25,000 pursuant to Resolution 13—187. DMSI/CMA has included the application fee with this proposal*.

As defined in Section 255.065 (3)(d):

> Before approving a comprehensive agreement, the responsible public entity must determine that the proposed project:
> 1. Is in the public's best interest.
> 2. Is for a facility that is owned by the responsible public entity or for a facility for which ownership will be conveyed to the responsible public entity.
> 3. Has adequate safeguards in place to ensure that additional costs or service disruptions are not imposed on the public in the event of material default or cancellation of the comprehensive agreement by the responsible public entity.
> 4. Has adequate safeguards in place to ensure that the responsible public entity or private entity has the opportunity to add capacity to the proposed project or other facilities serving similar predominantly public purposes.
> 5. Will be owned by the responsible public entity upon completion, expiration, or termination of the comprehensive agreement and upon payment of the amounts financed.

Legislative Findings & Intent:

There is a **public need** for **timely and cost-effective** acquisition, **design, construction**, improvement, renovation, expansion, equipping, maintenance, operation, implementation, or installation **of projects serving a public purpose**, **including** educational facilities, transportation facilities, **water** or wastewater **management facilities** and infrastructure, technology infrastructure, roads, highways, bridges, and other public infrastructure and government facilities within the state which serve a public need and purpose, **and that such public need may not be wholly satisfied by existing procurement methods**.

Project Approval Requirements per FL Statutes 255.065 (4).

An unsolicited proposal from a private entity for approval of a qualifying project must be accompanied by the following material and information, **unless waived by the responsible public entity**:

a. A description of the qualifying project, including the conceptual design of the facilities or a conceptual plan for the provision of services, and a schedule for the initiation and completion of the qualifying project.

How Requirement is Met:
Description of Qualifying Project:
Section 1. Description of Project & Background of this proposal. (Page no. 2)
Conceptual Design:
Section 2, Conceptual Plans of Proposed 48-inch Water Transmission line of this proposal (Page no. 7)
Schedule of Qualifying Project:
DMSI/CMA Design-Build Schedule of this Proposal (Page No. 6)

b. A description of the method by which the private entity proposes to secure the necessary property interests that are required for the qualifying project.

How Requirement is Met:
Transmission Main will be constructed in Public ROW. Permit will be acquired from

c. A description of the private entity's general plans for financing the qualifying project, including the sources of the private entity's funds and the identity of any dedicated revenue source or proposed debt or equity investment on behalf of the private entity.

How Requirement is Met:
It is understood that the City is going out for a bond to finance all of the enabling projects for the new water treatment plant. On May 16th, 2023, City staff presented CAM # 23-0322 (Resolution Declaring the City's Official Intent to Reimburse Itself from the Proceeds of the Water and Sewer Revenue Bons – Water and Sewer Improvements) to commission where the City has determined that it intends to finance the cost of the enabling projects for the Prospect Lake CCW. This unsolicited proposal is to help fast track the process to get this project completed on time and meet the contractual deadline. The intention for the delivery of this project would be a Design-Build method and the payments would be provided on a monthly basis on the actual work performed. DMSI/CMA will prepare a Schedule of Values and utilize the City's Public Works Engineering Division Payment Application Form to submit for monthly payments.

However, DMSI/CMA can engage Waterway Capital LLC as placement agent to source debt financing from one or more institutional investors in an amount equal to 25%, 50% or 100% of the project cost. For more details on the proposed debt financing please see section 6. Financing (pages 27 - 36) of this document. **Financing is an additional option to our proposal for the City's consideration.**

d. The name and address of a person who may be contacted for additional information concerning the proposal.

How Requirement is Met:

David Mancini, Jr
David Mancini & Sons, Inc.
Vice President
Phone: 754-264-9594
Address: 2601 Wiles Road, Pompano Beach, FL 33073
Email: dmancinijr@dmsi.co

e. The proposed user fees, lease payments, or other service payments over the term of a comprehensive agreement, and the methodology for and circumstances that would allow changes to the user fees, lease payments, and other service payments over time.

How Requirement is Met:

Once the project is completed it will be transferred to the City for the maintenance and operation. Under a standard agreement DMSI will warranty the project for one year. There will be no need for any user fees, lease payments, or other service payments.

f. Additional material or information that the responsible public entity reasonably requests.

How Requirement is Met:

Any additional information requested will be made available upon request by the City.

4. Qualification & Experience of DMSI/CMA Team

The DMSI/CMA Design-Build Team was assembled with a number of goals in mind. We have brought together a team of industry leaders with proven experience in South Florida, with an emphasis on past working relationships and teaming together in a collaborative environment. Most members of our Team have been fortunate to work together over the past 20 years in the successful execution of several water and wastewater infrastructure projects. As a result, our key staff has gained firsthand knowledge of local conditions, City of Fort Lauderdale design standards, local permitting requirements, stakeholder and public outreach concerns, multi-agency coordination needs, general contracting practices, and construction methodologies specific to pipeline installation. Our team's tenure on these projects has yielded an invaluable working relationship with local municipal staff and other local regulatory agencies - one based on trust, quality, and responsiveness, while delivering cost-effective solutions.

DMSI will lead the project as the prime contractor and CMA will provide support services as the lead engineer. Together DMSI and CMA have worked on some of the largest, most challenging and yet most successful projects for the City of Fort Lauderdale. CMA's first project for the City was in 1989 and since then it has worked on over 70 City of Fort Lauderdale projects. Our team experience and City infrastructure knowledge is unmatched and will be key to the timely success of this project. Below is a list of our relevant City projects in the last 5 years.

Project	Diameter	Material	Length	Pipe Use	Owner
54-inch Sewer Redundant Forcemain	54-inch	HDPE / DIP	15,000	Wastewater	Fort Lauderdale
Emergency 42-inch Repair - Prospect Wellfield	42-inch	PCCP	20	Raw Water	Fort Lauderdale
Pump Station B-4 Sewer Forcemain	28-inch	HDPE	5,400	Wastewater	Fort Lauderdale
16-inch HDD Forcemain - Las Olas Boulevard	16-inch	HDPE	1,226	Wastewater	Fort Lauderdale
16-inch & 20-inch HDD Watermain - Las Olas Boulevard	20-inch / 16-inch	HDPE / PVC	1,881	Water	Fort Lauderdale
16-inch Watermain New River Crossing SE 1st Avenue	16-inch	HDPE	1,000	Water	Fort Lauderdale
Coral Shores Small Watermains Improvements	8-inch	PVC	1,500	Water	Fort Lauderdale
Port Condo Small Watermain Improvements	12-inch	HDPE	5,500	Water	Fort Lauderdale
Edgewood Stormwater Improvements	15-inch to 66-inch	RCP & HPPP	29,000	Stormwater	Fort Lauderdale
Emergency 54-inch Repair - Tarpon River	54-inch	HDPE	1,600	Wastewater	Fort Lauderdale

Table #6: DMSI Relevant City of Fort Lauderdale Experience in the Last 5 years

Project	Diameter	Material	Length	Pipe Use	Owner
Bayshore Drive Intracoastal Forcemain	20-inch	HDPE	3,400	Wastewater	Fort Lauderdale
48-inch Sewer Redundant Forcemain	48-inch	HDPE / DIP	22,000	Wastewater	Fort Lauderdale
SW 13th Avenue 30-inch Forcemain (CEI)	30-inch	DIP	3,100	Wastewater	Fort Lauderdale
16-inch Las Olas Phase II Forcemain	16-inch	HDPE	3,100	Wastewater	Fort Lauderdale
Pump Station B-4 Sewer Forcemain	28-inch	HDPE	5,400	Wastewater	Fort Lauderdale
17th Street Causeway Watermain	12 & 24-inch	HDPE	6,600	Water	Fort Lauderdale
P.S. A-16 Watermain DCP	30-inch	HDPE	1,200	Water	Fort Lauderdale
South Middle River Forcemain Crossing	16-inch	HDPE	4,100	Wastewater	Fort Lauderdale
30" Emergency Forcemain	30-inch	HDPE	22,000	Wastewater	Fort Lauderdale
Upsize 14-inch Forcemain PS D-36 to D-35	14-inch	HDPE	3,000	Wastewater	Fort Lauderdale

Table #7: CMA Relevant City of Fort Lauderdale Experience in the Last 5 years

The DMSI/CMA Design-Build Team will be flexible in how we interface with the City. We believe our team's previous experience provides a thorough level of understanding as it relates to City expectations, however, we also understand the client's needs can change. A good example would be our regular and emergency communications. The DMSI/CMA Design-Build Team has a number of procedures related to communications that we plan to implement on this project. A clear line of communication will be established from the initial meeting, defining points of contact for both normal operational interactions as well as emergency situations. Protocols for electronic and voice communications and document sharing will be defined. Project scheduling progress reports will be generated and provided on a monthly basis. These reports highlight the work plan schedule for the review period, showing work activities completed and scheduled durations for upcoming project tasks and milestone dates related to all phases of construction (design, permitting and construction). The reports will also provide projected cost information and define progress on both short- term and long-term project goals.

Our team will provide the City with the necessary tools to evaluate and monitor overall project performance. The City will play an advisory role as we implement these communication measures, allowing them to fine-tune these details to their specific preferences. As with any project, effective management is the key to overall success. The DMSI/CMA Design- Build Team has a significant advantage over other teams because several of our Team members have worked together on a number of conventional and design-build projects. Our Team has established routine successful management approaches and controls. These controls allow us to plan the work efficiently and track expenditures

accurately. This also allows us to recognize variances earlier in the project. Being proactive and identifying issues early on allows more time to strategize and prevent those issues from having a major impact. These controls in turn allow our team to provide the City of Fort Lauderdale with accurate, real-time project data at a level catered to your needs.

Figure #7: 28" P.S. B-4 Force main completed by DMSI/CMA Team in 2021 (1-mile)

The DMSI/CMA team is as follows:

DMSI will serve as the Prime Contractor

CMA will serve as lead Designer/Engineer

Sub-consultants

1. Pan Geo Consultant (Geotechnical Engineering)
2. Stoner & Associates (Surveyor)
3. Brierley & Associates (Trenchless Designers)
4. InfraMap (Subsurface Utility Exploration)

Sub-Contractors

1. Centerline Directional Drilling (Horizontal Directional Drilling)
2. DBE Utility Services (Horizontal Directional Drilling)
3. Weekly Asphalt (Roadway restoration)

The project team organizational chart is on the following page. Refer to ***Attachments A, B and C*** for further Qualifications of the DMSI/CMA team.


CITY OF FORT LAUDERDALE
CLIENT
City of Fort Lauderdale
chen moore and associates
DESIGN SERVICES
Chen Moore and Associates
PRINCIPAL IN CHARGE
Peter Moore, P.E., F.ASCE, FACEC
SENIOR PROJECT MANAGER
Daniel Davila, P.E.
PIPELINE & TRENCHLESS TECHNOLOGY
David Castro, P.E., M.E.
PIPELINE ENGINEERING
Vincent Locigno, P.E.
SENIOR ENGINEER
Jessica Diaz, P.E.
SENIOR INSPECTOR
Matt O'Rourke
SENIOR INSPECTOR
Manuel Caamano
DESIGN SERVICES SUBCONSULTANTS
GEOTECH
Pen Geo Consultants
SURVEY
Stoner & Associates
SUE
Inframap
TRENCHLESS TECHNOLOGIES
Brierley & Associates
SUBCONTRACTORS
HORIZONTAL DIRECTIONAL DRILLING
Centerline Directional Drilling
HORIZONTAL DIRECTIONAL DRILLING
DBE Utility Services
RESTORATION
Weekly Asphalt
CONSTRUCTION SERVICES
David Mancini & Sons, INC.
PRINCIPAL IN CHARGE
David Mancini
VP – ESTIMATING & PM
David Mancini Jr.
VP - OPERATIONS
Richard Mancini
SENIOR PROJECT MANAGER
Krishan Kandial, P.E.
PROJECT MANAGER
Leydis Colomina Power
PROJECT COORDINATOR
Matthew Hodge
SUPERINTENDENT
Ryan Kaltz & Onique Williams
ESTIMATOR
Alejandro Mejia
CONSTRUCTION MANAGER
Fabio Angarita

5. Price proposal

Our price for this unsolicited proposal is **$48,590,888.90**, for the conceptual route shown on page 11 which is approximately 17,600 feet. This is a lump sum guaranteed maximum price and is negotiable based on value engineering potentials in design if we are selected.

The below table #8 shows our proposal pricing justification, using a previous project (South Redundant Sewer Force Main) of similar scope and size that we submitted to the City in January 2020. This project was completed ahead of schedule with no change orders. The Engineering News Record (ENR) Construction Cost Index table #9 shown below we used for price escalation from January 2020 (11392) to July 2023 (13425) which is 17.85% over the last 42 months. This is an average of 0.425% per month. As our schedule shows construction is expected to start on June 2024 which is 11 months from July 2023 and will have an additional 4.675% projected increased inflation rate during that period. From January 2020 to our expected start of construction of June 2024 we are projecting that the inflationary percentage to increase by 22.53%.

South Redundant Sewer Force main Project	
Total Project Cost	$33,798,007.00
Total Linear Feet (LF) of Project	15,000
Price per Linear Feet	$2,253.20
Inflationary Percent Increase	22.53%
Unsolicited 48-inch Water Transmission Main	
Price per LF adjusted for Inflation	$2,760.85
Total LF of Project	17,600.00
Price Proposal	***$ 48,590,888.90***

Table #8: Price Justification

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG
2023	13175.03	13175.93	13176.3	13229.57	13288.27	13345.00	13424.98	
2022	12555.55	12683.97	12791.43	12898.96	13004.47	13110.50	13167.84	13171.07
2021	11627	11698	11749	11849	11989	12112	12237	12463
2020	11392	11396	11397	11412	11418	11436	11439	11455
2019	11206	11213	11228	11228	11230	11268	11293	11311
2018	10878	10889	10959	10971	11013	11069	11116	11124
2017	10542	10559	10667	10678	10692	10703	10789	10826
2016	10132	10181	10242	10279	10315	10337	10379	10385
2015	9972	9962	9972	9992	9975	10039	10037	10039

Source: https://www.enr.com/economics/historical_indices/construction_cost_index_history
(Date: July 28, 2023)

Table #9: ENR's Construction Cost Index History

6. Financing

Outlined on the following pages are various debt financing illustrations for the consideration of the City.

Under this structure, DMSI would enter into an installment purchase agreement with the City whereby the City would pay for the construction and ownership of the water transmission main in installments over the course of say, 20, 25 or 30 years and ownership of the asset would revert to the City upon the expiration of the agreement. The lender would provide a loan to DMSI (illustrated herein in the amounts equal to 25%, 50% and 100% of the budgeted construction cost plus financing costs) which would be used to construct the project and the installment payments from the City would be used to pay debt service on the loan.

Attached is an illustration which calculates the annual installment payments required to get to the design and construction cost (plus financing costs) at each of the terms shown, assuming 2.00% annual payment escalations.

Benefits of this structure include the following:

- Monetization of the contract provides immediate liquidity to construct the asset
- Municipality can avoid the red tape of having to go through the public debt raising process (voter approval, direct debt constraints) which can be time-consuming and costly after factoring in various fixed transaction costs (especially for a deal of this size)
- Municipality can maintain control of the asset via the installment purchase contract whereby they agree to maintain the asset and will own the asset outright at the end of the term

For this financing options please note the following:

a. The rates in the financing summary are based on current capital markets and subject to change until rate lock.
b. Rate lock is good for 60 days.
c. The "typical" timeline is about 60-90 days from engagement of placement agent to closing.
d. Loan provides the ability to fund various soft costs before construction commences.
e. City to agree to start paying the installment payments on a specific date regardless of the status of construction.
f. Loan is assumable and can also be prepaid with a prepayment penalty. Installment purchase contract shall give the City the right to purchase the asset prior to the expiration of the contract term [at a to-be-negotiated purchase price] so long as the purchase price is equal to or greater than the outstanding balance on the loan plus any prepayment penalty.

These Financing Options are an additional option to our proposal for the City's consideration. Per FL Statutes 255.065 (4) the public entity can waive this requirement.

WATERWAY CAPITAL

Installment Purchase Contract Loan Summary

City of Fort Lauderdale

Fort Lauderdale, Florida

Tenant Rating

Moody's:	Aa1 (stable)
S&P:	AAA (stable)

Transaction Details	22.0 Year Term Fully Amortizing	27.0 Year Term Fully Amortizing	32.0 Year Term Fully Amortizing
Loan Proceeds	$ 14,489,000	$ 14,552,000	$ 14,633,000
Debt Service Coverage [1]	1.00	1.00	1.00
Average Life (Years)	15.0	19.5	24.5
Loan Term (Months)	264	324	384
Starting Annual Installment Payment	$ 1,043,530	$ 927,007	$ 847,663
Annual Installment Payment Escalations	2.00%	2.00%	2.00%
Transaction Costs			
Construction Interest Reserve [2]	$ 1,651,746	$ 1,714,226	$ 1,747,180
Debt Service Reserve [3]	-	-	46,901
Lender's Legal Fees [4]	100,000	100,000	100,000
Borrower's Legal Fees	TBD	TBD	TBD
Placement Agent Fee	217,335	218,280	219,495
Special Risk Condemnation Gap Insurance	N/A	N/A	N/A
Special Risk Casualty Gap Insurance	N/A	N/A	N/A
Trustee/Closing Costs [4]	19,200	19,200	19,200
Construction Monitor Fee	TBD	TBD	TBD
Net Proceeds to Borrower	$ 12,500,719	$ 12,500,294	$ 12,500,223
Spread	1.75%	1.80%	1.95%
UST Index [5]	3.95%	4.09%	4.02%
Interest Rate	5.70%	5.89%	5.97%

Notes

(1) Assumes that there are no financial obligations of the borrower in the installment purchase contract and that the City shall maintain and repair the asset (including capital expenditures).
(2) Assumes a 24-month construction period.
(3) A debt service reserve will be established to cover the difference between the installment amount due and interest due under the note.
(4) Represents an estimate.
(5) Based on a 10 year, 20 year and 30 year U.S. Treasury yield of 3.80%, 4.10% and 3.92%, respectively.

Cash Flows

22.0 Year Term

Months	Monthly Installment	Trustee Fee [4]	Available for Debt Service	Debt Service Payment	Monthly Cash Flow
24 mos. IO	-	$500	-	$68,823	-
1-12	$86,961	$500	$86,461	$86,461	-
13-24	$88,700	$500	$88,200	$88,200	-
25-36	$90,474	$500	$89,974	$89,974	-
37-48	$92,284	$500	$91,784	$91,784	-
49-60	$94,129	$500	$93,629	$93,629	-
61-72	$96,012	$500	$95,512	$95,512	-
73-84	$97,932	$500	$97,432	$97,432	-
85-96	$99,891	$500	$99,391	$99,391	-
97-108	$101,888	$500	$101,388	$101,388	-
109-120	$103,926	$500	$103,426	$103,426	-
121-132	$106,005	$500	$105,505	$105,505	-
133-144	$108,125	$500	$107,625	$107,625	-
145-156	$110,287	$500	$109,787	$109,787	-
157-168	$112,493	$500	$111,993	$111,993	-
169-180	$114,743	$500	$114,243	$114,243	-
181-192	$117,038	$500	$116,538	$116,538	-
193-204	$119,379	$500	$118,879	$118,879	-
205-216	$121,766	$500	$121,266	$121,266	-
217-228	$124,201	$500	$123,701	$123,701	-
229-240	$126,686	$500	$126,186	$126,186	-

27.0 Year Term

Months	Monthly Installment	Trustee Fee [4]	Available for Debt Service	Debt Service Payment	Monthly Cash Flow
24 mos. IO	-	$500	-	$71,426	-
1-12	$77,251	$500	$76,751	$76,751	-
13-24	$78,796	$500	$78,296	$78,296	-
25-36	$80,372	$500	$79,872	$79,872	-
37-48	$81,979	$500	$81,479	$81,479	-
49-60	$83,619	$500	$83,119	$83,119	-
61-72	$85,291	$500	$84,791	$84,791	-
73-84	$86,997	$500	$86,497	$86,497	-
85-96	$88,737	$500	$88,237	$88,237	-
97-108	$90,511	$500	$90,011	$90,011	-
109-120	$92,322	$500	$91,822	$91,822	-
121-132	$94,168	$500	$93,668	$93,668	-
133-144	$96,051	$500	$95,551	$95,551	-
145-156	$97,972	$500	$97,472	$97,472	-
157-168	$99,932	$500	$99,432	$99,432	-
169-180	$101,931	$500	$101,431	$101,431	-
181-192	$103,969	$500	$103,469	$103,469	-
193-204	$106,049	$500	$105,549	$105,549	-
205-216	$108,170	$500	$107,670	$107,670	-
217-228	$110,333	$500	$109,833	$109,833	-
229-240	$112,540	$500	$112,040	$112,040	-
241-252	$114,790	$500	$114,290	$114,290	-
253-264	$117,086	$500	$116,586	$116,586	-
265-276	$119,428	$500	$118,928	$118,928	-
277-288	$121,816	$500	$121,316	$121,316	-
289-300	$124,253	$500	$123,753	$123,753	-

32.0 Year Term

Months	Monthly Installment	Trustee Fee [4]	Available for Debt Service	Debt Service Payment	Monthly Cash Flow
24 mos. IO	-	$500	-	$72,799	-
1-12	$70,639	$500	$70,139	$70,139	-
13-24	$72,051	$500	$71,551	$71,551	-
25-36	$73,492	$500	$72,992	$72,992	-
37-48	$74,962	$500	$74,462	$74,462	-
49-60	$76,461	$500	$75,961	$75,961	-
61-72	$77,991	$500	$77,491	$77,491	-
73-84	$79,550	$500	$79,050	$79,050	-
85-96	$81,142	$500	$80,642	$80,642	-
97-108	$82,764	$500	$82,264	$82,264	-
109-120	$84,420	$500	$83,920	$83,920	-
121-132	$86,108	$500	$85,608	$85,608	-
133-144	$87,830	$500	$87,330	$87,330	-
145-156	$89,587	$500	$89,087	$89,087	-
157-168	$91,379	$500	$90,879	$90,879	-
169-180	$93,206	$500	$92,706	$92,706	-
181-192	$95,070	$500	$94,570	$94,570	-
193-204	$96,972	$500	$96,472	$96,472	-
205-216	$98,911	$500	$98,411	$98,411	-
217-228	$100,889	$500	$100,389	$100,389	-
229-240	$102,907	$500	$102,407	$102,407	-
241-252	$104,965	$500	$104,465	$104,465	-
253-264	$107,064	$500	$106,564	$106,564	-
265-276	$109,206	$500	$108,706	$108,706	-
277-288	$111,390	$500	$110,890	$110,890	-
289-300	$113,618	$500	$113,118	$113,118	-
301-312	$115,890	$500	$115,390	$115,390	-
313-324	$118,208	$500	$117,708	$117,708	-
325-336	$120,572	$500	$120,072	$120,072	-
337-348	$122,983	$500	$122,483	$122,483	-
349-360	$125,443	$500	$124,943	$124,943	-

Notes

(3) Represents an estimate.

The information contained herein has been prepared from sources Waterway Capital LLC ("Waterway Capital") believes reliable, but is not guaranteed by Waterway Capital. This information is neither a complete nor a comprehensive summary or statement of all available data. This credit tenant loan financing summary does not represent a firm quote and the numbers, as presented above, are preliminary and subject to change.

WATERWAY CAPITAL

Installment Purchase Contract Loan Summary

City of Fort Lauderdale

Fort Lauderdale, Florida

Tenant Rating

Moody's:	Aa1 (stable)
S&P:	AAA (stable)

Transaction Details	22.0 Year Term Fully Amortizing	27.0 Year Term Fully Amortizing	32.0 Year Term Fully Amortizing
Loan Proceeds	$ 28,840,000	$ 28,967,000	$ 29,125,000
Debt Service Coverage [1]	1.00	1.00	1.00
Average Life (Years)	15.0	19.5	24.5
Loan Term (Months)	264	324	384
Starting Annual Installment Payment	$ 2,072,045	$ 1,840,365	$ 1,682,506
Annual Installment Payment Escalations	2.00%	2.00%	2.00%
Transaction Costs			
Construction Interest Reserve [2]	$ 3,287,760	$ 3,412,313	$ 3,477,525
Debt Service Reserve [3]	-	-	90,863
Lender's Legal Fees [4]	100,000	100,000	100,000
Borrower's Legal Fees	TBD	TBD	TBD
Placement Agent Fee	432,600	434,505	436,875
Special Risk Condemnation Gap Insurance	N/A	N/A	N/A
Special Risk Casualty Gap Insurance	N/A	N/A	N/A
Trustee/Closing Costs [4]	19,200	19,200	19,200
Construction Monitor Fee	TBD	TBD	TBD
Net Proceeds to Borrower	$ 25,000,440	$ 25,000,982	$ 25,000,537
Spread	1.75%	1.80%	1.95%
UST Index [5]	3.95%	4.09%	4.02%
Interest Rate	5.70%	5.89%	5.97%

Notes

(1) Assumes that there are no financial obligations of the borrower in the installment purchase contract and that the City shall maintain and repair the asset (including capital expenditures).
(2) Assumes a 24-month construction period.
(3) A debt service reserve will be established to cover the difference between the installment amount due and interest due under the note.
(4) Represents an estimate.
(5) Based on a 10 year, 20 year and 30 year U.S. Treasury yield of 3.80%, 4.10% and 3.92%, respectively.

Cash Flows

22.0 Year Term

Months	Monthly Installment	Trustee Fee [4]	Available for Debt Service	Debt Service Payment	Monthly Cash Flow
24 mos. IO	-	$500	-	$136,990	-
1-12	$172,670	$500	$172,170	$172,170	-
13-24	$176,124	$500	$175,624	$175,624	-
25-36	$179,646	$500	$179,146	$179,146	-
37-48	$183,239	$500	$182,739	$182,739	-
49-60	$186,904	$500	$186,404	$186,404	-
61-72	$190,642	$500	$190,142	$190,142	-
73-84	$194,455	$500	$193,955	$193,955	-
85-96	$198,344	$500	$197,844	$197,844	-
97-108	$202,311	$500	$201,811	$201,811	-
109-120	$206,357	$500	$205,857	$205,857	-
121-132	$210,484	$500	$209,984	$209,984	-
133-144	$214,694	$500	$214,194	$214,194	-
145-156	$218,988	$500	$218,488	$218,488	-
157-168	$223,368	$500	$222,868	$222,868	-
169-180	$227,835	$500	$227,335	$227,335	-
181-192	$232,392	$500	$231,892	$231,892	-
193-204	$237,039	$500	$236,539	$236,539	-
205-216	$241,780	$500	$241,280	$241,280	-
217-228	$246,616	$500	$246,116	$246,116	-
229-240	$251,548	$500	$251,048	$251,048	-

27.0 Year Term

Months	Monthly Installment	Trustee Fee [4]	Available for Debt Service	Debt Service Payment	Monthly Cash Flow
24 mos. IO	-	$500	-	$142,180	-
1-12	$153,364	$500	$152,864	$152,864	-
13-24	$156,431	$500	$155,931	$155,931	-
25-36	$159,560	$500	$159,060	$159,060	-
37-48	$162,751	$500	$162,251	$162,251	-
49-60	$166,006	$500	$165,506	$165,506	-
61-72	$169,326	$500	$168,826	$168,826	-
73-84	$172,713	$500	$172,213	$172,213	-
85-96	$176,167	$500	$175,667	$175,667	-
97-108	$179,690	$500	$179,190	$179,190	-
109-120	$183,284	$500	$182,784	$182,784	-
121-132	$186,950	$500	$186,450	$186,450	-
133-144	$190,689	$500	$190,189	$190,189	-
145-156	$194,502	$500	$194,002	$194,002	-
157-168	$198,392	$500	$197,892	$197,892	-
169-180	$202,360	$500	$201,860	$201,860	-
181-192	$206,407	$500	$205,907	$205,907	-
193-204	$210,536	$500	$210,036	$210,036	-
205-216	$214,746	$500	$214,246	$214,246	-
217-228	$219,041	$500	$218,541	$218,541	-
229-240	$223,422	$500	$222,922	$222,922	-
241-252	$227,891	$500	$227,391	$227,391	-
253-264	$232,448	$500	$231,948	$231,948	-
265-276	$237,097	$500	$236,597	$236,597	-
277-288	$241,839	$500	$241,339	$241,339	-
289-300	$246,676	$500	$246,176	$246,176	-

32.0 Year Term

Months	Monthly Installment	Trustee Fee [4]	Available for Debt Service	Debt Service Payment	Monthly Cash Flow
24 mos. IO	-	$500	-	$144,897	-
1-12	$140,209	$500	$139,709	$139,709	-
13-24	$143,013	$500	$142,513	$142,513	-
25-36	$145,873	$500	$145,373	$145,373	-
37-48	$148,791	$500	$148,291	$148,291	-
49-60	$151,767	$500	$151,267	$151,267	-
61-72	$154,802	$500	$154,302	$154,302	-
73-84	$157,898	$500	$157,398	$157,398	-
85-96	$161,056	$500	$160,556	$160,556	-
97-108	$164,277	$500	$163,777	$163,777	-
109-120	$167,563	$500	$167,063	$167,063	-
121-132	$170,914	$500	$170,414	$170,414	-
133-144	$174,332	$500	$173,832	$173,832	-
145-156	$177,819	$500	$177,319	$177,319	-
157-168	$181,375	$500	$180,875	$180,875	-
169-180	$185,003	$500	$184,503	$184,503	-
181-192	$188,703	$500	$188,203	$188,203	-
193-204	$192,477	$500	$191,977	$191,977	-
205-216	$196,326	$500	$195,826	$195,826	-
217-228	$200,253	$500	$199,753	$199,753	-
229-240	$204,258	$500	$203,758	$203,758	-
241-252	$208,343	$500	$207,843	$207,843	-
253-264	$212,510	$500	$212,010	$212,010	-
265-276	$216,760	$500	$216,260	$216,260	-
277-288	$221,095	$500	$220,595	$220,595	-
289-300	$225,517	$500	$225,017	$225,017	-
301-312	$230,027	$500	$229,527	$229,527	-
313-324	$234,628	$500	$234,128	$234,128	-
325-336	$239,321	$500	$238,821	$238,821	-
337-348	$244,107	$500	$243,607	$243,607	-
349-360	$248,989	$500	$248,489	$248,489	-

Notes

(3) Represents an estimate.

The information contained herein has been prepared from sources Waterway Capital LLC ("Waterway Capital") believes reliable, but is not guaranteed by Waterway Capital. This information is neither a complete nor a comprehensive summary or statement of all available data. This credit tenant loan financing summary does not represent a firm quote and the numbers, as presented above, are preliminary and subject to change.

WATERWAY CAPITAL

Installment Purchase Contract Loan Summary

City of Fort Lauderdale

Fort Lauderdale, Florida

Tenant Rating

Moody's:	Aa1 (stable)
S&P:	AAA (stable)

Transaction Details	22.0 Year Term Fully Amortizing	27.0 Year Term Fully Amortizing	32.0 Year Term Fully Amortizing
Loan Proceeds	$ 57,543,000	$ 57,795,000	$ 58,108,000
Debt Service Coverage [1]	1.00	1.00	1.00
Average Life (Years)	15.0	19.5	24.5
Loan Term (Months)	264	324	384
Starting Annual Installment Payment	$ 4,129,146	$ 3,666,955	$ 3,352,135
Annual Installment Payment Escalations	2.00%	2.00%	2.00%
Transaction Costs			
Construction Interest Reserve [2]	$ 6,559,902	$ 6,808,251	$ 6,938,095
Debt Service Reserve [3]	-	-	178,783
Lender's Legal Fees [4]	100,000	100,000	100,000
Borrower's Legal Fees	TBD	TBD	TBD
Placement Agent Fee	863,145	866,925	871,620
Special Risk Condemnation Gap Insurance	N/A	N/A	N/A
Special Risk Casualty Gap Insurance	N/A	N/A	N/A
Trustee/Closing Costs [4]	19,200	19,200	19,200
Construction Monitor Fee	TBD	TBD	TBD
Net Proceeds to Borrower	$ 50,000,753	$ 50,000,624	$ 50,000,302
Spread	1.75%	1.80%	1.95%
UST Index [5]	3.95%	4.09%	4.02%
Interest Rate	5.70%	5.89%	5.97%

Notes

(1) Assumes that there are no financial obligations of the borrower in the installment purchase contract and that the City shall maintain and repair the asset (including capital expenditures).
(2) Assumes a 24-month construction period.
(3) A debt service reserve will be established to cover the difference between the installment amount due and interest due under the note.
(4) Represents an estimate.
(5) Based on a 10 year, 20 year and 30 year U.S. Treasury yield of 3.80%, 4.10% and 3.92%, respectively.

Cash Flows

22.0 Year Term

Months	Monthly Installment	Trustee Fee [4]	Available for Debt Service	Debt Service Payment	Monthly Cash Flow
24 mos. IO	-	$500	-	$273,329	-
1-12	$344,096	$500	$343,596	$343,596	-
13-24	$350,977	$500	$350,477	$350,477	-
25-36	$357,997	$500	$357,497	$357,497	-
37-48	$365,157	$500	$364,657	$364,657	-
49-60	$372,460	$500	$371,960	$371,960	-
61-72	$379,909	$500	$379,409	$379,409	-
73-84	$387,507	$500	$387,007	$387,007	-
85-96	$395,258	$500	$394,758	$394,758	-
97-108	$403,163	$500	$402,663	$402,663	-
109-120	$411,226	$500	$410,726	$410,726	-
121-132	$419,451	$500	$418,951	$418,951	-
133-144	$427,840	$500	$427,340	$427,340	-
145-156	$436,396	$500	$435,896	$435,896	-
157-168	$445,124	$500	$444,624	$444,624	-
169-180	$454,027	$500	$453,527	$453,527	-
181-192	$463,107	$500	$462,607	$462,607	-
193-204	$472,369	$500	$471,869	$471,869	-
205-216	$481,817	$500	$481,317	$481,317	-
217-228	$491,453	$500	$490,953	$490,953	-
229-240	$501,282	$500	$500,782	$500,782	-

27.0 Year Term

Months	Monthly Installment	Trustee Fee [4]	Available for Debt Service	Debt Service Payment	Monthly Cash Flow
24 mos. IO	-	$500	-	$283,677	-
1-12	$305,580	$500	$305,080	$305,080	-
13-24	$311,691	$500	$311,191	$311,191	-
25-36	$317,925	$500	$317,425	$317,425	-
37-48	$324,283	$500	$323,783	$323,783	-
49-60	$330,769	$500	$330,269	$330,269	-
61-72	$337,385	$500	$336,885	$336,885	-
73-84	$344,132	$500	$343,632	$343,632	-
85-96	$351,015	$500	$350,515	$350,515	-
97-108	$358,035	$500	$357,535	$357,535	-
109-120	$365,196	$500	$364,696	$364,696	-
121-132	$372,500	$500	$372,000	$372,000	-
133-144	$379,950	$500	$379,450	$379,450	-
145-156	$387,549	$500	$387,049	$387,049	-
157-168	$395,300	$500	$394,800	$394,800	-
169-180	$403,206	$500	$402,706	$402,706	-
181-192	$411,270	$500	$410,770	$410,770	-
193-204	$419,495	$500	$418,995	$418,995	-
205-216	$427,885	$500	$427,385	$427,385	-
217-228	$436,443	$500	$435,943	$435,943	-
229-240	$445,172	$500	$444,672	$444,672	-
241-252	$454,075	$500	$453,575	$453,575	-
253-264	$463,157	$500	$462,657	$462,657	-
265-276	$472,420	$500	$471,920	$471,920	-
277-288	$481,868	$500	$481,368	$481,368	-
289-300	$491,506	$500	$491,006	$491,006	-

32.0 Year Term

Months	Monthly Installment	Trustee Fee [4]	Available for Debt Service	Debt Service Payment	Monthly Cash Flow
24 mos. IO	-	$500	-	$289,087	-
1-12	$279,345	$500	$278,845	$278,845	-
13-24	$284,931	$500	$284,431	$284,431	-
25-36	$290,630	$500	$290,130	$290,130	-
37-48	$296,443	$500	$295,943	$295,943	-
49-60	$302,372	$500	$301,872	$301,872	-
61-72	$308,419	$500	$307,919	$307,919	-
73-84	$314,587	$500	$314,087	$314,087	-
85-96	$320,879	$500	$320,379	$320,379	-
97-108	$327,297	$500	$326,797	$326,797	-
109-120	$333,843	$500	$333,343	$333,343	-
121-132	$340,519	$500	$340,019	$340,019	-
133-144	$347,330	$500	$346,830	$346,830	-
145-156	$354,276	$500	$353,776	$353,776	-
157-168	$361,362	$500	$360,862	$360,862	-
169-180	$368,589	$500	$368,089	$368,089	-
181-192	$375,961	$500	$375,461	$375,461	-
193-204	$383,480	$500	$382,980	$382,980	-
205-216	$391,150	$500	$390,650	$390,650	-
217-228	$398,973	$500	$398,473	$398,473	-
229-240	$406,952	$500	$406,452	$406,452	-
241-252	$415,091	$500	$414,591	$414,591	-
253-264	$423,393	$500	$422,893	$422,893	-
265-276	$431,861	$500	$431,361	$431,361	-
277-288	$440,498	$500	$439,998	$439,998	-
289-300	$449,308	$500	$448,808	$448,808	-
301-312	$458,294	$500	$457,794	$457,794	-
313-324	$467,460	$500	$466,960	$466,960	-
325-336	$476,809	$500	$476,309	$476,309	-
337-348	$486,346	$500	$485,846	$485,846	-
349-360	$496,073	$500	$495,573	$495,573	-

Notes

(3) Represents an estimate.

The information contained herein has been prepared from sources Waterway Capital LLC ("Waterway Capital") believes reliable, but is not guaranteed by Waterway Capital. This information is neither a complete nor a comprehensive summary or statement of all available data. This credit tenant loan financing summary does not represent a firm quote and the numbers, as presented above, are preliminary and subject to change.

7. Summary and Conclusion

The proposed 48-inch water main is a vital component of the Prospect Lake CWC and its timely completion is of the upmost importance to City of Fort Lauderdale residents, businesses and other large users. The DMSI/CMA team is pleased to submit this proposal to the City of Fort Lauderdale. We have put together the best team for the project, which includes the most experienced professionals in the industry. Our commitment to you is to provide a cost-effective solution and a project that will be delivered to your constituents on time to meet the Prospect Lake CWC enabling projects deadline. We thank you for this opportunity and look forward to discussing this project in greater detail.

Best Regards,

David Mancini Jr.
Vice President
David Mancini & Sons (DMSI)

Attachments:

Attachment A – Qualifications of the Team
Attachment B – Project Methodology and Approach
Attachment C – References

CITY OF FORT LAUDERDALE
DESIGN-BUILD TEAM QUALIFICATIONS

TABLE OF CONTENTS

Attachment A
Qualifications of the Team

chen moore and associates

A. QUALIFICATIONS OF THE FIRM

A. Firm History

David Mancini & Sons (DMSI) - Construction

The DMSI Team is a partnership of construction companies and engineering firms which will provide the City of Fort Lauderdale with depth of resources, industry leading professionals, and innovative solutions required for this watermain extension project. DMSI has assembled a team of local companies to provide the City of Ft. Lauderdale with comprehensive services for this project. Our Team has a positive track record working with the City of Ft. Lauderdale and other municipalities.

As you will be able to see throughout this proposal, the DMSI Team has designed and constructed more pipeline projects of similar or greater size and complexity than any other team. With an aggregate bonding capacity in excess of $100 million, DMSI is recognized as one of the most technically advanced underground utility, HDD trenchless emergency work, road building and earth moving contractors in South Florida. Over the past 30 years, David Mancini, President and Qualifier of DMSI, has successfully delivered multiple design-build projects which accounted for more than $150 M worth of their contracts. DMSI is recognized in the construction industry for completing the projects within time and budget.

The DMSI Team includes specialized construction and engineering firms who have an outstanding record of successfully completed similar projects in South Florida. Together, our team offers the City of Ft. Lauderdale unmatched expertise, depth of resources, collaborative relationship, and local experience. All of the Design-Build Team Key Personnel qualifications and experience perfectly match their proposed roles for this project.

Since taking over in 1985 as the third generation of Mancini Family Estate Succession Planning, DMSI's construction experience history now spans **FOUR GENERATIONS** and **SIX DECADES** of underground utility excellence. DMSI is a heavy civil general contractor and construction management firm headquartered in Deerfield Beach and Ft. Lauderdale, Florida since its inception. DMSI is defined by its employees - honest, experienced, forward-thinking, professional and hardworking. DMSI's team members form collaborative relationships with owners, developers, design teams, subcontractors and others to assist in delivering the most desirable and economical solution to the construction goal, reinforcing the company's reputation for superior workmanship and performance. DMSI's business philosophy is dedicated to trusting relationships, excellent service and workmanship that has enduring character and meeting or exceeding customer expectations every time.

1st Generation | In the Mid 1950's Charlie D'Agostini and his Brothers incorporated Northwest Construction, specializing in Underground Utility and Tunneling Construction within the Detroit, Michigan area.

2nd Generation | In 1958 Charlie D'Agostini's Daughter Gilda, married Richard Mancini and soon after he started working for Northwest Construction gaining experience as a general superintendent. In 1965 Richard Mancini, with the help of Charlie D'Agostini, incorporated Ric-Man Construction which specialized in underground utility and excavation construction throughout the State of Michigan.

3rd Generation | In 1981, Ric-Man Construction established a parallel operation in the State of Florida, in which David Mancini relocated to Florida and started working as a laborer for Ric-Man Construction, Inc. In 1983, Richard Mancini and his eldest son, David Mancini, formed Ric-Man International Inc. a Florida Corporation specializing in underground utility and excavation. In 1985 David Mancini was promoted to president of Ric-Man International until late 2010 when David Mancini resigned to incorporate David Mancini & Sons, Inc. (DMSI).

