

AGREEMENT

Between

City of Fort Lauderdale

and

Reiss Engineering, Inc.

for

CONSULTANT SERVICES

for Project

Comprehensive Utility Strategic Master Plan, P11858

THIS IS AN AGREEMENT made and entered into this ____ day of _____ 20__,
by and between:

City of Fort Lauderdale, a Florida municipality,
(hereinafter referred to as "CITY")

and

Reiss Engineering, Inc., a Florida Corporation
(hereinafter referred to as "CONSULTANT").

WHEREAS, the City Commission of the City of Fort Lauderdale, Florida at its meeting of _____, 20__ authorized by motion the execution of this Agreement between CONSULTANT and CITY authorizing the performance of Comprehensive Utility Strategic Master Plan, RFQ No.246-11426 (the "Agreement") ; and

WHEREAS, the CONSULTANT is willing and able to render professional services for such project for the compensation and on the terms hereinafter set forth;

NOW, THEREFORE, in consideration of the mutual covenants, agreements, terms, and conditions contained herein, the parties hereto, do 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 and IDENTIFICATIONS set forth below are assumed to be true and correct and are therefore agreed upon by the parties.

- 1.1 AGREEMENT: Means this document between the CITY and CONSULTANT dated _____, 20__ and any duly authorized and executed Amendments to Agreement.
- 1.2 CERTIFICATE FOR PAYMENT: A statement by CONSULTANT based on observations at the site and on review of documentation submitted by the Contractor that by its issuance recommends that CITY pay identified amounts to the Contractor for services performed by the Contractor at the Project.
- 1.3 CHANGE ORDER: A written order to the CONSULTANT approved by the CITY authorizing a revision to this agreement between the CITY and the CONSULTANT 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 his Agreement.

The CONSULTANT may review and make recommendations to the CITY on any proposed Change Orders, for approval or other appropriate action by the CITY.

- 1.4 CITY: The City of Fort Lauderdale, a Florida municipality.
- 1.5 CITY MANAGER: The City Manager of the City of Fort Lauderdale, Florida.
- 1.6 COMMISSION: The City Commission of the City of Fort Lauderdale, Florida, which is the governing body of the CITY government.
- 1.7 CONSTRUCTION COST: The total construction cost to CITY of all elements of the Project designed or specified by the CONSULTANT.
- 1.8 CONSTRUCTION COST LIMIT: A maximum construction cost limit established by the CITY defining the maximum budget amount to which the final construction documents should be designed so as not to exceed.
- 1.9 CONSTRUCTION DOCUMENTS: Those working drawings and specifications and other writings setting forth in detail and prescribing the work to be done, the materials, workmanship and other requirements for construction of the entire Project, including any bidding information.
- 1.10 CONSULTANT: Reiss Engineering, Inc, the CONSULTANT selected to perform professional services pursuant to this Agreement.
- 1.11 CONTRACT ADMINISTRATOR: The Public Works Director of the City of Fort Lauderdale, or his designee. In the administration of this Agreement, as contrasted with matters of policy, all parties may rely upon instructions or determinations made by the Contract Administrator.
- 1.12 CONTRACTOR: One or more individuals, firms, corporations or other entities identified as such by a written agreement with CITY ("Contract for Construction") to perform the construction services required to complete the Project.
- 1.13 ERROR: A mistake in design, plans and/or specifications that incorporates into those documents an element that is incorrect and is deficient from the standard of care that a professional engineer in similar circumstances, working on a similar project and location would have exercised. Also includes mistakes in design, plans, specifications and/or shop drawings review that lead to materials and/or equipment being ordered and/or delivered where additional costs are incurred.
- 1.14 FINAL STATEMENT OF PROBABLE CONSTRUCTION COSTS: A final cost estimate prepared by CONSULTANT during the Final Design Phase of the Project, based upon the final detailed Construction Documents of the Project.
- 1.15 NOTICE TO PROCEED: A written Notice to Proceed with the Project issued by the Contract Administrator.

- 1.16 OMISSION: A scope of work missed by the CONSULTANT that is necessary for the Project, including a quantity miscalculation, which was later discovered and added by Change Order and which is deficient from the standard of care that a professional engineer in similar circumstances, working on a similar project and location would have exercised. Also includes design that was wrong, but was corrected after award to the Contractor, but before the construction process was materially affected.
- 1.17 ORIGINAL CONTRACT PRICE: The original bid and/or contract price as awarded to a Contractor based upon the CONSULTANT'S final detailed Construction Documents of the Project.
- 1.18 PLANS AND SPECIFICATIONS: The documents setting forth the final design plans and specifications of the Project, including architectural, civil, structural, mechanical, electrical, communications and security systems, materials, lighting equipment, site and landscape design, and other essentials as may be appropriate, all as approved by CITY as provided in this Agreement.
- 1.19 PRELIMINARY PLANS: The documents prepared by the CONSULTANT consisting of preliminary design drawings, renderings and other documents to fix and describe the size and character of the entire Project, and the relationship of Project components to one another and existing features.
- 1.20 PROJECT: An agreed scope of work for accomplishing a specific plan or development. This may include, but is not limited to, planning, architectural, engineering, and construction support services. The services to be provided by the CONSULTANT shall be as defined in this Agreement and further detailed in Task Orders for individual projects or combinations of projects. The Project planning, design and construction may occur in separate phases and Task Orders at the CITY's discretion.
- 1.21 RESIDENT PROJECT REPRESENTATIVE: Individuals or entities selected, employed, compensated by and directed to perform services on behalf of CITY, in monitoring the Construction Phase of the Project to completion.
- 1.22 TASK ORDER: A document setting forth a negotiated detailed scope of services to be performed by the CONSULTANT at fixed contract prices in accordance with this Agreement between the CITY and the CONSULTANT.
- 1.23 TIME OF COMPLETION: Time in which the entire work shall be completed for each Task Order.

ARTICLE 2
PREAMBLE

In order to establish the background, context and frame of reference for this Agreement and to generally express the objectives and intentions of the respective parties hereto, the following statements, representations and explanations shall be accepted as predicates for the undertakings and commitments included within the provisions of this Agreement which follow and may be relied upon by the parties as essential elements of the mutual considerations upon which this Agreement is based.

- 2.1 Pursuant to Section 287.055, Florida Statutes, CITY has formed a Committee to evaluate the CONSULTANT's statement of qualifications and performance data to ensure that the CONSULTANT has met the requirements of the Consultants' Competitive Negotiation Act, as set forth in Section 287.055, Florida Statutes, and has selected CONSULTANT to perform services hereunder.

ARTICLE 3
SCOPE OF SERVICES

- 3.1 The CONSULTANT shall perform the following professional services: Comprehensive Utility Strategic Master Plan as more specifically described in Exhibit "A," Scope of Services, attached hereto and incorporated herein. CONSULTANT shall provide all services set forth in Exhibit "A" including the necessary, incidental and related activities and services required by the Scope of Services and contemplated in CONSULTANT's level of effort.
- 3.2 CITY and CONSULTANT acknowledge that the Scope of Services does not delineate every detail and minor work tasks required to be performed by CONSULTANT to complete the Project. If, during the course of the performance of the services included in this Agreement, CONSULTANT determines that work should be performed to complete the Project which is in the CONSULTANT's opinion, outside the level of effort originally anticipated, whether or not the Scope of Services identifies the work items, CONSULTANT shall notify Contract Administrator and obtain written approval by the CITY in a timely manner before proceeding with the work. If CONSULTANT proceeds with said work without notifying the Contract Administrator, said work shall be deemed to be within the original level of effort, whether or not specifically addressed in the Scope of Services. Notice to Contract Administrator does not constitute authorization or approval by CITY to perform the work. Performance of work by CONSULTANT outside the originally anticipated level of effort without prior written CITY approval is at CONSULTANT's sole risk.
- 3.3 CITY and CONSULTANT acknowledge that Basic Services described in Exhibit "A" are included in the fee agreed upon. The CITY and CONSULTANT may negotiate additional scopes of services, compensation, time of performance and other related matters for future phases of Project. If CITY and CONSULTANT cannot contractually agree, CITY shall have the right to immediately terminate

negotiations at no cost to CITY and procure services for future Project phases from another source.

ARTICLE 4
GENERAL PROVISIONS

- 4.1 Negotiations pertaining to the professional design, engineering, architectural and project management services to be performed by the CONSULTANT have been undertaken between CONSULTANT and a committee of CITY representatives pursuant to Section 287.055, Florida Statutes, and this Agreement incorporates the results of such negotiation.
- 4.2 CONSULTANT shall include CITY's specific Task Order number as part of the heading on all correspondence, invoices and drawings. All correspondence shall be directed specifically to the Contract Administrator.

ARTICLE 5
TASK ORDERS FOR ADDITIONAL SERVICES

- 5.1 Task Orders for additional services shall be jointly prepared by the CITY and CONSULTANT defining the detailed scope of services to be provided for the Project. Each Task Order shall be separately numbered and approved in accordance with this Agreement and all applicable CITY code requirements. These Task Orders shall be considered supplemental to the general description of basic services as described in Exhibit "A".
- 5.2 Under all Task Orders and Projects, CITY may require the CONSULTANT, by specific written authorization, and for mutually agreed upon additional compensation, to provide or assist in obtaining one or more of the following special services. These services may include, at the discretion of the CITY, the following items:
 - 5.2.1 Providing additional copies of reports, contract drawings and documents;
and
 - 5.2.2 Assisting CITY with litigation support services arising from the planning, development, or construction.
- 5.3 Prior to initiating the performance of any services under this Agreement, CONSULTANT must receive a written Notice to Proceed / Purchase Order from the CITY. The CONSULTANT must receive the approval of the Contract Administrator or his designee in writing prior to beginning the performance of services in any subsequent Task Order under this Agreement.

- 5.4 In the event CONSULTANT is unable to complete the services on the date or dates as provided in this Agreement, or subsequent Task Orders, because of delays resulting from the untimely review and approval by CITY and other governmental authorities having jurisdiction over the Project, CITY may grant an appropriate extension of time for completion of the work. It shall be the responsibility of the CONSULTANT to notify the CITY promptly in writing whenever a delay in approval by a governmental agency is anticipated or experienced, and to inform the CITY of all facts and details related to the delay.
- 5.5 If, in the opinion of the CITY, the CONSULTANT is improperly performing the services under a specific supplemental Task Order, or if at any time the CITY shall be of the opinion that said supplemental Task Order is being unnecessarily delayed and will not be completed within the agreed upon time, the CITY shall notify the CONSULTANT in writing. The CONSULTANT has within ten (10) working days thereafter to take such measures as will, in the judgment of the CITY, ensure satisfactory performance and completion of the work. If the CONSULTANT fails to cure within the ten (10) working days, the CITY may notify the CONSULTANT to discontinue all work under the specified Task Order. The CONSULTANT shall immediately respect said notice and stop said work and cease to have any rights in the possession of the work and shall forfeit the Task Order and any remaining monies. The CITY may then decide, after City Commission approval, to issue a new supplemental Task Order for the uncompleted work to another consultant using the remaining funds. Any excess costs arising therefrom over and above the original supplemental Task Order price shall be charged against CONSULTANT, as the original CONSULTANT.

ARTICLE 6
TERM OF AGREEMENT; TIME FOR PERFORMANCE

- 6.1 CONSULTANT shall perform the basic services described in Exhibit "A" within the time periods specified in a mutually agreed upon Project schedule, included in this Agreement as Exhibit "C". The time periods shown in the project schedule shall commence from the date of the Notice to Proceed for such services.
- 6.2 Prior to beginning the performance of any services under this Agreement, CONSULTANT must receive a Notice to Proceed and a purchase order. CONSULTANT must receive written approval from the Contract Administrator prior to beginning the performance of services in any subsequent phases of the Agreement. Prior to granting approval for CONSULTANT to proceed to a subsequent phase, the Contract Administrator may, at his or her sole option, require CONSULTANT to submit itemized deliverables for the Contract Administrator's review.
- 6.3 In the event CONSULTANT is unable to complete the above services because of delays resulting from untimely review by CITY or other governmental authorities having jurisdiction over the Project, and such delays are not the fault of CONSULTANT, or because of delays which were caused by factors outside the

control of CONSULTANT, CITY shall grant a reasonable extension of time for completion of the services and shall provide reasonable compensation, if appropriate. It shall be the responsibility of the CONSULTANT to notify CITY promptly in writing whenever a delay in approval by a governmental agency is anticipated or experienced, and to inform CITY of all facts and details related to the delay.

- 6.4 The time for the performance of services described in Exhibit "A," Scope of Services and supplemental Task Orders shall be negotiated by the CITY and the CONSULTANT as the services are requested and authorized by the CITY.
- 6.5 The Term of this Agreement shall be limited to the time required to complete the Basic Services of the Project and any additional Project related Task Orders for additional services.

ARTICLE 7 COMPENSATION AND METHOD OF PAYMENT

7.1 AMOUNT AND METHOD OF COMPENSATION

7.1.1 Not To Exceed Amount Compensation

CITY agrees to pay CONSULTANT as compensation for performance of basic services as related to Exhibit "A" required under the terms of this Agreement up to a Not to Exceed Amount of \$1,199,812.80, and to reimburse CONSULTANT for Reimbursables as described in Section 7.2, up to a Not to Exceed Amount of \$0, for a total Not to Exceed Amount of \$1,199,812.80. It is agreed that the method of compensation is that of "Not to Exceed Amount" which means that CONSULTANT shall perform all services set forth in Exhibit "A" for total compensation in the amount of or less than that stated above. The total hourly rates payable by CITY for each of CONSULTANT's employee categories are shown on Exhibit "B." The total hourly rates payable by CITY for each of CONSULTANT's employee categories are shown on Exhibit "B."

7.2 REIMBURSABLES

- 7.2.1 Direct non-salary expenses, entitled Reimbursables, directly attributable to the Project will be charged at actual cost, in the total Not-to-Exceed amount of \$0. Reimbursable expenses are in addition to the compensation for basic services and include actual expenditures made by the CONSULTANT and the CONSULTANT'S employees directly attributable to the Project and will be charged at actual cost, without reference to the professional service fees above. CITY shall not withhold retainage from payments for Reimbursable Expenses. CONSULTANT shall be compensated for Reimbursables associated with a particular Task Order

only up to the amount allocated for such Task Order. Any reimbursable or portion thereof which, when added to the Reimbursables related to a particular Task Order previously billed, exceeds the amount allocated for such Task Order shall be the responsibility of the CONSULTANT unless otherwise agreed to in writing by the Contract Administrator. Travel and subsistence expenses for the CONSULTANT, his staff and subconsultants and communication expenses, long distance telephone, courier and express mail between CONSULTANT's and subconsultants' various offices are not reimbursable under this Agreement. Reimbursables shall include only the following listed expenses unless authorized in writing by the Contract Administrator:

- A. Direct financing charges for receiving P-card payments from the City.

7.2.2 Reimbursable subconsultant expenses are limited to the items described above when the subconsultant agreement provides for reimbursable expenses. A detailed statement of expenses must accompany any request for reimbursement. Local travel to and from the Project site or within the Tri-County Area will not be reimbursed.

7.2.3 It is acknowledged and agreed to by CONSULTANT that the dollar limitation set forth in each Task Order is a limitation upon, and describes the maximum extent of CITY's obligation to reimburse CONSULTANT for direct, nonsalary expenses, but does not constitute a limitation, of any sort, upon CONSULTANT's obligation to incur such expenses in the performance of services hereunder. If CITY or Contract Administrator requests CONSULTANT to incur expenses not contemplated in the amount for Reimbursables, CONSULTANT shall notify Contract Administrator in writing before incurring such expenses. Any such expenses shall be reviewed and approved by CITY prior to incurring such expenses.