4th Generation | In October 2010, David Mancini, together with his sons David Jr. and Richard incorporated David Mancini & Sons, Inc. which specializes in streetscape, underground utility, roadwork and trenchless construction. When DMSI was incorporated over 70% of the staff from Ric-Man International Inc., ranging from key to field personnel joined DMSI bringing along extensive years of experience and teamwork to DMSI. Currently DMSI has a staff of over 70 employees.

The company specializes in delivering large-scale projects which entail difficult tasks, conditions and schedules. DMSI executes projects through a variety of delivery systems, ranging from traditional contracting arrangements to turnkey design-build as well as CM/GC project execution. Typical projects include, large diameter pipelines, underground utilities, commercial and industrial site developments and trenchless utility installations.

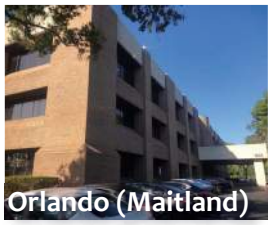
DMSI's Team understands what is needed and will perform with the City of Ft. Lauderdale best interest in mind. Integrating into the designers and contractors' team as well as coordinating efforts with stakeholders will require seasoned professionals with experience in neighborhood improvement projects. The DMSI Team brings confidence in project management water infrastructure engineering design and construction through verifiable expeience on similar design-build projects. All of our Key personnel have experience in all elements of the scope of work and are 100% committed to the City of Ft. Lauderdale's successful implementation of this project.

Chen Moore and Associates (CMA) - Design


Fort Lauderdale


Miami


West Palm Beach


Orlando (Maitland)


Gainesville


Jacksonville


Tampa

Founded in 1986, CMA specializes in civil engineering, electrical engineering, water resources, water and sewer, landscape architecture, transportation, planning and irrigation, environmental and construction engineering services. The firm commits to providing responsive quality services while meeting the schedules and specific project needs of our clients. The firm has it's headquarters in Fort Lauderdale, FL. CMA has regional offices in Miami, West Palm Beach, Jacksonville, and Orlando (Maitland). CMA has additional offices in Jupiter, Gainesville , Sarasota, Port St. Lucie, Tampa and Atlanta. The work performed for this contract will be based out of our Fort Lauderdale office.

At CMA, we best describe ourselves, our approach, and our priorities with these five words: Leadership, Excellence, Philanthropy, Community and Culture. CMA embraces the history and legacy of the firm set by Dr. Ben Chen, P.E. and is empowered by the vision set by its leadership team, led by President Peter Moore, P.E., F. ASCE, FACEC. The firm continues to grow by striving for excellence in design, innovation, project management, and quality. CMA continues to be focused on community through its commitment to philanthropy at all levels of the firm. Every office utilizes time and treasure to attend, contribute and lead in community and profession-related events throughout CMA's geographic reach. The CMA family culture is about quality and excellence in our professional work, while contributing as a leader in our community in a fun working environment.

The firm is currently working on and has successfully completed projects involving the planning, design and construction of a wide range of projects in a multitude of disciplines including:

- Infrastructure Master Planning
- Pump Station Design and Rehabilitation
- Water Supply, Treatment, and Distribution Design
- Stormwater Management System Design and Master Plans
- Environmental Engineering
- Roadway Design and Streetscape
- Transmission Engineering
- Government Permitting
- Land Development
- Site Development
- Site Planning
- Landscape Architecture
- Hardscape Design
- Irrigation Design
- Park Design
- GIS Analysis and Mapping
- Project and Program Management
- Sustainable Design and LEED Solutions
- Value Engineering
- Utility Rate and Infrastructure Valuation Studies
- Resident Coordination and Stakeholder

CMA employs 120 full time staff, including 39 registered professional engineers, 7 registered landscape architects, 4 certified planners, 2 certified arborists, and a certified irrigation designer. With our highly experienced technical design staff, the CMA team has the capabilities to address the smallest to the most challenging tasks required for many types of public, semi-public and private sector projects. The City can be assured that the CMA team can handle all components of the projects performed under this contract.

ZERVOS GROUP, INC.
INSURANCE & BONDS

April 26, 2023

Florida Department of Transportation
Manager, Contracts Administration Office
605 Suwannee Street, M.S. 55
Tallahassee, FL 32399-0455

RE: **David Mancini & Sons, Inc.,**
2601 Wiles Rd.
Pompano Beach, FL 33073

To Whom It May Concern:

It is the privilege of Zervos Group, Inc. and Travelers Casualty and Surety Company of America to provide surety bonds on behalf of David Mancini & Sons, Inc. In our opinion, David Mancini & Sons, Inc. is properly financed, well-equipped and capably managed.

At the present time, Travelers Casualty and Surety Company of America provides a $80,000,000.00 single project/$135,000,000.00 aggregate surety program to David Mancini & Sons, Inc. As always, Travelers Casualty and Surety Company of America reserves the right to perform normal underwriting at the time of any bond request, including, without limitation, prior review and approval of relevant contract documents, bond forms, and project financing. We assume no liability to The City of Fort Lauderdale or its affiliates if for any reason we do not execute such bonds.

Travelers Casualty and Surety Company of America is listed on the U. S. Treasury Department's Listing of Approved Sureties (2021 Department Circular 570), and is rated "A++" (Superior) with a Financial Size Category of XV ($2Billion or greater) by A. M. Best Company.

Sincerely,

Travelers Casualty and Surety Company of America

By: Courtney Saunders
Courtney Saunders, Attorney-In-Fact

24724 Farmbrook Road • P.O. Box 2067 • Southfield, Michigan 48037-2067
4443 Lyons Road • Suite D-212 • Coconut Creek, Florida 33073
(248) 355-4411 • Fax (248) 355-2175

TRAVELERS

Travelers Casualty and Surety Company of America
Travelers Casualty and Surety Company
St. Paul Fire and Marine Insurance Company

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS: That Travelers Casualty and Surety Company of America, Travelers Casualty and Surety Company, and St. Paul Fire and Marine Insurance Company are corporations duly organized under the laws of the State of Connecticut (herein collectively called the "Companies"), and that the Companies do hereby make, constitute and appoint **Courtney Saunders** of **SOUTHFIELD**, **Michigan**, their true and lawful Attorney(s)-in-Fact to sign, execute, seal and acknowledge any and all bonds, recognizances, conditional undertakings and other writings obligatory in the nature thereof on behalf of the Companies in their business of guaranteeing the fidelity of persons, guaranteeing the performance of contracts and executing or guaranteeing bonds and undertakings required or permitted in any actions or proceedings allowed by law.

IN WITNESS WHEREOF, the Companies have caused this instrument to be signed, and their corporate seals to be hereto affixed, this **21st** day of **April, 2021.**

State of Connecticut

City of Hartford ss.

By: _____
Robert L. Raney, Senior Vice President

On this the **21st** day of **April, 2021**, before me personally appeared **Robert L. Raney**, who acknowledged himself to be the Senior Vice President of each of the Companies, and that he, as such, being authorized so to do, executed the foregoing instrument for the purposes therein contained by signing on behalf of said Companies by himself as a duly authorized officer.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

My Commission expires the **30th** day of **June, 2026**

_____
Anna P. Nowik, Notary Public

This Power of Attorney is granted under and by the authority of the following resolutions adopted by the Boards of Directors of each of the Companies, which resolutions are now in full force and effect, reading as follows:

RESOLVED, that the Chairman, the President, any Vice Chairman, any Executive Vice President, any Senior Vice President, any Vice President, any Second Vice President, the Treasurer, any Assistant Treasurer, the Corporate Secretary or any Assistant Secretary may appoint Attorneys-in-Fact and Agents to act for and on behalf of the Company and may give such appointee such authority as his or her certificate of authority may prescribe to sign with the Company's name and seal with the Company's seal bonds, recognizances, contracts of indemnity, and other writings obligatory in the nature of a bond, recognizance, or conditional undertaking, and any of said officers or the Board of Directors at any time may remove any such appointee and revoke the power given him or her; and it is

FURTHER RESOLVED, that the Chairman, the President, any Vice Chairman, any Executive Vice President, any Senior Vice President or any Vice President may delegate all or any part of the foregoing authority to one or more officers or employees of this Company, provided that each such delegation is in writing and a copy thereof is filed in the office of the Secretary; and it is

FURTHER RESOLVED, that any bond, recognizance, contract of indemnity, or writing obligatory in the nature of a bond, recognizance, or conditional undertaking shall be valid and binding upon the Company when (a) signed by the President, any Vice Chairman, any Executive Vice President, any Senior Vice President or any Vice President, any Second Vice President, the Treasurer, any Assistant Treasurer, the Corporate Secretary or any Assistant Secretary and duly attested and sealed with the Company's seal by a Secretary or Assistant Secretary; or (b) duly executed (under seal, if required) by one or more Attorneys-in-Fact and Agents pursuant to the power prescribed in his or her certificate or their certificates of authority or by one or more Company officers pursuant to a written delegation of authority; and it is

FURTHER RESOLVED, that the signature of each of the following officers: President, any Executive Vice President, any Senior Vice President, any Vice President, any Assistant Vice President, any Secretary, any Assistant Secretary, and the seal of the Company may be affixed by facsimile to any Power of Attorney or to any certificate relating thereto appointing Resident Vice Presidents, Resident Assistant Secretaries or Attorneys-in-Fact for purposes only of executing and attesting bonds and undertakings and other writings obligatory in the nature thereof, and any such Power of Attorney or certificate bearing such facsimile signature or facsimile seal shall be valid and binding upon the Company and any such power so executed and certified by such facsimile signature and facsimile seal shall be valid and binding on the Company in the future with respect to any bond or understanding to which it is attached.

I, **Kevin E. Hughes**, the undersigned, Assistant Secretary of each of the Companies, do hereby certify that the above and foregoing is a true and correct copy of the Power of Attorney executed by said Companies, which remains in full force and effect.

Dated this **26th** day of **April**, **2023**.

_____
Kevin E. Hughes, Assistant Secretary

To verify the authenticity of this Power of Attorney, please call us at 1-800-421-3880.
Please refer to the above-named Attorney(s)-in-Fact and the details of the bond to which this Power of Attorney is attached.

Qualifications of the Team

C. Licenses

David Mancini and Sons, Inc. (DMSI)

Ron DeSantis, Governor

Melanie S. Griffin, Secretary

dbpr

STATE OF FLORIDA
DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION

CONSTRUCTION INDUSTRY LICENSING BOARD

THE UNDERGROUND UTILITY & EXCAVATION CO HEREIN IS CERTIFIED UNDER THE PROVISIONS OF CHAPTER 489, FLORIDA STATUTES

MANCINI, DAVID A

DAVID MANCINI & SONS, INC.
2601 WILES ROAD
POMPANO BEACH FL 33073

LICENSE NUMBER: CUC044220
EXPIRATION DATE: AUGUST 31, 2024

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Ron DeSantis, Governor

Melanie S. Griffin, Secretary

dbpr

STATE OF FLORIDA
DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION

CONSTRUCTION INDUSTRY LICENSING BOARD

THE GENERAL CONTRACTOR HEREIN IS CERTIFIED UNDER THE PROVISIONS OF CHAPTER 489, FLORIDA STATUTES

MELEHAN, FRANCIS PATRICK

DAVID MANCINI & SONS, INC
26124 N TURKEY CREEK ROAD
EVERGREEN CO 80439

LICENSE NUMBER: CGC1506008
EXPIRATION DATE: AUGUST 31, 2024

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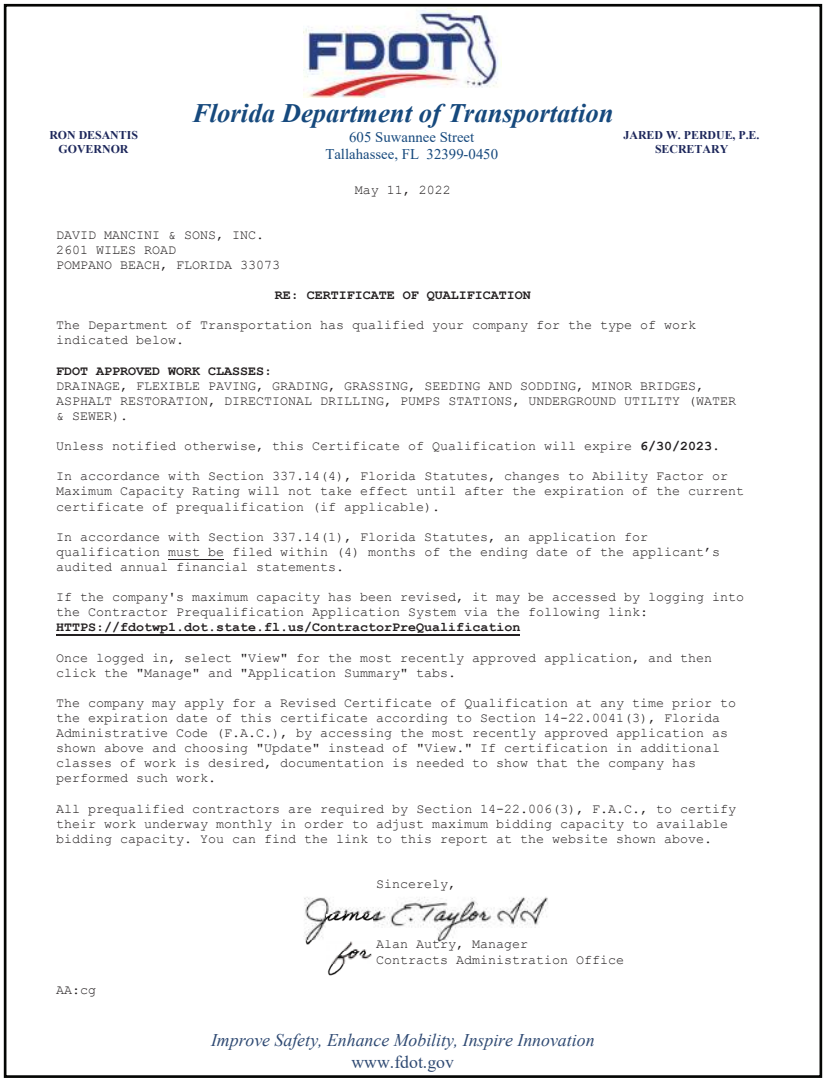

FDOT

Florida Department of Transportation

RON DESANTIS
GOVERNOR

605 Suwannee Street
Tallahassee, FL 32399-0450

JARED W. PERDUE, P.E.
SECRETARY

May 11, 2022

DAVID MANCINI & SONS, INC.
2601 WILES ROAD
POMPANO BEACH, FLORIDA 33073

RE: CERTIFICATE OF QUALIFICATION

The Department of Transportation has qualified your company for the type of work indicated below.

FDOT APPROVED WORK CLASSES:
DRAINAGE, FLEXIBLE PAVING, GRADING, GRASSING, SEEDING AND SODDING, MINOR BRIDGES, ASPHALT RESTORATION, DIRECTIONAL DRILLING, PUMPS STATIONS, UNDERGROUND UTILITY (WATER & SEWER).

Unless notified otherwise, this Certificate of Qualification will expire **6/30/2023.**

In accordance with Section 337.14(4), Florida Statutes, changes to Ability Factor or Maximum Capacity Rating will not take effect until after the expiration of the current certificate of prequalification (if applicable).

In accordance with Section 337.14(1), Florida Statutes, an application for qualification must be filed within (4) months of the ending date of the applicant's audited annual financial statements.

If the company's maximum capacity has been revised, it may be accessed by logging into the Contractor Prequalification Application System via the following link:
HTTPS://fdotwp1.dot.state.fl.us/ContractorPreQualification

Once logged in, select "View" for the most recently approved application, and then click the "Manage" and "Application Summary" tabs.

The company may apply for a Revised Certificate of Qualification at any time prior to the expiration date of this certificate according to Section 14-22.0041(3), Florida Administrative Code (F.A.C.), by accessing the most recently approved application as shown above and choosing "Update" instead of "View." If certification in additional classes of work is desired, documentation is needed to show that the company has performed such work.

All prequalified contractors are required by Section 14-22.006(3), F.A.C., to certify their work underway monthly in order to adjust maximum bidding capacity to available bidding capacity. You can find the link to this report at the website shown above.

Sincerely,

James E. Taylor AA for

Alan Autry, Manager
Contracts Administration Office

AA:cg

Improve Safety, Enhance Mobility, Inspire Innovation
www.fdot.gov

FDOT Unlimited Notice of Qualifications

Chen Moore and Associates (CMA)

Ron DeSantis, Governor
Melanie S. Griffin, Secretary
FBPE FLORIDA BOARD OF PROFESSIONAL ENGINEERS

STATE OF FLORIDA

BOARD OF PROFESSIONAL ENGINEERS

THE PROFESSIONAL ENGINEER HEREIN IS LICENSED UNDER THE PROVISIONS OF CHAPTER 471, FLORIDA STATUTES

MOORE, PETER MICHAEL
500 WEST CYPRESS CREEK ROAD
SUITE 630
FT. LAUDERDALE FL 333090000

LICENSE NUMBER: PE58709
EXPIRATION DATE: FEBRUARY 28, 2025
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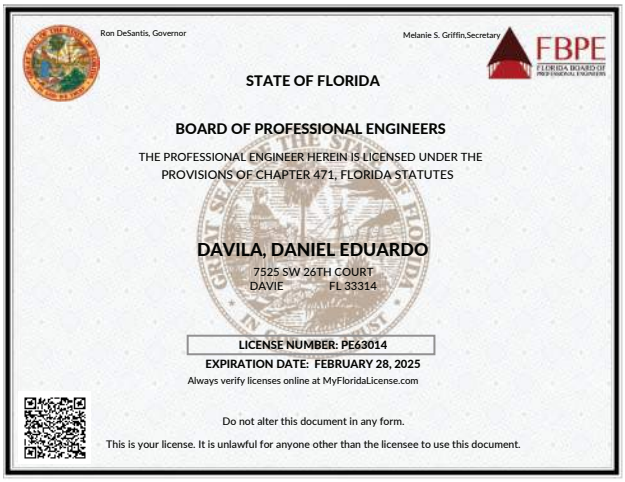

Ron DeSantis, Governor
Melanie S. Griffin, Secretary
FBPE FLORIDA BOARD OF PROFESSIONAL ENGINEERS

STATE OF FLORIDA

BOARD OF PROFESSIONAL ENGINEERS

THE PROFESSIONAL ENGINEER HEREIN IS LICENSED UNDER THE PROVISIONS OF CHAPTER 471, FLORIDA STATUTES

DAVILA, DANIEL EDUARDO
7525 SW 26TH COURT
DAVIE FL 33314

LICENSE NUMBER: PE63014
EXPIRATION DATE: FEBRUARY 28, 2025
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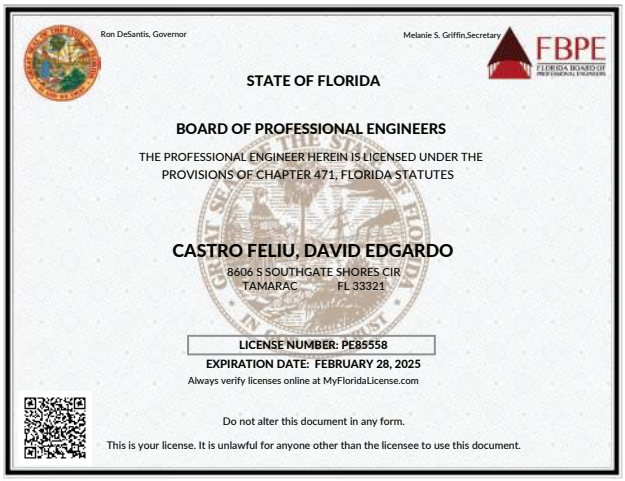

Ron DeSantis, Governor
Melanie S. Griffin, Secretary
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STATE OF FLORIDA

BOARD OF PROFESSIONAL ENGINEERS

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CASTRO FELIU, DAVID EDGARDO
8606 S SOUTHGATE SHORES CIR
TAMARAC FL 33321

LICENSE NUMBER: PE85558
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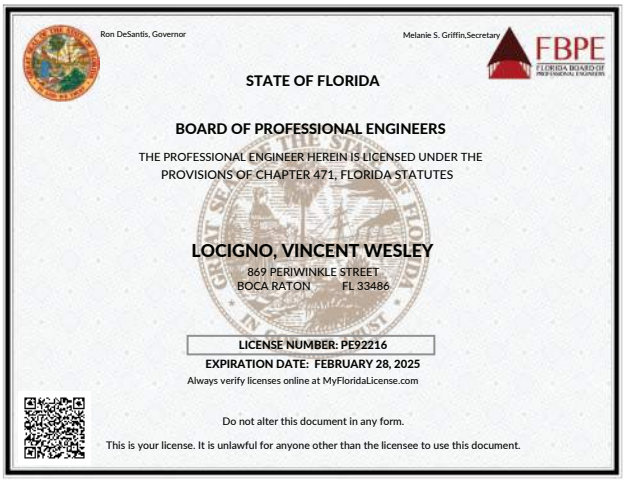

Ron DeSantis, Governor
Melanie S. Griffin, Secretary
FBPE FLORIDA BOARD OF PROFESSIONAL ENGINEERS

STATE OF FLORIDA

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LOCIGNO, VINCENT WESLEY
869 PERIWINKLE STREET
BOCA RATON FL 33486

LICENSE NUMBER: PE92216
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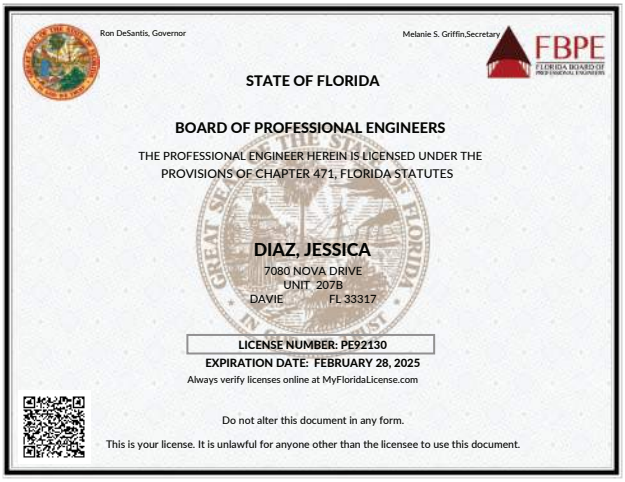

Ron DeSantis, Governor
Melanie S. Griffin, Secretary
FBPE FLORIDA BOARD OF PROFESSIONAL ENGINEERS

STATE OF FLORIDA

BOARD OF PROFESSIONAL ENGINEERS

THE PROFESSIONAL ENGINEER HEREIN IS LICENSED UNDER THE PROVISIONS OF CHAPTER 471, FLORIDA STATUTES

DIAZ, JESSICA
7080 NOVA DRIVE
UNIT 207B
DAVIE FL 33317

LICENSE NUMBER: PE92130
EXPIRATION DATE: FEBRUARY 28, 2025
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FDOT
Florida Department of Transportation
RON DESANTIS
GOVERNOR
605 Suwannee Street
Tallahassee, FL 32399-0450
JARED W. PERDUE, P.E.
SECRETARY

May 10, 2023

Peter Moore, President & CEO
CHEN MOORE AND ASSOCIATES, INC.
500 West Cypress Creek Road, Suite 630
Ft. Lauderdale, Florida 33309

Dear Mr. Moore:

The Florida Department of Transportation has reviewed your application for prequalification package and determined that the data submitted is adequate to technically prequalify your firm for the following types of work:

Group 2 - Project Development and Environmental (PD&E) Studies

Group 3 - Highway Design - Roadway

3.1 - Minor Highway Design
3.2 - Major Highway Design
3.3 - Controlled Access Highway Design

Group 5 - Bridge Inspection

5.4 - Bridge Load Rating

Group 7 - Traffic Operations Design

7.1 - Signing, Pavement Marking and Channelization
7.2 - Lighting
7.3 - Signalization

Group 10 - Construction Engineering Inspection

10.1 - Roadway Construction Engineering Inspection

Group 13 - Planning

13.6 - Land Planning/Engineering

Group 15 - Landscape Architect

Your firm is now technically prequalified with the Department for Professional Services in the above referenced work types. The overhead audit has been accepted, and your firm may pursue projects in the referenced work types with fees of any dollar amount. This status shall be valid until June 30, 2024, for contracting purposes.

1

Approved Rates

Home/ Branch Overhead	Facilities Capital Cost of Money	Premium Overtime	Reimburse Actual Expenses	Home Direct Expense
189.77%	0.229%	Reimbursed	No	2.24%

Per Title 23, U.S. Code 112, there are restrictions on sharing indirect cost rates. Refer to Code for additional information.

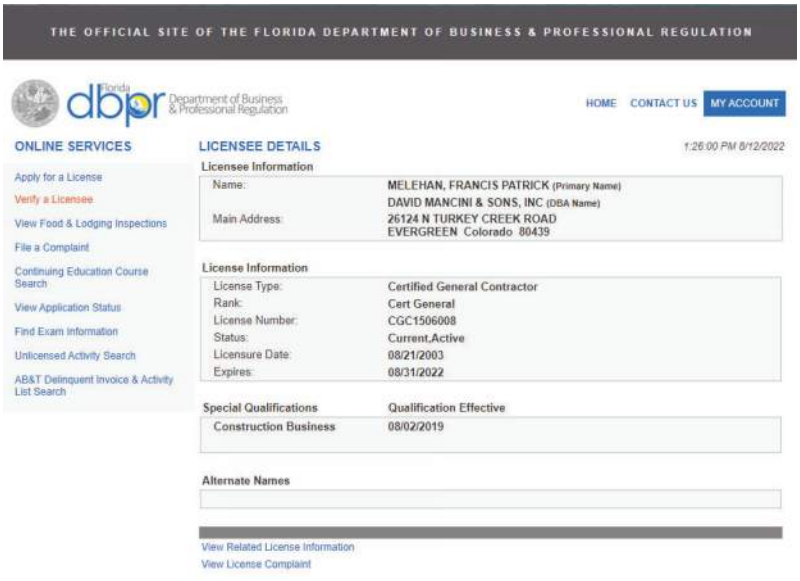
Should you have any questions, please feel free to contact me by email at carliayn.kell@dot.state.fl.us or by phone at 850-414-4597.

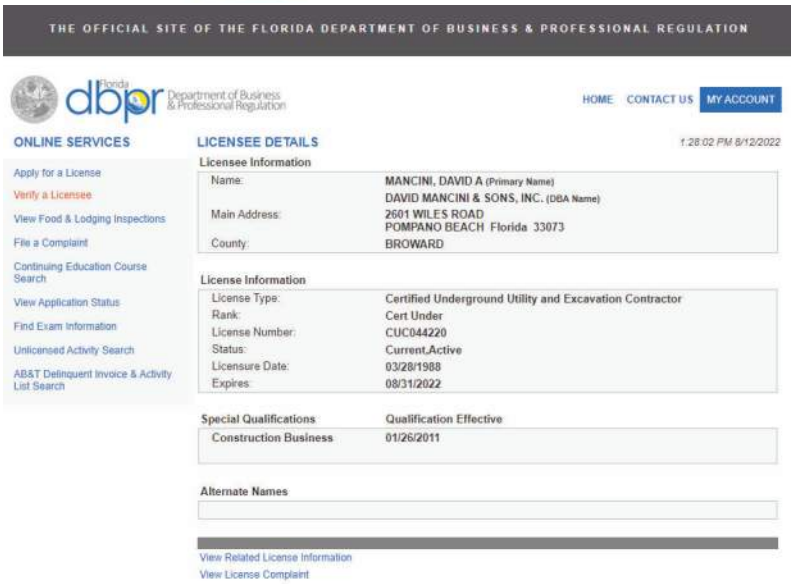
Sincerely,

Carliayn Kell
Professional Services
Qualification Administrator

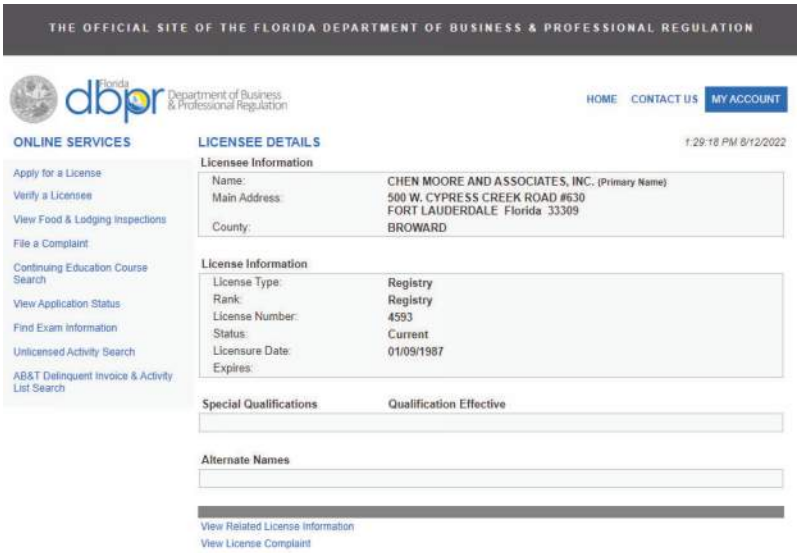
FDOT Unlimited Notice of Qualifications

David Mancini and Sons, Inc. (DMSI)





Chen Moore and Associates (CMA)



D. DMSI Equipment List

David Mancini & Sons, Inc — SHOP Equipment List

	Fixed Asset ID	Equipment	Description	Make	Model	Year	Serial Number
		RENTAL	RENTAL EQUIP				SN
		STEVEM	STEVEN MANCINI				SN
AIR COMPRESSOR							
		AC200C	AIR COMPRESSOR	SULLAIR	200HDPQCAT	2016	SN201608220006
		AC375A	AIR COMPRESSOR	SULLAIR	375HDP	2019	SN201812180018
	128	MAIRC6	AIR COMPRESSOR	SULLAIR	210HDPQ-C	2006	SN200607280058
	129	MDIVE1	DIVE COMPRESSOR	SLOAN	DIVE COMPRESSOR		SNDC16
	201	MDIVE2	DIVE COMPRESOR	BROWNIES	CTD390B	2012	SN
		AC200HD	AIR COMPRESSOR	SULLAIR	200HDPQCAT	2016	SN201608230030
		AC200HE	AIR COMPRESSOR	SULLAIR	200HDPQCAT	2016	SN201608230017
ATTACHMENTS							
		MC4C	PLATE COMPACTOR ATTCHMENT	NPK	C4C	2017	SN2N1372
		MHB6	HAMMER	CATERPILLAR	B6_MHE	2020	SNHA602585
		MHH63	JACK HAMMER ATTCH SKID STEER	CAT	H63		SNGL05185
		M272SW	SKID STEER REVERSE SWEEPER	CATERPILLAR	BU118	2020	SNLXB05516
		MH130E	HAMMER	CATERPILLAR	H130E	2016	SNHHF00813
	189	MH55D2	HAMMER	CATERPILLAR	H55DS_304_5CR	2012	SN
		SC272A	272 SWEEPER ATTACHMENT	SMITH CHALLENGE	SCM200	2018	SN
		SC272B	272 SWEEPER ATTACHMENT	SMITH CHALLENGE	SCM 200	2018	SNBR-12-18-36
		B306RIP	27" RIPPER ATTACHMENT	CATERPILLAR	MHE5	2020	SNEQ93962
		B308RIP	34" RIPPER ATTACHMENT	CATERPILLAR	MHE8T	2020	SNEQ93961
	147	B50DX1A	B50DX1 BREAKER w/ BRACKET	JOHN DEERE	HP-750	2006	SN
	044	M262BA1	CAT BA18HYD 262C ATTACHMENT 1	CATERPILLAR	BA18HYD	2011	SNAZN03251
		B135EX37	B135 EX37 ROCK DRILL RIG				SN
		B304COUP	QUICK COUPLER for 304	CATERPILLAR	QC304_5CCR	2020	SNEQ90208
	152	B365BLPH	B365BL PIPE HOOK	KENCO	PH30000	2007	SN
	153	B365BLQC	B365BL ATTACHMENT				SNBTP10033
		B470COUP	QUICK DISCONNECT FOR 470	PALADIN	JRB POWERLATCH	2015	SNAKRPLR92NTX30084
		MTTRENCH	MT 30-50" TRENCH PAVER				SN
		TILTROTA	TILTROTATOR PACKAGE	ENGCON	EC206	2019	SNEC029618
		TITLROTB	TILT ROTATOR	CATERPILLAR	TRS6 5T	2021	SNA5900330
AUTOMOBILE							
		A19CHR	2019 TOYOTA C-HR	TOYOTA	C-HR	2019	SNNMTKHMBX2KR088809
		A18EXP1	2018 FORD EXPLORER	FORD	EXPLORER	2018	SN1FM5K8GT5JGB97301
		A18EXP2	2018 FORD EXPLORER	FORD	EXPLORER	2018	SN1FM5K8GT2JGB85350
BROOM TRACTOR							
	085	SJD520	BROOM TRACTOR	JOHN DEERE	5200	1995	SNLV5200E420555
		BT2615B	BROOM TRACTOR	MASSEY FERG	MF2615	2013	SNFY814062
	236	BT2660A	BROOM TRACTOR	MASSEY FERGUSO	MF2660	2013	SNBX15020
BUCKET							
	148	B50DX1B	BUCKET - 50D CLEANOUT DITCHING	JOHN DEERE	ASI 4' BUCKET	2006	SN
		BB30424	BUCKET - 24" f CAT 304	CATERPILLAR	24" BUCKET	2020	SNEQ90560
		BB32560	BUCKET - 60" CAT 325	CATERPILLAR	BKT320F_60DC	2015	SNMH203317
		B245G24B	BUCKET - 24" JD 245G	JOHN DEERE	24" ESCO XDP	2017	SNRH120919
		B245G36B	BUCKET - 36" JD 245G	JOHN DEERE	ESCO XDP 36"	2017	SNRH120908
	185	B305E12A	BUCKET - 12" for CAT 305_5ECR	WERK BRAU	BKT304_5CCR_12W	2012	SN183151-1-4
	184	B305E24A	BUCKET - 24" for CAT 305_5ECR	CATERPILLAR	BKT304_5CCR_24		SN
	186	B305E40A	BUCKET - 40" for CAT 305_5ECR	CATERPILLAR	BKT304_5CCR_40D	2012	SN
	211	B328D24A	BUCKET - 24" for CAT 328D LCR	CATERPILLAR	328E	2013	SN3460877 or 3460882
	221	B328D48A	BUCKET - 48" for CAT 328D LCR	CATERPILLAR	48" BUCKET	2013	SNNBC08244
		BB135G24	BUCKET - 24" C&P JD 135	C&P	24" SDR .571		SN
		BB245G24	BUCKET - 24" JD 245	JOHN DEERE	24" BUCKET	2016	SN
		BB245G36	BUCKET - 36" JD 245G	JOHN DEERE	36" BUCKET	2016	SN
		BB308C24	BUCKET - 24" f CAT 308	CATERPILLAR	24" BUCKET	2020	SNEQ90558
		BB308D18	BUCKET - 18" f CAT 308D	CATERPILLAR	18" BUCKET	2020	SNEQ90559
	154	BB312 60	BUCKET - 5 FT CAT 60"	CATERPILLAR	60" 312		SN312DC601002
		BB321D24	BUCKET - 24" CAT 321	CATERPILLAR	24" QUEST	2015	SN
	190	BB321D42	BUCKET - CAT 42" GP for B321D	CATERPILLAR	BKT321D_42PMB	2012	SNGPB-4903-42-0512
	204	BB321DFL	BUCKET - FLECO 42" for B321D	FLECO	BKT321D_42FLC	2012	SN39024
	156	MHYDCLAM	BUCKET - 8 FT HYD CLAMP	PEMBERTON			SN
CEMENT MIXER							
		MCEM02	MULTIQUIP CONCRETE MIXER	MULTIQUIP		2015	SN
		MCEM03	CONCRETE MIXER	TK	MC9	2018	SN3A9S38M18H1168095
COMBINATION BACKHOE/LOADE							
	192	C420F1	LOADER/BACKOE	CATERPILLAR	420F	2012	SNSKR00457
	065	L310SJ1	LOADER/BACKHOE - WHEEL	JOHN DEERE	310 SJ	2011	SNLT0310SJKB0200975
CONCRETE SAW/SAWS							
		MSAWS	MISC SAWS CONCRETE/CHAIN				SN
		BANDSAW	KLUTCH 7"x12" METAL BAND SAW	KLUTCH		2021	SN20080717
	098	CSHOND01	SAW 18" WALK BEHIND	HONDA	13HP DITEQ 18"	2011	SN000106D
		M15HYSA2	HYDRAULIC CHAIN SAW	ICS	890F4	2018	SN00015456
	019	M15HYSAW	SAW - 15" HYRDAULIC	PROFORCE	880 F4	2011	SN
	155	M18STSAW	STREET SAW - 18'	STOW	CD613H18		SN0303673
DOZER							
	115	D650H	DOZER	JOHN DEERE	650H	2002	SNT0650HX897875
		DD3K1	DOZER	CATERPILLAR	D3K2XL	2018	SNKF202415
EXCAVATOR							
		B50G1	EXCAVATOR - COMPACT	JOHN DEERE	50G	2016	SN1FF050GXLGH283830
		B50G2	EXCAVATOR - COMPACT	JOHN DEERE	50G	2016	SN1FF050GXPGH284841
		B50G3	EXCAVATOR - COMPACT	JOHN DEERE	50G	2016	SN1FF050GXLGH284850
	234	B85GA	EXCAVATOR- w 24" bu, 42" cl bu	JOHN DEERE	85G	2013	SN1FF085GXVDJ017083
	235	B135GA	EXCAVATOR	JOHN DEERE	135G	2013	SN1FF135GXPDE400155
		B245G1	EXCAVATOR	JOHN DEERE	245G LC	2016	SN1FF245GXTFE600911
		B245G2	EXCAVATOR	JOHN DEERE	245G LC	2017	SN1FF245GXCGF800138
	056	B27DZ1	EXCAVATOR	JOHN DEERE	27D ZTX	2011	SN1FF027DXLA025571
	093	B321D2	EXCAVATOR	CATERPILLAR	321D LCR	2011	SNMPG00237
		B325LA	EXCAVATOR	CATERPILLAR	325L	2020	SNTEL00481
		B325LB	EXCAVATOR	CATERPILLAR	325L	2020	SNTEL00479
	206	B328DA	EXCAVATOR	CATERPILLAR	328D LCR	2013	SNRMX00449
	092	B365BL	EXCAVATOR	CATERPILLAR	365BL	2002	SN9TZ00512
		B470GA	EXCAVATOR	JOHN DEERE	470G	2015	SN1FF470GXJEE471106
		B3027D1	EXCAVATOR MINI	CATERPILLAR	302_7DCR	2020	SNLJ701963
	183	B3055E1	EXCAVATOR	CATERPILLAR	305_5ECR	2012	SNFKY00533
		B3067A1	EXCAVATOR - MINI	CATERPILLAR	306	2020	SN6G600148
		B3067A2	EXCAVATOR - MINI	CATERPILLAR	306 07A	2021	SN6G604055
		B308E21	EXCAVATOR - MINI	CATERPILLAR	308 E2	2019	SNGG800585

	Fixed Asset ID	Equipment	Description	Make	Model	Year	Serial Number
		B335FL1	EXCAVATOR	CATERPILLAR	335FLCR	2018	SNFTKNE10275
FORKLIFT							
		FP360	FORKLIFT	HOIST	P360LC@48	2012	SN29457
GENERATOR							
		G06KOH	GENERATOR	KOHLER	60RE02JB	2006	SN212133B
	094	GNCHI1	2200/2400 W GENERATOR	CHICAGO	5.5 HP 2.2/2.4K	2011	SN
	108	MLITE1	LIGHT TOWER, TOWABLE SM	MAGNUM	MLT3060	2005	SN51816
		MLITE2	LIGHT TOWER w/TRAILER	WACKER NEUSON	LTN6	2017	SN5XFLN0517HN000524
		MLITE3	LIGHT TOWER	WACKER NEUSON	LTV6K	2020	SN5XFLV0418LM002086
		MLITE4	LIGHT TOWER	WACKER NEUSON	LTV6K	2020	SN5XFLV0416LM001986
		GFUSION	GENERATOR	CUMMINS POWER G	DGFB-5770080		SNG060951105
		HYDRPOWR	HYDRAULIC POWER UNIT	BRIGGS-VANGUARD	35HP	2020	SN163862
GRADER							
	191	G120H1	GRADER	CATERPILLAR	120H NA	2000	SN4MK00726
LOADER							
	116	L922B	LOADER	CATERPILLAR	922B	1966	SN94A1982
	187	L272D1	LOADER - SKID STEER	CATERPILLAR	272DXHP	2012	SNSHY00269
		L272D3	LOADER - SKID STEER	CATERPILLAR	272D2XHP	2017	SNMD200564
		L272D4	LOADER - SKID STEER	CATERPILLAR	272D2XHP	2017	SNMD200565
		L272D5	LOADER - SKID STEER	CATERPILLAR	272D2XHP	2018	SNMD200950
		L272D6	LOADER - SKID STEER	CATERPILLAR	272D2XHP	2019	SNMD200989
		L272D7	LOADER - SKID STEER	CATERPILLAR	272D3	2020	SNGJ200563
		L272D8	LOADER - SKID STEER	CATERPILLAR	272D3XE	2020	SNGJ200614
	226	L624KA	LOADER - WHEEL	JOHN DEERE	624K	2013	SN1DW624KZCDE651292
		L624KB	LOADER - WHEEL	JOHN DEERE	624K	2016	SN1DW624KZVGF674501
		L624KC	LOADER - WHEEL	JOHN DEERE	624K	2016	SN1DW624KZEGF674973
	064	L924H1	LOADER - WHEEL	CATERPILLAR	924H	2011	SN092HLHXC02173
		L926MA	LOADER - WHEEL	CATERPILLAR	926M	2017	SNLTE04174
	083	L938G1	LOADER - WHEEL	CATERPILLAR	938G II	2004	SNRTB00746
	052	L938H1	LOADER - WHEEL	CATERPILLAR	938H	2011	SNMCC00374
		L938M1	LOADER - WHEEL	CATERPILLAR	938M	2018	SNJ3R05312
		L938M2	LOADER - WHEEL	CATERPILLAR	938M	2020	SNJ3R07486
		L938M3	LOADER - WHEEL	CATERPILLAR	938M	2020	SNJ3R07665
	207	L950KA	LOADER - WHEEL	CATERPILLAR	950K	2013	SNR4A01321
MISCELLANEOUS EQ							
	117	MARCH	ARCH SPREADER	ARCH	SPREADER		SN9409630
		MCAGE	CUSTOM PERSONNEL CAGE	LAKESHORE IND	M332	2016	SNJ-6132
		M08MOB	MERCURY 8HP OUTBOARD	MERCURY	ME 8MH 4S	2015	SN0R672463
	210	M10JOB	JOHNSON 10 OUTBOARD				SN
	209	M60YOB	YAMAHA 60 OUTBOARD			2013	SN
		MDOLLY	(4) PIPE DOLLIES			1994	SNSEE ATTACHED
	239	MIBEAM	I BEAMS				SN
		MPIG48	BARE FOAM PIG 48" HEAVY DENSIT	PIGS UNLIMITED	HBDD48	2020	SN
	008	MSCAM1	SEAVIEW CAMERA	SEAVIEW			SN
	059	MSTEEL	STEEL PLATES	Steel Plates			SNsee File Attachement
		MV160M	LUBEMATE V160	AMERICAN EAGLE	V160M LUBE MATE	2020	SNUSE ON TMF13A
		MWELD2	WELDER	TRAILBLAZER	325	2019	SNMK171701R
		MWHEEL	(2) WHEEL WEIGHER	HAENNI	WL101		SN
		ARROWBD	ARROW BOARD	15 LIGHT		2018	SN
		MBORING	3" PNEUMATIC BORING TOOL	VEMREER	VPT300	2019	SN312716
		MFUSION	FUSION 1-3" MACHINE	MCELROY		2013	SNC59082
		MIBEAM1	(14) STEEL IBEAMS	MEDLEY STEEL			SN
		MMWELD1	MIG WELDER	MILLERMATIC	252	2017	SNMH360109N
		MOFFTRA	OFFICE TRAILER 12x60				SN
	112	MSTEEL1	STEEL PLATES - 5 ea. 20'x8'				SN
		MTAPKIT	FEED TAP 3/4-2" PIPE KIT	REED MANUFACTUR		2017	SN
		MTFRAC1	FRAC TANK 21K GAL	MODERN	FAVTLSM	2003	SNCFVP2086L
		M24CLAMP	24" QUICK CAM REPAIR CLAMP			2019	SNSEE NOTES
		MDATALOG	DATALOGGER 6 PACKAGE	McELROY		2020	SN
		MDIAGTOO	CAT DIAGNOSTIC SOFTWARE				SN
		MFUSION3	54" BUTT FUSION MACHINE	SUDA		2020	SNCHINA
		MFUSION4	ROLLING 618 12"-18" MACHINE	McELROY	No.618	2020	SN
		MFUSION5	ROLLING 28 2"-8" FUSION MACHIN	McELROY	No. 28	2020	SNC104566
		MFUSION6	1"-4" FUSION MACHINE	MCELROY	PITBULL 14	2021	SNC99650
		MJONBOAT	ALUMINUM JON BOAT	ALUMACRAFT	1232	2019	SNACBR1035E919
		MNUCGAUG	NUCLEAR DENSITY GAUGE				SN
PUMP							
		P4DIA	PUMP - 4" DOUBLE DIAPHRAGM	MWI	DDP004Y	2018	SN4DD-1024
		P6PVA	PUMP - 6" VAC ASST	PIONEER	PP66S12L71	2016	SNPP27352
		P6PVB	PUMP - 6" VAC ASST	PIONEER	PP66S12L7	2020	SN19L19-15-00006Z
	120	P8PVA	PUMP - 8' VAC ASST TRASH PUMP	PIONEER	PP88S12	2004	SN3031
		PJETA	PUMP - 4" JET PUMP	COMPLETE	3JP-D4T-F	2016	SN9515
	121	PJETC	PUMP - 4" JET PUMP	COMPLETE	DEWATERING	1998	SN8098
	178	MWPSYS	WELL POINT SYSTEM - MISC				SN
	134	PHYDH6	PUMP SYSTEM	D8 PERKINS	1104.44-1204		SND8-1104.44-1204
	135	PWP10A	PUMP - 10" WELLPOINT PUMP	6068DF150B	2JDXL06.8016	2002	SNPE6068D202027
		PHYDH6A	PUMP 6" HYRAULIC	HOLLAND	H6TMS	2020	SND8S-TD3.624-1423
		PHYTORCA	HYDRAULIC PUMP w/TORQUE WRENCH	HYTORC	HY-115-2	2021	SNX2FI2022-016
PRESSURE WASHER							
	241	MPRESS1	PRESSURE WASHER	Norstar			SN
		MPRESS2	PRESSURE WASHER	BE PRESSURE SUP	B316HAS	2020	SNB-GCAAA-2969776
ROLLER/PLATE TAMPER							
		M1008A	COMPACTOR - REVERSIBLE PLATE	BOMAG	BPR100/80D	2015	SN101692761003
		M1008B	COMPACTOR - REVERSIBLE PLATE	BOMAG	BPR100/80D	2015	SN101692761009
		M2550A	COMPACTOR - SINGLE DIRECTION	BOMAG	BP25/50	2021	SN101230451043
		M5055A	COMPACTOR - REVERSIBLE COMPACT	BOMAG	BPR50/55 DE	2019	SN101692401090
	230	MHATZ1	COMPACTOR - VIB PLATE DIESEL	HATZ	B140 22"	2013	SNY-3940
	131	MMULT3	COMPACTOR	MULTI QUIP	MVH406	2006	SN1074
	132	MMULT6	COMPACTOR	MULTI QUIP	MVH406DSZ		SNR-17111
		MVH408	COMPACTOR - REVERSIBLE PLATE	MULTIQUIP	MVH-408DZ	2017	SNB1424
		RB124C	ROLLER	BOMAG	BW124DH-40	2017	SN861832131116
		RB124D	ROLLER	BOMAG	BW124DH-5	2018	SN861586571052
	233	RCB22A	COMPACTOR	CATERPILLAR	CB22	2013	SN22001340
	041	RCB24A	COMPACTOR	CATERPILLAR	CB24	2011	SN24001324
	182	RCB24B	COMPACTOR	CATERPILLAR	CB24	2012	SN24002362
		RBS502I	VIBRATORY RAMMER	WACKER	BS502i	2016	SN24296030
		RBS602I	JUMPING JACK TAMPER	WACKER	BS602I	2017	SN24348966
		RCS140A	ROLLER - STEEL DRUM	DYNAPAC	CS1400N	2019	SN10000514LJA022118
		RQ800GS	ROLLER WALK BEHIND	MULTIQUIP	MRH800GS	2019	SNE-1376

Fixed Asset ID	Equipment	Description	Make	Model	Year	Serial Number
DUMP TRUCK						
	TDM17A	MACK DUMP TRUCK	MACK	GU813	2017	SN1M2AX13C74HM036988
	TDM19A	MACK DUMP TRUCK	MACK	GR64F	2019	SN1M2GR2GC1KM004632
	TDM19B	MACK DUMP TRUCK	MACK	GR64B	2019	SN1M2GR2GCXKM006881
FLATBED/FUEL TRUCK						
180	TFP99A	1999 FUEL LUBE TRUCK	PETERBILT	330P	1999	SN1NPNHZ7X7YS496414
	TMF13A	FREIGHTLINER MOT FLATBED	FREIGHTLINER	SPRINTER	2013	SNWDPPF4CC6D9556561
219	TMM13A	MACK LOWBOY TRUCK	MACK	CHU613	2013	SN1M1AN07Y3DM014152
TRAILER						
242	T05TON	TRAILER - MOBILE TL for RT450	MOBILE TRAILER	FM1410	2006	SN1M9BF142861553455
	T09TON	TRAILER 9 TON	EAGER BEAVER	B9DOW 9 TON	2017	SN112DPM295HL082076
090	T25TON	TRAILER 25 TON	EAGER BEAVER	25XPT	2006	SN112HAX35X6L071863
081	TT06HO	TRAILER - 2006 HORIZON	HORIZON		2006	SN5E2B1101361026106
175	TTACKA	TACK TANK TRAILER	LEEBOY	L250T	2012	SN1B9AA1115B1309496
068	TTB07A	TRAILER - 2007 BELI	BELI	BELWB12 2EP	2007	SN16JF0162771043186
215	TTF05A	TRAILER - FONTAINE	FONTAINE		2005	SN13N14830351523951
220	TTK13A	TRAILER - TRAIL KING	TRAIL KING	TK110HDG-513	2013	SN1TKJ05137EM072235
216	TTR05A	TRAILER - REIT	REIT		2005	SN1RNF48A2X5R013867
243	TTV04A	TRAILER - VERMEER for RT450	VERMEER		2004	SN1VRZ111H641000406
195	TTW03A	TRAILER WANCO	WANCO	WTS P55	2003	SN5F11S101131000373
173	TTZIP3	ASPHALT ZIPPER TRAILER	WILLIAMSON OCEA	BT001	2011	SN109FS0821BU021866
	T09TONA	TRAILER 9 TON	EAGER BEAVER	B9DOW9	2020	SN112DP299LL084678
	T25TONA	TRAILER 25 TON	EAGER BEAVER	25XPT	2018	SN112HAX371KL083430
	T25TONB	TRAILER 25 TON	EAGER BEAVER	25XPT	2021	SN112HAX376ML085113
	TCARGO1	TRAILER CARGO	CONTINENTAL	7'x14'	2021	SN5NHUNS42XMU131040
	TGARGO2	TRAILER CARGO	CONTINENTAL	7'x14'	2021	SN5NHUNS42XMU131040
	TOFFICE	20' OFFICE TRAILER	OFFICE	CONTAINER		SN
151	TTANDS1	2003 ANDS TRAILER	ANDS	TRAILER	2003	SN4YNBN18273C013104
016	TIMEOUT3	TRAILER - JUPITER TIMEOUT2	CONTINENTAL		2014	SN1ZJBB3121EM082646
	TOFFICE2	OFFICE TRAILER 12x60				SN
PICKUP						
175	MTACKA	TACK TANK	LEEBOY	L250T	2012	SN77496
	TPC15A	2015 CHEVY SILVERADO	CHEVY	SILVERADO	2015	SN1GC0CUEG8FZ127362
	TPC15B	2015 CHEVY SILVERADO	CHEVY	SILVERADO	2015	SN1GC0CUEG2FZ119547
	TPC15C	2015 CHEVY SILVERADO	CHEVY	SILVERADO	2015	SN1GC0CUEG5FZ121812
	TPC16A	2016 CHEVY SILVERADO	CHEVY	SILVERADO	2016	SN1GC2CUEGXGZ406077
	TPC16B	2016 CHEVY SILVERADO	CHEVY	SILVERADO	2016	SN1GB0CUEG3GZ357011
	TPC16C	2016 CHEVY SILVERADO	CHEVY	SILVERADO	2016	SN1GB0CUEG8GZ359496
	TPC17A	2017 CHEVY SILVERADO	CHEVY	SILVERADO	2017	SN1GC2CUEG7HZ285736
	TPC17B	2017 CHEVY SILVERADO	CHEVY	SILVERADO	2017	SN1GC1KWEYXHF206662
	TPC18A	2018 CHEVY COLORADO	CHEVY	COLORADO	2018	SN1GCHSBEA5J1173616
	TPC18B	2018 CHEVY SILVERADO	CHEVY	SILVERADO	2018	SN1GC1KXEY2JF205677
	TPC19A	2019 CHEVY SILVERADO	CHEVY	SILVERADO	2019	SN2GC2CREG2K1229278
	TPC19B	2019 CHEVY SILVERADO	CHEVY	SILVERADO	2019	SN2GC2CREG4K1231517
	TPC19C	2019 CHEVY SILVERADO	CHEVY	SILVERADO	2019	SN2GC2CREGXK1229772
	TPC20A	2020 CHEVY SILVERADO	CHEVY	SILVERADO	2020	SN3GCPWCED1LG183905
	TPC20B	2020 CHEVY SILVERADO	CHEVY	SILVERADO	2020	SN3GCPWCED3LG132373
	TPC20C	2020 CHEVY SILVERADO	CHEVY	SILVERADO	2020	SN1GCUYBEF0LZ164867
	TPC21A	2021 CHEVY SILVERADO	CHEVY	SILVERADO	2021	SN3GCPYFED8MG421911
035	TPD11A	2011 DODGE RAM 1500	DODGE	RAM 1500	2011	SN1D7RV1CT5BS549050
073	TPD11D	2011 DODGE RAM 1500	DODGE	RAM 1500	2011	SN3D7LP2EL0BG596819
203	TPD12A	2012 DODGE RAM 1500	DODGE	RAM 1500	2012	SN1C6RD7PTXCS293751
218	TPD13A	2013 Dodge 2500 Pickup	Dodge	2500	2013	SN3C6LR4AL5DG590420
	TPD14A	2014 DODGE RAM 1500	DODGE	RAM	2014	SN1C6RR7MT3ES470049
	TPD15A	2015 DODGE RAM 2500 MEGACAB	DODGE	RAM 2500	2015	SN3C6UR5NL0FG605476
	TPD15B	2015 DODGE RAM 1500	DODGE	RAM 1500	2015	SN1C6RR6HTXFS608711
	TPD19A	2019 DODGE RAM 3500	DODGE	RAM 3500	2019	SN3C7WRSAL3KG668705
	TPD21A	2021 DODGE RAM 1500	DODGE	RAM 1500	2021	SN1C6RREJT1MN544123
105	TPF01B	2001 FORD F-250	FORD	F-250	2002	SN1FTNF20L11ED49991
179	TPF04B	2004 FORD F250 PICKUP	Ford	F-250	2004	SN1FDNF20L04ED25620
005	TPF09A	2009 FORD F-150	FORD	F-150	2009	SN1FTPW12VW9FA91591
	TPF17A	2017 FORD F-150	FORD	F-150	2017	SN1FTEW1EG8HFA71536
007	TPL08A	2008 LAND ROVER	LAND ROVER	RANGE ROVER	2008	SNSALSH23448AA14772
228	TPT14A	2014 TOYOTA TUNDRA 4x2	TOYOTA	TUNDRA 4x2	2014	SN5TFRY5F12EX151059
	TVC14A	2014 CHEVY VAN	CHEVY	2500 VAN	2014	SN1GCWGGFA6E1161209
205	TVG03A	2003 GMC SAVANNA 2500 VAN	GMC	SAVANNA 2500	2003	SN1GTFG29T431134331
TRUCK/TRACTOR						
	TJV09A	2009 INT'L VAC TRUCK	INTERNATIONAL	VAC CON VPD3611	2009	SN1HTWHAAT49J174519
214	TMD13A	MECHANIC TRUCK	DODGE	RAM 5500	2013	SN3C7WRMBL8DG520465
	TMF19A	MECHANIC TRUCK	FORD	F550 SUPER DUTY	2019	SN1FD0X5HTXKED01772
060	TMF95A	MECHANIC TRUCK	FORD	F-800	1995	SN1FDWF80C75VA07613
TRENCHER						
243	RT100A	TRENCHER	VERMEER	RT100	2004	SN1VRX057E551001734
242	RT450A	TRENCHER	VERMEER	RT450	2007	SN1VRX0721771001342
WATER TRUCK						
	TWF11A	2011 FORD WATER TRUCK	FORD	F750-2KW	2011	SN3FRWF7FA5BV557274
091	TWI88A	WATER TRUCK	INTERNATIONAL	S-1900	1988	SN1HTLKZ3R0JH590065
	TWS03A	2003 STERLING WATER TRUCK	STERLING	M7500	2003	SN2FZAAKAK33AL05758
	TWWM500	500 GAL WATER WAGON	MULTIQUIP	WT5C	2020	SN55647
ASPHALT ZIPPER/COLD PLANE						
172	M24MIL	COLD PLANER	CATERPILLAR	PC206	2012	SNDDG00981
231	M30MIL	COLD PLANER	CATERPILLAR	PC408B	2013	SNXCP00187
	M40MIL	COLD PLANER	CATERPILLAR	PC310B 40"	2018	SNLZP00890
049	MBS70A	VIBRATORY HAMMER		BS702i	2011	SN
	MCUT30	30" CUTTER HEAD				SNX002044
232	MPAVE1	ASPHALT PAVER	MAULDIN	1550D	2013	SN722L50TKZ9Y202722
133	MPAVE3	ASPHALT PAVER	INGERSALL	575T	1996	SN
173	MZIPE3	ASPHALT ZIPPER w/ TRAILER	ASPHALT ZIPPER	AZ500B	2012	SN50000593
	MZIPE4	ASPHALT ZIPPER w/ TRAILER	AZPHALT ZIPPER	AZ480	2001	SN109FS10191U021878
	MZIPE5	ASPHALT ZIPPER	ASPHALT ZIPPER	AZ-500B	2018	SN50000427R
	M30MILA	COLD PLANNER	CATERPILLAR	PC408B	2020	SNKP800171
099	MWPCOMP1	COMPACTOR SM GAS WACKER PLATE	WACKER PLATE	COMPACTOR		SN6684107
STORAGE						
069	MCONX1	CONX 20' CONTAINER	CONX	20S2 613301	2011	SN2037988MSG
070	MCONX2	CONX 20' CONTAINER	CONX	20S2 615671	2011	SN2107067MSG
071	MCONX3	CONX 20' STANDARD TRI DOOR	CONX	20ZS 618914	2011	SNES20VZS2093
160	MCONX4	CONX 8' x 12' RMI	CONEX	105 221863	2007	SNRSSU600006
161	MCONX5	CONX 8' x 12' RMI	CONEX	105 221864	2007	SNRSSU600009
223	MCONX6	CONX 8' x 12	CONEX		2013	SN
	STOREMER	10' STORAGE CONTAINER	PACVAN	EMERGENCY JOBS	2020	SN2717830
	STORFUSI	10' STORAGE CONTAINER	PACVAN	FUSING EQUIP	2020	SN2717825

David Mancini & Sons, Inc — SHOP Equipment List

	Fixed Asset ID	Equipment	Description	Make	Model	Year	Serial Number
TANKS							
	084	MFUEL1	FUEL TANK	YOUNG	500 GALLON		SN14278
		MTANK3	SEDIMENT TANK 5000 GAL	VESTEK	5K-SED-TANK	2018	SNV180415
		MTANK4	SEDIMENT TANK 3000 GAL	SPEEDSHORE	SDT-0614-3000	2015	SNNONE
LASER							
	114	L01C	LASER - PIPE LASER	TOPCON	TP-L4G	2001	SNVD0221
	066	LTPL4A	LASER	TOPCON	TP-L4BG	2011	SNVH2587
	199	LTPL4B	LASER - PIPE LASER	TOPCON	TP-L4BG	2012	SNVH2783
	240	LTPL4C	LASER - PIPE LASER	TOPCON	TP-L4B	2014	SNVG9778
		LSDG711	LASER - PIPE LASER	SPECTRA PRECISI	DG711-3	2015	SN
ROCK BOX							
	109	M4YDRB	ROCK BOX - 4 YARD				SN
	110	M5YDRB	ROCK BOX - 5 YARD				SN
		M7YDRB	ROCK BOX - 7 YARD				SN
		M9YDRB	ROCK BOX - 9 YARD			2017	SN33033
	150	M20YDRB	ROCK BOX - 20 YARD	EFFICIENCY	SM-EWHD-24	2005	SN128386
TRENCH BOX							
	140	TB4620	TRENCH BOX - 4 x 6 x 20	PRO-TEC	PRO4-620D		SN15008
	176	TB6416	TRENCH BOX - 4 x 6 x 16				SN
	244	TB6824	TRENCH BOX - 6 x 8 x 24	Efficiency	HT6-824	2014	SN147098
	141	TB8828	TRENCH BOX - 8 x 8 x 28	SPEED SHOR	TS-0828DW8KE		SN42586
		TB8X12	TRENCH BOX - 8 x 12	XTERRA	XTS-6M-812KE	2020	SNXTS20350
		TB8X16	TRENCH BOX - 8 x 16	XTERRA	XTS-6M-816KE	2020	SNXTS20362
		TJACKS	TRENCH JACKS SHORING SYSTEM	NTS		2018	SN
	177	TB4620A	TRENCH BOX - 4 X 6 X 20				SN130221
		XTS6M824	TRENCH SHIELD 8 x 24	XTERRA	XTS-6M-824	2018	SNXTS180531

E. Key Personnel

DMSI has assembled a team of professionals with experience and expertise in the areas required to meet the goals and objectives of the City of Fort Lauderdale. We have all the professionals needed to provide a wide range of technical services to the City. For detailed information please refer to our team's resumes in Section 3 "Qualifications of the Team". Our Design-Build Team consists of the following firms:

David Mancini & Sons, Inc.
2601 Wiles Road, Pompano Beach, FL 33073
Tel: (954) 977-3556 Fax: (954) 944-2040
Contact: David Mancini, Jr., Vice President
Email: dmancinijr@dmsi.com

Chen Moore and Associates, Inc. (CMA)
500 W Cypress Crk Rd, Ste 630, Fort Lauderdale, FL 33309
Tel: (954) 730-0707 Ext 1085 Fax: (954) 730-2030
Contact: Daniel Davila, P.E., Director of Water & Sewer
Email: ddavila@chenmoore.com

David Mancini and Sons, Inc. (DMSI)

Name	Title	Years Exp.	Area of Responsibility	Firm / Location	Education	Registration/ Licenses	Other Professional Qualifications
David Mancini, CUC	President	34	Principal-in-Charge	DMSI/ Pompano Beach	N/A	Underground Utility License	Please refer to his resume at the end of this section
David Mancini, Jr.	Vice President	15	Estimating & Project Manager	DMSI/ Pompano Beach	MS/ International Finance	N/A	Please refer to his resume at the end of this section
Richard Mancini	Vice President/ General Manager	9	Vice President of Operations	DMSI/ Pompano Beach	N/A	N/A	Please refer to his resume at the end of this section
Krishan Kandial, P.E.	Design-Build Project Manager	12	Senior Project Manager	DMSI/ Pompano Beach	BS/Civil Engineering	PE License	Please refer to his resume at the end of this section
Leydis Colomina Power	Permit/ Compliance Manager	10	Project Manager	DMSI/ Pompano Beach	N/A	N/A	Please refer to her resume at the end of this section
Fabio Angarita	Project Manager	20	Construction Manager	DMSI/ Pompano Beach	BS/Civil Engineering	N/A	Please refer to his resume at the end of this section
Ryan Kaltz	General Superintendent	40	Superintendent	DMSI/ Pompano Beach	N/A	N/A	Please refer to his resume at the end of this section
Onique Williams	Superintendent	12	General Superintendent	DMSI/ Pompano Beach	N/A	N/A	Please refer to his resume at the end of this section

Name	Title	Years Exp.	Area of Responsibility	Firm / Location	Education	Registration/ Licenses	Other Professional Qualifications
Alejandro Mejia	Chief Estimator	16	Project Health and Safety Manager	DMSI/ Pompano Beach	AS/Civil Engineering AS/Business Administration	N/A	Please refer to his resume at the end of this section
Matthew Hodge	Project Coordinator	3	Chief Estimator	DMSI/ Pompano Beach	N/A	N/A	Please refer to his resume at the end of this section

Chen Moore and Associates, Inc. (CMA)

Name	Title	Years Exp.	Area of Responsibility	Firm / Location	Education	Registration/ Licenses	Other Professional Qualifications
Peter Moore, P.E., F.ASCE, F.ACEC	President/CEO	26	Principal-in-Charge	CMA/Fort Lauderdale	MS/Civil Engineering BS/Civil Engineering	PE License	Please refer to his resume at the end of this section
Daniel Davila, P.E.	Director of Water & Sewer	24	Senior Project Manager	CMA/Fort Lauderdale	BS/Civil Engineering	PE License	Please refer to his resume at the end of this section
David Castro, P.E.	Senior Engineer	12	Pipeline & Trenchless Technologies	CMA/Fort Lauderdale	MS/Civil Engineering BS/Civil Engineering	PE License	Please refer to his resume at the end of this section
Vincent Locigno, P.E.	Senior Engineer	6	Pipeline Engineering	CMA/Fort Lauderdale	BS/Civil Engineering	PE License	Please refer to his resume at the end of this section
Jessica Diaz, P.E.	Project Engineer	7	Project Engineer	CMA/Fort Lauderdale	N/A	N/A	Please refer to her resume at the end of this section
Matthew O'Rourke	Senior Construction Specialist	16	Senior Inspector	CMA/Fort Lauderdale	N/A	N/A	Please refer to his resume at the end of this section
Manuel Caamano	Senior Construction Specialist	21	Senior Inspector	CMA/Fort Lauderdale	N/A	N/A	Please refer to his resume at the end of this section

DAVID A. **MANCINI, C.U.C**

DESIGN-BUILD PROJECT MANAGER

Industry Experience: 34 yrs
Design/Build Experience: 10 Yrs
Member of the Engineering Contractors Association

Registration / Certifications:
State of Florida Underground Utility License No. CUC0442220
Broward County License #00-1650-W
Qualified Business Organization—QB0008454

Experience:
President and Qualifier
October 2010 - Present
David Mancini & Sons, Inc. (DMSI)
President 1985-2010
Qualifier 1988-2010
Ric-Man International, Inc. (RMI)

With over thirty-four years of construction experience from Michigan to Florida, David Mancini has built David Mancini & Sons, Inc. (DMSI) into the premier underground civil contractor in South Florida. David served as President and Qualifier for his father, Richard Mancini, at Ric-Man International, Inc. from 1985-2010. Since incorporating David Mancini & Sons, Inc. in 2010, his "hands on" abilities and vast pool of knowledge have enabled DMSI to become the leader in large diameter pipeline construction.

Serving as Design-Builder Manager, David Mancini has successfully completed a long list of projects within an urban environment throughout South Florida that include the installation of transmission water mains (PCCP & DIP), transmission force mains (PCCP & DIP), sanitary sewers, storm sewers, pump stations, jack and bores, micro tunnels, directional drills, roadways, sub-aqueous crossings, and neighborhood improvement projects over the past three decades.

KEY PROJECTS

48-INCH FORCE MAIN (BROWARD CW&WWD) BROWARD COUNTY, FL, 2007

Role: Design-Build Manager: Over 5,000' of 48" Force Main within the FDOT Turnpike right-of-way, completed in 8 months including design, permits and construction. The new pipeline was constructed alongside a canal bank and residential neighborhood and included a subaqueous crossing.
Client: Broward County Water & Wastewater (Pat Macgregor (954) 831-0904)

DERM01-WASD-NLE-WEST 54" FORCE MAIN , MIAMI-DADE COUNTY,FL, 2005

Role: Design-Build Manager: Design Build Project with Nova Engineering, consisting of 9,240 LF of 54" PCCP Force Main complete with restoration, infrastructure and beautification improvements along 57th Ave and the Opa-locka Airport Property. This project also included a 25' deep subaqueous, by pass of existing 48" FM and open cut of existing State Road
Client: MDWASD (Jorge Aguiar (786) 552-8138)

DESIGN BUILD SERVICES FOR THE REPLACEMENT OF THE EXISTING 54" FM FROM CENTRAL DISTRICT WWTP TO FISHER ISLAND , MIAMI-DADE COUNTY, FL, 2014

Role: President/Manager/Qualifier: Installation via open cut approximately 1,100 LF of 60" PCCP. Project required the by pass of the existing 54" and 42" Force main.
Client: Nicholson Construction Company for MDWASD (Eloy Ramos (412) 715-3265

54" REDUNDANT SEWER FORCE MAIN, MIAMI-BEACH, FL 2014

Role: Design Build Manager: Installation of appx. 1,000 LF of 54" PCCP, was constructed in an urban environment maintaining existing traffic which entailed extensive MOT & restoration Client: City of Miami Beach (Bruce Mowry, PE (786) 759-8941)

PROJECT EXPERIENCE

54" WATER MAIN SUBAQUOUES CROSSING AT RED ROAD, MIAMI-DADE COUNTY, FL 2014

Role: President/Manager/Qualifier: This deep subaqueous crossing appx. 300 LF of 54" DIP, was constructed alongside a bridge where (2) canals intersect to facilitate widening by the FDOT. The minimal tolerances of this pipeline and the deep complex installation within the canal were major challenges to this project.
Client: MCM for MDWASD (Nelson Cespedes (305) 439-8959)

DAVID A. MANCINI JR.

CONSTRUCTION MANAGER

Industry Experience: 10 yrs
Registration / Certifications / Degrees:
OSHA Certification - Construction Safety and Health MOT Work Zone Traffic Control: Intermediate Level Master of Business and Administration Specialization in International Finance

Reference#1:
Bob Wertz: Senior Project Manager
City of Hollywood Engineering DivisionBwertz@hollywoodfl.org,
Phone 954-921-3930

Reference#2:
Gregory Mullenski
City Inspector
City of Hollywood Engineering Division Gmullenski@hollywoodfl.org,
Phone 954-249-2870}

Reference#3:
Carla S. Dixon- Capital Projects Miami Beach – Capital Improvement
Carladixon@miamibeachfl.gov
Phone 305-673-7071

David A. Mancini Jr. has over 15 years of construction experience in South Florida. As a field laborer, David Mancini Jr. began his career in construction at only 15 years old, working on various construction projects for City Municipalities. As a Construction manager of David Mancini and Sons, Inc., David administers all construction operations, residential public relations, and coordination regarding the City of Hollywood's construction projects. His specialization and experience is in neighborhood improvement projects, water main replacements, high-profile and politically sensitive large diameter design build projects. His management practice consists of a "first person on site and last person to leave" attitude. David's main priority in administering construction operations is limiting at all cost the impact construction operations may impose on the residents.

CONSTRUCTION MANAGER EXPERIENCE

DESIGN BUILD SERVICES FOR THE INSTALLATION OF A 48-INCH FORCE MAIN ALONG NORTH MIAMI AVENUE, MIAMI, FL, 2019

Role: Construction Manager: This project includes the installation of approximately 13,000 linear feet of 48" sewer force main on NE 36th Street, between Federal Highway and North Miami Avenue. 12" and 16" water mains on North Miami Avenue, between NW 20th and 29th Street and 1,000 feet of 24" storm water drainage.

WATER MAIN & FORCE MAIN INTRACOASTAL WATERWAY CROSSINGS AT LAS OLAS BLVD. , FORT LAUDERDALE, FL, 2017

Role: Construction Manager: This project includes the installation of a 20" diameter water main and a new 16" diameter subaqueous force main on the south of Las Olas Blvd. Bridge to provide additional redundancy to the Las Olas area. The City had selected the horizontal directional drilling (HDD) method for construction of the proposed subaqueous crossings.

DESIGN-BUILD SERVICES FOR THE REPLACEMENT OF THE EXISTING 54-INCH SANITARY SEWER FORCE MAIN PIPELINE FROM THE CENTRAL DISTRICT WASTEWATER TREATMENT PLANT TO FISHER ISLAND, UNDER NORRIS CUT CHANNEL, MIAMI, FL , 2014

Role: Construction Manager: Design-Build project to replace the existing 54-inch force main (FM) from the Virginia Key Central District Wastewater Treatment Plant (CDWWTP) under Biscayne Bay Norris Cut to Fisher Island. Including: planning, engineering, design, permitting, procurement, construction / installation, testing and startup of a new 60-inch replacement FM. Project elements include: Approximately 5,200 linear feet of tunnel boring with precast segmental liners capable of accommodating a 60-inch internal diameter carrier pipeline. Approximately 2,500 linear feet of open cut construction to install a 60-inch diameter pipe. Approximately 1,000 linear feet of horizontal directional drilling (HDD) to install 8-inch pipe that will relay the sewage flow from the Fisher Island Pump Station (PS 170) to the tunnel. The replaced 54-inch FM will be cut, flushed, plugged at terminal locations, and abandoned for potential rehabilitation in the future.

HOLLYWOOD WATER MAIN REPLACEMENT 11-5110, HOLLYWOOD, FL , 2014

Role: Construction Manager: Project consisted of the installation of over 5,200 LF of 16-inch C905 PVC Transmission water main, over 60,000 LF of 4", 6" and 8" C900 PVC and DIP distribution water mains, fittings, valves, fire hydrants, and interconnections associated with the water main replacement. The project also included over 900 water service connections at the existing meters and over 400 water meter relocations and water service installations on the private property. Some of the key construction activities included emergency response, temporary traffic controls, clearing and grubbing, tree relocation, locating and protecting existing utilities, trench excavation, shoring, density testing, pressure testing, pipe disinfection, pavement restoration, existing water main abandonment, and coordination with Homeowners Association, City, County, and FDOT Utility Staff.

RICHARD **MANCINI**

SUPERINTENDENT

Industry Experience: 9 yrs

Richard Mancini, Superintendent for David Mancini and Sons, Inc. has always been fascinated with the underground industry since a young age. When he was young, he would spend his days after school playing and pretend driving all the equipment in our storage yard, and starting around 10 years old, David SR, would bring him to jobsites on the weekend to learn how to run equipment. At 15 years old, he got his first summertime job cleaning the shop and doing light mechanic work. Fast forward to present day, Richie is fully immersed in the day to day business of running large diameter pipeline projects for just shy of 4 years.

EXPERIENCE

AREA N

48" Transmission WM, 15,000' – Oversee open cut installation, subaqueous crossing (100' wide canal, 25' underwater); crossing FDOT roadways SR-986 + SR-94, which SR-94 included a 1200' run. Developed MOT Plans, Coordinated with Stakeholders in the neighborhood, kept up to 4 crews busy daily, Designed alternate routes when conflicts emerged.
Aug. 2018 – Nov. 2019

INDIAN CREEK

72" Storm Drainage 1,500' in Miami beach- included overseeing day to day operations, managing three to five in house DMSI Crews, while overseeing multiple subcontractors. Delivering fast tracked completion dates, installation of 72" drainage, a large pump station consisting of 5+ 100,000 lb structures, smaller diameter drainage structures and piping. Rebuilding a new roadway at a higher elevation.
2016 – Aug. 2018

OTHER EXPERIENCES INCLUDES:

Foreman over seeing 8/12 inch water main installation with rear to front service conversions in Hollywood, FL. Pipe Cleaning supervisor for Airlift Dredging of the 54" HDPE Directional Drill. Spent multiple years as a laborer and operator, running all different types of equipment.

DMSI DAVID MANCINI & SONS, INC.

Krishan Kandial, P.E.

Project Manager

Krishan Kandial has 12 years of experience in water & sewer (distribution, collection, transmission & treatment), paving, grading and drainage project. Mr. Kandial has worked for the Cities of Fort Lauderdale and Coconut Creek for over 6 years. Working for these municipalities he has overseen the design, permitting, and construction of larger projects. He also worked in the private sector designing and managing construction projects. Mr. Kandial has Bachelor's degree in Civil Engineering and is a licensed PE in the State of Florida.

Highlights

Water, sewer and stormwater experience.
Member of American Society of Civil Engineering

Licenses:
State of Florida Professional License (PE # 84174)

Experience
Project Manager - 2021 to Present - David Mancini & Sons, Inc. – up to $25 million projects
Project Manager -2018 to 2021 – City of Fort Lauderdale - up to $130 million projects
Engineer I - 2015 to 2018 – City of Coconut Creek – up to $ 5 million projects
Construction Claims Specialist - 2013 to 2015 – Robert A. Cedeno, PA
Project Engineer – 2010 to 2013 - SRK' Ngineering Consultant – up to $27 million projects

Key Projects

Edgewood Neighborhood Stormwater Improvements – $14.5M (City of Fort Lauderdale, FL). Approximately 5.6 miles of stormwater pipes and structures. Pipe diameter from 15-inch to 66-inch RCP. Restoration of roadways, cleaning of existing structures, relocation of water mains and force mains, sidewalks and landscaping.

Design-Build Emergency Redundant Sewer Force Main - $65.0M (City of Fort Lauderdale, FL) Over 7 miles of 54/48-inch force main that transmitted over 80 MGD of sewer. Project was completed in 18 months from design to substantial completion. Project included 17 horizontal direction drills through various neighborhoods in the City.

Design-Build Oxygen Generating System for GTL Wastewater Treatment Plant - $17.5M (City of Fort Lauderdale, FL). Managed the design-build for a 40-ton VPSA system to generate oxygen for GTL wastewater treatment plant.

Inflow & Infiltration Program - $30.0M (City of Fort Lauderdale, FL). Managed the rehabilitation of 6 neighborhoods sewer basins using trenchless technology (cured in place pipe) to eliminate I&I in the sanitary sewer system.

DMSI DAVID MANCINI & SONS, INC.

Leydis Colomina Power
Permit / Compliance Manager

Over 10 years' construction experience in the design of water and sewer projects, including Water Mains, Gravity Sewer, and Force Mains using M-D WASD Standards, and other Municipal Standards. During the time she worked for David Mancini and Sons, Inc. she had the opportunity to play roles of team management, client interaction and contractor/subcontractor coordination efficiently. Also, she has developed knowledge in the utility coordination process, permitting processes and construction cost estimates.

Experience
Permit Manager to Project Manager – 2012 to Present - David Mancini & Sons, Inc.

• Projects Experience •

"Country Club Village Infrastructure Upgrades" (2020-2022)
Owner: City of Boca Raton
Contact: Edward Galvan (561) 212-9043
Role: Project Manager

This $5.8 million neighborhood improvement project consisted of installing over 23,000 feet of water mains and connecting 348 private properties in front and rear. Open-cut installation included pipeline sizes from 6-inch to 16-inch DIP. Horizontal Directional Drill construction included pipeline sizes from 6-inch to 18-inch HDPE. A major component of the Project consisted of the installation of a 24-inch DR-18 FPVC Casing with 16-inch DR-18 FPVC carrier pipe via directional drill crossing under I-95.
The project includes improvement of three (3) 18-inch stormwater outfalls in the L-47 canal and Lift Station No.59 Terminal Manhole and Discharge Manhole Improvements. Worked closely with the Engineer to modify design of the Sanitary Sewer Manhole.
The project also required installation of nine (9) Tapping Sleeves from sizes of 4-inch to 24-inch; and five (5) Line Stops from sizes of 6-inch to 10-inch.
Completion of the project included abandonment of existing ACP water main system, relocation, and reconnection of the water services from the new water mains to the house, as well as restoration of private and public property. Site work above ground included asphalt paving, concrete paving, concrete sidewalks, curb gutter, roadway pavement markings, and tree pruning/removal as recommended by a Certified Arborist.

"Museum Park Promenade - PHASE IV" (2018-2019)
Owner: City of Miami
Contact: Carlos Vasquez, R.A./S.C.A. (786)376-5480
Role: Project Coordinator

The promenade improvements include the installation of a drainage system of approximately 500 LF of 15-inch HDPE and 50 LF of 12-inch HDPE, the relocation of two fire hydrants and the installation of approximately 100 LF of 6-inch water/fire line. The electrical work includes the installation of nine 1-inch conduits, a 17x30 box, and lighting fixtures. The irrigation system includes the installation of bubblers, spray heads, rotor heads, control valves, and 2-inch main line and PVB backflow preventer. The landscaping work consisted of a large variety of approximately 90 plants, including grass, shrubs, groundcovers, flowers, trees, and palms, of which there were 80 Florida royal palms. The pathway includes the installation of approximately 19,000 SF of gray concrete paver with sand, 6-inch, and 4-inch-thick concrete walk, 6-inch header curb, 9 retractable bollards and benches. The multi-use park was renamed in honor of long-time mayor and community leader Maurice A. Ferré and will include a restaurant, underground parking, and museum sites!

"Design/Build Services to Furnish and Install a 48-inch Force Main along North Miami Avenue from NW 8 Street to NE 36 Street and along NE 36 Street from North Miami Avenue to NW 2 Avenue." (2016-2019)
Owner: Miami-Dade Water and Sewer
Contact: Julio Cuenca (786)402-0601
Role: Assistant Project Manager, Worksite Traffic Supervisor, Permit Manager, Public Information Officer.

This Design/Build project includes the installation of approximately 12,700 LF of 48-inch PCCP Force Main, 5,600 LF of 12-inch DIP Water Main, and 1,000 LF of 24-inch PVC Storm Water. This System Betterment Project also includes relocating and transferring water services, reconnections to fire hydrants, permanent paving repairs, and sidewalk/curb/gutter restorations.
Close coordination with business owners, homeowners, and shoppers through utility infested corridors of Miami Design District, Midtown Miami, Wynwood and Overtown.
Responsible for implementing and overseeing traffic control operations, lane closures, setting signs and devices in compliance with local, state, and federal rules and regulations.
Preparing and submitting permit applications, following acceptance, review and approval process. Attending all municipality meetings. Ensuring permits are renewed in a timely manner.

"Storm Water Drainage Improvements along Indian Creek Drive." (2016-2018)
Owner: City of Miami Beach
Contact: Giancarlo Peña, P.E., C.G.C. (305)673-7080
Role: Worksite Traffic Supervisor

This project includes the installation of approximately 3,600 LF 72-inch DuroMaxx Storm Water Pipe, a Pollution Control Structure, the rebuilding of a public sea wall on Indian Creek Drive from 25 Street to 41 Street. This project also includes upsizing sections of the existing storm water drainage and raising the road.