7.3 METHOD OF BILLING

7.3.1 Not To Exceed Amount Compensation

CONSULTANT shall submit billings, which are identified by the specific project number on a monthly basis in a timely manner for all salary costs and Reimbursables attributable to the Project. These billings shall identify the nature of the work performed for each phase, subtask, deliverable and item identified in the Exhibit "A" Scope of Services or Task Order, the total hours of work performed and the employee category of the individuals performing same. Billings shall itemize and summarize Reimbursables by category and identify same as to the personnel incurring the expense and the nature if the work with which such expense was associated. Where prior written approval by Contract Administrator is required for

Reimbursables, a copy of said approval shall accompany the billing for such Reimbursables. The statement shall show a summary of salary costs with accrual of the total and credits for portions paid previously. Subconsultant fees must be documented by copies of invoices or receipts, which describe the nature of the expenses and contain a project number or other identifier, which clearly indicates the expense, as identifiable to the Project. Except for meals and travel expenses, it shall be deemed unacceptable for the CONSULTANT to modify the invoice or receipt by adding a project number or other identifier. Internal expenses must be documented by appropriate CONSULTANT's cost accounting forms with a summary of charges by category. When requested, CONSULTANT shall provide backup for past and current invoices that records hours and salary costs by employee category and Subconsultant fees on a task basis, so that total hours and costs by task may be determined.

7.4 METHOD OF PAYMENT

7.4.1 CITY shall pay CONSULTANT in accordance with the Florida Prompt Payment Act. To be deemed proper, all invoices must comply with the requirements set forth in this Agreement and must be submitted on the form and pursuant to instructions prescribed by Contract Administrator.

7.4.2 CITY will review CONSULTANT's invoices and, if inaccuracies or errors are discovered in said invoice, CITY will inform CONSULTANT 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 CONSULTANT to CITY.

7.4.3 Payment shall be made by CITY to CONSULTANT using a CITY P-Card (credit card).

ARTICLE 8 AMENDMENTS AND CHANGES IN SCOPE OF SERVICES

8.1 No modification, amendment or alteration in the terms or conditions contained herein shall be effective unless contained in a written Amendment prepared with the same formality as this Agreement and executed by the CITY and CONSULTANT.

8.2 CITY or CONSULTANT may request changes that would increase, decrease, or otherwise modify the Scope of Services to be provided under a Task Order. Such changes must be contained in a written amendment, executed by the parties hereto, with the same formality and of equal dignity herewith, prior to any deviation from the terms of the Task Order including the initiation of any additional services. CITY shall compensate CONSULTANT for such additional services as provided in Article 7.

- 8.3 In the event a dispute between the Contract Administrator and CONSULTANT arises over whether requested services constitute additional services and such dispute cannot be resolved by the Contract Administrator and CONSULTANT, such dispute shall be promptly presented to the City Manager for resolution. The City Manager's decision shall be final and binding on the parties for amounts in the aggregate under \$100,000 per project. In the event of a dispute in an amount over \$100,000, the parties agree to use their best efforts to settle such dispute. To this effect, they shall consult and negotiate with each other, in good faith and, recognizing their mutual interests, attempt to reach a just and equitable solution satisfactory to both parties. If they do not reach such solution within a period of sixty (60) days, then upon notice to the other, either party may commence litigation to resolve the dispute in Broward County, Florida. Any resolution in favor of CONSULTANT shall be set forth in a written document in accordance with Section 8.2 above. During the pendency of any dispute, CONSULTANT shall promptly perform the disputed services.

ARTICLE 9 CONSULTANT'S RESPONSIBILITIES

- 9.1 The CONSULTANT, following the CITY's approval of the Construction Documents and of the Final Statement of Probable Construction Costs, shall, when so directed and authorized by the CITY, assist the CITY in obtaining bids or negotiated proposals and assist in awarding and preparing contracts for construction. If requested, the CONSULTANT shall review and analyze the proposals received by the CITY, and shall make a recommendation for any award based on CITY's Purchasing Ordinance.
- 9.2 Should the lowest responsible, responsive proposal exceed the Final Statement of Probable Construction Costs by less than 10%, CONSULTANT, at no additional cost to the CITY, shall meet with the CITY's representatives and work to reduce costs to bring the Original Contract Price within the Final Statement of Probable Construction Costs. Should the lowest responsible, responsive proposal exceed the Final Statement of Probable Construction Costs by 10% or more, CONSULTANT shall, at the CITY's direction, redesign each Project and/or work with the CITY to reduce the costs to within the Final Statement of Probable Construction Costs at no additional expense to the CITY. If negotiations between the CITY and the CONSULTANT have not commenced within three months after completion of the final design phase, or if industry-wide prices are changed because of unusual or unanticipated events affecting the general level of prices or times of delivery in the construction industry, the established Construction Cost Limit may be adjusted in accordance with the applicable change in the Construction Cost Index for Twenty Cities from the date of completion of the final design phase and the date on which proposals are sought, as published monthly in "Engineering News Record". If each Project scope and design is expanded by the CITY after the CONSULTANT renders the estimated Construction Cost of the Plans and Specifications, the CONSULTANT shall not be responsible for any redesign without compensation.

- 9.3 The CONSULTANT shall provide the CITY with a list of recommended, prospective proposers.
- 9.4 The CONSULTANT shall attend all pre-proposal conferences.
- 9.5 The CONSULTANT shall recommend any addenda, through the Contract Administrator, as appropriate to clarify, correct, or change proposal documents.
- 9.6 If pre-qualification of proposers is required as set forth in the request for proposal, CONSULTANT shall assist the CITY, if requested, in developing qualification criteria, review qualifications and recommend acceptance or rejection of the proposers. If requested, CONSULTANT shall evaluate proposals and proposers, and make recommendations regarding any award by the CITY.
- 9.7 The CITY shall make decisions on all claims regarding interpretation of the Construction Documents, and on all other matters relating to the execution and progress of the work after receiving a recommendation from the CONSULTANT. The CONSULTANT shall check and approve samples, schedules, shop drawings and other submissions for conformance with the concept of each Project, and for compliance with the information given by the Construction Documents. The CONSULTANT may also prepare Change Orders, assemble written guarantees required of the Contractor, and approve progress payments to the Contractor based on each Project Schedule of Values and the percentage of work completed.
- 9.8 The CITY shall maintain a record of all Change Orders which shall be categorized according to the various types, causes, etc. that it may be determined are useful or necessary for its purpose. Among those shall be Change Orders identified as architectural/engineering Errors or Omissions.
- 9.8.1 Unless otherwise agreed by both parties in writing, it is specifically agreed that any change to the work identified as an Error on the part of the CONSULTANT shall be considered for purposes of this Agreement to be an additional cost to the CITY which would not be incurred without the Error.
- 9.8.2 Unless otherwise agreed by both parties in writing, it is further specifically agreed for purposes of this Agreement that fifteen percent (15%) of the cost of Change Orders for any item categorized as an Omission shall be considered an additional cost to the CITY which would not be incurred without the Omission. So long as the total of those two numbers (Change Order costs of Errors plus fifteen percent (15%) of Omissions) remains less than two percent (2%) of the total Construction Cost of the Project, the CITY shall not look to the CONSULTANT for reimbursement for Errors and Omissions.
- 9.8.3 Should the sum of the two as defined above (cost of Errors plus fifteen

percent (15%) of the cost of Omissions) exceed two percent (2%) of the Construction Cost, the CITY shall recover the full and total additional cost to the CITY as a result of CONSULTANT's Errors and Omissions from the CONSULTANT, that being defined as the cost of Errors plus fifteen percent (15%) of the cost of Omissions above two percent (2%) of the Construction Cost.

9.8.4 To obtain such recovery, the CITY shall deduct from the CONSULTANT's fee a sufficient amount to recover all such additional cost to the CITY.

9.8.5 In executing this Agreement, the CONSULTANT acknowledges acceptance of these calculations and to the CITY's right to recover same as stated above. The recovery of additional costs to the CITY under this paragraph shall not limit or preclude recovery for other separate and/or additional damages which the CITY may otherwise incur.

9.8.6 The Contract Administrator's decision as to whether a Change Order is caused by an Error or caused by an Omission, taking into consideration industry standards, shall be final and binding on both parties for amounts in the aggregate under \$100,000 per project. In the event of a dispute in an amount over \$100,000, the parties agree to use their best efforts to settle such dispute. To this effect, they shall consult and negotiate with each other, in good faith and, recognizing their mutual interests, attempt to reach a just and equitable solution satisfactory to both parties. If they do not reach such solution within a period of sixty (60) days, then upon notice to the other, either party may commence litigation to resolve the dispute in Broward County, Florida.