"Design/Build Services for the installation of 54-inch HDPE/PCCP Force Main in South Miami Beach." (2015-2019)

Owner: City of Miami Beach
Contact: Bruce Mowry, P.E. (386)262-4943
Role: Assistant Project Manager, Permit Manager, Public Information Officer.

The project involved the installation of approximately 5,300 LF of 54-inch force main commencing at the existing 48-inch plug valve located at the intersection of Washington Avenue and Commerce Street, extending northerly in the right-of-way of Washington to the intersection of Euclid Avenue; approximately 4,200 LF of horizontal directional drilling along the urban corridor between Euclid Avenue and Washington Avenue; approximately 1,000 LF of open cut pipe installation along 11th Street and in Washington Avenue to accomplish final connections to the 30-inch discharge PS No.1 and the existing 48-inch plug valve in the intersection of Commerce and Washington Avenue. The 54-inch pipe replaces the existing force main sanitary line that was constructed in 1977 and served as the sole means on wastewater conveyance through Miami Beach.
Some of the key assistant activities included emergency response, temporary traffic controls, expedite permitting with DERM, FDOH, FDOT, City of Miami Beach and coordination with Homeowners Associations, Business Owners.

"Storm Water Pipe Replacement along Washington Avenue ending on Dade Boulevard Canal." (2015-2016)

Owner: City of Miami Beach
Contact: Jose Rivas, P.E. (305)673-7080
Role: Public Information Officer

This project includes the installation of 12-inch, 15-inch, 30-inch, 36-inch, 72-inch and 96-inch RCP pipe connected to associated drainage boxes/manholes and trash box along Washington Avenue from 19 Street to Collins Canal. This project also includes permanent paving and striping repairs, and sidewalk/curb/gutter restorations.

Fabio Angarita
Project Manager

Industry Experience:

20 years

Education:

Bachelor's Degree in Civil Engineering, Bogota Colombia 1999

Experience:

Project Manager 2013 to Present
David Mancini & Sons, Inc.

Project Manager 2007 to 2013
Southeastern Engineering Contractors, Inc.

Project Manager 2006 to 2007
Development and Communications Group of Florida, Inc.

Project Manager 2004 to 2006
Petro Hydro Inc.

Co-owner / Project Manager 1999-2002
GDC Ltda (Colombia)

Fabio Angarita has successfully completed over $80 million of municipal projects in highly urban environments throughout South Florida including Storm Sewer Projects, Pump Stations, Water Main Projects (open cut and HDD), Force Mains Projects (open cut and HDD), Sub-Aqueous Crossings, Roadway and Neighborhood Improvement Projects.

EXPERIENCE LAST 10 YEARS

PARK OF COMMERCE PHASE IB, CITY OF LAKE WORTH BEACH – To be completed by December of 2020

Role: Construction Project Manager: Located in the City of Lake Worth Beach, the project includes about 1600 linear-foot of drainage pipe, about 1200 LF of new Water Main a WM Aerial Crossing over Keller Canal and concrete and new roadway construction along 4TH Avenue North from Boutwell Rd to 23RD Avenue South and along 7TH Avenue North from the West side of LWDD (Keller Canal) to Barnet Dr.
Owner Representative: City of Lake Worth Beach (Julie Parham, P.E. 561-586-1798)

LAKE OSBORNE ESTATES WATER MAIN IMPROVEMENTS PHASE I, CITY OF LAKE WORTH BEACH – To be completed by October of 2020

Role: Construction Project Manager: Located in the City of Lake Worth Beach, along a residential neighborhood located along Lake Osborne between High Ridge Rd and Lantana Rd, the project includes about 15,000 LF of Water Main, transferring of over 240 Water Services from the back of the properties to the front and all the restoration associated.
Owner Representative: City of Lake Worth Beach (Giles Rhodes, P.E. 561-586-1640)

REGIONAL MASTER METER – BROWARD COUNTY – To be completed by November of 2020

Role: Construction Project Manager: Located in the City of Tamarac along Southgate Blvd and 66TH Avenue, the project included the installation of two (2) 30" Linestops, the installation of one (1) 30" plug valve, six (6) 24" Valves, the installation of a meter vault with a 24" Magnetic Meter, Electrical Work, Telemetry System for remote monitoring and the restoration associated.
Owner Representative: Broward County (Merle Medina 954-831-0791)

Cruise Terminal B and C conversion to C Waterside Improvements, Port of Miami 2019

Role: Construction Project Manager: Located at the Waterside of the Port of Miami Cruise Terminal B and C, the project included the installation of a new 12" Water Main, the construction of the reinforced concrete runways for the Pedestrian Boarding Bridges, the installation of new mooring bollards, the installation of over one hundred (100) auger cast piles, the reconstruction of three (3) metal stairs and the installation of two (2) deep wells with the corresponding control structures.
Owner Representative: Miami Dade County Port of Miami (Jorge Perez 305-960-5427)

Port of Miami 42" Water Main, 10" Force Main and Pump Station 9141 – Miami Dade Water and Sewer 2019

Role: Construction Project Manager: Located between Downtown Miami and the New Port of Miami Terminal A, the project included the following improvements:

- Water Main Improvements: Installation of about 10,000 linear-foot of 42" Ductile Iron Pipe Water Main, about 3000 linear-foot of (8" to 30") Ductile Iron Pipe Water Main, about 4000 LF of 30" HDD Water Main under the Intercoastal Water Way, and the installation, setup and calibration of the Venturi Meter System with Telemetry for Remote Operation and the restoration associated.
- Force Main Improvements: Installation of about 5000 linear-foot of 10" Force Main from Biscayne Blvd to the Port of Miami Pump Station # 9141, the installation of 4000 linear-foot 12" HDD under Intercoastal Water Way and the restoration associated.
- Construction of the Pump Station # 9141: Installation of New Sanitary Sewer Pump Station 9141 with two (2) submergible 30 HP pumps, Telemetry System for Remote Control and monitoring, 80 kW Emergency Generator with ATS, new Magnetic Meter and demolition of old Pump Station.

Achieved the approval from the stakeholders of two (2) Value Engineer initiatives which generated $530,000 in savings to share between contractor and owner, one of them consisting in the substitution of the proposed microtunnel and jack and bore under FEC by an open cut performed in record time (40 continuous hours) which avoided months of traffic disruption in the main intersection of Port Blvd and Caribbean Way. The second Value Engineer initiative involved a pipe realignment which provided savings in restoration, pipe footage, pipe fittings and major disruptions to cargo operations.
Owner Representative: Miami-Dade Water and Sewer Department (Gary Clarke 305-205-6980)

DESIGN AND BUILD OF 24" HDD FORCE MAIN AND 24" HDD WATER MAIN UNDER BISCAYNE CANAL, CITY OF NORTH MIAMI 2016

Role: Design and Build Project Manager: Located in Northeast Miami-Dade County at NE 131st Street and Memorial Highway. This project included the design, permitting and construction of two (2) parallel 24" directional drills for Water Main and Force Main under Biscayne Canal and 131St Street from NE 2ND Avenue to Memorial Highway and the corresponding tie-in connections to existing pipes.
Owner Representative: City of North Miami - (Hazan Rizvi, P.E. 305-895-9878)

SEABOARD ACRES PUMP STATION RETROFIT AND PUMP CASING REPLACEMENT, MIAMI DADE COUNTY 2016

Role: Construction Project Manager: Located in Northeast Miami-Dade County at the intersection of NE 131st Street and Memorial Highway. This Neighborhood includes mostly residential developments and some commercial developments. The proposed improvements include the complete demolition and reconstruction of the existing Seaboard Acres Storm Water Pump Station. The reconstructed pump station has a pumping capacity of 40 CFS achieved by using two (2) electronic submersible pumps of 20 CFS each. Also emergency diesel pumps backup Generator and Telemetry System for remote, monitoring, and control of the pumps and generator.
Owner Representative: Miami-Dade County Public Works (Ruben Arencibia 305-469-9539)

Flamingo Park Neighborhood Improvements - 11TH Street Phase II, City of Miami Beach 2017

Role: Design and Build Project Manager: Located in Miami Beach along 11TH Street from Washington Avenue to Euclid Avenue and from Jefferson Avenue to Alton Rd, this project included the following improvements:

- Force Main Improvements: Design, Permitting and Installation of about 550 linear-foot of 36" Force Main from Michigan Avenue to the Pump Station # 1.
- Water Main, Sanitary Sewer, Storm Sewer and Roadway Improvements: Design Permitting and Installation of new water main, new storm sewer, new gravity sewer and new roadway including elevating about 24" the final grade of the existing roadway and the corresponding harmonization, new signalized traffic intersections at Pennsylvania Avenue, new street light system, new landscaping and irrigation systems along 11TH Street from Alton Rd to Jefferson Avenue and from Euclid Avenue to Washington Avenue.

Owner Representative: City of Miami Beach (Otniel Rodriguez 786-831-0483)

54-INCH Redundant Sewer Force Main, City of Miami Beach 2016

Role: Design and Build Project Manager: Located in Miami Beach from Pump Station # 1 to Washington Avenue and Commerce Street, this project included the following improvements:

- Force Main Improvements: Design, Permitting and Installation of about 5000-foot-long 54" Force Main from 11TH Street and Jefferson Avenue to Commerce Street and Washington Avenue underneath Euclid Avenue and Washington Avenue using open cut and HDD technologies. A world record of over 3,000 – foot long and a 1,200 – foot long installation of a 54 –inch IPS DR -17high—density polyethylene (HDPE) pipe using horizontal directional drilling (HDD) methods, over 1000 foot long 54" PCCP pipe using open cut method. This pipe replaces the existing force main sanitary line that was constructed in 1977 and served as the sole means of wastewater conveyance through Miami Beach.
- Pump Station # 1 Improvements: Design Permitting and Construction of new influent wet well, new 36" and 24" Force Main, new biological odor control system, plug valves replacement and emergency bypass.
- Water Main, Sanitary Sewer, Storm Sewer and Roadway Improvements: Design Permitting and Installation of new water main, new storm sewer, new gravity sewer and new roadway including elevating about 24" the final grade of the existing roadway and the corresponding harmonization, new signalized traffic intersections at Euclid Av and Meridian Av, new street light system, new landscaping and irrigation systems along 11TH Street from Jefferson Avenue to Euclid CT.

Owner Representative: City of Miami Beach (Igor Vassiliev 805-801-0710)

CRESPI BLVD WATER MAIN, STORM SEWER COLLECTION SYSTEM AND STORM SEWER PUMP STATION, CITY OF MIAMI BEACH 2015

Role: Design and Build Project Manager: Design, Permitting and Installation of Water Main, Storm Sewer Collection System and 40,000 GPM Storm Sewer Pump Station along Crespi Blvd between 85TH street and 79TH Street. The project Includes the installations of over 2500 LF of Water Main, over 2800 LF of Storm Sewer collection system, Installations of pollution Control Structure, Installations of Storm Sewer Pump Station, Energy Dissipater, Seawall and landscaping along a residential neighborhood.
Owner Representative: City of Miami Beach (Eugene Egemba, P.E. 305-781-0391)

SWEETWATER STORM SEWER IMPROVEMENTS PHASE IIB 2013 - 2014

Role: Construction Project Manager: Installation of about 6000 LF of storm sewer collection system and two (2) storm sewer pump stations with capacity of 5500 GPM/EA along a residential neighborhood.
Owner Representative: (Eric Gomez, P.E. 305-553-5457)

FDOT T6278, FDOT 2014

Role: Construction Project Manager: Installation of 54" Water Main subaqueous crossing along NW 57TH Avenue between W46TH Street and W 53RD Street.
Owner Representative: MDWASD (Nelson Cespedes 305-439-8959)

FDOT E6G98-RO —PUSH BUTTON PROJECT

Role: Project Manager: Performance of several drainage and roadway projects in FDOT District 6. Project included an emergency drainage project in Downtown Miami and US1, Drainage Improvements in Haulover Bridge and drainage Improvements on 163RD Street.

INSTALLATION OF SIX (6) 48" PLUG VALVES IN THE EXISTING PCCP FORCE MAIN ALONG OPA LOCKA BLVD 2012

Role: Project Manager: Installation of 48" plug valves in different locations in the existing PCCP Force Main along Opa Locka Blvd. The project included the installation of six (6) plug valves, the installation of twelve (12) 48" line stops, six (6) PCCP closures, implementation of extensive MOT, shoring, dewatering and roadway restoration.
Owner Representative: MDWASD (Nelson Cespedes 305-439-8959)

SAN MARCO ISLAND DRAINAGE IMPROVEMENTS 2011

Role: Project Manager: Preinstallations of storm sewer collection system and a pump station in San Marco Island. The project Included about 2000 LF of storm sewer collection system, installation of four (4) deep wells, emergency bypass and storm sewer pump station.
Owner Representative: City of Miami (Valentin Onuigbo, P.E. 786-447-9817)

SWEETWATER STORM SEWER IMPROVEMENTS PHASE IV 2011

Role: Project Manager: Installation of about 8000 LF of storm sewer collection system and two (2) storm sewer pump stations with capacity of 5500 GPM along a residential neighborhood. Owner Representative: City of Sweetwater (Eric Gomez, P.E.(305)-553-5457)

FAIRLAWN STORM SEWER PHASE III 2011

Role: Project Manager: Installation of about 10,000 LF of exfiltration storm sewer system along a residential neighborhood.
Owner Representative: City of Miami (Genady Beylin.(786)972-5048)

RYAN
KALTZ
GENERAL SUPERINTENDENT

Experience:
General Superintendent
Certs: OSHA 30, CPR/First Aid, OSHA Confined Space

Ryan Kaltz has spent most all of his life working for the Mancini Family. He is 3rd generation, his grandfather used to make push rings for the tunnels in Michigan. His father, Daryl, Started working for Richard Mancini, founder of Ric-Man Michigan in 1983. In 2000, Ryan got his first job working for Ric-Man Michigan. First sweeping the floors and picking tools up after the other tradesman.
In 2008, Ryan moved to Miami Beach, FL and started working for David Mancini Sr. at Ric-Man, Intl. He started as a laborer installing water services, soon after becoming foreman installing vacuum sewers in the Florida Keys, lift stations and laterals in Broadview Park, overseeing milling and paving operations along SR-441, and multiple water and drainage installation projects. During the 2010 reorganization of Ric-Man, INTL. Ryan left and came to work for David Mancini at DMSI as a Mainline / Project Closeout Foreman. He became acting Superintendent on the recent projects of: Seaboard Pump Station, Convention Center Pump Station, and Area N 48" WM. He has proven knowledge in the underground construction market.

EXPERIENCE

BROADVIEW PARK – 2009
- Well pointing
- Lift Stations
- Sanitary Sewer / Laterals
- Drainage Installations
- ROW to ROW Restoration.

CITY OF SURFSIDE – 2010
- Water / Drainage Installation
- Water Service / Meter Replacements
- Sewer Point / Lateral Repairs

SWEET WATER PUMP STATIONS
- Clean and Build Pump Stations
- Oversee inspections and close out project

VIRGINIA KEY TUNNEL SHAFT
- Ring Beams, Concrete work for thrust wall and tunnel seal

Emergency Culvert Repair at SW 137 Ave - 2020
- Miami-Dade Public Works Emergency
- Slip-line 140 LF of 120" CMP
- Oversee inspections and project efficiency

ALTON ROAD MIAMI BEACH - 2013
- RCP Drainage and Water Main installation
- Pump Station Installation

CRESPI DRAINAGE IMPROVEMENTS
Built pump station and installed pumps

11TH STREET MIAMI BEACH IMPROVEMENTS
- Watermain / Storm Sewer / Forcemain Improvements
- Raising Road Elevation

CONVENTION CENTER PUMP STATION – 2016
- Install two 35' deep pollution control structures in cofferdam
- Install multiple large concrete structures
- Install 96" RCP connections between structures
- Clean and complete inspections
- Coordinate with subcontractors

SEABOARD PUMP STATION - 2017
- Install a 20' x 50' concrete structure via Caisson method in rock
- Demolition and replacement of storm water pump station
- Coordinate with subcontractors
- Ordering materials

AREA N 48" WM -2018 THRU 2020
- Oversee day to day activities
- Set up MOT
- Review plans for constructability
- Cross major roadways (SR-94 / SR986)
- Oversee cleaning and inspection operations
- Install the C-100 Canal crossing (25 ft underwater)

ONIQUE **WILLIAMS**

Experience:

Mainline Foreman- August 2017 – January 2020 full time – Miami Ave., Area N, Virginia Key / Fisher Island, Emergency projects: 156th, 163rd, Ft Lauderdale raw water, Ft Lauderdale sewer, 42" valves Ft Lauderdale

2010 – 2017 – Helped start and built DMSI when it first opened it's doors, did odds and ends for multiple mainline / restoration crews as laborer / loader operator. From Sunset Island to Biscayne Point became restoration foreman full time. Once Biscayne Point ended went to Alton Road became mainline / restoration forman laying 30" RCP drainage, including trench patching, built storm water pump station on 10th street. Started Hollywood Neighborhood water main improvement for 8 / 12" pvc pipe with rear to front service conversions. Ft Lauderdale GTL grit chamber improvements.

EXPERIENCE

MIAMI BEACH 54" DIRECTIONAL DRILL

Onsite 7 days a week, coordinating mud removal from drill rig oversaw drilling pressure relief wells along the route, restored once the drills were completed, oversaw the cleaning of the internal pipe via airlift dredging. Oversaw delivery and fusing of 54" HDPE.

MIAMI AVE: 48" PCCP FORCE MAIN 13,100 FT

Onique's official position was Foreman but truly acted as Superintendent. In charge of ordering materials, developing MOT plans, managing ultra-small footprint for large diameter installation through Miami's Midtown and Wynwood Districts. Designing pipe alignment through heavily infested utilities corridor when conflicts arose. Also installed around 2000 feet 12" watermain

VIRGINIA KEY / FISHER ISLAND

Onique gained tunnel tie in experience through installing the vertical 48" pipe inside the shafts, to connect from the tunnel to the tie in points with 90 degree bends. While also building the 36" bypass on the last 1,000 ft of large diameter FM feeding directly into Central District Wastewater Treatment Plant.

AREA N

Onique gained valuable experience installing a 48" Transmission WM under SFWMD C-2 Canal. This project consisted of extremely hard rock, installation of PCCP watermain 25 feet underwater on an 100-foot wide canal, utilizing 2 large excavators, while also designing the tie in and closing on the existing pipe from another DMSI crew. Onique also worked many short spurts on major FDOT crossings first at 72nd street, and then 88th. Without

Onique started working for Ric Man Intl as a laborer on a restoration crew under David Mancini SR, when David Mancini SR left Ric-Man Intl and started DMSI, Onique left with David Sr to help build DMSI to what it is today.

ALEJANDRO **MEJIA**

SAFETY MANAGER

Industry Experience: 16 yrs
Education:
AS in Business Administration
AS in Civil Engineering
OSHA 30 Certification

Alejandro Mejia has over 16 years of experience overseen municipal projects in highly urban environments, airports throughout Dade County, Broward County, Florida including storm sewer projects, storm sewer pump stations, sanitary sewer, force mains, water mains, roadway, and neighborhood improvement projects over the past decade.

EXPERIENCE

MDWASD INSTALLATION OF 42-INCH DIP WATER MAIN AND 10-INCH FORCE MAIN TO PORT OF MIAMI AND PS 9141 REPLACEMENT:
Safety Manager for the Miami-Dade Water and Sewer Department (MDWASD) installation of 9,740 LF of 42-inch DIP and fittings; 42-inch mechanical joint resilient seated wedge gate valve; Venturi meter (including valve and fittings, manhole frame and cover, valve box quick disconnect, and concrete support slab); 260 LF of micro tunneling under existing FEC railroad right-of-way (including steel casing, drill shafts, and proposed area of construction); 4,600 LF of twin 30-inch HDPE HDD subaqueous channel crossing along Biscayne Bay from Bayside to Port of Miami; replacement of Pump Station (PS) 9141 (including existing 8-inch cast iron pipe (CIP) force main connecting to wastewater collection and transmission system); and installation of approximately 5,000 LF of 10-inch replacement force main pipeline between PS 9141 and a point of connection on the mainland (City of Miami).

MDC EMERGENCY REPAIRS TO 72-INCH AND 54-INCH PCCP FORCE MAIN AT BISCAYNE BLVD & NW 156 STREET:
Safety Manager for an emergency contractor for Miami-Dade Water & Sewer for over 10 years, David Mancini was as called upon to remove 60 LF of existing PCCP and replace with 60 LF section of 42" DIP which was located in the center of SW 2nd Ave entailed extensive MOT, shoring and dewatering.

MDC INSTALLATION OF 54-INCH DIP FORCE MAIN AT OPA LOCKA EXECUTIVE AIRPORT:
Safety Manager for furnishing and installing approximately 10,900 LF of 54- inch ductile iron pipe and fittings; 54-inch mechanical joint resilient seated wedge plug valves; connections to existing 48-inch force main and connection to existing 54-inch PCCP, including valves and fittings, access manholes installation.

BROWARD COUNTY FLL, TERMINAL 4 EXTENSION, INSTALLATION OF MULTIPLE UNDERGROUND UTILITIES AT FORT LAUDERDALE INTERNATIONAL AIRPORT:
Safety Manager for furnishing and installing approximately 1000 LF in storm sewer pipes ranging from 30-inch to 96-inch; 2000 LF in water mains ranging from 8-inch to 12- inch ductile iron pipe and fittings; 1500 LF in 8-inch sanitary sewer mains including laterals and new sanitary lift station. In addition to this, excavation of cast in place concrete piles and preparation of building pad for new Terminal 4.

MDC INSTALLATION OF 54-INCH BAR WRAPPED CONCRETE CYLINDER PIPE WATER MAIN AT RED ROAD IV FDOT T-6345:
Safety Manager of furnishing and installing approximately 4300 LF of 54- inch bar wrapped concrete pipe and fittings; 54-inch mechanical butterfly valves; connections to existing 54-inch water main and connection to existing 36-inch water main, including valves and fittings, access manholes installation.

DMSI DAVID MANCINI & SONS, INC.

Matthew Hodge

Project Coordinator

Mr Hodge had worked with DMSI for over three years. He has overseen the daily operation of crews and handling community relations in neighborhoods.

Experience

Project Coordinator - 2020 to Present - David Mancini & Sons, Inc.

Key Projects

Edgewood Neighborhood Stormwater Improvements (City of Fort Lauderdale, FL).

Design-Build Emergency Redundant Sewer Force Main (City of Fort Lauderdale, FL)

Coral Shores Small Water Main Improvements - (City of Fort Lauderdale, FL).

PS B-4 Redundant Forcemain (City of Fort Lauderdale, FL).

Annual Stormwater Projects (City of Fort Lauderdale, FL).

Peter Moore, P.E., F.ASCE, F.ACEC
President/CE

Hire Date: 09/01/1999
Years with other firms: 2

Education
Bachelor of Science, Civil Engineering, University of Florida, 1997
Master of Engineering, Civil Engineering, University of Florida, 2004

Registration
Professional Engineer, Florida, 58709, 2002

Professional Affiliations
American Society of Civil Engineers
Florida Engineering Society
Florida Stormwater Association
National Society of Professional Engineers

Certifications
LEED Accredited Professional
Envision Sustainability Professional
Certified Stormwater Inspector

Awards
ACEC-FL President's Award (2019)

Mr. Moore is the president of CMA with more than 25 years of experience with a wide variety of utility, stormwater, transportation and other infrastructure projects. Since joining CMA in 1999, Mr. Moore has focused on the management, planning, design, permitting, and construction of various utility infrastructure projects for public clients throughout South Florida. A lifelong Broward County resident, Mr. Moore has worked on literally dozens of unique projects for Broward County valued at $100M in his career, literally serving in every role in a project team. Of particular note is Mr. Moore's experience in value engineering, including projects for Broward County WWS, Miami-Dade Water and Sewer Department and a development client in Saudi Arabia. Including his assistance as a reviewer and design guideline developer for the firm's work in the Republic of Panama, Mr. Moore has an additional $500M of international project exposure to give him the full arsenal of tools to serve Broward County.

Project Experience
Ft Lauderdale FM Rehab, HDD & Swageline (1-4), Ft. Lauderdale, FL. CMA was the prime consultant for the 30" Emergency Force Main Rehabilitation project in the City of Fort Lauderdale. This innovative design-build project, led by Murphy Pipeline Contractors (MPC), was undertaken to provide both mainline force main replacement for aging infrastructure and to provide additional redundancy in case of future issues. The contract was divided into four (4) phases within the City of Fort Lauderdale. Phase 1 included a horizontal directional drill (HDD) subaqueous crossing under Tarpon River and swageline rehabilitation in upland areas, phase 2 included HDD and open cut for interconnects on Himmarshee Street near downtown, Phase 3 entailed two long HDD installations and phase 4 had over 6,000 linear feet of close compression fit lining. The nearly 22,000 linear feet of pipeline was rehabilitated through a combination of swagelining, horizontal directional drilling, and traditional open cut installation over thefour phases. CMA provided planning, design, permitting, and engineering services during construction. Environmental compliance, a subaqueous crossing including benthic surveys, public involvement, and maintenance of traffic in the busy Sistrunk and Himmarshee Business Districts were some of the additional project complexities. Permitting and utility easements through FDEP and the US Army Corps of Engineers were required for the crossing of Tarpon River. CMA also provided dewatering permitting and groundwater modeling due to contaminated sites within quarter mile of the projects. The project from design including permitting, construction and certification was completed in 9 months. This project was awarded the 2019 Project of the Year by the ASCE Broward Branch and 2020 ACEC Florida Section Pipeline/Utility project of the year.

Emergency Bypass 48" Forcemain, Ft. Lauderdale, FL. CMA was responsible for the design, permitting, and construction observation of the replacement of the City of Fort Lauderdale's main transmission line going into the wastewater treatment plant. The new line consists of more than 22,000 linear feet of new pipe which will be installed via 11 horizontal directional drills (HDD) that range between 1,200 and 3,400 linear feet each to a depth of up to 70 feet. Some drills consisted of large diameter reverse compound curves that required detailed route analysis including load and stress calculations, and inadvertent return analysis to ensure the pipe could be constructed within the project constraints. The new force main is mostly 48" HDPE pipe with some ductile iron pipe sections. The project route includes sensitive ecosystems

including the crossing of South Middle River which require Benthic surveys for the subaqueous crossing, dewatering calculations, and permitting for construction within a quarter mile of contaminated areas with high-water table being close to the coastline. Crossing of the intracoastal (US Federal Waters) requires permitting through the US Army Corps of Engineers and the Department of Environmental Protection. Chen Moore provided survey, subsurface utility exploration, environmental studies, geotechnical engineering, electrical engineering, M.O.T. design, civil engineering, permitting and CEI services. There is a total of nine (9) jurisdictional agencies for this project. The project was an emergency project for the City of Fort Lauderdale which was fast tracked to be completed (design, permitting, and construction) in 14 months. The project was a Design-Build project led by Murphy Pipeline Contractors with CMA as the lead Consultant. It was also named the ASCE Florida Section's 2022 Project of the Year in July 2022, ACEC Florida Section 2022 Pipeline Project of the Year and the "National Recognition Award" at the 2022 ACEC National Conference in Washington DC.

City Center Right-of-Way and Utility Improvement Project, Miami Beach, FL. CMA was the prime consultant and was responsible for providing surveying, planning, geotechnical investigation, design, permitting, preparation of construction documents, bid and award and CEI services for infrastructure improvements within the public right-of-way (ROW) areas of the City Center neighborhood of Miami Beach. The project encompasses approximately 24,000-LF of ROW infrastructure improvements including: 8,700-LF of 8-inch water main replacements; sewer improvements, stormwater drainage improvements; paving & grading; roadway/traffic improvements (streets, sidewalks, curb and gutter, drainage, traffic control devices including striping, signing and channelization); streetscaping and landscaping enhancements; decorative, landscape and roadway lighting improvements; and roadway reconstruction. Additionally, due to existing listed contaminated sites within the proximity of the ROW improvements, environmental coordination, including site analysis and consideration of the radius of influence, was necessary for coordinating dewatering operations. Due to the existing mixed residential and commercial environment of this neighborhood, special design efforts were made to incorporate walkable community elements including meeting all ADA requirements, providing street furniture, providing bicycle paths, upgrading sidewalks, incorporating specialty treatments at crosswalks, landscaping improvements with specialized tree wells to provide a walkable surface and bulb outs to increase pedestrian friendliness and safety. This project also required extensive coordination with the public, adjacent CRAs, historic districts and various regulatory agencies. As part of the proposed stormwater and drainage services, extensive analysis was conducted utilizing ICPR Modeling and GIS to meet or exceed required stormwater Level of Services standards. ICPR Modeling was utilized for the design and permitting of 14 drainage gravity wells. The proposed stormwater design included the introduction of catch basins and stormwater piping to effectively collect and route the stormwater to 16 drainage gravity wells with overflow outfall connections to Biscayne Bay. Due to the environmental sensitivity of Biscayne Bay design and implementation of water quality treatment measures was an important consideration and design factor of the system prior to outfall to the Bay and was closely coordinated with regulatory agencies during the permitting process.

Biscayne Aquifer Well #4, North Lauderdale, FL. CMA is responsible for designing and permitting a new raw water well for the City of North Lauderdale Water Treatment Plant. The initial assignment included a well siting analysis to determine the best location of the well. The new well design includes civil engineering, electrical engineering, instrumentation design and hydrogeological services and testing. The project will also include design of a new 16" raw watermain to connect the well to the water treatment plant supply line. The 16" raw watermain is approximately 1,000 linear feet long and it will be designed and constructed as a HDD line to avoid conflicts and yard piping within the water treatment plant.

Daniel Davila, P.E.
Director of Water and Sewer-Principal Engineer

Hire Date: 06/13/2011
Years with other firms: 12

Education
Bachelor of Science, Civil Engineering, University of Florida, 2000

Registration
Professional Engineer, Florida, 63014, 2005

Professional Affiliations
American Academy of Environmental Engineers
American Society of Civil Engineers
Florida Engineering Society
Florida Healthcare Engineers Association

Certifications
Stormwater Management Inspector

Mr. Davila serves as Director of Water and Sewer for CMA's engineering team and has over 22 years of civil engineering experience. Mr. Davila has extensive experience designing a variety of water and wastewater facilities, utilities master planning, and has worked on thousands of linear feet of water and sewer utility infrastructure projects. He has served as Project Manager, or Senior Engineer for more than 40 horizontal direction drill projects that range from 6" in diameter up to 54" transmission lines, as well as for the design of several intracoastal crossings that range from 14" to 48" in diameter. Mr. Davila has an expertise on Trenchless Technologies having worked on dozens of Horizontal Directional Drilling (HDD), pipe bursting and HDPE compression-fit lining projects in Florida, Central America and the Caribbean. He is located in our Fort Lauderdale office only 3 miles away from the project site.

Project Experience

Emergency Bypass 48-inch Forcemain, Fort Lauderdale, FL. Project Manager and Engineer of Record. CMA was responsible for the design, permitting, and construction observation of the City's main transmission line going into the wastewater treatment plant. The new 48-inch line consists of more than 22,000 linear feet of new pipe which will be installed via 11 horizontal directional drills (HDD) that range between 1,200 and 3,400 linear feet each to a depth of up to 60 feet. The new force main is mostly 48" HDPE pipe with some ductile iron pipe sections. The project crossed County and FDOT roadways, busy intersections and the intracoastal waterway which required US Army Corps of Engineers and the Department of Environmental Protection permitting. The project was fast-tracked and it took 18 months to complete from initial NTP to design, permitting and construction.

30-inch Forcemain Rehabilitation, HDD & Swageline (1-4), Fort Lauderdale, FL. Project Manager and Engineer of Record. CMA was responsible for the design, permitting, and construction administration services for the construction and rehabilitation of one of the main sewage transmission lines for Fort Lauderdale. This fast-tracked project was divided into four (4) phases and included nearly 22,000 linear feet of new pipe through a combination of swagelining, horizontal directional drilling, and traditional open cut installation. The project was constructed near downtown fort Lauderdale and included a subaqueous crossing under the Tarpon River. The project was fast-tracked and it took 9 months to complete from initial NTP to design, permitting and construction

Pump Station B-4 Redundant 28-inch Forcemain, Fort Lauderdale, FL. Project Manager and Engineer of Record. CMA was responsible for the design, permitting, and construction management services for new forcemain on Bayview Drive from pump station B-4 to the intersection with NE 21st Street. The project entailed approximately 5,100 linear feet of new 28-inch HDPE forcemain and connection to two City pump stations (B-4 and B-5) and to a 24-inch stub out at the north end of the project. The project was fast-tracked and it included three horizontal directional drills with approximately 70% of the project installed trenchless. The design, permitting, construction management services, testing, certification and startup was completed in 8 months.

Bayshore Drive 20-inch FM Replacement. Project Manager and Engineer of Record. CMA prepared a Design Criteria Package (DCP) and provided Construction Engineering Inspections (CEI) services for the City of Fort Lauderdale for the replacement and upsizing of an existing sanitary sewer

forcemain on Bayshore Drive. The scope of work included preliminary design and permitting of approximately 3,450 LF of 20" HDPE sanitary sewer force main to replace the existing 16" cast iron pipe force main. The project included a total of four (4) horizontal directional drills (HDD) including one under the intracoastal waterway (reverse compound curve). As part of the project CMA performed HDD calculations for pull loads and inadvertent returns. Route analysis, technical specifications and 30% plans were provided.

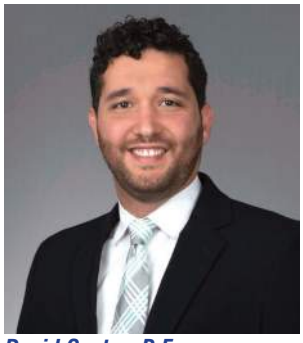
South Bermuda Parkway 24-inch Reuse WM. Lead Engineer. CMA is providing professional services for the design, permitting and construction of this project which includes approximately 40,000 LF of 24-inch and 3,000 LF of 12-inch reuse water transmission mains to interconnect the South Bermuda and Parkway Water Reclamation. The project is approximately 90% trenchless technologies with the majority of the pipe to be installed via Horizontal Directional Drilling (HDD) due to the amount of land features and crossings. The recommended pipe route included railroad crossings, canal crossings, County and State roads and crossings under Florida's Turnpike.

South County 24-inch Reclaimed Water Transmission Pipeline Phase 1A. QA/QC Engineer. CMA provided construction documents and related permits to allow the construction of approximately 3.7 miles (19,500 linear feet) of reclaimed water pipeline and related facilities. The design included pipe of various size and material, with the transmission main being 24-inch ductile iron pipe and the service lines varying from 10-inch to 12-inch, with some sections designed to use C-900 PVC due to corrosion potential. The design also included a 500 linear-foot horizontal directional drill to cross Glades Road and a private lake and permitting for the aerial crossing of Hillsboro Canal.

NE 35th Avenue 30-inch Watermain Improvements, North Miami Beach. Lead Engineer. CMA provided design and permitting for the civil engineering improvements for the replacement of two existing watermains. The new watermains include the Horizontal Directional Drilling in a highly dense residential area with only one access to the Island. The new transmission line is a 20" HDPE watermain designed to be installed via HDD in three segments for a total of 3,300 linear feet of pipe up to 30 feet deep with compound curves.

24-Forcemain Lift Station #11, Wilton Manors, FL. QA/QC Engineer. CMA is responsible for the design, permitting and CEI services for this 4,100 linear feet 24-inch forcemain for the City of Wilton Manors. The forcemain is routed through busy residential streets and business areas in Wilton Manors and it requires the crossing of a river. One of the crossings requires the design of a complex horizontal directional drill (HDD) compound curve that is limited by the available space between the bridge piles and the existing right-of-way. The project is approximately 90% trenchless with most of it installed via HDD utilizing. A total of three drills (reverse curves) were planned to accommodate the right-of-way geometry.

South River Forcemain Crossing, Fort Lauderdale, FL. CMA prepared the Design Criteria Package (DCP) for the South Middle River Force Main Crossing for the City of Fort Lauderdale, located along NE 19th Street / NE 21st Street between NE 22nd Avenue and Bayview Drive. The scope of work included preliminary design and permitting of approximately 2,200 LF of 16" HDPE sanitary sewer force main to replace the existing 12" cast iron pipe force main which is currently out of service. This project included approximately 1,410 LF of horizontal directional drill (HDD) of the 16" force main under the Middle River. CMA prepared the DCP and has permitted the HDD with Broward County, SFWMD, U.S. Army Corps of Engineers (ACOE), and FDEP. CMA also provided bidding assistance for this project.



David Castro, P.E.
Senior Engineer

Hire Date: 09/15/2017
Years with other firms: 3

Education
Bachelor of Science, Civil Engineering, University of Puerto Rico, 2014
Master of Engineering, Civil Engineering, University of Florida, 2023

Registration
Professional Engineer, Puerto Rico, 27186, 2017
Engineer In Training, Florida, 1100021596
Professional Engineer, Florida, 85558, 2018

Professional Affiliations
American Society of Civil Engineers

Certifications
HDD Academy – Arizona State University

Mr. Castro is a Senior Engineer for CMA's engineering team and has extensive project experience with the design and permitting of drainage and sanitary sewer improvements along with the associated construction oversight. In addition, he conducted several studies that included directional engineering analysis for trenchless pipeline installations, river analysis, storm sewer design, flood analysis, erosion control, hydrologic and hydraulic studies, and irrigation studies. Mr. Castro expertise in HDD includes several drills under the ICW, railroads and roadways, and include HDPE and steel pipe.

Project Experience

Emergency Bypass 48-inch Forcemain, Fort Lauderdale, FL. CMA was responsible for the design, permitting, and construction observation of the City's main transmission line going into the wastewater treatment plant. The new 48-inch line consists of more than 22,000 linear feet of new pipe which will be installed via 11 horizontal directional drills (HDD) that range between 1,200 and 3,400 linear feet each to a depth of up to 60 feet. The new force main is mostly 48" HDPE pipe with some ductile iron pipe sections. The project crossed County and FDOT roadways, busy intersections and the intracoastal waterway which required US Army Corps of Engineers and the Department of Environmental Protection permitting. The project was fast-tracked and it took 18 months to complete from initial NTP to design, permitting and construction.

30-inch Forcemain Rehabilitation, HDD & Swageline (1-4), Fort Lauderdale, FL. CMA was responsible for the design, permitting, and construction administration services for the construction and rehabilitation of one of the main sewage transmission lines for Fort Lauderdale. This fast-tracked project was divided into four (4) phases and included nearly 22,000 linear feet of new pipe through a combination of swagelining, horizontal directional drilling, and traditional open cut installation. The project was constructed near downtown Fort Lauderdale and included a subaqueous crossing under the Tarpon River. The project was fast-tracked and it took 9 months to complete from initial NTP to design, permitting and construction.

Pump Station B-4 Redundant 28-inch Forcemain, Fort Lauderdale, FL. CMA was responsible for the design, permitting, and construction management services for new forcemain on Bayview Drive from pump station B-4 to the intersection with NE 21st Street. The project entailed approximately 5,100 linear feet of new 28-inch HDPE forcemain and connection to two City pump stations (B-4 and B-5) and to a 24-inch stub out at the north end of the project. The project was fast-tracked and it included three horizontal directional drills with approximately 70% of the project installed trenchless. The design, permitting, construction management services, testing, certification and startup was completed in 8 months.

Bayshore Drive 20-inch FM Replacement, Fort Lauderdale, FL. CMA prepared a Design Criteria Package (DCP) and provided Construction Engineering Inspections (CEI) services for the City of Fort Lauderdale for the replacement and upsizing of an existing sanitary sewer forcemain on Bayshore Drive. The scope of work included preliminary design and permitting of approximately 3,450 LF of 20" HDPE sanitary sewer force main to replace the existing 16" cast iron pipe force main. The project included a total of four (4) horizontal directional drills (HDD) including one under the intracoastal waterway (reverse compound curve). As part of the project CMA performed HDD calculations for pull loads and inadvertent returns.

CMA prepared the DCP and obtain permits for the installation with SFWMD, U.S. Army Corps of Engineers (ACOE), and FDEP. CMA performed Benthic Surveys for determination of seagrasses and obtained a utility easement with ACOE and FDEP for subaqueous crossings on the intracoastal waterway. The DCP package included pipe routing, determination of drill locations, HDD calculations, 30 percent level plans, technical specifications, CEI services during the Design-Build phase, including design review, full time field representation, and project closeout services.

South Bermuda Parkway 24-inch Reuse WM. CMA is providing professional services for the design, permitting and construction of this project which includes approximately 40,000 LF of 24-inch and 3,000 LF of 12-inch reuse water transmission mains to interconnect the South Bermuda and Parkway Water Reclamation. The project is approximately 90% trenchless technologies with the majority of the pipe to be installed via Horizontal Directional Drilling (HDD) due to the amount of land features and crossings. Mr. Castro was involved in the route analysis and BODR that out lines the potential routes, and constructability of the project. The recommended pipe route included railroad crossings, canal crossings, County and State roads and crossings under Florida's Turnpike. The second phase is currently underway and encompasses the design and construction of the preferred option identified under the routing analysis phase. CMA is providing geotechnical, design, permitting, and construction services.

24-Forcemain Lift Station #11, Wilton Manors, FL. Mr. Castro is the EOR and Project Manager for the design, permitting and CEI services for this 4,100 linear feet 24-inch forcemain for the City of Wilton Manors. The forcemain is routed through busy residential streets and business areas in Wilton Manors and it requires the crossing of a river. One of the crossings requires the design of a complex horizontal directional drill (HDD) compound curve that is limited by the available space between the bridge piles and the existing right-of-way. The project is approximately 90% trenchless with most of it installed via HDD utilizing. A total of three drills (reverse curves) were planned to accommodate the right-of-way geometry.