ARTICLE 10 CITY'S RESPONSIBILITIES

10.1 CITY shall assist CONSULTANT by placing at CONSULTANT's disposal all information CITY has available pertinent to the Project including previous reports and any other data relative to design or construction of the Project.

10.2 CITY shall arrange for access to, and make all provisions for, CONSULTANT to enter upon public and private property as required for CONSULTANT to perform its services.

10.3 CITY shall review the itemized deliverables/documents identified per Task Order.

10.4 CITY shall give prompt written notice to CONSULTANT whenever CITY observes or otherwise becomes aware of any development that affects the scope or timing of CONSULTANT's services or any defect in the work of the Contractor.

ARTICLE 11
MISCELLANEOUS

11.1 OWNERSHIP OF DOCUMENTS

All documents including, but not limited to, drawings, renderings, models, and specifications prepared or furnished by CONSULTANT, its dependent professional associates and consultants, pursuant to this Agreement shall be owned by the CITY.

Drawings, specifications, designs, models, photographs, reports, surveys and other data prepared in connection with this Agreement are and shall remain the property of the CITY whether the Project for which they are made is executed or not, and are subject to reuse by the CITY in accordance with Section 287.055(10) of the Florida Statutes. They are not intended or represented to be suitable for reuse by the CITY or others on extensions of this Project or on any other project without appropriate verification or adaptation. This does not, however, relieve the CONSULTANT of liability or legal exposure for errors, omissions, or negligent acts made on the part of the CONSULTANT in connection with the proper use of documents prepared under this Agreement. Any such verification or adaptation may entitle the CONSULTANT to further compensation at rates to be agreed upon by the CITY and the CONSULTANT. This shall not limit the CITY's reuse of preliminary or developmental plans or ideas incorporated therein, should the Project be suspended or terminated prior to completion.

11.2 TERMINATION

11.2.1 Termination for Cause. It is expressly understood and agreed that the CITY may terminate this Agreement at any time for cause in the event that the CONSULTANT (1) violates any provisions of this Agreement or performs same in bad faith or (2) unreasonably delays the performance of the services or does not perform the services in a timely manner upon written notice to the CONSULTANT. Notice of termination shall be provided in accordance with Section 11.27. In the case of termination by the CITY for cause, the CONSULTANT shall be first granted a 10 working day cure period after receipt of written notice from the CITY. In the event that the Agreement is terminated, the CONSULTANT shall be entitled to be compensated for the services rendered from the date of execution of the Agreement up to the time of termination. Such compensation shall be based on the fee as set forth above, wherever possible. For those portions of services rendered to which the applicable fee cannot be applied, payment shall be based upon the appropriate rates for the actual time spent on the project. In the event that the CONSULTANT abandons this Agreement or through violation of any of the terms and conditions of this Agreement, causes it to be terminated, CONSULTANT shall indemnify the CITY against any loss pertaining to this termination.

All finished or unfinished documents, data, studies, surveys, drawings, maps, models, photographs and reports prepared by CONSULTANT shall become the property of CITY and shall be delivered by CONSULTANT to the CITY within five (5) days of CITY's request. Upon payment of such sum by CITY to CONSULTANT, CITY shall have no further duties or obligations pursuant to or arising from this Agreement.

11.2.2 This Agreement may also be terminated by CITY upon such notice as CITY deems appropriate in the event CITY or Contract Administrator determines that termination is necessary to protect the public health, safety, or welfare.

11.2.3 Notice of termination shall be provided in accordance with Section 11.27, NOTICES, except that Contract Administrator may provide a prior verbal stop work order if the Contract Administrator deems a stop work order of this Agreement in whole or in part is necessary to protect the public's health, safety, or welfare. A verbal stop work order shall be promptly confirmed in writing as set forth in Section 11.27, NOTICES.

11.2.4 Termination for Convenience. In the event this Agreement is terminated for convenience, CONSULTANT shall be paid for any services performed to the date the Agreement is terminated. Compensation shall be withheld until all documents specified in Section 11.3 of this Agreement are provided to the CITY. Upon being notified of CITY's election to terminate, CONSULTANT shall refrain from performing further services or incurring additional expenses under the terms of this Agreement. Under no circumstances shall CITY make payment for services which have not been performed.

11.2.5 Termination by Consultant. CONSULTANT shall have the right to terminate this Agreement upon substantial breach by the CITY of its obligation under this Agreement as to unreasonable delay in payment or non-payment of undisputed amounts. CONSULTANT shall have no right to terminate this Agreement for convenience of the CONSULTANT

11.3 AUDIT RIGHT AND RETENTION OF RECORDS

CITY shall have the right to audit the books, records, and accounts of CONSULTANT that are related to this Project. CONSULTANT shall keep such books, records, and accounts as may be necessary in order to record complete and correct entries related to the Project.

CONSULTANT 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), if applicable, or, if the Florida Public Records Act is not applicable, for

a minimum 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 CONSULTANT's records, CONSULTANT shall comply with all requirements thereof; however, no confidentiality or non-disclosure requirement of either federal or state law shall be violated by CONSULTANT. 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 if not corrected or resolved by CONSULTANT within fourteen (14) days.

CONSULTANT shall:

a) Keep and maintain public records that ordinarily and necessarily would be required by the CITY in order to perform the service.

(b) Provide the public with access to public records on the same terms and conditions that the CITY would provide the records and at a cost that does not exceed the cost provided in Chapter 119, Florida Statutes (2013), as may be amended or revised, or as otherwise provided by law.

(c) Ensure that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law.

(d) Meet all requirements for retaining public records and transfer, at no cost, to the CITY, all public records in possession of the CONSULTANT upon termination of this contract and destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. All records stored electronically must be provided to the CITY in a format that is compatible with the information technology systems of the CITY.

11.4 NON DISCRIMINATION, EQUAL EMPLOYMENT OPPORTUNITY, AND AMERICANS WITH DISABILITIES ACT

CONSULTANT 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 (ADA) in the course of providing any services funded in whole or in part by CITY, including Titles I and II of the ADA (regarding nondiscrimination or the basis of disability), and all applicable regulations, guidelines, and standards.

CONSULTANT's decisions regarding the delivery of 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.

CONSULTANT shall comply with Title I 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, CONSULTANT 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.

CONSULTANT 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.

11.5 MINORITY PARTICIPATION

Historically, the CITY has been able to achieve participation levels of approximately twelve percent (12%) by MBE/WBE firms in CITY projects, and in the purchase of goods and services. The CONSULTANT shall make a good faith effort to help the CITY maintain and encourage MBE/WBE participation levels consistent with such historical levels and market conditions. The CONSULTANT will be required to document all such efforts and supply the CITY with this documentation at the end of the Project, or in cases where projects are longer than one year, each CITY fiscal year.

11.6 PUBLIC ENTITY CRIMES ACT

CONSULTANT represents that the execution of this Agreement will not violate the Public Entity Crimes Act (Section 287.133, Florida Statutes), which essentially provides that a person or affiliate who has been placed on the convicted vendor list following a conviction for a public entity crime may not submit a bid, proposal, or reply on a contract to provide any goods or services to a public entity; may not submit a bid, proposal, or reply on a contract with a public entity for the construction or repair of a public building or public work; may not submit bids, proposals, or replies on leases of real property to a public entity; may not be awarded or perform work as a contractor, supplier, subcontractor, or consultant under a contract with any public entity; and may not transact business with any public entity in excess of the threshold amount provided in s. 287.017 for CATEGORY TWO for a period of 36 months following the date of being

placed on the convicted vendor list. Violation of this section shall result in termination of this Agreement and recovery of all monies paid hereto, and may result in debarment from CITY's competitive procurement activities.

In addition to the foregoing, CONSULTANT further represents that there has been no determination, based on an audit, that it committed an act defined by Section 287.133, Florida Statutes, as a "public entity crime" and that it has not been formally charged with committing an act defined as a "public entity crime" regardless of the amount of money involved or whether CONSULTANT has been placed on the convicted vendor list.

11.7 SUBCONSULTANTS

11.7.1 CONSULTANT may subcontract certain items of work to subconsultant. The parties expressly agree that the CONSULTANT shall submit pertinent information regarding the proposed subconsultant, including subconsultant's scope of work and fees, for review and approval by the CITY prior to sub-consultants proceeding with any work.

11.7.2 CONSULTANT shall utilize the subconsultants identified in the proposal that were a material part of the selection of CONSULTANT to provide the services for this Project. CONSULTANT shall obtain written approval of Contract Administrator prior to changing or modifying the list of subconsultants submitted by CONSULTANT.

The list of subconsultants submitted is as follows:
Hillers Electrical Engineering, Inc.
JLA Geosciences, Inc.
McNabb Hydrogeologic Consulting, Inc.

11.8 ASSIGNMENT AND PERFORMANCE

Neither this Agreement nor any interest herein shall be assigned, transferred, or encumbered without the written consent of the other party, and CONSULTANT shall not subcontract any portion of the work required by this Agreement except as authorized pursuant to Section 11.7.

CONSULTANT represents that all persons delivering the services required by this Agreement have the knowledge and skills, either by training, experience, education, or a combination thereof, to adequately and competently perform the duties, obligations, and services set forth in the Scope of Services and to provide and perform such services to CITY's satisfaction for the agreed compensation.

CONSULTANT shall perform its duties, obligations, and services under this Agreement in a skillful and respectable manner. The quality of CONSULTANT's performance and all interim and final product(s) provided to or on behalf of CITY shall meet or exceed all professional standards of the State of Florida.

11.9 INDEMNIFICATION OF CITY

11.9.1 CONSULTANT shall defend, counsel being subject to CITY's approval, and indemnify and hold harmless CITY, and CITY's officers and employees from any and all claims, liabilities, damages, losses, penalties, fines, judgments, and costs, including, but not limited to, any award of attorneys' fees and any award of litigation costs, in connection with or arising directly or indirectly out of any act or omission by the CONSULTANT or by any officer, employee, agent, invitee, subcontractor, or subconsultant of the CONSULTANT. The provisions of this Section shall survive the expiration or early termination of this Agreement. To the extent considered necessary by Contract Administrator and CITY's city attorney, any sums due the CONSULTANT under this Agreement may be retained by CITY until all of CITY's claims for indemnification pursuant to this Agreement have been settled or otherwise resolved, and any amount withheld shall not be subject to payment of interest by CITY.

11.9.2 It is specifically understood and agreed that the consideration inuring to the CONSULTANT for the execution of this Agreement are the promises, payments, covenants, rights and responsibilities contained herein and the award of this Agreement to the CONSULTANT.

11.9.3 The execution of this Agreement by the CONSULTANT shall obligate the CONSULTANT to comply with the foregoing indemnification provision.

11.10 LIMITATION OF CITY'S LIABILITY

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 \$100.00. For other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the CONSULTANT expresses its willingness to enter into this Agreement with the knowledge that the CONSULTANT'S recovery from the CITY to any action or claim arising from the Agreement is limited to a maximum amount of \$100.00 less the amount of all funds actually paid by the CITY to the CONSULTANT pursuant to this Agreement. Accordingly, and notwithstanding any other term or condition of this Agreement that may suggest otherwise, the CONSULTANT agrees that the CITY shall not be liable to the CONSULTANT for damages in an amount in excess of \$100.00, which amount shall be reduced by the amount actually paid by the CITY to the CONSULTANT 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 manner intended either to be a waiver of the limitation placed upon the CITY'S liability as set forth in Section 768.28, Florida Statutes, or to extend the CITY'S liability beyond the limits established in said Section 768.28; and no claim or award against the CITY shall include attorney's fees, investigative costs, extended damages, expert fees, suit costs or pre-judgment interest. Notwithstanding the foregoing, the parties agree and understand that the

provisions of this Article 11.10 do not apply to monies owed, if any, for services rendered to CONSULTANT by the CITY under the provisions of this Agreement.

11.11 INSURANCE

11.11.1 CONSULTANT shall provide and shall require all of its sub-consultants and sub-contractors to provide, pay for, and maintain in force at all times during the term of the Agreement, such insurance, including Commercial General Liability Insurance, Business Automobile Liability Insurance, Workers' Compensation Insurance, Employer's Liability Insurance, and Professional Liability Insurance, as stated below. Such policy or policies shall be issued by companies authorized to transact business and issue insurance policies in the State of Florida and having agents upon whom service of process may be made in the State of Florida.

- A. The Commercial General Liability insurance policy shall name the City of Fort Lauderdale, a Florida municipality, as additional insured. BINDERS ARE UNACCEPTABLE. The insurance coverage required shall include those classifications, as listed in standard liability insurance manuals, which most nearly reflect the operations of the CONSULTANT. Any exclusions or provisions in the insurance maintained by the CONSULTANT that precludes coverage for the work contemplated in this Agreement shall be deemed unacceptable, and shall be considered a breach of contract.
- B. The CONSULTANT shall provide the CITY an original Certificate of Insurance for policies required by Article 11. All certificates shall state that the CITY shall be given thirty (30) days notice prior to expiration or cancellation of the policy. The insurance provided shall be endorsed or amended to comply with this notice requirement. In the event that the insurer is unable to accommodate, it shall be the responsibility of the CONSULTANT to provide the proper notice. Such notification will be in writing by registered mail, return receipt requested and addressed to the Finance Department. Such policies shall: (1) name the insurance company or companies affording coverage acceptable to the CITY, (2) state the effective and expiration dates of the policies, (3) include special endorsements where necessary. Such policies provided under Article 11 shall not be affected by any other policy of insurance, which the CITY may carry in its own name.
- C. CONSULTANT shall as a condition precedent of this Agreement, furnish to the City of Fort Lauderdale, c/o Project Manager, 100 N. Andrews Avenue, Fort Lauderdale, FL 33301, Certificate(s) of Insurance upon execution of this Agreement, which indicate that insurance coverage has been obtained which meets the requirements as outlined below:

11.11.2 COMMERCIAL GENERAL LIABILITY

- A. Limits of Liability:
- | | |
|---|-------------|
| Bodily Injury and Property Damage - Combined Single Limit | |
| Each Occurrence | \$1,000,000 |
| Project Aggregate | \$1,000,000 |
| General Aggregate | \$2,000,000 |
| Personal Injury | \$1,000,000 |
| Products/Completed Operations | \$1,000,000 |
- B. Endorsements Required:
- City of Fort Lauderdale included as an Additional Insured
 - Broad Form Contractual Liability
 - Waiver of Subrogation
 - Premises/Operations
 - Products/Completed Operations
 - Independent Contractors
 - Owners and Contractors Protective Liability

11.11.3 BUSINESS AUTOMOBILE LIABILITY

- A. Limits of Liability:
- | | |
|---|-------------|
| Bodily Injury and Property Damage - Combined Single Limit | |
| All Autos used in completing the contract | |
| Including Hired, Borrowed or Non-Owned Autos | |
| Any One Accident | \$1,000,000 |
- B. Endorsements Required:
- Waiver of Subrogation

11.11.4 WORKERS' COMPENSATION AND EMPLOYERS' LIABILITY

Limits: Workers' Compensation – Per Florida Statute 440
Employers' Liability - \$500,000

Any firm performing work on behalf of the City of Fort Lauderdale must provide Workers' Compensation insurance. Exceptions and exemptions can only be made if they are in accordance with Florida Statute. For additional information contact the Department of Financial Services, Workers' Compensation Division at (850) 413-1601 or on the web at www.fldfs.com.

Consultant must be in compliance with all applicable State and Federal workers' compensation laws, including the U.S. Longshore Harbor Workers' Act or Jones Act.

11.11.5 PROFESSIONAL LIABILITY/ERRORS AND OMISSIONS COVERAGE

Each Claim	\$1,000,000
General Aggregate Limit	\$2,000,000
Deductible- not to exceed	\$100,000

11.11.6 All insurance policies required above shall be issued by companies authorized to transact business and issue insurance policies under the laws of the State of Florida, with the following qualifications:

The Consultant's insurance must be provided by an A.M. Best's "A-" rated or better insurance company authorized to issue insurance policies in the State of Florida, subject to approval by the City's Risk Manager. Any exclusions or provisions in the insurance maintained by the Consultant that precludes coverage for work contemplated in this project shall be deemed unacceptable, and shall be considered breach of contract.