South River Forcemain Crossing, Fort Lauderdale, FL. CMA prepared the Design Criteria Package (DCP) for the South Middle River Force Main Crossing for the City of Fort Lauderdale, located along NE 19th Street / NE 21st Street between NE 22nd Avenue and Bayview Drive. The scope of work included preliminary design and permitting of approximately 2,200 LF of 16" HDPE sanitary sewer force main to replace the existing 12" cast iron pipe force main which is currently out of service. This project included approximately 1,410 LF of horizontal directional drill (HDD) of the 16" force main under the Middle River. CMA prepared the DCP and has permitted the HDD with Broward County, SFWMD, U.S. Army Corps of Engineers (ACOE), and FDEP. CMA also provided bidding assistance for this project

Vincent Locigno, P.E.
Project Engineer

Hire Date: 05/15/2017
Years with other firms: 0

Education
Bachelor of Science, Civil Engineering, Florida Atlantic University, 2017

Registration
Professional Engineer, Florida, 92216, 2021

Professional Affiliations
American Society of Civil Engineers

Mr. Locigno serves as a Project Engineer for CMA's engineering team and has experience working on various aspects of civil engineering design, plan preparation, permitting efforts, and construction oversight while leading segments of the project design. His experience includes utility coordination; performing modeling and simulation; site grading; pavement analysis; water distribution system; sanitary sewer collection system; lift station design; stormwater management system and drainage analysis; roadway design; maintenance of traffic and phasing; pavement marking; signage; and erosion control. He also prepares meeting agendas, meeting minutes, and estimates of probable cost including quantity takeoffs. Mr. Locigno has extensive project experience during both the design phase and construction phase on various UAZ and STEP projects for Broward County WWS minutes, and estimates of probable cost including quantity takeoffs.

Project Experience

KA17-03 District 3A Septic Tank Elimination Program Area 3A-H (R1404111P1). Keith and Associates Inc. CMA provided professional engineering services to Broward County for the design, technical specifications, permitting and coordination for the Septic Tank Elimination Program for this project. CMA assisted with the collection of survey data, field investigations, engineering design, coordination with private property owners, coordination and permitting with the Florida Department of Transportation (FDOT), Broward County Environmental Protection and Growth Management Department and the City of Dania Beach. The proposed improvements within Griffin Road required the design of conflict structures around FDOT's stormwater system. The improvements also required CMA to perform groundwater modeling to ensure dewatering during construction would not affect contaminated sites adjacent to the project site.

STEP - Hillsboro Pines Improvements BP3 (RFP R1404111P1). Keith and Associates Inc. CMA is providing professional engineering services to Broward County for the design, technical specifications, permitting and construction procurement required to complete the Hillsboro Pines Improvements project. The Hillsboro Pines Improvement Project is a Septic Tank Elimination Project (STEP) for BCWWS. In addition to the design, permitting and construction services CMA provided for this project, the CMA Team also provided topographic survey, sub-surface utility engineering including test holes and utility designation, geotechnical investigation, and coordination with regulatory permitting agencies, including the City of Coconut Creek and coordination with property owners.

Broward County UAZ Water Sewer Improvements 113B, Lauderdale Lakes, FL. The UAZ 113B project included the improvements to the existing water distribution and sanitary sewer system within the City of Lauderdale Lakes, along with restoration of surface areas disturbed for the construction of the improvements. The project had a total area of 350 acres and included the installation of 42,700 linear feet of gravity sewer, 1,500 linear feet of forcemain, and 66,200 linear feet of watermain. The total project included 110,400 linear feet of pipe. Pipe installation took place along local city roads, as well as County and FDOT jurisdiction roadways including NW 31st Avenue, West Oakland Park Boulevard, and US-441. The existing water main consists of asbestos cement, cast iron, ductile iron, galvanized steel, and polyvinyl chloride pipe ranging from 2" - 24" in diameter size. The sanitary sewer consists of vitrified clay, fold and form liner, cured in place liner, and ductile

ductile iron pipe ranging from 8" – 18" in diameter size. The force main consists of asbestos cement, cured in place liner, ductile iron, and polyvinyl chloride pipe ranging from 6" – 8" in diameter size. County lift station 50M1 was rehabilitated as part of this project. The restoration of roadways, sidewalks, driveways, and landscape areas will need to be performed as needed for water and sanitary sewer improvement construction. CMA performed CEI services during construction and the project is currently in the close-out phase.

Broward County UAZ Water Sewer Improvements 110/111, Lauderdale Lakes, FL. The UAZ 110/111 project include the improvements to the existing water distribution and sanitary sewer system within the City of Lauderdale Lakes and the City of Oakland Park, along with restoration of surface areas disturbed for the construction of the improvements. The project had a combined total area of 479 acres and included the installation of 57,400 linear feet of gravity sewer, 4,400 linear feet of forcemain, and 72,100 linear feet of watermain. The total project included 133,900 linear feet of pipe. Pipe installation took place along local city roads, as well as County and FDOT jurisdiction roadways including West Oakland Park Boulevard and US-441. The existing water main consists of asbestos cement, cast iron, ductile iron, galvanized steel, and polyvinyl chloride pipe ranging from 2" - 24" in diameter size. The sanitary sewer consists of vitrified clay, fold and form liner, cured in place liner, and ductile iron pipe ranging from 8" – 18" in diameter size. The force main consists of asbestos cement, cured in place liner, ductile iron, and polyvinyl chloride pipe of 12" in diameter size. The restoration of roadways, sidewalks, driveways, and landscape areas will need to be performed as needed for water and sanitary sewer improvement construction. The project is currently under construction and CMA is performing construction administration services.

Broward County UAZ Water Sewer Improvements 113A, Lauderdale Lakes, FL. The UAZ 113A project include the improvements to the existing water distribution and sanitary sewer system within the City of Lauderdale Lakes, along with restoration of surface areas disturbed for the construction of the improvements. The project had a total area of 207 acres and included the installation of 22,000 linear feet of gravity sewer, 5,800 linear feet of forcemain, and 29,800 linear feet of watermain. The total project included 57,600 linear feet of pipe. Pipe installation took place along local city roads, as well as County and FDOT jurisdiction roadways including West Oakland Park Boulevard and US-441. The existing water main consists of asbestos cement, cast iron, ductile iron, galvanized steel, and polyvinyl chloride pipe ranging from 2" - 18" in diameter size. The sanitary sewer consists of vitrified clay, fold and form liner, cured in place liner, and ductile iron pipe ranging from 8" – 12" in diameter size.

Jessica Diaz, P.E.
Project Engineer

Hire Date: 08/22/2016
Years with other firms: 0

Education
Bachelor of Science, Civil Engineering, University of Florida, 2016
Master of Science, Civil Engineering, University of Florida, 2019
Associate of Arts, Engineering, Broward College, 2012

Registration
Professional Engineer, Florida, 92130, 2021

Professional Affiliations
American Society of Civil Engineers

Ms. Diaz serves as an Associate Engineer for CMA's engineering team and has experience working on various aspects of civil engineering design, plan preparation, permitting efforts, and construction oversight while leading segments of the project design. Her experience includes utility coordination; performing modeling and simulation; site grading; pavement analysis; water distribution system; sanitary sewer collection system; lift station design; stormwater management system and drainage analysis; roadway design; maintenance of traffic and phasing; pavement marking; signage; and erosion control. She also prepares meeting agendas, meeting minutes, and estimates of probable cost including quantity takeoffs. Her main focus since joining the firm has been utility improvement projects for Broward County Water and Wastewater Services, including water and sewer design and permitting.

Project Experience

Broward County UAZ Water Sewer Improvements 113A, Lauderdale Lakes, FL. The UAZ 113A project include the improvements to the existing water distribution and sanitary sewer system within the City of Lauderdale Lakes, along with restoration of surface areas disturbed for the construction of the improvements. The project had a total area of 207 acres and included the installation of 22,000 linear feet of gravity sewer, 5,800 linear feet of forcemain, and 29,800 linear feet of watermain. The total project included 57,600 linear feet of pipe. Pipe installation took place along local city roads, as well as County and FDOT jurisdiction roadways including West Oakland Park Boulevard and US-441. The existing water main consists of asbestos cement, cast iron, ductile iron, galvanized steel, and polyvinyl chloride pipe ranging from 2" - 18" in diameter size. The sanitary sewer consists of vitrified clay, fold and form liner, cured in place liner, and ductile iron pipe ranging from 8" – 12" in diameter size. The force main consists of asbestos cement, cured in place liner, ductile iron, and polyvinyl chloride pipe ranging from 6" – 16" diameter size. County lift station 50N was rehabilitated as part of this project. The restoration of roadways, sidewalks, driveways, and landscape areas will need to be performed as needed for water and sanitary sewer improvement construction. The project is currently under construction and CMA is performing construction administration services.

Broward County UAZ Water Sewer Improvements 113B, Lauderdale Lakes, FL. The UAZ 113B project included the improvements to the existing water distribution and sanitary sewer system within the City of Lauderdale Lakes, along with restoration of surface areas disturbed for the construction of the improvements. The project had a total area of 350 acres and included the installation of 42,700 linear feet of gravity sewer, 1,500 linear feet of forcemain, and 66,200 linear feet of watermain. The total project included 110,400 linear feet of pipe. Pipe installation took place along local city roads, as well as County and FDOT jurisdiction roadways including NW 31st Avenue, West Oakland Park Boulevard, and US-441. The existing water main consists of asbestos cement, cast iron, ductile iron, galvanized steel, and polyvinyl chloride pipe ranging from 2" - 24" in diameter size. The sanitary sewer consists of vitrified clay, fold and form liner, cured in place liner, and ductile iron pipe ranging from 8" – 18" in diameter size. The force main consists of asbestos cement, cured in place liner, ductile iron, and polyvinyl chloride pipe ranging from 6" – 8" in diameter size. County lift station 50M1 was rehabilitated as part of this project. The restoration of roadways, sidewalks, driveways, and landscape areas will need to be performed as needed for water and sanitary sewer improvement construction. CMA performed CEI services during construction and the project is currently in the close-out phase.

Broward County UAZ Water Sewer Improvements 110/111, Lauderdale Lakes, FL. The UAZ 110/111 project include the improvements to the existing water distribution and sanitary sewer system within the City of Lauderdale Lakes and the City of Oakland Park, along with restoration of surface areas disturbed for the construction of the improvements. The project had a combined total area of 479 acres and included the installation of 57,400 linear feet of gravity sewer, 4,400 linear feet of forcemain, and 72,100 linear feet of watermain. The total project included 133,900 linear feet of pipe. Pipe installation took place along local city roads, as well as County and FDOT jurisdiction roadways including West Oakland Park Boulevard and US-441. The existing water main consists of asbestos cement, cast iron, ductile iron, galvanized steel, and polyvinyl chloride pipe ranging from 2" - 24" in diameter size. The sanitary sewer consists of vitrified clay, fold and form liner, cured in place liner, and ductile iron pipe ranging from 8" – 18" in diameter size. The force main consists of asbestos cement, cured in place liner, ductile iron, and polyvinyl chloride pipe of 12" in diameter size. The restoration of roadways, sidewalks, driveways, and landscape areas will need to be performed as needed for water and sanitary sewer improvement construction. The project is currently under construction and CMA is performing construction administration services.

Broward County UAZ 303, 314 & 318 Bid Pack 1, Dania Beach, FL. The Broward County UAZ 303, 314, 316 and 318 project was part 1 of what was projected to be an $8.8 million project replacing existing water and providing sanitary sewer for County Service Areas in the City of Dania Beach, just east of State Road 7, north and south of Griffin Road. The main technical components included replacing 12-inch water mains on County roads, replacing the residential water distribution system, providing sanitary sewer systems to eliminate existing septic tanks, and rehabilitating or installing new lift stations. In order to obtain the necessary information, site visits concentrated on contacting residents to determine the location of existing tanks. A great deal of coordination was required to accommodate developer projects, tie into County projects and obtain easements for crossing private properties. GIS was used to keep track of all ongoing projects, log pertinent site information, determine the projected flow rates, track questions from residents of the area and track responses from utility companies regarding their existing facilities. The design of these improvements began in January 2009 and construction has been completed. Chen Moore and Associates also performed construction administration for this project.

District 3C Water System Improvements and Septic Tank Elimination - Bid package 1. CMA, as a subconsultant is providing engineering services necessary for design, permitting, bidding/award, on the new Sanitary Sewer System to serve Utility Analysis Zones 359, 360, 361, 364, 365 and 366 in the District 3C Service Area in Broward County. The project involves replacing approximately 202,000 linear feet of existing water mains that are at the end of their design life and installing a new Sanitary Sewer System to eliminate septic tanks in UAZ's 359, 360, 361, 364, 365 and 366.

CMA will prepare the design of the new sanitary sewer system inclusive of Lift Stations and a 2 mile force main. This will include the evaluation of existing conditions, review of preliminary process design criteria, phasing, preparation of preliminary design level opinion of construction cost, preparation and submittal of a draft and final schematic design/report and coordination/review.

Matthew O'Rourke
Senior Construction Specialist

Hire Date: 01/14/2019
Years with other firms: 12

Certifications
FDOT Maintenance of Traffic – Advanced Level
FDOT CTQP – Concrete, Earthwork, Aggregate, LBR Technician
A.C.I. – Concrete & Aggregate Testing Technician
Nuclear Safety HAZMAT Certificate
Radiation Safety Officer
U.S.A.C.E. – Contractor Quality Control Manager
FDOT Project Administrators Construction Academy 2011

Matthew O'Rourke serves as CMA's Senior Construction Specialist with extensive experience with engineering construction projects in Florida. His responsibilities include coordination and monitoring of construction activities for public and private sectors, and serves as liaison to owners, contractors, subcontractors, residents, and governmental agencies. Additional responsibilities include the review and processing of change orders, progress payments and construction related reports, and representing the owners and engineers at pre-construction and various other meetings. He provides construction site observation. He also analyzes and approves any deviations from construction documents requested by the contractor to minimize potential delays. In addition, he reviews as-builts for accuracy, prepares punch list items, attends final walk-throughs, and assists in project closeouts. Additional responsibilities include constructability review and value engineering. Mr. O'Rourke will serve as a construction specialist for this contract.

Project Experience

Broward County UAZ 110/111 & 113 Water Sewer Improvements 110/111 (RFP No. R1356803P1) - The Water and Sanitary Sewer Improvements for the UAZ 110/111 & 113 Project will include the improvements to the existing water distribution system, sanitary sewer system, and transmission systems within the project area along with the restoration of surface areas disturbed for the construction of said improvements. All projects combined a total area of over 1000 acres within multiple Cities. The existing system being replaced consists of approximately 168,100LF of water mains, 122,100 LF of sanitary sewer mains and 23,600 LF force main. The existing water main consists of asbestos cement, cast iron, ductile iron, galvanized steel, polyvinyl chloride pipe ranging from 2" - 24" in diameter size. The sanitary sewer consists of vitrified clay, fold and form liner, cured in place liner and ductile iron pipe ranging from 8" – 15" in diameter size. The force main consists of asbestos cement, cured in place liner, ductile iron and polyvinyl chloride pipe ranging from 6" – 16" in diameter size. There are 8 Broward County lift stations in these UAZ areas and 1 private lift station which sanitary sewer systems will need to connect to. Two of these stations will need rehabilitation/replacement. The restoration of roadways, sidewalks, driveways, and landscape areas will need to be performed as needed for water and sanitary sewer improvement construction.

CMA 19-02 District 2 - 12" Water Main Aerial Crossing - Broward County Project 104461 - Contract PNC2117097P1_1 - PO WWE2000011. This project includes the installation of a new 12-inch DIP water main aerial crossing along NE 36th Street over the Captain Knight Bayou Canal / South Grand Canal just west of NE 26th Avenue within the City of Lighthouse Point. The aerial crossing will be installed on 4 new square prestressed concrete batter pile supports within the canal along with associated pile caps. The aerial crossing will also include the installation of an automatic air release valve and 2 fan guards. The new 12-inch DIP water main segment will be interconnected to the existing 12-inch water main on each side of the canal along NE 36th Street. The work also includes the replacement of 5 existing water services that will be connected to the new 12-inch DIP water main. Chen Moore and Associates (CMA) will provide construction services on behalf of Broward County Water and Wastewater Services (BCWWS).

CMA19-04 Lift Station 50M Rehabilitation - Broward County Project 9253-100977 - Contract PNC2117097P1_1 - PO WWE2000016. Lift Station #50M is owned and operated by Broward County Water and Wastewater Services (BCWWS) and is located within the UAZ113 area in the City of Lauderdale Lakes. The existing Lift Station #50M had previously encountered flow issues during rainfall events due to undersized pumps, which were unable to overcome the increased system pressures during these events. CMA was retained for design, permitting, and construction services for the rehabilitation of the existing Lift Station #50M. CMA was also responsible for conducting a hydraulic analysis of the sanitary force main network to select appropriate pumps and to recommend force main improvements downstream of Lift Station #50M. The improvements include the rehabilitation of the existing wet well, installing new submersible pumps, a new valve vault, new valves, new bypass piping connections, new instrumentation, new control panels, new telemetry, and associated sanitary piping to connect to the existing gravity sewer and existing force main. CMA provided site investigation, design services, regulatory permitting, and construction services on behalf of Broward County Water and Wastewater Services (BCWWS) on this project.

Septic Tank Elimination Area 2-F - D2 Sanitary Sewer Collection System Septic Tank Elimination Area 2 with Broward County - RFP No. PNC2117589P1 - Thompson & Associates Project 18057. As a subconsultant to Thompson and Associates, CMA will provide design services and regulatory permitting for the design of a new sanitary sewer submersible lift station, in addition to regulatory permitting and quality assurance, quality control of the proposed sanitary sewer improvements within an industrial area called Septic Tank Elimination Area 2-F D2 for Broward County Water and Wastewater Services. CMA is providing site investigation including and sanitary flow analysis and design services including regulatory permit submittal. CMA will also assist with geohydraulic testing services and preparation of record drawings during construction.

Manuel Caamano.
Senior Construction Specialist

Hire Date: 10/16/2017
Years with other firms: 15

Certifications
FDOT Advanced MOT
FDOT Concrete Field Inspector Specifications
FDOT Earthworks Level 1
Certificate in Engineering
WZTC Certified (NYSDOT)
OSHA 10 HR
NICET Level II

Mr. Caamano serves as CMA's Construction Specialist with extensive experience with engineering construction projects in Florida. His responsibilities include coordination and monitoring of construction activities for public and private sectors, and site development for residential, commercial, and industrial use projects. He serves as liaison to owners, contractors, subcontractors, residents, and governmental agencies. Additional responsibilities include overseeing the review and processing of change orders, progress payments and construction related reports, and representing the owners and engineers at pre-construction meetings and other various meetings. Some of the construction administrative services that he covers includes regular construction site observation, walk-throughs, review of as-builts, and project close-out.

Project Experience

CMA19-11 Sample Road Subaqueous Water Main Crossing - Contract PNC2117097P1_1 - PO WWE2100053_1 - Project No. 104461. Broward County Water and Wastewater Services (BCWWS) retained a contractor to construct the District 2 Sample Road Water Main Aerial Crossing Project under Solicitation PNC2118654C1 ("the Project"). Under the original bid documents, the Project was to include the installation of a new aerial water main crossing along Sample Road over the Captain Knight Bayou Canal / South Grand Canal just west of NE 26th Avenue within the City of Lighthouse Point. The aerial water main crossing was to be installed on 4 new square prestressed concrete batter pile supports to be driven within the canal adjacent to an existing bridge. During the right of way permitting by the selected contractor, the City of Lighthouse Point would not issue a right of way permit for this work due to concerns about the potential impact of the pile driving on the stability of the adjacent bridge, which is in poor condition. CMA was hired to provide an alternative design and horizontal directional drilling (HDD) was selected as the best alternative for this project. CMA provided design and permitting services for the installation of a new subaqueous water main crossing along Sample Road over the Captain Knight Bayou Canal / South Grand Canal just west of NE 26th Avenue within the City of Lighthouse Point. The proposed water main was approximately 8 inches in internal diameter (ID). The water main was installed via horizontal directional drilling (HDD) method. Pipe dimension ratio (DR) was determined by CMA during design. The proposed 8-inch water main was connected to the existing 12-inch watermain on Sample Road. The design took into consideration several existing utilities, including electrical lines, forcemain, gravity sewer, drainage pipe, watermains and telecommunication lines. The HDD was designed to a depth of 50 feet to avoid existing utilities installed via HDD and the bridge sheet piling which was installed to a depth of 40 feet. The line was installed via wire line tracking to accurately avoid bridge pilings and existing infrastructure.

Emergency Bypass 48" Forcemain, Ft. Lauderdale, FL. CMA was responsible for the design, permitting, and construction observation of the replacement of the City of Fort Lauderdale's main transmission line going into the wastewater treatment plant. The new line consists of more than 22,000 linear feet of new pipe which will be installed via 11 horizontal directional drills (HDD) that range between 1,200 and 3,400 linear feet each to a depth of up to 70 feet. Some drills consisted of large diameter reverse compound curves that required detailed route analysis including load and stress calculations, and inadvertent return analysis to ensure the pipe could be constructed within the project constraints. The new force main is mostly 48" HDPE pipe with some ductile iron pipe sections. The project route includes sensitive ecosystems

including the crossing of South Middle River which require Benthic surveys for the subaqueous crossing, dewatering calculations, and permitting for construction within a quarter mile of contaminated areas with high-water table being close to the coastline. Crossing of the intracoastal (US Federal Waters) requires permitting through the US Army Corps of Engineers and the Department of Environmental Protection. Chen Moore provided survey, subsurface utility exploration, environmental studies, geotechnical engineering, electrical engineering, M.O.T. design, civil engineering, permitting and CEI services. There is a total of nine (9) jurisdictional agencies for this project. The project was an emergency project for the City of Fort Lauderdale which was fast tracked to be completed (design, permitting, and construction) in 14 months. The project was a Design-Build project led by Murphy Pipeline Contractors with CMA as the lead Consultant. It was also named the ASCE Florida Section's 2022 Project of the Year in July 2022, ACEC Florida Section 2022 Pipeline Project of the Year and the "National Recognition Award" at the 2022 ACEC National Conference in Washington DC.

Ft Lauderdale FM Rehab, HDD & Swageline (1-4), Ft. Lauderdale, FL. CMA was the prime consultant for the 30" Emergency Force Main Rehabilitation project in the City of Fort Lauderdale. This innovative design-build project, led by Murphy Pipeline Contractors (MPC), was undertaken to provide both mainline force main replacement for aging infrastructure and to provide additional redundancy in case of future issues. The contract was divided into four (4) phases within the City of Fort Lauderdale. Phase 1 included a horizontal directional drill (HDD) subaqueous crossing under Tarpon River and swageline rehabilitation in upland areas, phase 2 included HDD and open cut for interconnects on Himmarshee Street near downtown, Phase 3 entailed two long HDD installations and phase 4 had over 6,000 linear feet of close compression fit lining. The nearly 22,000 linear feet of pipeline was rehabilitated through a combination of swagelining, horizontal directional drilling, and traditional open cut installation over thefour phases. CMA provided planning, design, permitting, and engineering services during construction. Environmental compliance, a subaqueous crossing including benthic surveys, public involvement, and maintenance of traffic in the busy Sistrunk and Himmarshee Business Districts were some of the additional project complexities. Permitting and utility easements through FDEP and the US Army Corps of Engineers were required for the crossing of Tarpon River. CMA also provided dewatering permitting and groundwater modeling due to contaminated sites within quarter mile of the projects. The project from design including permitting, construction and certification was completed in 9 months. This project was awarded the 2019 Project of the Year by the ASCE Broward Branch and 2020 ACEC Florida Section Pipeline/Utility project of the year.

F. Firms Past Experience

David Mancini and Sons Similar Experience

YEAR	PROJECT DESCRIPTION	OWNER	PIPE DIAMETER	PIPE MATERIAL	PIPE USE	FOOTAGE	DETAILS
2015	Crespi Blvd Improvements at Miami Beach	City of Miami Beach Bruce Mowry, P.E. Mobile (386) 262-4943 bmowry@att.net	8-Inch	DIP	WM	1,800	Installation of 8" Water Main along Crespi Blvd from 85TH Street to 79TH Terrace
			18-Inch - 72-Inch	RCP	STRM	1,600	Installation of Storm Sewer Collection System and 40,000 GPM Storm Sewer Pump Station
2016	Design-Build 54-Inch Redundant Force Main at Miami Beach.	City of Miami Beach Bruce Mowry, P.E. Mobile (386) 262-4943 bmowry@att.net	54-Inch	HDPE	FM	4,400	54" Force Main from Pump Station # 1 (11TH Street and Jefferson Av) to Washington Avenue and 1ST Street. World Record Directional Drill
			54-Inch	PCCP	FM	1,111	Value Engineering Saved $4 M and delivered Design Build within Budget
			8-Inch	DIP	WM	1,060	installation of 8" DI Water Main, fittings, service connections and fire hydrants
			18-Inch - 24-Inch	PVC - C900	Gravity	750	Installation of 18-Inch and 24-Inch new gravity sewer system along 11TH Street from Euclid Ct to Jefferson Ct
2017	HDD INSTALL 16" FM & 20" WM AT E. LAS OLAS BLVD DESIGN AND BUILD	City of Fort Lauderdale Rick Johnson Mobile (954) 258-3862 rjohnson@fortlauderdale.gov	20-Inch / 16-Inch	HDPE/PVC	WM	1,881	Installation of 20-inch Water Main under the Intracoastal Waterway (icw) utilizing High Density Polyethylene Pipe installed via Horizontal Directional Drilling (HDD) and the connections to existing Water Mains via open cut at both sides of the Waterway.
			16-Inch	HDPE	FM	1,226	16-inch diameter Force Main under the Intercoastal Waterway utilizing High Density Polyethylene Pipe installed via HDD.
2017	Water Main replacement along 63RD Street from LaGorce Dr to Indian Creek Drive	City of Miami Beach Bruce Mowry, P.E. Mobile (386) 262-4943 bmowry@att.net	20-Inch - 8-Inch	HDPE & DIP	WM	01/05/16	Water Main replacement along 63 st between LaGorce and Indian Creek Dr - 660 LF of 20" DIP (Open-cut), 280 LF of 20" HDPE (Aerial Crossing) and 850LF of 20" HDPE HDD under Intercoastal Waterway & 480 LF of (6"-8") DIP open cut.
2017	Construction of 48-Inch PCCP Water Transmission Main for Area N.	WASD Alexis Valdes Mobile (786)299-9008 alexis.valdez@miamidade.gov	48-Inch	PCCP	WM	15,300	Installation of 15,000 LF of 48" PCCP Water Main Transmission Line long SW 117TH Avenue from SW 72ND Street to SW 104TH Street.
2017	11th ST IMPROVEMENTS FLAMINGO PARK NEIGHBORHOOD PHASE II	City of Miami Beach Bruce Mowry, P.E. Mobile (386) 262-4943 bmowry@att.net	36-Inch	PVC-C-900	WM, FM, Gravity	42,962	Design and Construction of about 2000 LF of Water Main, 1600 LF of Sanitary Sewer main, 230 LF of 36" Force Main, 2000 lf of 18" to 36" Drainage, Traffic Signal replacement on 11th and Pennsylvania Av, new Street Light system and Landscaping.
2017	Replacement of Existing 54-Inch Sanitary Sewer Force Main at CentralDistrict Wastewater Treatment Plant on Virginia Key	WASD Gary Clark Mobile (305) 205-6980 gary.clarke@miamidade.gov	60-Inch	PCCP	FM	2,700	Included bypass of entirety of City Miami Beach's Sewage and connection to Grit Chamber. Included connections to Hobas Tunnel & vertial PCCP pipe installation in Tunnel Shafts

YEAR	PROJECT DESCRIPTION	OWNER	PIPE DIAMETER	PIPE MATERIAL	PIPE USE	FOOTAGE	DETAILS
2018	Design-Build 48-Inch PCCP Force Main along North Miami Avenue	WASD James Ferguson, P.E. Mobile (786) 552-8756 james.ferguson@miamidade.gov	48-Inch	PCCP	FM	13,000	Design Build through Urbon Corridor(s) and utility infested Midtown Miami, Miami Design District, and Wynwood.
2018	Construction of 42-Inch Water Main & 10" Force Main from Biscayne Blvd to the Port of Miami and Construction of Sanitary Pump Station 9141	WASD Gary Clarke Mobile (305) 205-6980 Gary.Clarke@miamidade.gov	42-Inch	DIP	WM	9,740	Installation of 42" Water Main from Biscayne Blvd to the new Cruise Terminal A
			30 Inch	HDPE	WM	4,000	Installation of twins 30" HDPE Water Main via Horizontal Directional Drill under Biscayne Bay.
			10-Inch	PVC-C900	FM	5,000	Installation of new 10" Force Main from Biscayne Blvd to New Sanitary Lift Station # 9141
			12-Inch	HDPE	FM	4,000	Installation of twins 12" HDPE Force Main via Horizontal Directional Drill under Biscayne Bay.
2019	Emergency pipe repair of a 72-Inch and 54-Inch Force Main at Biscayne Blvd and NE 156 Street	WASD Alexis Valdes Mobile (786)299-9008 alexis.valdez@miamidade.gov	72-Inch and 54-Inch	PCCP	FM		72-Inch & 54-Inch Linestops and 72-Inch & 54-Inch Repair Asemblies. Unknown Interior Liner in pipe cased emergency bypass operation and repair "in-the-wet".
2019	Emergency Linestops and Bypass on 48-Inch PCCP Force Main crossing the Oleta River at Biscayne Blvd and NE 163 Street	WASD David Vazquez, P.E. Mobile (786) 552-4447 david.vazquez@miamidade.gov	48-Inch	RCP	FM	1,000	2-48-Inch Linestops and 1,000 LF Bypass
			42-Inch	HDPE HDD	FM	800	Emergency Design Build 800 LF HDD and 1,000 OPEN CUT Replacement Forcemain
			42-Inch	HDPE SLIPLINE	FM	800	Slipline
2019	REGIONAL MASTER METER IMPROVEMENTS BID PACK 1 PO#WWE1900051	BROWARD COUNTY CDM SMITH TIMOTHY O'NEIL , P.E. (954) 319-3076 oneiltj@cdmsmith.com	24-Inch	PVC - C900	FM	450	INSTALLATION OF 24" REGIONAL MASTER METER, INCLUDING 30" LINESTOPS WITH 24" BYPASS, 30" AND 24" PIPING, ELECTRICAL SERVICE, TELEMETRY SYSTEM, START-UP, TESTING AND RESTORATION ASSOCIATED.
2019	Emergency 42-Inch Water Main Repair near Fort Lauderdale Executive Airport	City of Fort Lauderdale Rick Johnson Mobile (954) 258-3862 rjohnson@fortlauderdale.gov	42-Inch	PCCP	RWM	20	42-Inch PCCP Kit Repair Assembly
2020	Country Club Village Water Main Infrastructure Upgrades Project # 2019-029	City of Boca Raton Lauren Burack Mobile (561) 866-7193 lburack@myboca.us	8"-24"	PVC-C900 & HDPE	WM	24,000	Installation of approx. 24,000 LF of 4" - 24" Water Main in Country Club Village Neighborhood and along SW 18th Street, 24" Fusable PVC HDD under I-95 and 344 New Water Services and backto front transfers..
2020	Emergency 54" Sewer Reduntant Force Main	City of Fort Lauderdale Rick Johnson Mobile (954) 258-3862 , rjohnson@fortlauderdale.gov	54-Inch	HDPE	FM	3,800	Emergency Design Build 13,000 LF HDD 2,000 Open Cut - World Record Directional Drill

Chen Moore and Associates Similar Experience

PROJECT	DIAMETER	LENGTH	MATERIAL	PIPE USE	OWNER
City Center 9A & 9B (WM)	20-inch	9,820	DIP	Watermain	Miami Beach
Park Dr 16 inch Water Main Replacement	20-inch	5,300	DIP	Watermain	Bal Harbour Village
NE 35th Avenue Water Main Replacement	20-inch	3,450	HDPE	Watermain	North Miami Beach
20" Watermain Under SR 441	20-inch	7,800	DIP	Watermain	BCWWS
30" Emergency FM	30-inch	22,000	HDPE / PVC	Forcemain	Fort Lauderdale
48" Redundant FM	48-inch	22,000	HDPE / DIP	Forcemain	Fort Lauderdale
Pump Station B-4 Forcemain	28-inch	5,100	HDPE	Forcemain	Fort Lauderdale
Bayshore Drive FM Replacement	20-inch	3,300	HDPE	Forcemain	Fort Lauderdale
NW 13st Forcemain	30-inch	3,100	HDPE	Forcemain	Fort Lauderdale
South Middle River Forcemain	16-inch	2,193	HDPE	Forcemain	Fort Lauderdale
30" WM Relocation P.S. A-16 Upgrade	30-inch	1,200	HDPE	Watermain	Fort Lauderdale
Lift Station #11 - 24" Forcemain	24-inch	4,100	HDPE	Forcemain	Wilton Manors
Las Olas Phase II Forcemain	16-inch	3,100	HDPE	Forcemain	Fort Lauderdale
University Drive Watermain	16 & 20-inch	4,100	HDPE	Watermain	Davie
Blue Heron Intracoastal Forcemain	20-inch	4,100	HDPE	Forcemain	Riviera Beach
Blue Heron Intracoastal Watermain	20-inch	3,500	HDPE	Watermain	Riviera Beach
South County RCW Ph 1a	24-inch	15,250	DIP / HDPE	Reuse water	Palm Beach County
South County RCW Ph 1b	30-inch	31,600	DIP / HDPE	Reuse water	Palm Beach County
South Bermuda Parkway Reuse WM	24-inch	9,500	DIP / PVC	Reuse water	Toho Water Authority
Lakewood Ranch	16-inch	17,500	DIP / PVC	Reuse water	Braden River Utilities
Phase 1 - Ameglio WM	20-inch	19,657	DIP	Watermain	IDAAN
Phase 2 - Chorrillo, St. Ana, San Francisco, Be	8, 24, 30, 36, 42-incl	18,214	DIP	Watermain	IDAAN
Phase 4 - Chorrera WM	30-inch	20,835	DIP	Watermain	IDAAN
Phase 5 - Ciudad Radial hasta Tocumen WM	24-inch	17,126	DIP	Watermain	IDAAN

PUMP STATION B-4 REDUNDANT FORCE MAIN

CLIENT
City of Fort Lauderdale

KEY PERSONNEL
Daniel Davila, P.E.
David Castro, P.E.
Vincent Logcino
Manuel Caamano
David Mancini Jr.
Fabio Angarita

PROJECT START AND END DATE
June 2021 - January 2022

DESIGN COST, CONSTRUCTION COST
Design: $205,000 - Construction: $1,440,000

REFERENCE CONTACT INFORMATION
Krishan Kandial
Phone: 954-828-5064
Email: Dlizarazo@gfnet.com

SCOPE OF WORK
CMA was the lead engineer and DMSI was the lead contractor for the Design/Build of the Pump Station b-4 Redundant Forcemain for the City of Fort Lauderdale. The forcemain was an important part of the City's back bone sewer system that carries water to the wastewater treatment facility. The project entails the design, permitting and CEI of approximately 5,400 linear feet of 30-inch HDPE forcemain. The project was fast-tracked and it entailed three horizontal directional drills with 70% of the project to be trenchless.

WATER MAIN AND FORCE MAIN INTRACOASTAL WATERWAY CROSSINGS AT LAS OLAS BLVD

CLIENT
City of Fort Lauderdale

KEY PERSONNEL
Daniel Lizarazo, City of FLL ProjectManager
David Mancini Jr.

PROJECT START AND END DATE
2016 - 2017

CONSTRUCTION COST
Construction: $3,038,406

REFERENCE CONTACT INFORMATION
Daniel Lizarazo
Phone: 954-828-6982
Email: Dlizarazo@gfnet.com

SCOPE OF WORK
This project consists of (1) 20 inch nominal diameter water main utilizing HDPE installation via horizontal directional drilling in the crossing of the Intracoastal Waterway. (1) 16-inch nominal diameter force main HDPE installation via horizontal directional drilling in the crossing of the ICW. Along with cut and capping of the existing 16-inch water main on the north side of Las Olas Blvd. Bridge at both sides of the ICW and connecting all proposed piping to the existing piping on-shore utilizing 16-inch PVC pressure pipe meeting AWWA C905 standard.

This project was the City's first Design Build. Delivered on time and under budget; Including strict FIND deadlines and acceleration required for City's cherished annual Boat Show.

WATER MAIN INSTALLATION PROJECT WEST 63RD STREET (SR 907)

CLIENT
City of Miami Beach

KEY PERSONNEL
David Mancini Sr.

PROJECT START AND END DATE
2016 - 2017

CONSTRUCTION COST
Construction: $1,661,179.52

REFERENCE CONTACT INFORMATION
Bruce Mowry, Stantec
Phone: 305-673-7080
Email: Bruce.Mowry@Stantec.com

SCOPE OF WORK
This project consists of a Water Main Replacement along the city's major causeway of 63rd Street between La Gorce Dr. and Indian Creek Dr. The installation of approximately 1,100 LF of 20-inch water main pipe of horizontal directional drilling, 210 LF of 12 inch, 280 LF of 8-inch , 200 LF of 6-inch of ductile iron pipe and fittings, relocation and replacement of one fire hydrant, traffic control and all ancillary and miscellaneous work as per plan and specifications.

RICKENBACKER CAUSEWAY 20" WATER MAIN VIA HDD, MIAMI-DADE COUNTY FOR MDWASD

CLIENT
MDWASD and Kiewit Infrastructure South Co.

KEY PERSONNEL
David Mancini Sr.

PROJECT START AND END DATE
2013 - 2014

CONSTRUCTION COST
Construction: $1,860,000

REFERENCE CONTACT INFORMATION
Frank Di Cilio, Kiewit Infrastructure South Co.
Phone: 813-241-7370
Email: Frank. Digilio@kiewit.com

SCOPE OF WORK
Project entailed the installation of approximate 4,000 LF of 20" Water Main (HDPE) along the South side of the Old Rickenbacker Bridge via Horizontal Directional Drill (HDD) for Miami-Dade Water and Sewer Dept. Scope of Services Provided: Design of the HDD was provided and all construction services related to furnishing and installing all pipe and fittings, fusing and testing the HDPE, installation via HDD, and all connections. The removal of the existing 12" water main pipe from under the old bridge was also performed.

RIO VISTA EMERGENECY 54" FORCE MAIN REPLACEMENT DESIGN BUILD

CLIENT
City of Fort Lauderdale

KEY PERSONNEL
David Mancini Sr.
Richard Mancini

PROJECT START AND END DATE
2020 - 2021

CONSTRUCTION COST
Construction: $29,908,007

REFERENCE CONTACT INFORMATION
Scott Teschy
Phone: 954-995-5552
Email: STeschy@fortlauderdale.gov

SCOPE OF WORK
The methods of installation open cut along SE 9th Ave and SE 12 ST and directional drilling for the Tarpon River crossing. The final alignments and lengths determined by existing site conditions was, were. The Record Drawings of a Fixed Bridge were unavailable with unknown Pile Depths. Our Design Build team was successful in delivering this emergency HDD with compound turns to circumvent the bridge piles and kept the 54-inch hdpe within the 8' right of way, just outside the bridge piles. Such included an "Intersect HDD Technique" where two different pilots were utilized and intersected in the middle of the bore-path. Such ensured a successful installation. Project was emergency procured, permitted, designed, installed, and PLACED IN SERVICE successfully, ahead of it's already aggressive schedule.

PORTMIAMI - 42" WATER MAIN - 30" HDD - 12" HDD

CLIENT
Miami-Dade County WASD

KEY PERSONNEL
Fabio Angarita

PROJECT START AND END DATE
2018 - 2019

CONSTRUCTION COST
Construction: $80,884,160.89

REFERENCE CONTACT INFORMATION
Gary Clarke
Phone: 305-205-6980
Email: Gary.Clarke@miamidade.gov

SCOPE OF WORK
The project consists of furnishing and installing approximately 9,740 LF of 42-inch DIP and fittings; 42-inch mechanical joint resilient seated wedge gate valve; Venturi meter, including valve and fittings, manhole frame and cover, valve box quick disconnect and concrete support slab; making an inline connection to a proposed 36-inch water main at Biscayne Boulevard; approximately 260 LF of micro tunneling under existing FEC railroad right-of-way, with steel casing, drill shafts, and proposed area of construction; approximately 4,000 LF of twin 30-inch HDPE Water Main & 4,000 LF of twin 12-inch HDPE Force Main horizontal directional drilling subaqueous channel crossing along Biscayne Bay from Bayside to Port of Miami.

Project was delivered on-time ahead of the Massive Crews ships arriving to PortMiami for the first time.

54" HDPE FORCE MAIN ALONG EUCLID AVENUE

CLIENT
City of Miami Beach

KEY PERSONNEL
David Mancini Sr.
David Mancini, Jr.
Fabio Angarita

PROJECT START AND END DATE
2015 - 2018

CONSTRUCTION COST
Construction: $17,822,731

REFERENCE CONTACT INFORMATION
Bruce Mowry, Stantec
Phone: 305-673-7080
Email: Bruce.Mowry@Stantec.com

SCOPE OF WORK
This Design-Build consisted of the installation of a 54" PCCP FM for the City of Miami Beach serves as the marquee project in our roster exhibiting our Team's commitment to ensure that all our clients concerns are met. A proposed 54" redundant force main was implemented along Euclid Avenue in the City of Miami Beach.