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

The CONSULTANT 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 CONSULTANT shall be responsible for submitting new or renewed insurance certificates to the CITY at a minimum of thirty (30) calendar days in advance of such expiration. In the event that expired certificates are not replaced with new or renewed certificates that cover the contractual period, the CITY shall:

- A. Suspend the Agreement until such time as the new or renewed certificates are received by the CITY.
- B. The CITY may, at its sole discretion, terminate the Agreement for cause and seek damages from the CONSULTANT in conjunction with the violation of the terms and conditions of the Agreement.

11.12 REPRESENTATIVE OF CITY AND CONSULTANT

11.12.1 The parties recognize that questions in the day-to-day conduct of the Project will arise. The Contract Administrator, upon CONSULTANT's request, shall advise CONSULTANT in writing of one (1) or more CITY employees to whom all communications pertaining to the day-to-day conduct of the Project shall be addressed.

11.12.2 CONSULTANT shall inform the Contract Administrator in writing of CONSULTANT's representative to whom matters involving the conduct of the Project shall be addressed.

11.13 ALL PRIOR AGREEMENTS SUPERSEDED

This document 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 document. Accordingly, the parties agree that no deviation from the terms hereof shall be predicated upon any prior representations or agreements whether oral or written.

It is further agreed that no modification, amendment or alteration in the terms or conditions contained herein shall be effective unless contained in a written document executed with the same formality and of equal dignity herewith.

11.14 CONSULTANT'S STAFF

CONSULTANT will provide the key staff identified in their proposal for the Project as long as said key staff are in CONSULTANT's employment.

CONSULTANT will obtain prior written approval of Contract Administrator to change key staff. CONSULTANT shall provide Contract Administrator with such information as necessary to determine the suitability of any proposed new key staff. Contract Administrator will be reasonable in evaluating key staff qualifications.

If Contract Administrator desires to request removal of any of CONSULTANT's staff, Contract Administrator shall first meet with CONSULTANT and provide reasonable justification for said removal.

11.15 INDEPENDENT CONTRACTOR

CONSULTANT is an independent contractor under this Agreement. Services provided by CONSULTANT shall be subject to the supervision of CONSULTANT. In providing the services, CONSULTANT or its agents shall not be acting and shall not be deemed as acting as officers, employees, or agents of the CITY. Personnel policies, tax responsibilities, social security and health insurance, employee benefits, purchasing policies and other similar administrative procedures applicable to services rendered under this Agreement shall be those of CONSULTANT. 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.

11.16 THIRD PARTY BENEFICIARIES

Neither CONSULTANT nor CITY intends to directly or substantially benefit a third party by 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.

11.17 CONFLICTS

Neither CONSULTANT nor its employees shall have or hold any continuing or frequently recurring employment or contractual relationship that is substantially antagonistic or incompatible with CONSULTANT's loyal and conscientious exercise of judgment related to its performance under this Agreement.

CONSULTANT agrees that none of its officers or employees shall, during the term of this Agreement, serve as expert witness against CITY in any legal or administrative proceeding in which he or she is not a party, unless compelled by court process, nor shall such persons give sworn testimony or issue a report or writing, as an expression of his or her expert opinion, which is adverse or prejudicial to the interests of CITY or in connection with any such pending or threatened legal or administrative proceeding. The limitations of this Section shall not preclude such persons from representing themselves in any action or in any administrative or legal proceeding.

In the event CONSULTANT is permitted to utilize subconsultants to perform any services required by this Agreement, CONSULTANT agrees to prohibit such subconsultants, by written contract, from having any conflicts as within the meaning of this Section.

11.18 CONTINGENCY FEE

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

11.19 WAIVER OF BREACH AND MATERIALITY

Failure by CITY to enforce any provision of this Agreement shall not be deemed a waiver of such provision or modification of this Agreement.

CITY and CONSULTANT 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.

11.20 COMPLIANCE WITH LAWS

CONSULTANT shall comply with applicable federal, state, and local laws, codes, ordinances, rules, and regulations in performing its duties, responsibilities, and obligations related to this Agreement.

11.21 SEVERANCE

In the event this Agreement or 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 or CONSULTANT elects to terminate this Agreement. The election to terminate this Agreement based upon this provision shall be made within seven (7) days after the findings by the court become final.

11.22 JOINT PREPARATION

Preparation of this Agreement has been a joint effort of CITY and CONSULTANT 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.

11.23 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 1-11 of this Agreement shall prevail and be given effect.

11.24 APPLICABLE LAW AND VENUE

This Agreement shall be construed in accordance with and governed by the laws of the State of Florida. Venue for any lawsuit by either party against the other party or otherwise arising out of this Agreement and for any other legal proceeding shall be in Broward County, Florida, or in the event of federal jurisdiction, in the Southern District of Florida. . BY ENTERING INTO THIS AGREEMENT, CONSULTANT AND CITY EXPRESSLY WAIVE ANY RIGHTS EITHER PARTY MAY HAVE TO A TRIAL BY JURY OF ANY CIVIL LITIGATION RELATED TO, OR ARISING OUT OF, THIS AGREEMENT.

11.25 EXHIBITS

Each Exhibit referred to in this Agreement forms an essential part of this Agreement. The Exhibits, if not physically attached, should be treated as part of this Agreement, and are incorporated herein by reference.

11.26 THREE ORIGINAL AGREEMENTS

This Agreement shall be executed in three (3), signed Agreements, with each one treated as an original.

11.27 NOTICES

Whenever either party desires to give notice unto the other, it must be given by written notice, sent by certified United States mail, with return receipt requested, addressed to the party for whom it is intended, at the place last specified, and the place for giving of notice in compliance with the provisions of this paragraph. For the present, the parties designate the following as the respective places for giving of notice, to-wit:

CITY: City Engineer
 City of Fort Lauderdale
 100 North Andrews Avenue
 Fort Lauderdale, FL 33301
 Telephone: (954) 828-5772

With a copy to: City Manager
 City of Fort Lauderdale
 100 North Andrews Avenue
 Fort Lauderdale, FL 33301
 Telephone: (954) 828-5364

 City Attorney
 City of Fort Lauderdale
 100 North Andrews Avenue
 Fort Lauderdale, FL 33301
 Telephone: (954) 828-5037

CONSULTANT: Reiss Engineering, Inc
 1016 Spring Villas Pt.
 Winter Springs, FL 32708

11.28 ATTORNEY FEES

If CITY or CONSULTANT incurs any expense in enforcing the terms of this Agreement through litigation, the prevailing party in that litigation shall be reimbursed for all such costs and expenses, including but not limited to court costs, and reasonable attorney fees incurred during litigation.

11.29 PERMITS, LICENSES AND TAXES

CONSULTANT shall, at its own expense, obtain all necessary permits and licenses, pay all applicable fees, and pay all applicable sales, consumer, use and

other taxes required to comply with local ordinances, state and federal law. CONSULTANT is responsible for reviewing the pertinent state statutes regarding state taxes and for complying with all requirements therein. Any change in tax laws after the execution of this Agreement will be subject to further negotiation and CONSULTANT shall be responsible for complying with all state tax requirements.

11.30 TRUTH-IN-NEGOTIATION CERTIFICATE

Signature of this Agreement by CONSULTANT shall act as the execution of a Truth-in-Negotiation Certificate stating that wage rates and other factual unit costs supporting the compensation of this Agreement are accurate, complete, and current at the time of contracting. The original contract price and any additions thereto shall be adjusted to exclude any significant sums, by which the CITY determines that contract price was increased due to inaccurate, incomplete, or non-current wage rates and other factual unit costs. All such contract adjustments must be made within 1 year following the end of the contract.

11.31 EVALUATION

The CITY maintains the right to periodically review the performance of the CONSULTANT. This review will take into account the timely execution of Task Orders, the quality of the work performed, the cost to the CITY and the good faith efforts made by the CONSULTANT to maintain MBE/WBE participation in CITY projects. Any deficiencies in performance will be described in writing and an opportunity afforded, where practicable, for the CONSULTANT to address and/or remedy such deficiencies.