The force main (FM) was a crucial component of the City of Miami Beach to improve the quality of service in this touristic area. Phase I installed a 54" HDPE force main along Euclid Avenue from 11th Street to Washington Avenue and along Washington Avenue from Euclid Avenue to Commerce Court. The scope of services for this section of the project included the design and construction of around 4,450 LF of 54" HDPE force main installed by Horizontal Directional Drilling (HDD). A connection to Pump Station #31 was included in this phase. The project required constant communication with the city, as the team worked around the clock to deliver the project within the tight schedule. The project's expedited design schedule was met, with no major setbacks.

HDD OF 24" HDPE FORCE MAIN AND 24" WATER MAIN AT BISCAYNE CANAL, NORTH MIAMI

CLIENT
City of North Miami

KEY PERSONNEL
David Mancini Sr.

PROJECT START AND END DATE
2016 - 2017

CONSTRUCTION COST
Construction: $604,241.66

REFERENCE CONTACT INFORMATION
Hasan Rizvi, P.E.
Phone: 954-376-2655
Email: hrizvi@northmiamifl.gov

SCOPE OF WORK
The scope of services for this project included the design and construction of 900 LF of 24-in FM and 24-in WM installed by HDD. The existing water and sewer mains that cross the Biscayne Canal were attached to an existing pedestrian bridge. These lines were in conflict with a proposed storm-sewer pump station that will be built in the northeast corner of the intersection of NE 131st ST and Griffin Blvd. therefore, these two lines will be replaced. The project included the installation of 450 LF of 24-in FM installed by HDD under the Biscayne Canal from Griffin Blvd to NE 2nd Ave. The new 24-in FM will be interconnected to the existing force mains on both sides of the canal. The project also encompasses 450 LF of 24- in WM installed also by HDD, which also crosses the Biscayne Canal. The proposed WM has been permitted by FDEP an includes isolation valves, leak testing assemblies and interconnections to the existing water mains.

BEAR CUT & WEST BRIDGE MACARTHUR CAUSEWAY

CLIENT
Kiewit Infrastructure

KEY PERSONNEL
David Mancini Sr
Nelson Liberti

PROJECT START AND END DATE
2013 - 2014

CONSTRUCTION COST
Construction: $1,860,000

REFERENCE CONTACT INFORMATION
Frank Di Cilio, Kiewit Infrastructure South Co.
Phone: 813-241-7370
Email: Frank. Digilio@kiewit.com

SCOPE OF WORK
The Bear Cut underground utility construction project consisted of two directional drills. One was the installation of approximately 1,400 linear feet of 20" Water main across West Bride via Horizontal Directional Drilling. The second HDD was 3,000 linear feet of 20" Water main across Bear Cut Bridge on the Rickenbacker Causeway in Key Biscayne, FL. DMSI pipe tapped into the existing allowing for this relocation of the bridge superstructures to be reconstructed. The proposed water main was fully constructed prior to decommissioning the existing system. Extensive public outreach was performed in order to maintain all operations.

CITY OF MIAMI TIDAL VALVES INSTALLATION AND BRICKELL DRAINAGE ISSUES

CLIENT
City of Miami

KEY PERSONNEL
David Mancini Sr.
Ryan Kaltz

DATE OF PROJECT COMPLETION
JULY 2020

REFERENCE CONTACT INFORMATION
Keith Nguyen
Phone: 305-619-2368
Email: KeithNg@miamigov.com

SCOPE OF WORK

1. Installation of more than 65 backflow tidal valves from (Wapro) on the outfall pipe inside the closest structure to the Biscayne Bay, Miami River and City of Miami Canals. Different locations throughout the entire City of Miami
2. Valve Sizes all the way from 8" to 54" 3. Removal and Replacement of structure top slabs to facilitate the installation of valves larger than 20"
3. CCTV of Existing System
4. Plug Outfalls and bypass to clean existing Drainage Pipes
5. Assist the City of Miami in assessing what caused the flooding in a particular area and design a permanent solution to prevent flooding during King Tide and Rain Season
6. One of the Area was Brickell Ave between 8th St and 15th St and Brickell Dr between 8th St and 15th St

BROWARD COUNTY UAZ 110/111 & 113 WATER SEWER IMPROVEMENTS 110/111

chen moore and associates

CLIENT
Broward County

KEY PERSONNEL
Daniel Davila, P.E.
Vincent Logcigno, P.E.
Manuel Caamano

PROJECT START AND END DATE
2016 - On-going

DESIGN / CONSTRUCTION COST
Design: $4,831,452 Construction: $11,171,569

REFERENCE CONTACT INFORMATION
Broward County Water and Wastewater Services
Michael Hagerty
Phone: 954-831-0901
Email: mhagerty@broward.org

SCOPE OF WORK
Broward County UAZ Water Sewer Improvements 110/111, Lauderdale Lakes, FL. The UAZ 110/111 project include the improvements to the existing water distribution and sanitary sewer system within the City of Lauderdale Lakes and the City of Oakland Park, along with restoration of surface areas disturbed for the construction of the improvements. The project had a combined total area of 479 acres and included the installation of 57,400 linear feet of gravity sewer, 4,400 linear feet of forcemain, and 72,100 linear feet of watermain. The total project included 133,900 linear feet of pipe. Pipe installation took place along local city roads, as well as County and FDOT jurisdiction roadways including West Oakland Park Boulevard and US-441. The water main consists of asbestos cement, cast iron, ductile iron, galvanized steel, and polyvinyl chloride pipe ranging from 2" - 24" in diameter size. The sanitary sewer consists of vitrified clay, fold and form liner, cured in place liner, and ductile iron pipe ranging from 8" – 18" in diameter size. The force main consists of asbestos cement, cured in place liner, ductile iron, and polyvinyl chloride pipe of 12" in diameter size. The restoration of roadways, sidewalks, driveways, and landscape areas will need to be performed as needed for water and sanitary sewer improvement construction. The project is currently under construction and CMA is performing construction administration services.

DAVID MANCINI & SONS, INC.

chen moore and associates

BROWARD COUNTY UAZ 110/111 & 113 WATER SEWER IMPROVEMENTS 113A

chen moore and associates

CLIENT
Broward County

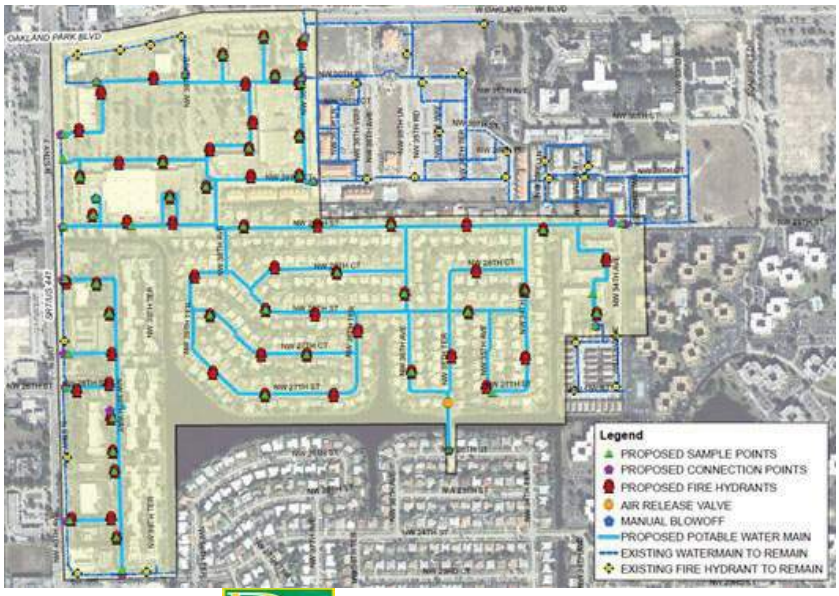
KEY PERSONNEL
Daniel Davila, P.E.
Vincent Logcigno, P.E.
Manuel Caamano

PROJECT START AND END DATE
2016 - On-going

DESIGN / CONSTRUCTION COST
Design: $3,155,461 Construction: $12,998,918

REFERENCE CONTACT INFORMATION
Broward County Water and Wastewater Services
Michael Hagerty
Phone: 954-831-0901
Email: mhagerty@broward.org

SCOPE OF WORK
Broward County UAZ Water Sewer Improvements 113A, Lauderdale Lakes, FL. The UAZ 113A project include the improvements to the existing water distribution and sanitary sewer system within the City of Lauderdale Lakes, along with restoration of surface areas disturbed for the construction of the improvements. The project had a total area of 207 acres and included the installation of 22,000 linear feet of gravity sewer, 5,800 linear feet of forcemain, and 29,800 linear feet of watermain. The total project included 57,600 linear feet of pipe. Pipe installation took place along local city roads, as well as County and FDOT jurisdiction roadways including West Oakland Park Boulevard and US-441. The water main consists of asbestos cement, cast iron, ductile iron, galvanized steel, and polyvinyl chloride pipe ranging from 2" - 18" in diameter size. The sanitary sewer consists of vitrified clay, fold and form liner, cured in place liner, and ductile iron pipe ranging from 8" – 12" in diameter size. The force main consists of asbestos cement, cured in place liner, ductile iron, and polyvinyl chloride pipe ranging from 6" – 16" diameter size. County lift station 50N was rehabilitated as part of this project. The restoration of roadways, sidewalks, driveways, and landscape areas will need to be performed as needed for water and sanitary sewer improvement construction. The project is currently under construction and CMA is performing construction administration services.



Qualifications of the Team

BROWARD COUNTY UAZ 110/111 & 113 WATER SEWER IMPROVEMENTS 113B

chen moore and associates

CLIENT
Broward County

KEY PERSONNEL
Daniel Davila, P.E.
Vincent Logcigno, P.E.
Manuel Caamano

PROJECT START AND END DATE
2016 - On-going

DESIGN / CONSTRUCTION COST
Design: $4,472,565 Construction: $29,137,738

REFERENCE CONTACT INFORMATION
Broward County Water and Wastewater Services
Michael Hagerty
Phone: 954-831-0901
Email: mhagerty@broward.org

SCOPE OF WORK
Broward County UAZ Water Sewer Improvements 113B, Lauderdale Lakes, FL. The UAZ 113B project included the improvements to the existing water distribution and sanitary sewer system within the City of Lauderdale Lakes, along with restoration of surface areas disturbed for the construction of the improvements. The project had a total area of 350 acres and included the installation of 42,700 linear feet of gravity sewer, 1,500 linear feet of forcemain, and 66,200 linear feet of watermain. The total project included 110,400 linear feet of pipe. Pipe installation took place along local city roads, as well as County and FDOT jurisdiction roadways including NW 31st Avenue, West Oakland Park Boulevard, and US-441. The water main consists of asbestos cement, cast iron, ductile iron, galvanized steel, and polyvinyl chloride pipe ranging from 2" - 24" in diameter size. The sanitary sewer consists of vitrified clay, fold and form liner, cured in place liner, and ductile iron pipe ranging from 8" – 18" in diameter size. The force main consists of asbestos cement, cured in place liner, ductile iron, and polyvinyl chloride pipe ranging from 6" – 8" in diameter size. County lift station 50M1 was rehabilitated as part of this project. The restoration of roadways, sidewalks, driveways, and landscape areas will need to be performed as needed for water and sanitary sewer improvement construction. CMA performed CEI services during construction and the project is currently in the close-out phase.

Qualifications of the Team

CENTRAL BAYSHORE SOUTH RIGHT-OF-WAY INFRASTRUCTURE IMPROVEMENTS

chen moore and associates

CLIENT
City of Miami Beach (Ric-Man International was the Contractor, and our direct client for this project)

PROJECT START AND END DATE
2016 - 2018

DESIGN / CONSTRUCTION COST
Design: $1,150,280 Construction: $16,600,000

REFERENCE CONTACT INFORMATION
Ric-Man International
Rene Castillo, Sr.
Phone: 954-426-1042
Email: rcastillo@ric-man.us

SCOPE OF WORK
The Central Bayshore South Right-of-Way Infrastructure Improvement Program is an approximately $18M Design-Build Project located in Miami Beach, Florida. The project limits stretch from Dade Boulevard north to West 34 Street and from Meridian Avenue east to the Indian Creek waterway.

The project included the reconstruction and elevation of roadways within the project area, driveway and swale harmonization, a new stormwater collection, conveyance, treatment, and pump station system, new transmission and distribution watermains, a new multi-use bike/pedestrian path, improved street lighting, improved roadway signage and pavement markings, and appropriate landscape mitigation. In total, the project proposed approximately 10,000 linear feet of water main ranging from 6" to 16" and approximately 13,600 LF of new roadway. The proposed stormwater system serving approximately 82 acres included gravity lines throughout the neighborhood ranging from 18" to 72", a vortex water quality treatment unit, one new pump station to be manifolded with two existing pump station, a 42" stormwater force main, an energy dissipater box, and a new outfall at the Indian Creek waterway. The system is equipped with backflow prevention devices in anticipation of sea level rise. As directed by the City, the water main portion of the project was the only portion constructed.

MDWASD - AREA S-4 WASTEWATER SYSTEM AND POTABLE WATER SYSTEM IMPROVEMENT

CLIENT
Miami Dade Water and Sewer Department (MDWASD)

PROJECT START AND END DATE
2019 - On-going

DESIGN / CONSTRUCTION COST
Design: $379,148

REFERENCE CONTACT INFORMATION
MDWASD
David Marquez
Phone: 786-552-8826
Email: David.Marquez@miamidade.gov

SCOPE OF WORK
CMA is providing professional civil engineering services, including the design, permitting, bid support and construction administration support services of a new gravity sewer and potable water system in the unincorporated neighborhood of Brownsville in Miami-Dade County, FL. The project, will include 8", 10" and 12" gravity sewer main with 6" laterals and 3,300 linear feet of 12" potable water distribution system, complete with appropriate fire hydrants and water service meters for customers. This project will interface with several adjacent projects for interconnectivity of both the gravity sewer and potable water systems and will include at least two directional drill installations underneath and existing CSX railroad.

Qualifications of the Team

NE 35TH AVENUE WATER MAIN REPLACEMENT

chen moore and associates

CLIENT
City of North Miami Beach

KEY PERSONNEL
Manuel Caamano

PROJECT START AND END DATE
2020 - On-going

DESIGN / CONSTRUCTION COST
Design: $202,610

REFERENCE CONTACT INFORMATION
City of North Miami Beach
Maceo Lewis
Phone: 305-354-4431
Email: LewisM@bv.com

SCOPE OF WORK
CMA provided design and permitting for the civil engineering improvements for NE 35th Avenue for the City of North Miami Beach. The design included divided lanes, drainage improvements, new sidewalks/ ADA accessibility, signage and striping. CMA also designed and permitted the replacement of two existing watermains. The new watermains include the Horizontal Directional Drilling in a highly dense residential area with only one access to the Island. The new transmission line is a 20" HDPE watermain designed to be installed via HDD in three segments for a total of 3,400 linear feet of pipe up to 30 feet deep with compound curves.

The project also included the replacement of 3,400 feet of 12" ACP with new HDPE pipe via pipe bursting. CMA's scope of services also included coordinating a topographic survey, geotechnical exploration, traffic analysis, site reconnaissance, utility coordination, construction documents, permitting, bidding assistance and limited construction administration support services.

Qualifications of the Team

CITY CENTER RIGHT-OF-WAY AND UTILITY IMPROVEMENT PROJECT

chen moore and associates

CLIENT
City of Miami Beach

PROJECT START AND END DATE
2004 - 2012

DESIGN / CONSTRUCTION COST
Design: $3,611,340 Construction: $21,200,000

REFERENCE CONTACT INFORMATION
City of Miami Beach
Maria Hernandez
Phone: 305-673-7071
Email: mariahernandez@miamibeachfl.gov

SCOPE OF WORK
CMA was the prime consultant and was responsible for providing surveying, planning, geotechnical investigation, design, permitting, preparation of construction documents, bid and award and construction engineering and inspection (CEI) services for infrastructure improvements within the public right-of-way (ROW) areas of the City Center neighborhood of Miami Beach. The project encompasses approximately 24,000 LF of ROW infrastructure improvements including: 8,700 LF of 8-inch and 9,800 LF of 20-inch water main replacements; sewer improvements, stormwater drainage improvements; paving & grading; roadway/traffic improvements (streets, sidewalks, curb and gutter, drainage, traffic control devices including striping, signing and channelization); streetscaping and landscaping enhancements; decorative, landscape and roadway lighting improvements; and roadway reconstruction. Additionally, due to existing listed contaminated sites within the proximity of the ROW improvements, environmental coordination, including site analysis and consideration of the radius of influence, was necessary for coordinating dewatering operations. Due to the existing mixed residential and commercial environment of this neighborhood, special design efforts were made to incorporate walkable community elements including meeting all ADA requirements, providing street furniture, providing bicycle paths, upgrading sidewalks, incorporating specialty treatments at crosswalks, landscaping improvements with specialized tree wells to provide a walkable surface and bulb outs to increase pedestrian friendliness and safety. This project also required extensive coordination with the public, adjacent CRAs, historic districts and various regulatory agencies.

As part of the proposed stormwater and drainage services, extensive analysis was conducted utilizing ICPR Modeling and GIS to meet or exceed required stormwater Level of Services standards. ICPR Modeling was utilized for the design and permitting of 14 drainage gravity wells. The proposed stormwater design included the introduction of catch basins and stormwater piping to effectively collect and route the stormwater to 16 drainage gravity wells with overflow outfall connections to Biscayne Bay. Due to the environmental sensitivity of Biscayne Bay design and implementation of water quality treatment measures was an important consideration and design factor of the system prior to outfall to the Bay and was closely coordinated with regulatory agencies during the permitting process.

PARK DRIVE 16-INCH WATER MAIN REPLACEMENT

CLIENT
Village of Bal Harbour

PROJECT START AND END DATE
2018 - 2021

DESIGN / CONSTRUCTION COST
Design: $150,660 Construction: $1,900,000

REFERENCE CONTACT INFORMATION
Village of Bal Harbour
John Oldenburg
Phone: 305-993-7316
Email: joldenburg@balharbourfl.gov

SCOPE OF WORK
CMA provided civil engineering design, government permitting assistance, and limited construction administration services for the Park Drive 16-inch Water Main Replacement project for the Village of Bal Harbour, Florida. CMA designed the 5,300-LF 20-inch HDPE pipe replacing the Village's single potable water transmission main between two turbine meters at each end of the municipality. The design proposed a combination of traditional and trenchless installation methods to minimize interruption to the neighborhoods and apartment buildings adjacent to the pipeline. CMA coordinated with the Village's utility director, the general contractor, and multiple other consultants working on development projects with connections to the new potable water main throughout the design and construction phases of the project. The total construction cost was approximately $1.9 million.

SILVER BEACH ROAD WIDENING PROJECT

CLIENT
City of Riviera Beach Utility District

KEY PERSONNEL
Vincent Logcigno, P.E.

PROJECT START AND END DATE
2013 - 2021

DESIGN / CONSTRUCTION COST
Design: $57,467

REFERENCE CONTACT INFORMATION
City of Riviera Beach Utility District
Martha McNicholas
Phone: 561-373-1450
Email: MMcnicholas@rivierabeach.org

SCOPE OF WORK
Chen Moore and Associates was asked by the City of Riviera Beach Utility District to coordinate the relocation of underground utilities which are in conflict with the County's proposed road widening project for Silver Beach Road. The scope of work includes evaluation of County plans for utility conflicts, field investigation, design, permitting and construction administration for 1,040 LF of 12-inch and 650 LF of 16-inch transmission main.

SEACOAST UTILITY AUTHORITY WESTERN COMMUNITY PIPELINE EXTENSION

chen moore and associates

CLIENT
Seacoast Utility Authority

PROJECT START AND END DATE
2018 - 2020

DESIGN / CONSTRUCTION COST
Design: $57,467

REFERENCE CONTACT INFORMATION
Seacoast Utility Authority
Brandon Selle
Phone: 561-267-2900
Email: bselle@sua.com

SCOPE OF WORK
CMA was contracted by Seacoast Utility Authority for surveying and engineering services for the design, permitting, bidding, construction administration, and permit certification of force main and watermain improvements within easements along Northlake Boulevard. Phase I is located from the eastern boundary of Ancient Tree to the eastern boundary of Osprey Isles and will consist of approximately 1,650 linear feet of 12-inch watermain and 6-inch force main, connections to existing mains, and disconnects with the City of West Palm Beach. Phase II will be located from the western side of Memorial Park Drive to the eastern boundary of the Carleton Oaks property and will consist of approximately 1,000 linear feet of 10-inch watermain and 4-inch force main, related tie ins to existing system components, and an interconnect meter station with City of West Palm Beach.

PALM BEACH SHORES WATER MAIN IMPROVEMENT PROJECT

chen moore and associates

CLIENT
City of Riviera Beach Utility District

PROJECT START AND END DATE
2018 - 2018

DESIGN / CONSTRUCTION COST
Design: $154,390

REFERENCE CONTACT INFORMATION
City of Riviera Beach Utility District
John Armstrong
Phone: 561-845-4185
Email: JArmstrong@rivierabeach.org

SCOPE OF WORK
CMA provided civil engineering for the Palm Beach Shores Water Main Improvement Project for the Riviera Beach Utility District (RBUD). The RBUD needs to replace the aging asbestos concrete water mains within "outer loop" roads so the Town of Palm Beach shores can resurface them. The project included 4,400 LF of 12-inch watermain. CMA performed survey coordination; utility coordination; field verification; geotechnical coordination; water main design; permitting; and bidding assistance.

31ST TO 35TH STREET WATER MAIN IMPROVEMENTS

chen moore and associates

CLIENT
City of West Palm Beach

PROJECT START AND END DATE
2018 - 2019

DESIGN / CONSTRUCTION COST
Design: $591,556 Construction: $3,723,184

REFERENCE CONTACT INFORMATION
City of West Palm Beach
Daniel Roberge
Phone: 561-822-2100
Email: droberge@wpb.org

SCOPE OF WORK
CMA is providing engineering and consulting professional services for the Water Main Improvements on 31st, 32nd, 33rd, 34th & 35th Streets for the City of West Palm Beach. The utility improvements are being completed under the City's bond program, and have strict deadlines for completion. The neighborhood includes 1,400 LF of 12-inch watermain, sanitary sewer replacement, roadway, curb and sidewalk improvements. In addition to the design and permitting efforts, the CMA Team is providing public outreach efforts including presentation at Neighborhood Association Meetings and City Commission. CMA is also submitting this project for Envision Certification, by the Institute for Sustainable Infrastructure. This certification process includes a submittal package for each credit, coordination with the Contractor and various City departments.

GARDEN ROAD UTILITY RELOCATION PROJECT

chen moore and associates

CLIENT
City of Riviera Beach Utility District

PROJECT START AND END DATE
2012 - 2021

DESIGN / CONSTRUCTION COST
Design: $637,751

REFERENCE CONTACT INFORMATION
City of Riviera Beach Utility District
John Armstrong
Phone: 561-845-4185
Email: JArmstrong@rivierabeach.org

SCOPE OF WORK
Chen Moore and Associates has had a continuing services contract with the Riviera Beach Utility Special District since 2008. The work under this contract has consisted of utility relocations associated with FDOT and Palm Beach County roadway projects, and utility improvement projects. For the utility relocation projects, CMA assisted the City of Riviera Beach Utility District (RBUD) with coordinating the relocation of underground utilities which are in conflict with proposed road widening projects for Blue Heron Boulevard/Dixie Highway, Dyer Road/Haverhill Boulevard, US 1, Martin Luther King Boulevard Phase B and C, Blue Heron Boulevard/Congress Avenue, Silver Beach Road and Garden Road. The pre-construction scope of services included coordination with RBUD and local regulatory agencies, coordinating utility location efforts, design of utility relocation and traffic management plans to FDOT standards and permitting. The projects involve over $5 million in water and sewer improvements completed in conjunction with FDOT and Palm Beach County projects. Special consideration was needed for the replacement of 12-inch AC water mains and the protection of existing AC mains to remain during construction of the drainage and roadway. This effort also included the design and permitting of a water main directional drill under Florida East Coast Railway right of way. Through extensive coordination with FDOT and Palm Beach County, CMA was able to evaluate the proposed road and drainage improvements and determine alternatives to avoid utility conflicts. CMA was also responsible for the bidding assistance which included conducting a pre-bid meeting, responding to bidder questions, evaluation of bids and recommendation for award. The construction administration services include conducting a pre-construction meeting and weekly progress meetings, shop drawing review, continued coordination with RBUD, Palm Beach County and FDOT, response to contractor RFIs, construction inspections, quantity tracking, tracking of test results, conducting substantial completion and final completion walk-throughs, and final certification of the project.

C-14 WATER MAIN CANAL CROSSING

CLIENT
City of Margate (Carollo Engineers was our direct client for this project)

PROJECT START AND END DATE
2014 - 2015

DESIGN / CONSTRUCTION COST
Design: $70,752

REFERENCE CONTACT INFORMATION
Carollo Engineers
Thomas Gillogly
Phone: 954-837-0030
Email: tgillogly@carollo.com

SCOPE OF WORK
CMA, as a subconsultant to Carollo Engineers, was contracted by the City of Margate to perform the design, permitting and construction administration of water main improvements. The improvements were identified as part of a separate task order in which the water model for the City was updated. The C-14 canal crossing was proposed in order to provided redundancy to the distribution system. The improvements include a directional drill under the SFWMD C-14 canal and a total of 2,300 LF of 12-inch and 14-inch of water main installation to provide redundancy in the service area. Permitting coordination is required with both SFWMD and the ACOE for special approvals.

Attachment B
Project Methodology & Approach

chen moore and associates

B. PROJECT METHODOLOGY & APPROACH

The DMSI and CMA have successfully designed, permitted, and constructed several water and sewer projects within South Florida and the City of Fort Lauderdale. The DMSI/CMA team is confident in our capability to complete the installation of the 48-inch water transmission main to meeting the deadline as outlined in the Project Team's Comprehensive Agreement. Our extensive knowledge of the City and our ability to self-perform critical path construction activities, ultimately will allow us to better control the project schedule. Our approach of dividing the pipe installation in packages will result in greater focus and efficiency. We can leverage our position to resolve issues and have items delivered expeditiously and cost effectively. In conjunction, DMSI employs more than 100 field craft workers who live within the Broward County area. We are certain no other team will bring to this project a greater breath of knowledge of the local working conditions or depth of Florida resources. DMSI's crew bring more than 50 years of experience in the installation of water pipelines. Our crews are well equipped to manage construction activities with a focus on maximum sustainability.

CMA will lead the design of this project and has an extensive history with the City of Fort Lauderdale on a variety of projects. CMA is known for complying and following the City's Design and Construction Standard Specifications and Details. CMA will evaluate the project location and project scope to identify the most cost and time effective design and approach to the project. The preliminary design approach is discussed in the following sections.

Together, CMA and DMSI have recently completed some of the more challenging pipeline projects the City has procured in recent years. Their knowledge of the City and expertise in utilities will ensure that the project is completed within budget and ahead of schedule.

Based on our success as a Design-Build team the follow is our approach to successfully complete this project:

a. Investigate Existing Site Conditions

b. Conceptual Design

c. Quality Assurance / Quality Control

d. Permitting

e. Construction Approach

A. INVESTIGATE EXISTING SITE CONDITIONS

Existing Conditions and Utility Coordination

The DMSI/CMA team will perform utility coordination and verification processes during the design/build process for accuracy. Several activities will be performed to obtain existing conditions data for the project area. The DMSI/CMA team will perform a preliminary investigation of the neighborhood, site conditions, and the existing utilities, including the existing water system. A design utility locate will be performed with Sunshine One (811) to determine the location of the existing utilities within the area. Existing GIS data and other existing information will also be reviewed and incorporated in the plans. A topographic survey of the project limits will be performed, which will incorporate site elevations and grades, as well as subsurface information. In addition, our team will perform Utility Targeting (GPR) and testholes to determine the exact location and depth of potential utility conflicts.

It is imperative that design tickets (811 calls), coordination with utility providers, testholes, and as-built review are thoroughly performed to understand the project constraints and to determine the best option for design. The DMSI/CMA team has in-house procedures to ensure that no critical step is missed prior to the design of the project. A log for utility coordination is continuously updated during this phase as information is made available to us.

NAME	COMPANY	STREET ADDRESS	CITY	STATE	ZIP	DATE LETTER SENT	RESPONSE DATE
Mark Caldwell	Sprint	mark.d.caldwell@sprint.com				6/30/2017	
Dino Farruggio	AT&T Distribution	1120 South Rogers Circle	Boca Raton	FL	33487	6/28/2017	
Brian Connelly	Superior Asphalt Inc.	rwallen@pcsfiber.com				6/30/2017	6/30/2017
Yvonne Goldman	Teco people Gas- South Florida	5101 NW 21st Ave, Suite 460	Fort Lauderdale	FL	33309	6/28/2017	
Dean Boyers	MCI	investigations@verizon.com				6/29/2017	6/29/2017
Seyed Hajassadollah	FPL - Transmission					6/28/2017	
Danny Haskett	Fibernet Direct	9250 W Flagler St	Miami	FL	33174	6/28/2017	8/2/2017
Edgar Aguilar	FPL	2455 Port West Blvd, PDC Bldg A	Riviera Beach	FL	33407	6/28/2017	
Maria Rosado (Eland)	Florida Department of Transportation	mrosado@smartsunguide.com				6/28/2017	7/13/2017
Jon Stahl	City of Fort Lauderdale	949 NW 38th ST	Fort Lauderdale	FL	33309	6/28/2017	
Leonard Maxwell-Newbold	Comcast Cable	2601 SW 145 th Ave	Miramar	FL	33027	6/28/2017	7/18/2017
Robert Blount	Broward County Traffic Engineering	2300 W Commercial Blvd	Fort Lauderdale	FL	33309	6/28/2017	7/6/2017
Randy Oliver	Crown Castle	2000 Corporate Drive	Cannonsburg	PA	15317	6/28/2017	7/5/2017

Utility Log example: "30-inch Emergency Forcemain" Project – Fort Lauderdale

Contaminated Sites

The 2021 Broward County contaminated sites database was explored to determine the potential contaminated influence zones within the project areas. A quarter mile buffer was added to the contaminated sites obtained from the database. There were 2 sites identified that are located within the quarter mile radius of the project limits, as displayed in the image below. Any additional environmental permits and areas of concerns will be reviewed during the design/build process. This information will become crucial when dealing with dewatering activities. Our team has successfully permitted dozens of projects that were in proximity to contaminated sites. We understand the process and have the relationships with BCPEGMD and SFWMD necessary to expedite water use and dewatering permits.

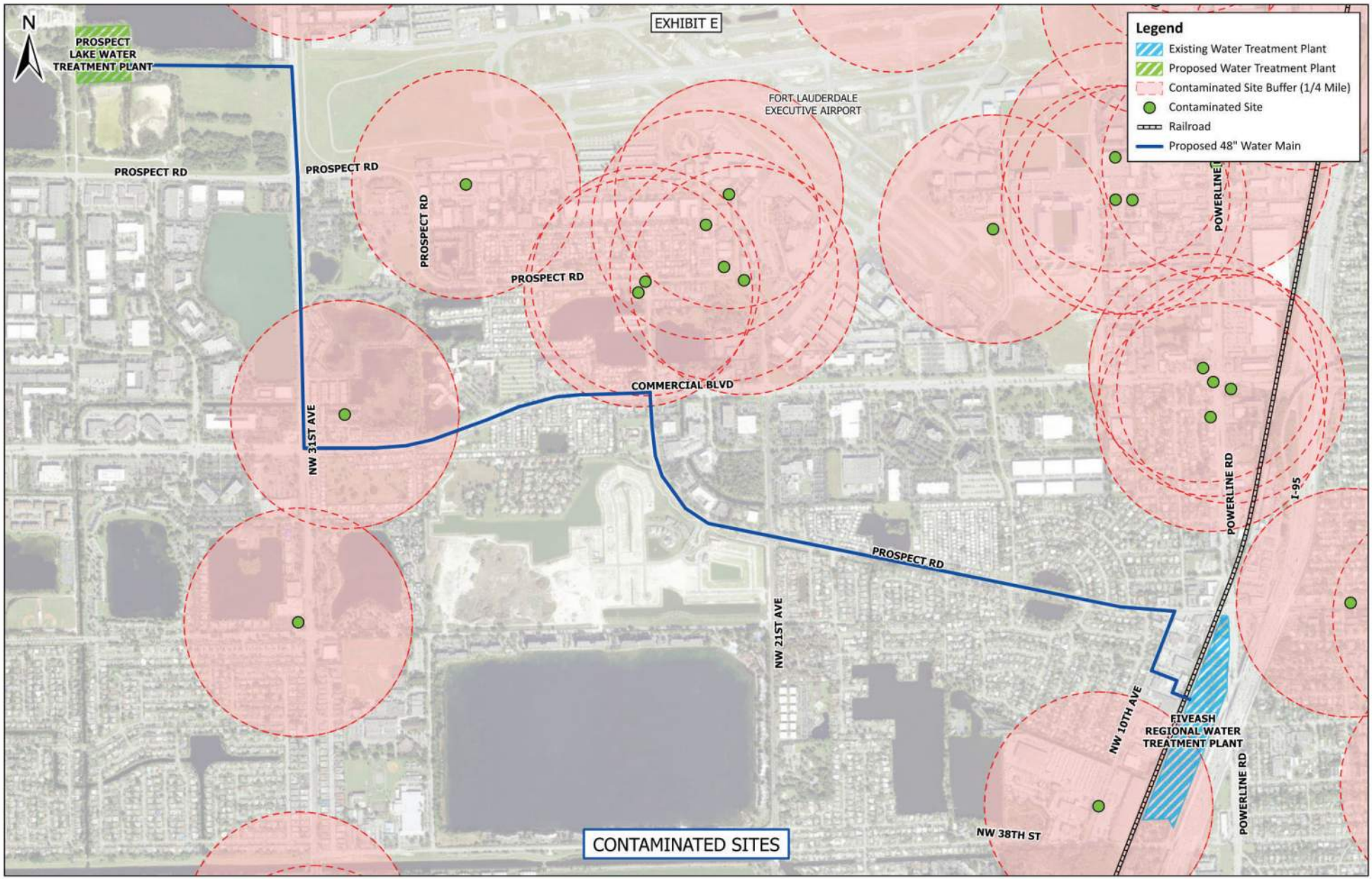


EXHIBIT E
N
PROSPECT LAKE WATER TREATMENT PLANT
PROSPECT RD
PROSPECT RD
PROSPECT RD
PROSPECT RD
FORT LAUDERDALE EXECUTIVE AIRPORT
COMMERCIAL BLVD
NW 31ST AVE
NW 21ST AVE
PROSPECT RD
POWERLINE RD
POWERLINE RD
I-95
NW 10TH AVE
FIVEASH REGIONAL WATER TREATMENT PLANT
POWERLINE RD
NW 38TH ST
Legend
Existing Water Treatment Plant
Proposed Water Treatment Plant
Contaminated Site Buffer (1/4 Mile)
Contaminated Site
Railroad
Proposed 48" Water Main
CONTAMINATED SITES

Field Investigation

The DMSI/CMA team visited the project sites to become more familiar with the existing site conditions and started communication with various agency having jurisdictions. A photo study of the project area was performed to document a general idea of the site conditions. This area is considered a high traffic commercial and residential area. The typical road cross-section observed has a curb and valley gutter and sidewalk on both sides, with sections that include on-road parking. Decorative pavers and pavement markings were observed towards the south end from the New River Canal to the intersection with East Las Olas Boulevard. Existing drainage structures were observed as well as gravity sewer manholes and other utility boxes. Additionally, pedestrian crossings with pavement markings and signs were also observed during this investigation. Several trees and other vegetation were also observed along the road, which will need to be considered during the design process.

B. CONCEPTUAL DESIGN

The DMSI/CMA team has reviewed the conceptual layouts provided by the City in the RFP and has begun verifying the preliminary layouts. These layouts will serve as preliminary pipe layouts for the proposed water main system during the design phase.

Based on the information gathered during the existing site conditions phase, the DMSI/CMA team will coordinate with City staff to develop the layout of the proposed water mains. During this phase, the DMSI/CMA team will develop detailed plans, calculations, reports, assessments, and technical specifications. This phase includes the following activities:

1. Verify utility information (test holes/survey)
2. Field visits to verify site conditions
3. Begin with a design approach that identifies the core project technical issues
4. Develop a profile view of the proposed water mains to identify utility conflicts
5. Revisions of existing utilities based on verified utility information
6. Identify constructability challenges and break down the project design components to the root challenges
7. Focus on simplifying solutions and providing clean, constructability designs
8. Follow through to assure coordination and communication with all project stakeholders


EXHIBIT A
N
PROSPECT LAKE WATER TREATMENT PLANT
FORT LAUDERDALE EXECUTIVE AIRPORT
Legend
Existing Water Treatment Plant
Proposed Water Treatment Plant
Railroad
Proposed 48-inch Water Main
PROSPECT RD
PROSPECT RD
PROSPECT RD
PROSPECT RD
COMMERCIAL BLVD
PROSPECT RD
NW 31ST AVE
NW 21ST AVE
NW 10TH AVE
NW 38TH ST
POWERLINE RD
POWERLINE RD
POWERLINE RD
I-95
FIVEASH REGIONAL WATER TREATMENT PLANT
PROSPECT LAKE 48" WATER MAIN

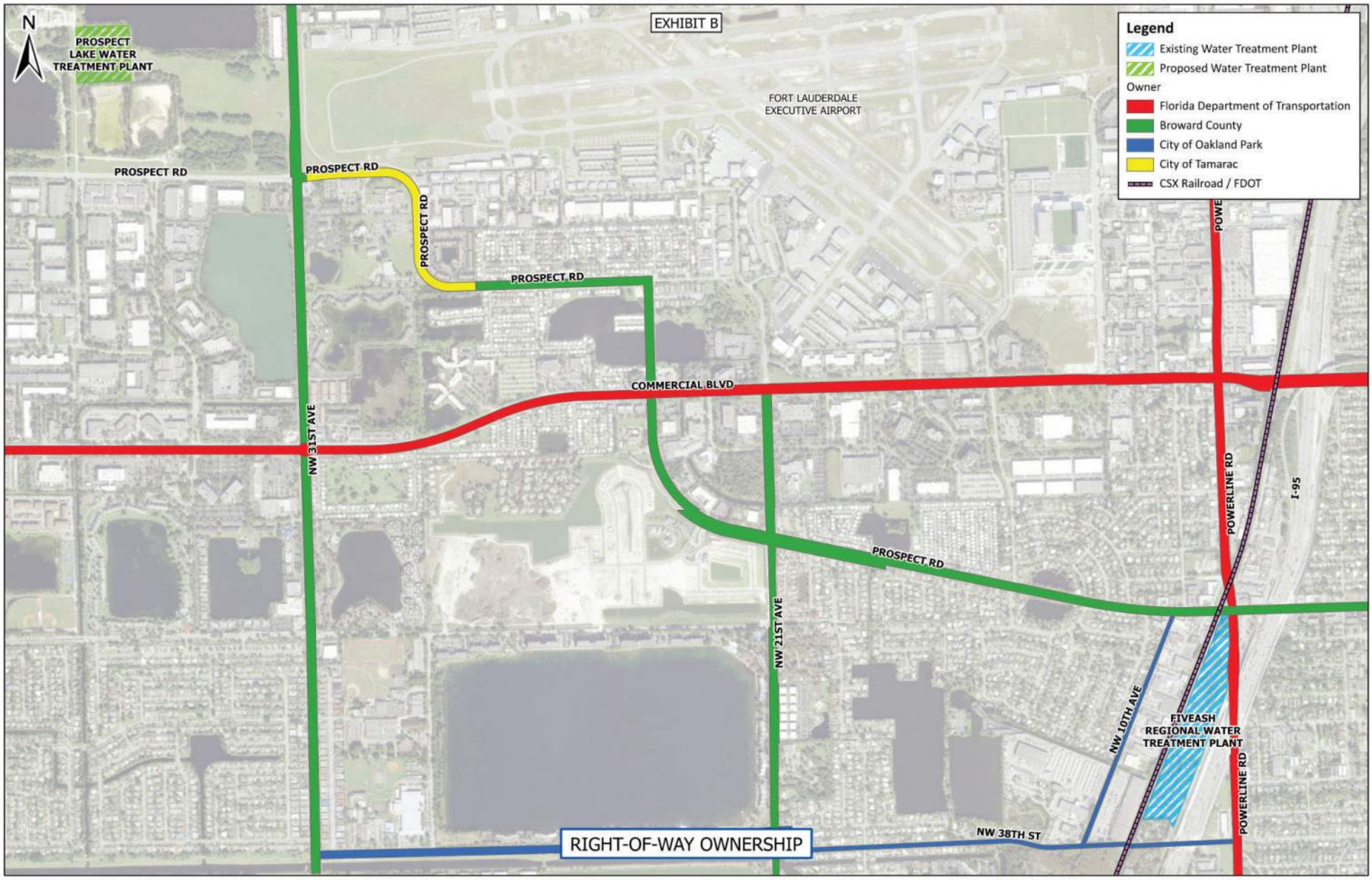
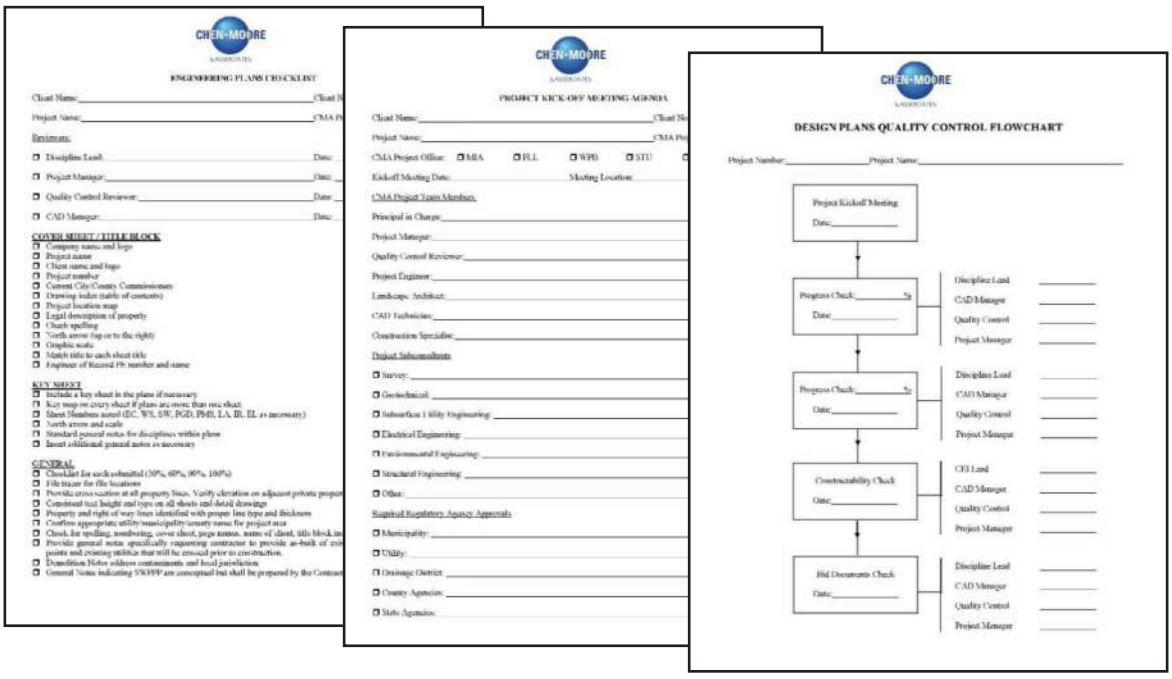


EXHIBIT B
N
PROSPECT LAKE WATER TREATMENT PLANT
FORT LAUDERDALE EXECUTIVE AIRPORT
PROSPECT RD
PROSPECT RD
PROSPECT RD
PROSPECT RD
COMMERCIAL BLVD
NW 31ST AVE
NW 21ST AVE
POWERLINE RD
I-95
PROSPECT RD
NW 10TH AVE
FIVEASH REGIONAL WATER TREATMENT PLANT
POWERLINE RD
NW 38TH ST
RIGHT-OF-WAY OWNERSHIP
Legend
Existing Water Treatment Plant
Proposed Water Treatment Plant
Owner
Florida Department of Transportation
Broward County
City of Oakland Park
City of Tamarac
CSX Railroad / FDOT

C. DESIGN QUALITY CONTROL AND ASSURANCE (QA/QC)

By completely integrating a QA/QC process, not only are the plan reviewed for accuracy, but preliminary schedules are developed, conflicts are identified, and solutions are developed. The DMSI/CMA team has made QA/QC a priority and believes that it is the single "most important" element of a project. To ensure the completion of a successful project, it is imperative to develop and implement a QC plan to evaluate project performance and to ensure the project objectives are being met. The DMSI/CMA team has developed a QA/QC plan to ensure accuracy, completeness, legibility, application of design criteria, and best engineering practices during the design process. Our team makes use of a series of QA/QC checklists which consist of a thorough list of action items throughout the design process. This plan guides the production of all plans and specifications during the design process.