11.32 STATUTORY COMPLIANCE

CONSULTANT shall prepare all documents and other materials for the Project in accordance with all applicable rules, laws, ordinances and governmental regulations of the State of Florida, Broward County, the City of Fort Lauderdale, Florida and all governmental agencies having jurisdiction over the services to be provided by CONSULTANT under this Agreement or over any aspect or phase of the Project.

11.33 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), this Section applies to any contract for goods or services of \$1 million or more:

The CONSULTANT 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 (2013), as may be amended or revised. The CITY may terminate this Contract at the CITY's option if the CONSULTANT is found to have submitted a false certification as provided under subsection (5) of section 287.135, Florida Statutes (2013), 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 has been engaged in business operations in Cuba or Syria, as defined in Section 287.135, Florida Statutes (2013), as may be amended or revised.

IN WITNESS OF THE FOREGOING, the parties execute this Agreement as follows:.

CITY:

CITY OF FORT LAUDERDALE, a
Florida municipality

By _____
LEE R. FELDMAN, City Manager

(CORPORATE SEAL)

ATTEST:

JONDA K. JOSEPH
City Clerk

Approved as to form:

RHONDA MONTOYA HASAN
Assistant City Attorney

CONSULTANT

WITNESSES:

(Witness print name)

(Witness print name)

(CORPORATE SEAL)

STATE OF _____:

COUNTY OF _____:

The foregoing instrument was acknowledged before me this _____ day of _____, 20__, by _____ and _____ as

(SEAL)

By _____

Name: _____

Title: _____

ATTEST:

By _____

Notary Public, State of
(Signature of Notary Public)

Name of Notary Typed, Printed or Stamped

EXHIBIT "A"

SPECIFIC CONTRACT SCOPE OF SERVICES AND DELIVERABLES

GENERAL DESCRIPTION AND INTRODUCTION

The City's Water and Wastewater Master Plan Updates are now over seven years old and require updates to account for revised population projections which may have a significant impact on the capacity of the water and wastewater conveyance and treatment systems, and to assure the adequacy of the adopted community investment plan (CIP) approved for FY 2015 through FY 2019 and through the planning year FY 2035. To start the update process, the City of Fort Lauderdale's (CITY) Public Works Department requested statements of qualifications from qualified professional engineering teams (CONSULTANT) to create a Comprehensive Utility Strategic Master Plan (Master Plan). The purpose of the Master Plan is to evaluate the entire utility system and to recommend actions, policies or code changes necessary to maintain and improve the system's condition, capacity, performance, efficiency and quality of service, while planning for the future repair, and replacement of utility system components. In addition, the Master Plan shall create a plan and Utilities Vision for improvements to the City's Utility system that is in line with the City's major initiatives such as the Strategic Plan, "Press Play," Vision Plan, "Fast Forward Fort Lauderdale 2035," and The *Southeast Florida Regional Climate Action Plan*.

Since completion of the 2007 Water and Wastewater Master Plan Updates, significant changes have affected the City. The largest effect was from the economic downturn popularly known as the "Great Recession." During this period and subsequent slow recovery, population growth in the CITY's distribution area changed significantly. The population size and water demand are directly related, and the demand forecasts included in the 2007 Master Plan Updates had very little relevancy after the beginning of the economic downturn in 2008. On the regulatory front, the South Florida Water Management District (SFWMD) renewed the CITY's Consumptive Use Permit (CUP) with the groundwater withdrawal limitation of 52.55 million gallons per day from the Biscayne Aquifer. Water demand projections from the 2007 Water Master Plan Update predicted that the CITY would exceed the withdrawal limitation from the Biscayne Aquifer around 2013. New demand forecasts reflecting the population changes and relatively slow economic recovery are necessary to determine when the CITY should plan for implementation of additional water sources or additional measures to reduce demand. In addition, the SFWMD produced the final draft of the Lower East Coast Water Supply Plan (LEC) in August of 2013. The LEC has the potential to provide additional water supply to the CITY and the utilities in southeast Florida continue to explore and negotiate terms of its implementation. Finally, the Federal Government conducted the census in 2010 and the resulting data was used to recalibrate the general population forecast projections.

The Master Plan shall focus on the elements affected by the new development and population growth data and related elements that can be reasonably analyzed. Those elements are water demand projections, wastewater flow projections, water transmission system model, wastewater collection system pressure pipe model, wastewater gravity collection system model for locations of concern, distribution system storage requirements, water treatment facility capacity, quality and performance, wastewater treatment, facility capacity, quality and performance and treated wastewater disposal. This effort shall encompass the review and analysis of previous water distribution and storage capital improvement recommendations and schedules contained in the 2007 Water and Wastewater Master Plan Updates, and then identification of revised or additional improvements in view of updated water demand and wastewater flow projections, population demographics, historical drought conditions and average and peak demands for each water meter location and high service pumping station and peak

flows for each wastewater pump station. The CONSULTANT shall evaluate and estimate the future repairs and upgrades required by the CITY's aging infrastructure.

The City Fort Lauderdale Public Works Department desires a comprehensive evaluation of the City's facilities, operations and procedures for delivery of water and wastewater to its customers to include:

- Reviews and recommendations on the adequacy of the capacity of facilities, equipment and buildings and of the efficiency of operation of facilities, including energy usage, water usage, chemical requirements, staffing, and other significant operation and maintenance costs.
- Reviews and recommendations regarding the reliability, sustainability, energy efficiency, process efficiency and cost efficiency of Public Utilities production of and use of water supplies, treatment and its waste streams, reclaimed water, wastewater sludge, water concentrate waste and water treatment (lime) sludge.
- Reviews and recommendations regarding the incorporation of renewable energy sources, alternative fuels, computer models, Supervisory Control and Data Acquisition (SCADA), and Asset Management Systems in Public Utilities operations.

PROJECT DESCRIPTION

The Master Plan shall include a schedule of improvements necessary to ensure reliable and/or improved service for the next twenty years (FY 2015 to FY 2035). In addition to evaluating the normal functions of water supply, water treatment, water high service pumping and distribution, wastewater collection, lift station pumping and wastewater treatment and disposal, the Master Plan shall contain evaluations and recommendations of policies, procedures and process improvements to increase energy conservation to meet the goal of a 20 percent reduction in energy use by year 2002, efficiencies of operation, monitoring and analysis, water conservation, adoption of sustainable practices and resistance to factors related to sea level rise and adaptations necessary to prepare for climate change and overall recommendations to increase the resiliency of the City's utility infrastructure. Specific attention shall be given to implementation of analyses of SCADA and Geographic Information System (GIS) data to identify inflow and infiltration (I/I), cost effective water treatment processes to improve quality, color and odor, relationships between rainfall, drought conditions, peak water demands, wastewater flows and inflow and infiltration (I/I) and improvements in the disposal of solids resulting from the water and wastewater treatment processes in order to maximize sustainability and cost efficiency.

A-1 CONSULTANT (REISS ENGINEERING, INC.) SCOPE OF WORK

The CONSULTANT shall perform the following professional services related to a contract for **COMPREHENSIVE UTILITY STRATEGIC MASTER PLAN** consultant services and shall include the following services:

WATER SYSTEM SCOPE

The Water portion of the MASTER PLAN shall include the following tasks:

- WA1. **External Planning Issues** - Provide a description of the status of external issues and their potential effect on the CITY's water system planning including the pace of economic and population growth, pending and predicted regulatory changes, regional water supply issues, salt intrusion into the aquifer inland, sea level rise and other pertinent influences on

performance and forecasting of the CITY's water supply system. CONSULTANT shall provide the implementation status of the Lower East Coast Water Supply Plan including potential effects to the CITY's water supply. The CONSULTANT shall review Upper Floridan Aquifer (UFA) reports for the CITY's UFA test wells for planning of future brackish water supply for low pressure reverse osmosis. Likely well production rates and expected present and future water quality shall be discussed. CONSULTANT shall provide a description of findings and probable effects to the CITY for the SFWMD's Floridan Aquifer study.