Our team strongly believes that by implementing a thorough QC process, we provide an extra layer of Risk Management during the project duration. These reviews also avoid uncertainties of unrealistic schedules, designs that are not constructible, overextended budgets, and unforeseen conflicts.



D. PERMITTING

The DMSI/CMA team has reviewed the permit requirements for this project and has identified the permits that need to be obtained prior to commencing construction. Coordination with regulatory agencies is performed during the entire project duration. It is of the upmost importance that the regulatory agencies are approached and engaged from the beginning of the project in order to avoid any unnecessary permit delays. Pre-application meetings will be attended by the DMSI/CMA team prior to initiating the design.

The DMSI/CMA team has extensive experience coordinating with various permitting agencies that will be engaged under this contract. Our team has years of experience in dealing with the local agencies including utility providers, FDOT, SFWMD, EPGMD, BCTED and FDEP.

Permits and/ or coordination for this project will be required for:

- Watermain improvements
- Dewatering activities during construction
- Pavement markings and signage
- Maintenance of Traffic (MOT) Permit
- Municipal/Building department permitting

The DMSI/CMA team will coordinate with the following regulatory agencies during the permitting process:

- City of Fort Lauderdale DSD and Building Department
- City of Fort Lauderdale Transportation & Mobility Department
- Florida Department of Transportation (FDOT)
- Florida Department of Environmental Protection (FDEP)
- Broward County Traffic Engineering Division (BCTED)
- Broward County Environmental Protection and Growth Management Department (BCEPGMD)
- South Florida Water Management Authority (SFWMD)

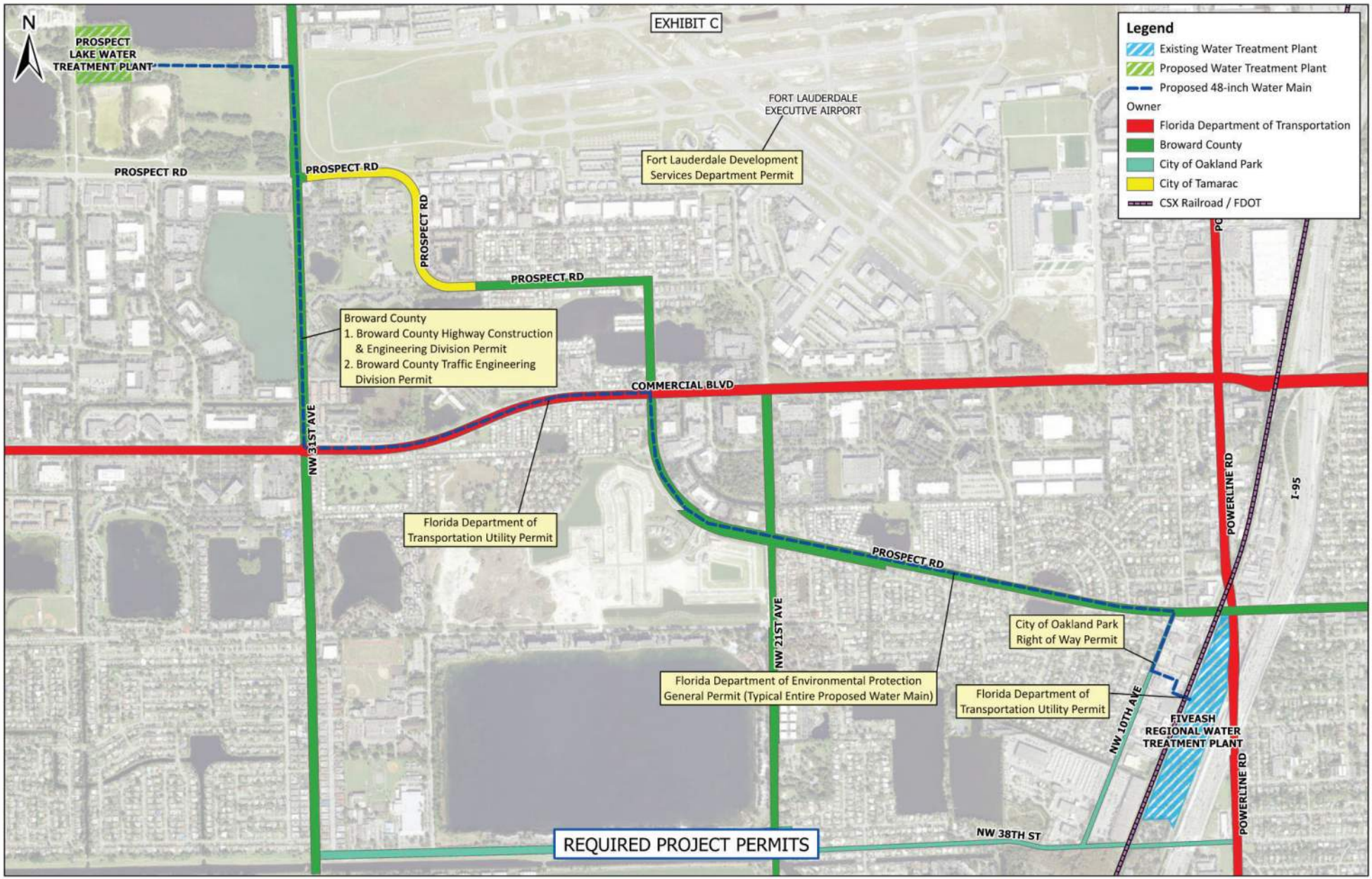


EXHIBIT C
N
PROSPECT LAKE WATER TREATMENT PLANT
PROSPECT RD
PROSPECT RD
PROSPECT RD
PROSPECT RD
FORT LAUDERDALE EXECUTIVE AIRPORT
Fort Lauderdale Development Services Department Permit
Broward County
1. Broward County Highway Construction & Engineering Division Permit
2. Broward County Traffic Engineering Division Permit
COMMERCIAL BLVD
NW 31ST AVE
Florida Department of Transportation Utility Permit
PROSPECT RD
NW 21ST AVE
Florida Department of Environmental Protection General Permit (Typical Entire Proposed Water Main)
City of Oakland Park Right of Way Permit
Florida Department of Transportation Utility Permit
NW 10TH AVE
FIVEASH REGIONAL WATER TREATMENT PLANT
POWERLINE RD
I-95
POWERLINE RD
NW 38TH ST
REQUIRED PROJECT PERMITS
Legend
Existing Water Treatment Plant
Proposed Water Treatment Plant
Proposed 48-inch Water Main
Owner
Florida Department of Transportation
Broward County
City of Oakland Park
City of Tamarac
CSX Railroad / FDOT

E. CONSTRUCTION APPROACH

DMSI has built a reputation in South Florida for high quality work, exceptional performance and excellent client service. The objective of DMSI/CMA team is to design a project that is easily constructed and maintained, while considering the City's standards and specifications. The DMSI/CMA team will have a pre-construction meeting after completion of the design and permitting phase with both the City and the residents. Meeting agendas and supporting material will be presented during this pre-construction meeting to inform all stakeholders of the upcoming construction activities. Pre-construction conditions will be recorded of the project site through videos and photos. Subsequently, DMSI will establish a field office and staging area with the approval of the City's project manager. DMSI will provide and maintain sufficient resources to adequately maintain project process as scheduled. Project sequencing and phasing will be developed by DMSI and CMA in order to complete the project as efficiently as possible with limiting the impact on the surrounding residents and local businesses. Prior to starting construction, DMSI will examine the conditions of the existing water mains to be abandoned in order to mitigate for pipe damage. As previously mentioned, the existing water mains to be abandoned will stay operational until the proposed water main has been certified and all water services have been connected. This construction sequence will be considered in the project schedule and will be updated as necessary. All project schedule updates will be shared with both the public as well as the City.

Site safety is DMSI's number one priority and is firmly embedded in our culture. It is crucial to maintain a safe work environment for the personal and the local residents and pedestrians. Concrete barrier walls and channeling devices will be utilized to reroute the pedestrian traffic in work zones. Additionally, DMSI will ensure that construction materials and equipment are stored appropriately overnight and on weekends. DMSI will ensure that noise and dust control measures are taken into place during construction. Routine street sweeping and water trucks will be utilized to minimize the dust resulting from the construction activities.

Public Coordination

This project is in the center of a highly residential area, therefor public coordination will be a crucial part to a successful project. THE DMSI/CMA team has an understanding that the most important component to a successful project is community involvement. The residents and business owners need to be informed of the goals of the project and be involved in the project from the very beginning. The DMSI/CMA team has a long history of having strong and successful community involvement, beginning with the planning process through the end of construction. DMSI will provide media relations, marketing, graphics services, organization of business interests, grassroots door-to-door consensus building, and serves as a spokesperson for their clients. For 40 years, they have established a proven record of developing and executing successful Public Involvement Programs and Community Awareness Plans. Ultimately, the Team's goal will be to maximize the community's understanding of this project. A key component of public involvement is a public information campaign that ensures the public is always well-informed of the work. By giving the public information before it is requested, it minimizes the potential questions and complaints that may bog down the project team. The number one priority for any design-build project is to keep impacted stakeholders informed and engaged, especially if there are delays, complications, or emergencies. The Team will identify key stakeholders ranging from elected/appointed officials to targeted businesses/CRA's.

Public meetings held for the impacted homeowner's and business owners are good forums for the dissemination of information to large groups of the affected public. Meetings are also important as it provides the public with an opportunity to pose questions, express concerns and generally understand the progress of the project. Project meetings are recommended throughout the design and construction of the project.

CITY OF FORT LAUDERDALE

IMPORTANT NOTICE!

CORAL SHORES SMALL WATER MAIN IMPROVEMENT

PROJECT ADVISORY

The City of Fort Lauderdale is working with David Mancini and Sons to construct a new water distribution line for the neighborhood of Coral Shores and surrounding business. A map is shown below of the project's limits. Temporary road closures should be expected throughout the project limits as water main replacement activities are commenced. The project is anticipated to commence end of May 2021 and is expected to last approximately 6-months. We apologize in advance for any inconvenience and thank our neighbors for their continued patience as we work to upgrade our water system as quickly as possible. The contractor's project manager: **Richard Mancini**, can be contacted at **954-242-8763** day or night to answer any questions, comments, or concerns you may have.

Please use the City's Lauderserv app or call 954-828-8000 to contact our 24-Hour Neighbor Service Center for more information.

For more information or questions, contact:

Richard Mancini, David Mancini and Sons
954-242-8763 or richiemancini@dmsi.co (NOT.com)

WE BUILD COMMUNITY

City of Fort Lauderdale

Sewer Pump Station A-24

Infrastructure Improvements Coming to Your Community

What's Happening?

The City of Fort Lauderdale is constructing a new underground sewer pump station at the intersection of NE 6 Street and NW 3 Avenue within Peter Feldman Park in Flagler Village. The new pump station will accommodate the increased demand associated with new developments in the area, enhance reliability, and improve services for our neighbors.

(954) 828-8000 | www.fortlauderdale.gov

WE BUILD COMMUNITY

Planned Improvements

- Constructing a new 18-inch gravity sewer line and new gravity sewer manhole on NE 6 Street north of Peter Feldman Park.
- Connecting the new gravity sewer line to existing nearby lines.
- Constructing a new 18-inch force main that connects nearby lines to the new pump station.
- Restoring the surrounding roadway

Cost
$3,634,438

Expected Completion
Late 2023

Project Number
12605

Contractor
David Mancini & Sons, Inc.

Fort Lauderdale City Commission

Dean J. Trantalis	John C. Herbst	Steven Glassman	Pam Beasley-Pittman	Warren Sturman	Greg Chavarria
Mayor	Commissioner, District 1	Commissioner, District 2	Vice Mayor, District 3	Commissioner, District 4	City Manager

One of the most critical components of public involvement is the acquiring, tracking and resolution of public complaints. The acquiring of the complaints needs to be thorough and courteous to ensure that the nature of the complaint is accurately portrayed and that the public is not additionally inflamed. The tracking of the complaints should include the complaint initiation, the results of the site and preconstruction research, the instructions to contractor and the actual resolution of the complaint. In addition, a record of all contact with the person initiating the complaint will be kept. Finally, the resolution of the complaint needs to include an official document notifying the originator of the complaint of the outcome. The Team understands that every step in the complaint resolution process needs to be accurately recorded for use in any possible future concerns.

Maintenance of Traffic (MOT)

Understanding that the project is in a high entertainment are with high volumes of vehicle and pedestrian traffic is key to the development of the maintenance of traffic plan (MOT). The DMSI/CMA team has designed and implemented well executed maintenance of traffic operations throughout Broward County. The DMSI/CMA team will develop a MOT plan which will display road closures and detours routes. All work affecting sidewalks and pedestrian crossings will be included in the MOT plan. The plan will include all temporary signage and temporary barricades and ramps. The DMSI/CMA team will ensure that access is maintained to all entrances for all commercial and residential properties within the project limits. Additionally, the team will ensure that the MOT plan always includes access and routes for all emergency vehicles.

The DMSI/CMA team evaluated the existing vehicle and pedestrian traffic within the project limits to determine effective ways to reroute traffic.

Dewatering Plan

Dewatering will be considered for the installation of the proposed water mains due to the high-water table observed in South Florida. As discussed previously, dewatering permits will be applied for this project in accordance with BCEPGM and SFWMD permit requirements. Several contaminated sites were identified within the 0.25-mile cone of influence. The sections of the project that fall within this cone if influence will require further investigation to determine whether remediation will be necessary. The DMSI/CMA team has developed successful dewatering plans and permitted these plans for multiple projects located within the South Florida area. A typical dewatering plan includes a dewatering pump, a dewatering hose, several well points if needed, a sedimentation tank, and a discharge location to the City's or State's stormwater system. All dewatering effluent will be treated to meet regulatory requirements for turbidity and turbidity curtains will be placed on all outfalls. A dewatering plan will be developed depicting the dewatering locations and discharge locations. Turbidity monitoring and testing will be done twice a day per permit regulations and a turbidity log will be kept tracking the effluent of all dewatering activities. A preliminary layout of the dewatering plan is displayed below, as well as an example of a turbidity log from a previous project.

Restoration

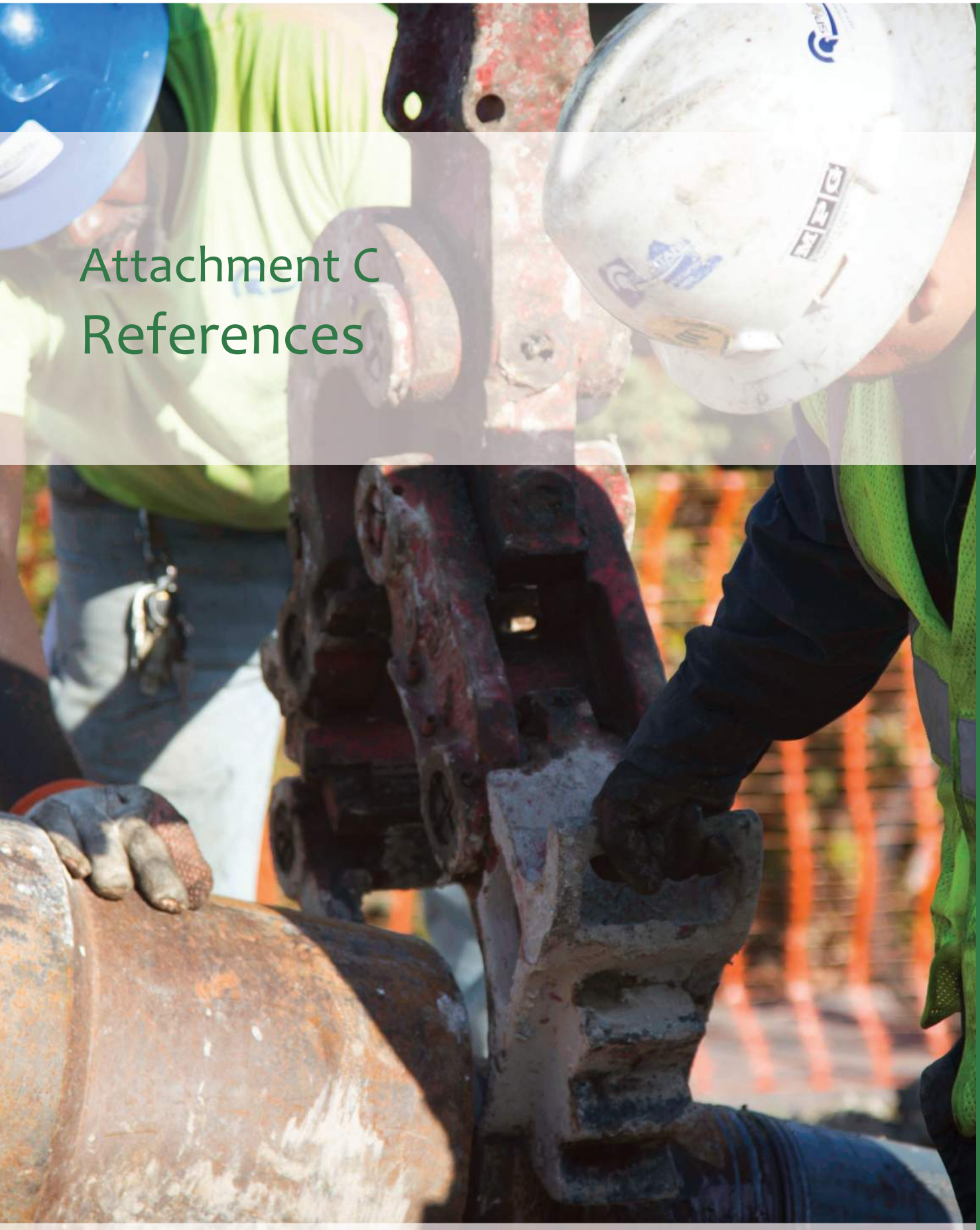
The scope of work for this design/build project includes restoration as necessary and milling and resurfacing of both northbound and southbound travel lanes. Once installation has been completed, stabilization of subgrade material and compaction of base material will have to be completed per the City's and/or County's specifications and requirements. Surface milling and asphalt placement will follow, to restore the roadway to pre-construction conditions. Restoration efforts will also include restoration of decorative pavers and decorative pavement marking observed within the project limits. Sidewalks and curbs will also need to be restored, as necessary. The DMSI/CMA team will indicate all restoration details and limits in the project plans and specifications, to minimize any additional restoration costs and schedule delays.

Project Schedule

The DMSI/CMA team will develop a proposed schedule that will limit the duration of construction that impacts the Downtown area by utilizing the critical path method. The DMSI/CMA team is familiar with working within the Downtown Fort Lauderdale area and has a broad knowledge of communication and coordinating with both the City and the local residents and businesses. This will enhance the workflow as well as, result in a timely completion of the project. The purpose of the project schedule is to establish durations of several project stages to ensure a timely completion of the project which benefits the City and the residents and local businesses. The project schedule will be updated during the project duration and shared with City staff. The project schedule will include stages in design as well as construction phases.

The design phase will consist of four key stages that include a deliverable: survey and data collection, 60% plans, 90% plans and permitting, and a 100% design.

Attachment C
References



C. REFERENCES

CLIENT INFORMATION	DESCRIPTION OF WORK	DATES OF CONST.	TOTAL COST
Miami-Dade County WASD Alexis Valdes 3501 NW 46th St, Miami, FL 33142 Mobile: (786) 299-9008 alexis.valdez@miamidade.gov	**CONSTRUCTION OF 48-INCH PCCP WATER TRANSMISSION MAIN FOR AREA NORTH** **Project Scope:** Installation of 15,000 LF of 48" PCCP Water Main Transmission Line long SW 117TH Avenue from SW 72ND Street to SW 104TH Street. (Pipe Diameter: 48-inch; Pipe Material: PCCP; Pipe Use: Water Main; Footage: 15,300) **Project Value Engineering, Cost Savings, Innovative Solutions, Project Time Enhancement: New Transmission WM** **Estimated Cost: $8,966,866**	2017 - 2021	$8,900,000
Miami-Dade County WASD James Ferguson, P.E. 3575 South LeJeune Rd, Miami, FL 33146 Mobile: (786) 552-8756 james.ferguson@miamidade.gov	**DESIGN-BUILD 48-INCH PCCP FORCE MAIN ALONG NORTH MIAMI AVENUE** Design Build through Urbon Corridor(s) and utility infested Midtown Miami, Miami Design District, and Wynwood. (Pipe Diameter: 48-inch; Pipe Material: PCCP; Pipe Use: Force Main; Footage: 13,000) **Project Value Engineering, Cost Savings, Innovative Solutions, Project Time Enhancement: New Transmission FM** **Estimated Cost: $22,012,999**	2016 - 2019	$22,019,000

CLIENT INFORMATION	DESCRIPTION OF WORK	DATES OF CONST.	TOTAL COST
Miami-Dade County WASD Gary Clarke 3575 S LeJeune Road Miami, FL 33146 Mobile: (305) 205-6980 gary.clarke@miamidade.gov	**CONSTRUCTION OF 42-INCH WATER MAIN & 10" FORCE MAIN FROM BISCAYNE BLVD TO THE PORT OF MIAMI AND CONSTRUCTION OF SANITARY PUMP STATION 9141** Construction of 42-Inch Water Main & 10" Force Main from Biscayne Blvd to the Port of Miami and Construction of Sanitary Pump Station 9141. • Pipe Diameter/Material/Use/Footage: 42-inch, DIP, Water Main, 9,740 • Pipe Diameter/Material/Use/Footage: 30-inch, HDPE, Water Main, 4,000 • Pipe Diameter/Material/Use/Footage: 10-inch, PVC-C900, Force Main, 5,000 • Pipe Diameter/Material/Use/Footage: 12-inch, HDPE, Force Main, 4,000 **Project Value Engineering, Cost Savings, Innovative Solutions, Project Time Enhancement: New WM, FM & Lift Station** **Estimated Cost: $20,884,160**	2018 - 2019	$15,200,000
City of Fort Lauderdale Scott Teschky 100 N Andrews Ave, Fort Lauderdale, FL 33301 Mobile: (954) 955-5552 steschky@fortlauderdale.gov	**CORAL SHORES SMALL WATER MAINS IMPROVEMENTS** Design, Permitting and Installation of 8-Inch HDPE water main, 81 water services and the restoration associated. (Pipe Diameter: 8-inch; Pipe Material: HDPE; Pipe Use: Water Main; Footage: 5,500) **Project Value Engineering, Cost Savings, Innovative Solutions, Project Time Enhancement: Water Main Replacement** **Estimated Cost: $1,401,000**	2021 - On-going	$1,401,000

DAVID MANCINI & SONS, INC.

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Pompano Beach, FL 33073
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cma
chen moore and associates

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Fort Lauderdale
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Fort Lauderdale, FL 33309
Telephone: +1 (954) 730-0707

REGIONAL OFFICES

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3150 SW 38th Ave., Suite 950
Miami, FL 33146
Telephone: +1 (786) 497-1500

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500 Australian Ave. South, Suite 850
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EXHIBIT B
TECHNICAL SPECIFICATIONS

Product Water Transmission to Fiveash Water Treatment Plant

CITY PROJECT NO. P12765

Table of Contents

Attachments

A-1: Product Water Transmission Main Alignment
A-2: Approved Manufactures List

1.0 Site Investigation

The Design Build Firm (DBF), by virtue of executing the Agreement, acknowledges that it has satisfied itself to the nature and location of the work, the general and local conditions including, but not restricted to: those bearing upon transportation; disposal, handling and storage of materials; access to the site; the confirmation and conditions of the work area; and the character of equipment and facilities needed preliminary to and during the performance of the work. Failure on the part of the DBF to completely or properly evaluate the site conditions shall not be grounds for additional compensation.

1.1 Responsibility for Geotechnical Investigation

The CITY shall be providing a geotechnical report for the project alignment and will issue a copy when it becomes available. The DBF has retained a geotechnical engineer to conduct additional geotechnical studies that includes soil borings and rock core analysis along the project alignment to supplement the CITY provided geotechnical report.

The DBF shall accept full responsibility for any interpretations, deductions or conclusions made or implied from the information obtained from the geotechnical study.

The DBF shall review the geotechnical study with its geotechnical engineer and assess the need to acquire additional data to design the pipelines described in this document. The DBF shall be responsible for the cost of any additional geotechnical reports required to complete the design of the pipeline.

The DBF, by virtue of executing the Agreement, acknowledges that it has satisfied itself as to the nature and extent of soil, rock, muck, (underground) water conditions and other materials on the project site. No additional payment will be made to the DBF because of the differences between actual conditions and those determined from the CITY provided geotechnical study.

1.2 Topographic Survey

A topographic survey of the general pipeline corridor shall be performed by a surveyor retained by the CITY. An electronic AutoCAD file for the survey will be available from the CITY upon request. The CITY will provide signed and sealed survey copies of the topographic survey upon request.

The DBF shall perform additional site surveying as may be required to develop a functional, constructible and permittable project. As part of the additional survey effort, the DBF shall identify the need for any property easements or acquisitions, including temporary easements. In such cases, the DBF shall provide required survey data for CITY use in procuring required easements.

Surveys shall comply with the latest “City of Fort Lauderdale Public Works Engineering & Architectural Department CADD Specifications for Project Drawings (hereinafter CADD Standards)” in effect at the time of contract execution.

2.0 Environmental Management Plan

The DBF shall ensure all statutory environmental requirements are met. The DBF assumes full responsibility for meeting environmental regulations and conditions of all applicable permits. The DBF shall develop an Environmental Management Plan prior to commencing construction. This Environmental Management Plan shall detail, at a minimum, the DBF’s work methods for handling the following items:

- Temporary environmental controls,
- Slurry and cuttings disposal,

- Drilling fluids,
- Dewatering,
- Stormwater pollution prevention, and
- Environmental incident response.

The Environmental Management Plan shall incorporate the environmental regulations and conditions of all applicable permits.

2.1 Temporary Environmental Controls

The DBF shall carry out effective measures wherever and as often as necessary to prevent its operation from producing dust in amounts damaging to property, cultivated vegetation, or domestic animals, or causing a nuisance to persons living in or occupying buildings in the vicinity.

During the progress of the work, the DBF shall keep the site and other areas used by it in a neat and clean condition, and free from any accumulation of rubbish. Rubbish and waste materials shall be collected and disposed of off-site in accordance with the local codes and ordinances governing locations and methods of disposal, and in conformance with all applicable safety laws, and to the particular requirements of Part 1926 of the OSHA Standards for Construction.

Fixed or portable chemical toilets shall be provided wherever needed for the use of employees. Toilets shall conform to the requirements of Part 1926 of the OSHA Standards for Construction.

All chemicals used during project construction or furnished for project operation shall show approval of either the U.S. Environmental Protection Agency or the U.S. Department of Agriculture. The handling, storage, use and disposal of all such chemicals and disposal of residues shall be in strict accordance with all applicable rules and regulations of Federal, State and local jurisdictional agencies and the printed instructions of the manufacturer and all regulatory requirements.

Noise resulting from the DBF's work shall not exceed the noise levels and other requirements stated in the City of Fort Lauderdale's Noise Ordinance. The DBF shall be responsible for curtailing noise resulting from its operation.

2.2 Slurry and Cuttings Disposal (Contaminated and/or Non-contaminated)

Cuttings (contaminated and/or non-contaminated) shall be disposed of properly and shall comply with all applicable requirements of the appropriate regulatory agencies. The DBF shall perform preliminary investigations of sufficient detail to determine if soil along the proposed pipeline corridors could potentially be classified as contaminated. The DBF shall be responsible for obtaining any permits required for disposal of these cuttings.

2.3 Drilling Fluids

Drilling fluids to be used shall be environmentally sound and biodegradable. Spent drilling fluids shall be disposed of properly and shall comply with all applicable requirements of the appropriate regulatory agencies. The DBF shall be responsible for obtaining any permits required for disposal of these fluids.

2.4 Dewatering

The DBF shall submit as part of the Environmental Management Plan its proposed methods of handling trench water and the locations at which the water will be disposed. Excavations shall be free from water prior to the installation of pipe or structures. The DBF 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 DBF shall continue dewatering operations until backfilling has progressed to a sufficient depth over the pipe or structure to prevent flotation or movement of the pipe or structure in the trench or so that it is above the water table.

Water from trenches, excavation and drilling operations 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. Disposal to any surface water body will require silt screens to prevent any degradation in the water body. The DBF shall have full responsibility for acquiring all necessary permits for disposal.

2.5 Stormwater Pollution Prevention

The DBF shall maintain full responsibility for meeting environmental regulations and conditions of all applicable permits with regard to stormwater pollution prevention.

2.6 Environmental Incident Reporting

In the event of any environmental incident, the DBF shall respond in an expeditious manner and notify the proper authorities. The appropriate environmental regulatory agency shall also be notified as soon as possible.

3.0 Compliance with Codes and Technical Requirements

All work specified in this document shall conform to or exceed the requirements of all applicable codes and specified technical requirements. The DBF shall construct the work specified in accordance with the requirements of this document and the referenced portions of those referenced codes, standards and technical requirements listed herein. In case of conflict between codes, reference standards and technical requirements, the most stringent requirements shall govern. All conflicts shall be brought to the attention of the CITY and approved by the CITY prior to ordering or providing any materials or labor.

All references made to published specifications, codes, standards or other requirements shall mean the latest specifications, standards, or requirements of the respective issuing agencies which have been published as of the date of the opening of the bids. In case of conflict between codes, reference standards, or other applicable documents, the most stringent requirements shall govern.

4.0 Utility Location and Connections

Limited information on existing underground utilities within the vicinity of the project area are available. The CITY shall provide, upon request any available information on CITY owned underground utilities.

The DBF shall perform utility locations to verify locations and elevations of underground utilities that may interfere with the work.

The DBF shall conduct utility investigations in order to fully inform themselves of the character, condition and extent of all such utilities that may be encountered, and that may affect the design and construction operations. The DBF shall make all appropriate contacts and negotiations as required with local utility companies that may be affected by the proposed work. All existing utilities in the vicinity of the proposed pipeline corridor routing shall be shown on the design drawings developed by the DBF.

The DBF shall perform utility verifications and shall excavate to verify tie-in points for connections to existing systems. All connections shall be performed in such a manner that no damage and minimal

interruption is caused to the existing facilities. Before commencing work involving the removal or placement in operation of existing or new facilities or tie-ins to existing facilities, the DBF shall notify the CITY in writing at least seven days in advance. Connections to existing services or utilities, shutdowns and startups shall be planned in detail with appropriate scheduling of work and coordination with the CITY.

5.0 Submittal Requirements

All submittals shall be directed to the CITY. A general summary of the types of submittals is as follows:

The DBF shall submit four (4) copies of the design packages to the CITY at the 95 percent stage of design. The design packages shall include the following:

- Geotechnical Results
- Design Drawings
- Design Documentation
- Permitting (if available)
- USB with all CADD files for CITY to check compliance with CADD Standard

All drawings submitted to the CITY shall be developed electronically in AutoCAD in accordance with the City's CADD Standard. Drawings shall include both plan and profiles of the proposed pipeline routing. Design documentation shall include such things as technical specifications, technical data sheets and vendor supplied drawings.

Within seven (7) days after the award of the Contract, the DBF shall prepare and submit copies of its proposed schedule to the CITY for review and comments. The schedule shall be updated monthly and submitted with the application for monthly progress payments. The schedule shall be prepared in the form of a horizontal bar chart showing in detail the proposed sequence of the work and identifying construction activities for each pipeline crossing. 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 DBF shall submit a Schedule of Payment Items for review within two weeks after receiving the Notice to Proceed. The schedule shall contain the major design milestones as well as the installed value of the component parts of work for the purpose of making progress payments during the design and construction period. Progress payment requests shall be made in accordance with CITY standards. Payment requests submitted without such documentation will not be processed.

Copies of all shop drawings, approved by the Engineer-of-Record for the DBF, shall be submitted to the CITY.

The DBF shall submit daily construction inspection reports to the CITY from the date that the DBF commences mobilization on site to the date that the DBF achieves substantial completion for the project. Reports shall be submitted weekly, on Mondays immediately following the end of the previous week.

Where warranties are called for, a sample of the warranty shall be submitted with the approved 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.

Copies of certificates of compliance and test reports shall be submitted for requested items prior to request for payment.

Prior to commencing work, the DBF shall have a continuous color audio-video recording taken along the entire length of the project (and the entirety of the Staging Areas for the HDD drilling entry/exit areas) to serve as a record of preconstruction conditions. Recordings shall not be made more than thirty (30) days prior to construction in any area. Audio-video recordings shall be digital and compatible for playback with a standard DVD player. Each DVD shall begin with current date, project name, and municipality and be followed by general location information such as the name of street, the viewing side, and the direction of progress. All video recordings must display continuously and simultaneously, generated with actual taping, transparent digital information to include the date and time of recording.

The DBF shall keep all drilling logs containing dates, times and locations, soil conditions, drilling data such as depth, angle and rate of penetration, and utility crossings. Computer data sheets from steering tools and tracking systems shall also be kept. The DBF shall, within thirty (30) calendar days of the date of final completion, submit these records to the CITY.

The DBF shall submit record drawing information to the CITY for review prior to the preparation of final record drawings. This preliminary submittal shall be submitted to the CITY within thirty (30) calendar days of the date of substantial completion. Upon receipt of review comments from the CITY, the DBF shall commence preparation of final Record Drawings.

The DBF shall, within thirty (30) calendar days of the receipt of review comments from the CITY, prepare Record Drawings showing those changes made during the construction process. Record Drawings shall be plotted on 24-inch by 36-inch paper. Record Drawings shall contain the following information, where available:

- Plan views showing:
    - horizontal alignment details of the horizontal directional drill
    - coordinates of critical points such as horizontal directional drill entry and exit points, tangent points, and inflection points
    - all coordinates shall be in Florida State Plane Coordinates North American Datum of 1983 (NAD83)
    - curve radii
    - bearings of straight sections
    - ties to surface fittings
- Vertical profiles showing:
    - the invert levels of the finished carrier pipe in relation to ground elevation, along with the elevations of critical points such as horizontal directional drill entry and exit points and tangent points
    - All elevations shall be in North American Vertical Datum of 1988 (NAVD88)
    - curve radii
    - chainages and invert levels of the carrier pipe at a minimum of 50-foot intervals
- the diameter and type of pipe and pipe joints used in carrier pipes,
- the diameter and type of pipe and pipe joints used in casing pipes (if the DBF determines that casing pipe is required),
- final reamed size of the boreholes,
- extent and type of grouting, and
- pipe spacer/centralizer arrangements.

6.0 General Requirements

The work to be performed under this Contract shall consist of furnishing all tools, equipment, materials, supplies, and manufactured articles, 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 DBF as though originally so specified at no increase in cost to the CITY.

Maintenance of existing operations is mandated throughout the construction period.

All materials and workmanship supplied for this project shall be of first class quality.

During construction, the DBF is expected to work regular hours between 7:30 A.M. to 4:30 P.M. Monday through Friday. Requests to work during other than regular hours must be submitted to the CITY at least 72 hours in advance of the period proposed for such overtime work and shall set forth the proposed schedule for overtime work to give the CITY ample time to arrange for its personnel to be at the site of the work. Hours of work shall conform to the requirements of the CITY's Noise Ordinance.

Prior to the commencement of work at the site, a preconstruction conference will be held at a mutually agreed time and place which shall be attended by the DBF, its superintendent, its subcontractors as well as representatives of the CITY, governmental representatives as appropriate, and others requested by the DBF or CITY. Prior to the preconstruction conference, the DBF shall have submitted a progress schedule.

The CITY will schedule and hold biweekly progress meetings during construction. The CITY, DBF and all subcontractors active on the site shall be represented at each meeting.

6.1 Temporary Utilities

The DBF shall be responsible for determining and providing the equipment and temporary utilities that are adequate for the performance of the work within the time specified. All items shall conform to the applicable requirements of OSHA Standards for Construction. These items may include, but are not limited to power, lighting, and water supply.

The DBF shall pay for all utilities (including power, lighting, water, sanitary facilities, etc.) needed for the performance of the Project. The DBF shall make arrangements for and pay all costs for all water used for construction and testing. The DBF shall provide and maintain all meters, piping, fittings, adapters and valves required.

To obtain potable water, the DBF shall install a CITY supplied meter and backflow preventer. The CITY will charge the DBF for potable water. The DBF shall make all necessary connections to existing piping and shall provide all necessary appurtenances at his own expense.

The DBF shall not make connection to, or draw water from, any fire hydrant or pipeline without first obtaining permission of the authority having jurisdiction over the use of said fire hydrant or pipeline and from the agency owning the affected water system. For each such connection made, the DBF shall first attach to the fire hydrant or pipeline a valve and a meter, if required by the said authority, of a size and type acceptable to said authority and agency.

6.2 Maintenance of Facilities and Sequence of Construction

All connections to existing systems shall be performed in such a manner that no damage and minimal interruption is caused to the existing facilities. Required shutdowns to the utility systems shall be identified in writing during design. The DBF shall give the CITY at least 72 hours' notice in writing before commencing work involving removing or placing in operation existing or new facilities or tie-ins to existing facilities for all planned for this Project. Connections to existing services or utilities, shutdowns and startups shall be planned in detail with appropriate scheduling of work and coordination with the CITY. The DBF shall obtain written approval from the appropriate permitting agencies and the CITY prior to placing the water main and the force main into service.

Final connections between existing and proposed pipeline shall be performed via short-term shutdown. A maximum of four (4) hours shall be allowed for a short-term shutdown. The start and stop time for performing short-term shutdowns shall be agreed to in writing with the CITY.

All connections between the existing and proposed piping shall be constructed in the presence of the CITY's inspector.

6.3 Protection of Existing Facilities

The DBF shall protect all existing utilities and improvements not required for removal and shall restore damaged or temporarily relocated utilities and improvements to equal or better conditions than they were prior to such damage or temporary relocation.

The DBF shall determine the exact locations and depths of all utilities that may interfere with the work. Utility location shall be performed in a manner sufficient to determine the alignment and grade of any potential conflicts. It is the responsibility of the DBF to make utility investigations in order to fully inform themselves of the character, condition and extent of all such utilities as may be encountered and as may affect the design and the construction operations at no additional cost to the CITY. The DBF shall make all appropriate contact and negotiations as required with local utility companies that may be affected by the proposed work.

6.4 Site Access, Staging and Parking

Nothing herein shall be construed to entitle the DBF to the exclusive use of any public street, alleyway, parking area or easement during the performance of the work. The DBF shall conduct its operations so as not to interfere unnecessarily with the authorized work of utility companies or other agencies in such streets, alleys, ways, parking areas or easements. No street shall be closed to the public without first obtaining permission from the CITY and proper governmental authority. Fire hydrants on or adjacent to the work shall be kept accessible to firefighting equipment at all times. Temporary provisions shall be made by the DBF to assure the use of sidewalks and the proper functioning of all gutters, sewer inlets, and other drainage facilities.

The DBF shall obtain permission from the CITY and relevant authority prior to using any right of way or easement for storage or operation of any construction equipment.

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 thirty (30) days prior to the required street closure in order to determine necessary sign and detour requirements.

Responsibility for protection and safekeeping of equipment and materials at or near the project area will be solely that of the DBF and no claim shall be made against the CITY by reasons of any act of an employee or trespasser.

The DBF shall notify the fire and police departments prior to closing any street or portion thereof, and again when streets are passable for emergency vehicles. Emergency vehicle access to consecutive arterial crossings or dead-end streets in excess of 300 feet shall not be blocked without special written permission from the fire department.

DBF shall be responsible for coordinating with the CITY for parking and staging arrangements within CITY properties and ensure that the area remains free of garbage, trash, and litter.

6.5 Traffic Control, Regulations and Maintenance of Traffic

The DBF shall obey all traffic laws and comply with all the requirements, rules and regulations of FDOT, the CITY and other local authorities having jurisdiction, to maintain adequate warning signs, lights, barriers, etc. for the protection of traffic on public roadways.

The DBF shall maintain and protect access, for vehicular and pedestrian traffic, to and from all properties and business establishments adjoining or adjacent to those streets affected by its operations.

Upon submittal of the 95 percent design plans, the DBF shall immediately prepare and submit Maintenance of Traffic (MOT) Plans to FDOT and CITY, as applicable, for approval. The MOT Plans shall comply with the requirements of FDOT, CITY and any other regulatory agency that may have jurisdiction within the project area.

6.6 Equipment and Materials

All equipment, materials, instruments or devices incorporated in this project shall be new and unused. All handling, maintenance and storage of these items shall be in accordance with the manufacturer's recommendations.

6.7 Project Closeout

The DBF shall promptly remove from the vicinity of the completed work, all rubbish, unused materials, concrete forms, construction equipment, temporary structures and facilities, construction signs, tools, scaffolding, materials, supplies and equipment which may have been used in the performance of the Work.

Before final acceptance of the project, the DBF shall submit to the CITY the following items:

- Written test results of project components;
- Certificates of inspection and acceptance by governing agencies having jurisdiction;
- Record drawings signed and sealed by the Engineer-of-Record;
- Documentation demonstrating compliance with the specific conditions of all permits (including those obtained by the CITY along with DBF obtained permits); and
- Releases from all parties who are entitled to claims against the subject project.

Final inspection of the work will be done by the CITY and the Engineer-of-Record for the DBF upon notification from the DBF. Any work not found acceptable will be noted on a "Punch List". Punch List work must be completed by the DBF to the satisfaction of the CITY prior to processing the final payment.

The DBF shall restore damaged areas or temporarily relocated utilities and improvements to a condition equal to or better than prior to such damage or temporary relocation.

The DBF shall comply with all maintenance and guarantee requirements.

7.0 Piping

The proposed pipelines shall have a working pressure rating of at least 150 psi and are anticipated to be installed through a combination of the following methods:

- Horizontal Directional Drilling (HDD)
- Open cut excavation and backfill
- Other trenchless method as necessary

Piping shall be high density polyethylene (HDPE) pressure pipe for any HDD operations. Pipelines to be installed from the terminal points of any HDD pipes to connection with the proposed of existing piping and structures shall be constructed by open cut excavation and backfill. Piping installed by open cut excavation shall be restrained Prestressed Concrete Cylindrical Pipe (PCCP) pressure pipe meeting AWWA C301 standard.

All connections to existing piping shall be coordinated with the CITY. Connections requiring the removal of existing piping from service shall be no longer than four (4) hours in duration in any 24-hour period unless bypass facilities are provided by the DBF.

7.1 High Density Polyethylene Pipe (HDPE)

HDPE pipe shall be high molecular weight. The resin material shall have a standard PE code designation of PE 4710. The pipe shall contain no recycled compound except that generated in the manufacturer's own plant from resin of the same specification from the same raw material pipe. The pipe shall be homogeneous throughout and free of visible cracks, bubbles, holes, foreign inclusions or other injurious defects. It shall be uniform in color, capacity, density, and other physical properties.

The pipe shall conform to Ductile Iron Pipe Size (DIPS) standard dimensions and the standard dimension ratio (DR) shall be DR 11. Based on the DBF's engineering analysis, the dimension ratio may be increased or decreased to facilitate proper HDD installation. If the DBF elect to increase the DR to a value greater than 11 (i.e., wall thickness is reduced) after award of the Contract, then the DBF shall obtain permission from the CITY and offer and appropriate reduction in contract price.

All polyethylene piping and fittings shall conform to the applicable requirements of AWWA C906. In addition, this pipe shall be listed as NSF 61.

All joints for polyethylene piping shall be of the thermal butt fusion type or electrofusion type. All butt fusion or electrofusion fittings shall be PE4710 HDPE. Fittings shall have a pressure rating equal to the pipe. All polyethylene fittings used for the water main shall conform to the requirements of AWWA C906.

7.2 Prestressed Concrete Cylinder Pipe and Specials

All prestressed concrete pipe and specials shall conform to AWWA C301 for "Prestressed Concrete Pressure Pipe, Steel Cylinder, for Water and Other Liquids". The pipe and specials shall be designed in accordance with the design pressure indicated in this document and maximum overburden conditions, plus an H-20 truck load, all in accordance with Design Appendix A of AWWA C301. Joints shall be of the steel ring, bell and spigot, rubber gasket type. Soap, gaskets, and diapers shall be supplied by the pipe supplier. Cement used for the manufacture of the pipe shall conform to ASTM Standard Specifications for Portland Cement, Designation C 150, Type I.

Steel cylinders for restrained pipe shall be designed to withstand lateral forces that occur at fittings or

specials and to linearly transmit the thrust developed at each fitting or special along each leg of the deflection for the design pressures indicated in this document and maximum overburden conditions All restrained pipe, bends and specials shall be restrained with "snap ring" type or "harnessed clamp" type joints. No welded joints will be allowed unless otherwise noted. The manufacturer shall design the pipe, fittings and specials to withstand the thrust caused by the fittings shown, based on the design pressures specified herein.

All outlets shall be located in full or short lengths of pipe, not in beveled sections of pipe. The outlet shall be integrally connected to the pipeline section during the manufacturing of the pipe section and terminate in either a cast-steel flange conforming to the requirements of ANSI B16.1, Class 125 or a plain or mechanical joint end suitable for connection to mechanical joint ductile iron pipe or of a type consistent with the mainline pipe as shown on the Concept Plans or required to complete the work.

Flanged joints and fittings for PCCP shall conform to the requirements of AWWA C207. Flanges shall be AWWA Standard Steel Ring, Class D, conforming to the requirements of ANSI B16.1, Class 125. The face of the flange shall be machined after installation of the flange to the pipe. No raised surface shall be allowed on flanges. Pipe lengths shall be fabricated to meet the requirements of the Drawings. Gaskets shall be the "Ring Gasket" type, 1/8-inch minimum thickness, cloth inserted rubber, red rubber, or neoprene. Bolts shall be of the size and length called for and in accordance with the "American Standard" and comply with the requirements of ANSI/AWWA Standards. The bolts for flanged joints shall be a minimum ASTM A307, Grade B carbon steel and be in accordance with ANSI A21.10 (AWWA C110). The bolts shall have hexagonal heads and nuts, no washers shall be used.

All exposed steel (except flange face) shall be coated with two coats of coal tar epoxy (min. 24 dry mil. thickness) TNEMEC 413, KOP-COAT 300M, or equal.

Mechanical joints and fittings for PCCP shall conform to the applicable requirements of AWWA C111/ANSI A21.11, and shall be furnished with retainer gland, all nuts, bolts and gaskets for a complete installation. Joints shall be made by employing a tapered rubber gasket forced into a tapered groove with a steel or ductile iron follower ring. Bolts for mechanical joints shall be high strength corrosion resistant low-alloy steel tee-headbolts with hexagonal nuts.

Mechanical coupling joints for PCCP shall have shouldered ends and be suitable for connection using split type couplings. The pressure rating and service of the coupling shall be the same as that of the connected piping. Coupling material shall be of malleable iron. Gaskets shall be of rubber. Bolts and nuts shall be heat treated carbon steel track bolts and shall be plated. After installation, buried couplings shall receive two heavy coats of coal tar epoxy (min. 24 dry mil thickness, which is compatible with the finish of the coupling. Couplings shall be as manufactured by Victaulic Company of America, Style 31, or equal.

Each size of PCCP and connecting joint shall be hydrostatically tested 150 psi pressure by the manufacturer. At the Engineer-of-Record's option, pipe testing may be witnessed by the Engineer-of- Record. The testing procedure shall be submitted to the Engineer-of-Record for review before scheduling the testing. Two sections of pipe shall be connected using the joint proposed for use on this project. Each section shall be a minimum of ten (10) feet in length. The manufacturer shall certify that the pipe sections used in the testing are of the same design characteristics and physical dimensions, except length, as proposed for the project. The assembly shall be filled with water, vented of air, and subjected to gradually increasing pressure. The assembly shall be inspected at increments not greater than 1/6 the design pressure for leaks, movement and distress of the exterior mortar coating. Leakage in excess of allowable as defined by AWWA C600 or visible cracks in the mortar coating shall constitute failure of the test. Test results shall be certified and submitted to the Engineer-of-Record for final approval before the delivery of any piping to the job site. Failure of the piping materials or joint shall be grounds for rejection of the manufacturer.

7.3 Steel Pipe and Fittings

Steel pipe and fittings for water and wastewater shall conform to AWWA C200. Steel pipe shall meet or exceed the manufacturer and material requirements of ASTM A53, Grade B or ASTM A139, Grade B.

Steel pipe shall be fabricated by either the spiral weld or single longitudinal seam method and shall be rated for at least 250 psi internal design pressure with a minimum yield strength of 35,000 psi. Design stress in the pipe wall at the design pressure shall not exceed 50 percent of the minimum yield strength of the steel.

Steel pipe shall be manufactured with minimum wall thicknesses of 0.5 inches.

Fittings shall be fabricated from the pipe specified and shall conform to AWWA C208, Table 1 (Figure 1). Fittings provided for the purpose of transition to other types of piping shall be in accordance with the applicable portions of AWWA C207 and AWWA C208, unless otherwise shown on the Drawings.

Flanges shall be AWWA C207, standard hub type, slip-on welding flanges, Class D or higher, designed by the pipe supplier.

Bolts for flanged joints shall be of the size and length called for and in accordance with the "American Standard" and comply with the requirements of the ANSI/AWWA Standards. Bolts shall be a minimum ASTM A307, Grade B, hot-dip galvanized, carbon steel in accordance with ANSI A21.10 (AWWA C110). Bolts shall have hexagonal heads and nuts; no washers shall be used.

Gaskets for flanged joints shall be Viton or silicone material, "Ring-Gasket" type, 1/8-inch minimum thickness, and suitable for 250 psi internal design pressure. Segmented gaskets will not be acceptable.

Welded field connections shall be of the single "V" butt joint type in accordance with AWWA C206. Welded connections shall not be permitted where such connections would interfere with the removal of valves or equipment or create sections of pipe too large for removal from structures. All field welds shall be inspected when field welding is permitted. Refer to Article 3.01 herein.

The piping layout shown on the Drawings is based upon typical fittings available in steel piping for process air. In some instances, flange joints shown may not be required for steel pipe. Welded joints may be substituted for flange joints subject to approval by the Engineer-of-Record. Welded joints will not be acceptable where such joints would interfere with the removal of valves or equipment or create sections of piping too large for removal from structures as determined by the Engineer-of-Record.

Harnessed flexible couplings may also be used in lieu of flanges at locations approved by the Engineer-of-Record. Lugs shall be welded to the pipe in accordance with the requirements of AWWA Manual M11 for Steel pipe where required for harnessing of flexible couplings.

Painting for steel pipe and fittings shall be as specified below.

1. The interior of all steel pipe shall have Ceramapure PL90.
2. Exterior Painting for Exposed Steel Pipe (Indoor and Outdoor)
    a. Except for areas of pipe to be welded, the exterior of exposed steel pipe shall receive a prime coat of 5 to 10 mils (dry) of inorganic zinc primer rated for 300°F continuous service and shall be Carbozinc 11 as manufactured by Carboline or equal.
    b. Areas of pipe to be welded shall receive 1 mil (dry) of weldable primer as manufactured by Carboline, or equal. After welding and pressure and leakage testing are completed, welded joints shall be thoroughly cleaned of all foreign matter and any scale or rust and primed as specified above.
    c. Over the prime coat shall be a finish coat of 3 to 5 mils (dry) of a high heat polymer coating and shall be Thermaline 4000 as manufactured by Carboline or equal.
3. Exterior Painting and Tape Wrap for Buried Steel Pipe

a. Except for areas of pipe to be welded, the exterior of buried steel pipe shall receive a prime coat of 6 to 10 mils (dry) of an epoxy-phenolic or epoxy-amine primer service rated for -50°F to 300°F continuous service and shall be Thermaline 450 EP as manufactured by Carboline, Carbomastic 15 as manufactured by Carboline, TC 7000 as manufactured by Chase/Tapecoat, or equal. The primer product used shall be compatible with the exterior tape system manufacturer recommendations.
b. Areas of pipe to be welded shall receive 1 mil (dry) of weldable primer as manufactured by Carboline, or equal. After welding and pressure and leakage testing are completed, welded joints shall be thoroughly cleaned of all foreign matter and any scale or rust and primed as specified above.
c. The exterior of buried steel pipe shall receive, over the prime coat, a multi-layered, cold-applied tape wrap system which shall be shop applied with a minimum total coating thickness of 80 mils. The cold applied type wrap shall operate satisfactorily at a temperature of 300°F. The wrap shall be applied in accordance with manufacturer's recommendations and as specified herein. All fittings shall be wrapped in accordance with manufacturer's recommendations. Successive layers shall be applied such that windings are staggered and overlay the midpoints of previous tape widths. Prime coat and wrap shall be applied to each joint as specified for the pipe for continuous coating and wrapping of all buried steel piping. Polyethylene backed coatings shall be protected from sunlight at all times. The tape wrap system shall be the Tapecoat HTMB 300°F Coating System as manufactured by the Chase Tapecoat, Evanston, Illinois, or equal.

7.4 Thrust Restraint Design

All joints shall be restrained. Thrust restraint design shall be based on the following criteria:

- Thrust restraint minimum design safety factory: 1.5
- Design pressure / Test pressure: 150 psi
- Thrust blocks shall not be allowed.
- Factory manufactured restrained joint pipe and fittings shall be designed wherever practicable in lieu of mechanical restraining devices.
- Mechanical restraining devices shall be Mega-lug as manufactured by EBAA Iron.

7.5 Hydrostatic Testing and Disinfection

All pipelines shall be hydrostatically tested. Prior to testing, all pipelines shall be flushed or blown out as appropriate. The pipelines can be tested in sections or as a unit. The pipeline shall be filled with potable water and shall be allowed to stand under a slight pressure for a period of at least 24 hours. For all horizontally directionally drilled pipelines, product pipelines shall be hydrostatically tested above ground prior to installation and shall be tested again after installation of the product (i.e., carrier) pipe in the final position within the borehole.

All test procedures shall be in accordance with the requirements of the Broward County Health Department as well as all applicable requirements of AWWA C600 and Plastic Pipes Institute in the case of HDPE pipe. The maximum allowable leakage for distribution and transmission pipelines shall be in accordance with the requirements of the Broward County Health Department. Pipes with welded joints shall have no leakage.

Before being placed into service, all new water mains and repaired portions of, or extension of existing mains shall be disinfected. Disinfection shall be done in accordance with the requirements of AWWA C651. Bacteriological testing shall be performed in accordance with the requirements of the Broward County Health Department (BCHD) and any other applicable regulatory agency. The Contractor shall be

responsible for obtaining the necessary certifications from the BCHD prior to placing the work into service.

Where connections are to be made to an existing potable water system, the interior surfaces of all pipe and fittings used in making the connections shall be swabbed or sprayed with a one percent hypochlorite solution before they are installed. Thorough flushing shall be started as soon as the connection is completed and shall be continued until discolored water is eliminated.

All water required for hydrostatic testing and disinfection shall be supplied to the DBF by the CITY via a CITY supplied meter and backflow preventer. The CITY will charge the DBF for potable water.

If the DBF determines that casing piping is required, it shall be included with its bid. Hydrostatic testing of casing pipe is not required unless specifically required by a permit condition.

8.0 Open Cut Excavation and Backfill

The DBF shall excavate, grade and backfill as required for site underground piping systems. All excavations shall meet applicable OSHA, local and Federal Code requirements. Trench excavation, where required, shall be done in accordance with the requirements of Florida Statute Section 553.60 *et. seq*. cited as the "Trench Safety Act". The DBF 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.

Clean, sandy excavated materials 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. Bedding for wet installations shall be pea rock conforming to the requirements of ASTM C 33, Size Number 8. Bedding for all precast concrete items shall be crushed stone, conforming to the requirements of ASTM C 33, Size Number 57. Depending on the existing soil condition alternative bedding can be used upon approval of the EOR.

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 FDOT. Maximum density of material in trenches shall be determined by ASTM D 1557. Field density of the backfill material in place shall be determined by ASTM D 1556 or D 2922. The DBF shall be responsible for obtaining all density tests that may be required for the work. Note that FDOT may require the use of flowable fill.

8.1 Depth of Cover

Minimum depth of cover for underground piping systems shall be 36-inches or greater as required by applicable regulatory agencies.

8.2 Tracer Identification Tape and Locator Wire

Pipelines installed by the open trench method shall be marked with metal tracer identification tapes located 18 inches above the pipe. For the force mains, tracer tape shall be safety green and imprinted with the words "CAUTION – PRESSURE SEWER MAIN BURIED BELOW". For the water main, tracer tape shall be safety blue and imprinted with the words "CAUTION – POTABLE WATER MAIN BURIED BELOW". The tape shall be three inches in width.

All pipe shall have 14 strand color coded identification wire installed on top of the pipe. The wire shall be secured to the pipe once per pipe joint. The wire shall pass through a drilled hold near the top of valve boxes from the outside of the box to the inside of the box. The wire shall be attached to the valve box.

9.0 Horizontal Directional Drilling

The DBF shall ensure that the grades, tolerances and hydraulic characteristics are achievable using the proposed construction methods, such that the completed pipeline will perform its intended function in accordance with this document.

9.1 Piping

All pipe installed by HDD shall be high density polyethylene (HDPE) pressure pipe. The Engineer-of-Record for the DBF shall verify that the Standard Dimension Ratio specified is adequate for the DBF's proposed design. The DBF's Engineer shall consider pipe loads such as operational and installation loads, internal (operational) pressure loads, external (operational) hydraulic and earth loads, pipe resistance to external loads, axial bending stress, pulling force, axial tensile stress, torsional stress, combined loads during installation and combined loads during operation. The design and selection of the product piping shall be done in accordance with the requirements of ASTM F 1962 (Standard Guide for Use of Maxi-Horizontal Directional Drilling for Placement of Polyethylene Pipe or Conduit Under Obstacles, Including River Crossings).

If the DBF determines that casing piping is required, it shall be included with its bid. The material for the casing pipe shall be HDPE, manufactured to the same specifications as the carrier piping. The diameter of the casing pipe shall be as determined by the DBF.

9.2 Drilling Fluids and Cuttings

The DBF shall use an appropriate drilling fluid to suit the ground conditions that may be encountered during the drilling, reaming and product pipe installation operations. Cuttings and spent drilling fluids shall be disposed of properly and shall comply with the requirements of all local regulatory agencies.

9.3 Guidance and Survey

The DBF's drilling method shall incorporate a survey system that will include tracking of the drill head and drill path for the entire length of the bore. The survey system shall be capable of measuring the elevation and gradient of the bore path.

9.4 Tracer Identification Tape

HDD installed pipelines shall be marked with metal tracer identification tapes at all bore entry and exit points and at intermediate locations where possible that allow for "line of sight" identification. For force mains, tracer tape shall be safety green and imprinted with the words "CAUTION – PRESSURE SEWER MAIN BURIED BELOW". For water main, tracer tape shall be safety blue and imprinted with the words "CAUTION – POTABLE WATER MAIN BURIED BELOW". Tracer identification tapes shall be laid a minimum of six inches above the crown of the pipe and shall be attached to metal surface fittings to provide connection points for locating devices.

10.0 Valves

10.1 Tapping Valves and Sleeves

Tapping valves shall be resilient wedge type meeting AWWA C509 and shall be connected by a machined projection on the outlet flanges of the tapping sleeves and crosses. The outlet ends shall conform in mechanical joint connections, except that the outside of the valves shall be larger than normal size to permit full diameter cuts.

Tapping valves shall comply in all other respects to the gate valve requirement of these specifications. All tapping valves must have a cast-in-alignment ring. VALVES, TAPPING: - Resilient seat only, Manufacturers: Mueller, American Darling, AVK Series 45, or City Approved Equal.

All tapping sleeves shall have duck-tipped end gaskets, flanged outlet with American one hundred, twenty-five pounds (125 lbs.) standard template, mechanical joints in the main line, factory tested for 400 psi and with working pressure of two hundred (200) PSI, They shall be Ford Style FS1-SS, JCM Model 432 (4”-12”), Mueller, American Darling or A Series or CITY approved equal. Stainless steel full clamp style may be considered on a case by case basis per City approval.

10.2 Plug Valves

Isolation valves for the sewer force mains shall be eccentric plug valves. One isolation valve shall be required at each connection point to the existing system. Eccentric plug valves shall be of the non- lubricated eccentric type with cast iron body, resilient faced plug, or a replaceable, resilient seat in the body. Resilient facing shall be suitable for the intended service. All valves above grade or in valve vaults shall have handwheels and shall have worm gear operators and ANSI B16.1, Class 125 flanges. Buried valves shall have mechanical joint ends conforming to ANSI 21.11. All shaft bearings shall be of stainless steel, Teflon, or other suitable material furnished with permanently lubricated bearing surfaces. All valves shall have an unobstructed port area or not less than 80 percent of full pipe area. All eccentric plug valves shall have a pressure rating of not less than 150 psig, for bubble tight shut off.

10.3 Butterfly Valves

Isolation valves for water mains shall be butterfly valves conforming to the requirements of AWWA C504 – Butterfly Valves for Water Systems. The valves shall be suitable for a design working water pressure of 200 psig. Valves shall be lined with two-part epoxy in accordance with AWWA C-550. Coating shall be suitable for potable water service. One isolation valve shall be required at each connection point of the

proposed water mains with the existing system. All butterfly valves shall be provided with valve boxes, complete with concrete pad and identifying brass disk in accordance with the requirements of the CITY.

10.4 Gate Valves

Gate valves for water service shall be resilient-seated gate valves and conform to AWWA C509. Gate valves intended for underground service shall have mechanical joint ends. Gate valves 16 inches nominal diameter and larger shall be fitted with a by-pass valve. Gate valves shall turn counter clockwise to open. Gate valves shall be non-rising stem type equipped with a 2-inch operating nut and valve box. Gate valves shall be designed for horizontal installation and be supplied with right-angle gearboxes.

10.5 Automatic Air Release Valves

Automatic air release valves shall be installed where required to vent accumulating air while the system is in service and under pressure. Air release valves shall be provided at each crossing. The design of the valves shall be appropriate for the type of service (water or wastewater). Air release valves below grade shall be installed in precast concrete boxes in accordance with site requirements and CITY standards. Hardware and nipples shall be Type 316 Stainless Steel.

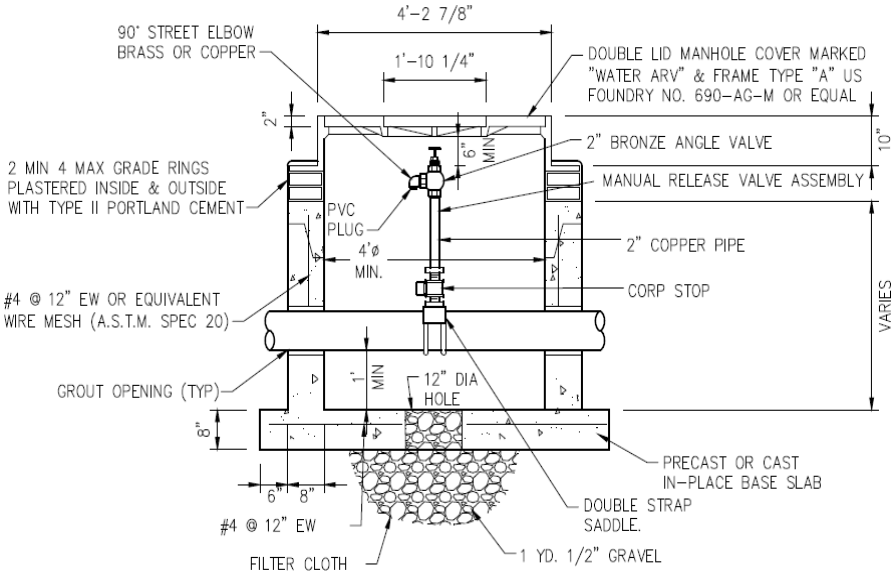
10.6 Manual Air Release Valves

Automatic air release valves (ARVs) shall not be used on water piping where the valve would be below the 100-year flood plain elevation. Manual ARVs shall be installed on water piping in areas subject to flooding and/or where indicated on the drawings and where required to vent accumulating air while the system is in

service and under pressure.

Manual ARVs below grade shall be installed in precast concrete boxes. All accessories in contact with potable water shall be lead free. Manhole shall comply with ASTM C478 titled “Standard Specification for Circular Precast Reinforced Concrete Manhole Sections”. Interior and exterior of the manhole shall be coated with a minimum 10 mils dry film thickness coating of coal tar epoxy. Manual ARV’s shall be comply with the design criteria illustrated in Figure 1 below:

Figure 1: Conceptual Illustration of Manual Air Release Valve



10.7 Valve Boxes

Valve boxes and covers for all size valves shall be of cast iron construction and adjustable screw-on type. The lid shall have cast in the metal the word “WATER” for the water lines. All valve boxes shall be six-inch (6”) nominal diameter and shall be suitable for depths of the particular valve. The stem of the buried valve shall be within twenty-four inches (24”) of the finished grade unless otherwise approved by the CITY. Valve boxes shall be or Tyler Brand, or Equal. Cast iron valve box shall not rest directly upon the body of the valve or upon the pipe. The box shall be placed in proper alignment and to such an elevation that it’s top will be at the final grade. Back filling around both units shall be placed and compacted to the satisfaction of the CITY. Valve Boxes and Covers/Lids: - Manufacturer: Tyler Pipe/Union Foundry cast iron two-piece 5-1/4” shaft screw-type 6850 series, or Equal.

11.0 Concrete

All materials for concrete work shall comply with the requirements of ACI 301. Materials for concrete shall conform to the following requirements:

- Cement shall be standard brand portland cement conforming to ASTM C 150, Type II.
- Water shall be potable and clean;
- Aggregates shall conform to the Florida Building Code and ASTM C 33.
- Ready mix concrete shall conform to the requirements of ASTM C 94.

Reinforcing steel shall conform to the following requirements:

- Bar reinforcement shall conform to the requirements of ASTM A 615 for Grade 60 Billet Steel Reinforcement with supplementary requirement S-1.

- Welded wire fabric reinforcement shall conform with the requirements of ASTM A 185.

Structural concrete (Class A concrete for use in vaults, pile caps, etc.) shall have a minimum 28 day compressive strength ratio of 4,000 psi per cubic yard. For site work concrete (Class B concrete for use in concrete fill, pavement, curbs and sidewalks), the minimum 28-day compressive strength ratio of 3,000 psi per cubic yard shall be used.

12.0 Grout

12.1 Grout for HDD Applications

If the borehole diameter exceeds the casing pipe outside diameter by more than two inches, the casing pipe shall be grouted within the drilled hole. The use of grout in other circumstances shall be at the discretion of the Engineer of Record for the DBF depending on the outcome of preliminary surface and subsurface studies, environmental considerations, the need to provide additional strength or mechanical protection of the pipe, or to increase the long term collapse resistance of the pipe.

The method employed to achieve the grouting shall ensure complete filling of the annulus and full encasement of the casing pipe so that full circle continuous support from the surrounding material is provided. The DBF shall ensure that the grouting process does not result in deformation of the casing pipe or dislodging of supports and movement of the casing pipe from its designed alignment. The DBF shall ensure that the net pressure on the pipe does not exceed the critical buckling pressure of the casing pipe divided by an appropriate factor of safety as selected by the Engineer of Record.

The grout composition shall be as designed by the Engineer of Record for the application. The design of the grout mixture shall consider the following:

- grout shall undergo minimal shrinkage
- grout shall be compatible with site conditions
- grout shall be environmentally sound
- grout composition shall have no adverse effect on the casing pipe
- placement of the grout mixture shall consider the desired set up time.

12.2 Cement Grout for Pipeline Filling Operations

Cement grout used for placing existing pipelines out of service shall conform to the requirements of Class B concrete except that the coarse aggregate shall have 100 percent passing the 1/2-inch sieve and 85 percent passing the 3/8-inch sieve. The consistency of the grout shall be as necessary to completely fill the interior space of the pipeline to be placed out of service.

12.3 Non-Shrink Grout

Non-shrink grout shall be used wherever grout is required, with the exception of HDD applications and pipeline filling operations. Non-shrink grout shall be a prepackaged, inorganic, non-gas liberating, nonmetallic, cement based grout requiring only the addition of water. Nonshrink grout shall have a minimum 28 day compressive strength of 5000 psi; shall have no shrinkage and a maximum 4.0 percent expansion in the plastic state when tested in accordance with ASTM C 827.

13.0 Painting

All exposed piping valves and ferrous metals shall be painted with not less than one shop coat and two field

coats. Items to be painted included, but are not limited to, structural steel, miscellaneous metals, pipe, fittings, valves and all other work which is obviously required to be painted unless specified otherwise. The following items shall not be coated unless otherwise noted:

- Stainless steel work
- Finish hardware
- Signs and nameplates
- Concrete

Surface preparation shall be in accordance with Specifications of the paint manufacturer's recommendations and the Society of Protective Coatings (SSPC). Metal surfaces exposed to the atmosphere shall be painted as described below:

- First Coat – Epoxy primer
- Second Coat – Hi-Build epoxy
- Third Coat – Hi-Build Epoxy

All colors shall be as selected by the CITY.

14.0 Site Restoration

The DBF shall restore damaged areas or temporarily relocated utilities and improvements to a condition equal to or better than original condition prior to such damage or temporary relocation.

The DBF shall make any repairs to landscaped and grassed areas that may be damaged by DBF activities. Landscaping and sodding in FDOT rights-of-way shall be done in accordance with the applicable FDOT specifications.

All damaged asphaltic concrete pavement shall be reconstructed in accordance with the requirements of applicable FDOT Specifications.

All damaged signs, reflective pavement markers, traffic stripes and markings shall be replaced in conformance with FDOT requirements. The DBF shall replace any existing reflective pavement markers, traffic stripes and markings damaged during construction. Paint for traffic stripes and markings shall be in conformance with FDOT specification Section 711 titled "Thermoplastic Traffic Stripes and Markings".

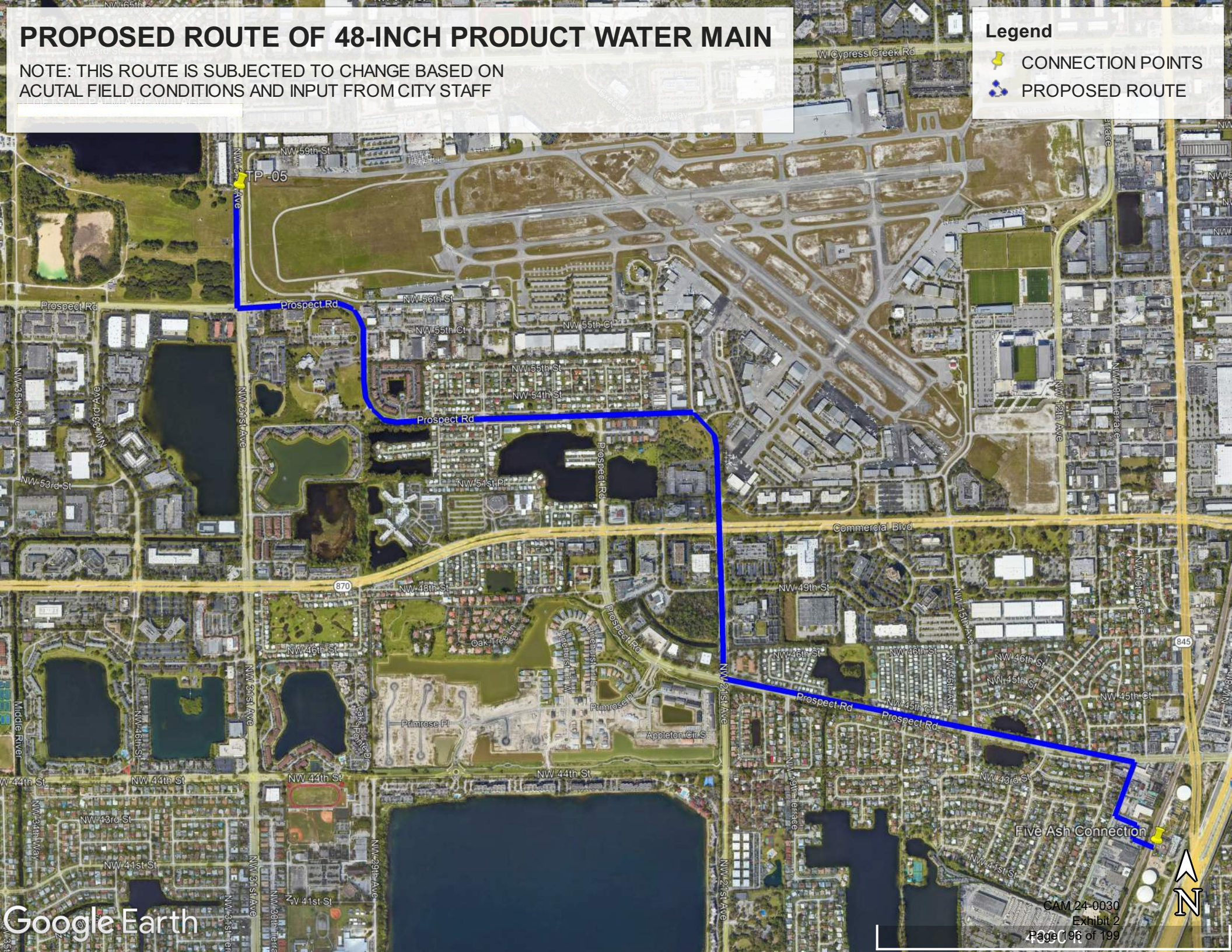
The DBF shall replace all signs damaged during construction. Traffic regulating signs shall conform to the colors, dimensions and requirements of the Federal Highway Administration document titled "Manual on Uniform Traffic Control Devices".

Damaged concrete pavement, curbs and sidewalks shall be reconstructed as new to existing lines, grades and dimensions.

Irrigation systems (piping, control wiring, etc.) damaged by DBF activities shall be restored to fully operational condition.

PROPOSED ROUTE OF 48-INCH PRODUCT WATER MAIN

NOTE: THIS ROUTE IS SUBJECTED TO CHANGE BASED ON ACUTAL FIELD CONDITIONS AND INPUT FROM CITY STAFF



LIST OF APPROVED PRODUCTS - WATER

		Water	
Description	**Manufacturer**	**Model #**	**Comments**
Air Release	ARI	D-040 (nylon body)	Combination
	Htec	986	Combination
ARV Vault	US Foundry	7665 Water Lid	
Auto Blow Off	Hydro Guard	HGI Standard	
Backflows	Watts	Model as required for application	
	Febco	Model as required for application	
	Ames	Model as required for application	
	Wilkins	Model as required for application	
Casing End Seals	Advance Products	AC and AW	
	Cascade Water Works	CCES	
	CCI Pipeline	ESW/ESC	
	Power Seal	4810 ES	
Casing Spacer	Advance Products	S/12	
	Cascade Water Works	CCS	
	CCI Pipeline	CCS 12	
Check Valve	American	N/A	
	Clow		
	Clow		
Corporation Ball Stops	Ford	FB1000	
	Mueller	P25008	
Curb Stops	Ford 1"	B41-444W PJ x FIP	1" Single Service
DIP Bell Joint Restraints	EBAA Iron Inc.	Series 1500 TD	
4"-12"	Uni-Flange	Series 1390	
	Sigma	Series PWP	
	Smith Blair	Series 165	
	Star	Series 1100	
DIP MJ Restraint	EBBA Iron Inc.	Series 1100	
	Uni-Flange	1400	
	Sigma	One Lok Series D	
	Star	Series 3000	
	Tyler Union	TufGrip Series TLD	
DIP Bell Restraints 16" up	EBAA Iron Inc.	Series 1700	
	Sigma	Series PWP/DI	
DIP Bell Restraint locking Gaskets	American	Fast Grip Gasket	
	U. S. Pipe	Field lok 350 Gasket	
DIP Pipe	American	Cement lined	Blue
	U. S. Pipe	Cement lined	Blue
Fittings M/J	American	Class 350	Cement lined
	Sigma	Class 350	Cement lined
	Star	Class 350	Cement lined
	Tyler Union & Clow	Class 350	Cement lined
Flow Meter	(By City)		
Gate Valves	Mueller	Series-2360/2361	
4" up	American	Series-2500	
	Clow	2640	
	Kennedy	KS-RW	

Generators	Cummings		
HDPE Drill	JM Eagle	HDPE	Blue-DR11
	Performance Pipe	Drisco Plex 4000	Blue-DR11
	Poly Pipe, Inc.	EHMW Poly	Blue-DR11
	CertainTeed	Certa-Lok C900/RJ	Blue
Hydrants	Mueller 5-1/4"	Super Centurion	Yellow w/blue caps
	3" Metalic Tape	3" x 1000' Det. Tape	Water buried below
Line Stops	JCM		Stainless Saddles
	Romac		Stainless Saddles

LIST OF APPROVED PRODUCTS - WATER

		Water	
Description	**Manufacturer**	**Model #**	**Comments**
Meterbox	Oldcastle	FL12 / FL36	
PE Tubing	Endot	IPS SDR9	Blue
	Drisco	IPS SDR9	Blue
	Charter Plastics	PE3408/3608 IPS SDR9	Blue
Poly Service Clamp	Ford	FSC w/full wrap gskt	3" wide for CTS
	Smith Blair	244 full circle redi clp	3" wide for CTS
PRV's	Clay		
	Bermad	720I	
PVC Pipe MJ Restraints	EBBA Iron Inc.	Series 2000 PU	
	Uni-Flange	Series 1500	
	Sigma	Series SICE	
	Star	Series 4000	
	Tyler Union	Series TLP	
PVC Bell Joint Restraints	EBBA Iron Inc.	1500	
	Uni-Flange	Series 1390	
	Sigma	Series PWP	
	Smith Blair	Series 165	
	Star	Series 1100 C	
	Tyler Union	Tuff Grip 300 C	
PVC Bell Joint Restraints 16" up	Sigma	PV Lok PWP	
	Smith Blair	Series 165	
	Star	Series 1100 C	
PVC 900 DR18 Bell & Spigot	JM Eagle	C-900	Blue
	Natl Pipe & Plastic Inc	C-900	Blue
	N American Pipe Corp	C-900	Blue
Service Saddles (Brass)	Ford	F202	
	JCM	402CC	
	Romac	202 NU	
	Smith Blair	313CC	
	Mueller	DR2A	
Service Saddles HDPE (Brass)	Ford	FCP 202	SDR9-SDR 17
	Romac	Series 202 N-H	SDR9-SDR 17
	Smith Blair	Series 317-1 for HDPE	SDR9-SDR 17
Single Services	1 1/2"	BF43-666W PJ x FLG	1-1/2" Single Service
	2"	BF43-777W PJ x FLG	2" Single Service
	Mueller 1"	P25170	1" Single Service
	1 1/2"	P25170	1-1/2" Single Service

	2"	P25170	2" Single Service
Tapping Sleeves Clamps	JCM	432 S. S	
	Romac	SST	
Tapping Valves	American	American	
	Mueller	Mueller	
	Kennedy	Kennedy	
Tracing Wire	Main lines & Services	14 GA	Blue
	Directional Drills	Copperhead	Blue
	Copperhead - Pipe Burst	**Copperhead Soloshot Extreme Strength 7x7 Stranded PBX-50b**	
	Copperhead - Directional Drills	**Copperhead Extra High Strength 1245B**	
	Copperhead - Open Cut	**Copperhead #12 High Strength 1230B**	
Tracing Wire Splice /	Wire Connection	14 GA wire nut	N/A
	Waterproofing Conn.	SA-102	Up to 3 - 10 GA wires
	Copperhead three way	**LSC1230B**	
	Copperhead- direct bury	**3WB-01**	
Tracer Wire Acces Point / grounding	**Copperhead Non-roadway access terminal**	**LD14BTP**	
	Copperhead	**CD14BTP14"**	
	Copperhead Roadway	**RB14BTP**	
	Copperhead Hydrant	**T1/2BFLPKG**	
	Copperhead Magnesium	**ANO-12**	
Valve Box	Tyler Union	6850 Water	"WATER" lid
	Mueller	10364 Water	"WATER" lid
	Star	VB 001	"WATER" lid
	Sigma	VB 261	"WATER" lid
Wet Well Safety Grates	Halliday Product		
Y Branch	Ford	Y 44-264-NL	
	Mueller	P-15343	