Deliverables:

1. Report with Recommendations including:
 - a. List of potential regulations affecting the City and impacts to the Utility
 - b. Summary of the water use stakeholders planned participation in the LEC Water Supply Plan

WA2. **Demand Forecast** - Review historical water demands, provide relationships between demands, rainfall and drought conditions and provide a Water Demand Forecast from FY 2015 to FY 2035 for average, wet and dry conditions. The CONSULTANT shall update the demand forecast for the CITY's distribution area using available population projection information for the retail and wholesale water service areas and projected unit demands. The CITY shall provide individual customer monthly water account information for the latest 5 years including monthly consumption quantity, customer type, meter size, customer name, customer address and available geolocation information, as well as other information provided in the data request list. The historical average and maximum month meter demands, future land use maps, aerial vacant land maps and updated water use forecasts shall also be used in water distribution system modeling. Residential, commercial, irrigation and wholesale water use shall be used to forecast demands for years 2020, 2025, 2030 and 2035. The forecasted demands shall be compared with previous master plan versions.

Deliverables:

Report with Recommendations including:

- a. Demand projections for the years stated
- b. Description of the methodology, information sources, decisions made and results
- c. Tables and graphs depicting demands and projections over the years stated

WA3. **A. Hydraulic Model Software Selection** – The CONSULTANT shall assist the City in selecting the modeling software that is best for the City's existing GIS water and wastewater data and staff capabilities. The CONSULTANT shall contact, coordinate and arrange up to three modeling software vendors to present their software products to the City within a one-day demonstration and selection workshop at the City's facility

Deliverables:

1. Facilitate and participate in the software selection workshop to be held at the City's selected training room
2. Report with Recommendation including:
 - a. Recommendation for software selection based on historical experience and the workshop presentations

- b. Detail of the selection process with methodology and reasoning for software selection

B. Water Distribution Hydraulic Model - The CONSULTANT shall review, verify and update the model system network using updated GIS atlas maps and expand the water system model to include distribution and transmission piping contained in the City's GIS atlas maps. CONSULTANT shall also add up to 20,000 feet of piping for new or pending projects/development not yet included in the GIS but provided by City via construction and record drawings. The Consultant shall update the GIS atlas maps with the fully connected files following the completion of the model. The City water system model was developed in H2OMAP Water Suite Version 6.0 by MWH Soft, Inc. The CONSULTANT shall export the model to the City's selected software and deliver the final model in same.

Deliverables:

1. Electronic version of the complete model in the selected software
2. Updated GIS map with network connectivity, all new pipes including added construction and record drawing information

C. Hydraulic Model Software/Training - CONSULTANT shall provide three-full days of onsite training to CITY staff on operation of the model documented with a training manual. Training shall be hands on, CITY will provide a training room and access to three modeling computers with the software described above installed.

3. Three (3) consecutive days of onsite software training for City staff at the City's selected training room

WA4. Hydraulic Modeling Demand Forecasts - Assign future demands to the water system model for the FY 2015 (current), FY 2020, FY 2025 and FY 2035 evaluation periods for average day flow (ADF), maximum day flow (MDF) and peak hour flow (PHF) conditions, provide a list of fire flow recommendations by land use type, provide model runs and evaluate the present and future ability of the water distribution system to meet the CITY's service standards. The CONSULTANT shall utilize the updated water system model to evaluate the present and future performance of the distribution system. The CONSULTANT shall provide efficiency recommendations based on the ADF model runs and shall provide recommendations for infrastructure improvements based on max day plus fire flow and peak hour demand model runs. CONSULTANT shall spot check 50 key hydrant field flow tests (provided by City from Wachs contract or other) against the hydraulic model for comparative purposes. From the model results, the CONSULTANT shall prioritize, list deficiencies and provide recommendations for the construction completion year. In addition, the CONSULTANT shall estimate improvements needed to ensure reliable operation of the water distribution system through the 20-year evaluation period (FY 2015 - FY 2035). From the list of deficiencies and future improvements, the CONSULTANT shall provide written descriptions of proposed capital projects that include protective hardening measures from hurricanes and predicted sea level rise. The descriptions shall include planning level estimates of project costs. The CONSULTANT shall provide graphical model run results for years FY 2015, FY 2020, FY 2025 and FY 2035 for scenarios with and without the recommended improvements.

Deliverables:

1. Report with Recommendations including:
 - a. Baseline modeling runs and model output figures (including pressure, flows, water age, and velocities) for the years specified above with current infrastructure
 - b. Modeling runs and model output figures (including pressure, flows, water age, and velocities) for the years specified above with infrastructure improvements identified in the respective years
 - c. Description of background, methodology and step-wise process for the selected model runs and outputs
 - d. Summary of model run results and infrastructure status at each year specified above
2. Updated model with all new pipes, scenarios and improvements for the years specified above

WA5. **A. Water Treatment Plant Evaluation** - Evaluate the present and future ability of the water treatment plants to meet the CITY's needs. The CONSULTANT shall evaluate both of the CITY's water treatment plants to assess their ability to meet present and anticipated future performance and regulatory requirements. The CONSULTANT shall evaluate the water treatment plants and provide recommendations to improve water quality, efficiency, reliability and sustainability. List prioritized deficiencies from the results of the specific water treatment plant evaluations and feasibility analysis listed below. The CONSULTANT shall provide descriptions of proposed improvements that include protective hardening measures from hurricanes, salt water intrusion and predicted sea level rise. Evaluate the present and future ability of the water treatment plant's Biscayne Aquifer wellfields ability to meet the CITY's needs. The CONSULTANT shall evaluate both of the CITY's wellfields to assess their ability to meet present and anticipated future performance and regulatory requirements. CITY provided well pumpage and drawdown data shall be evaluated and compared to pump performance curves to evaluate well system operation. The consultant shall review the latest annual SALT report prepared by the City for the South Florida Water Management District and address potential effects of movement of the salt water intrusion front due to sea level rise. Deficiencies shall be prioritized. The CONSULTANT shall provide descriptions of proposed improvements and provide planning level estimates of project costs. Provide a short term (five-year) and long-term (ten-year) list of improvements necessary for the evaluated wells to provide high quality service. Project costs shall be categorized by wellfield and prioritized. CONSULTANT shall determine the electrical, instrumentation and control system impacts to process and facility improvements identified in this Master Plan stemming from the updated projections used as the basis for the Master Plan. CONSULTANT shall provide narrative input briefly describing electrical system/impacts and improvements, and budgetary cost opinions, for improvements/modifications identified in the City's well fields, treatment facilities and distribution systems. The descriptions shall include planning level estimates of project costs.

Deliverables:

1. Report with Recommendations including:
 - a. Summary of the evaluation process and methodology for inspecting each facility
 - b. List of recommended improvements with cost estimates spread prioritized over the evaluation period

B. Fiveash Lime Softening Plant Evaluation - The CONSULTANT shall evaluate the Fiveash Water Treatment Plant process and provide recommendations and evaluations of alternatives to improve treated water quality including but not limited to ozonation, filtration, activated carbon, ion exchange (MIEX), color, nano-filtration membranes, reverse osmosis (RO), Floridan wells and aquifer storage and recovery (ASR). The CONSULTANT shall evaluate the option of placing the ASR well into service, including a cost estimate for completing the recommendations and a summary of regulatory requirements (such as permit renewals) for the ASR well system through 2035. The CONSULTANT shall review ASR cycle testing data and provide recommendations for the implementation of a modified ASR program for the CITY that may include permitting for the raw Biscayne Aquifer water injection. CONSULTANT shall identify ways to improve efficiency of the CITY's ASR well.

Deliverables:

1. Report with Recommendations including:
 - a. Summary of the evaluation efforts and existing conditions at the Fiveash WTP
 - b. List and description of deficient equipment, processes, monitoring and control systems
 - c. List and description of recommended improvements necessary to address compliance and water quality issues including color, consistency of pH, and an outlook of the effect on Stage 2 Disinfection/Disinfection By-Products (TTHMs and HAA5s)
 - d. Conceptual level cost estimates for the recommended improvements

B. Peele-Dixie Membrane Plant Evaluation - Evaluate the existing membrane facility to identify the deficient process components or equipment limiting the plant's production capabilities. The evaluation shall include the raw water wells and process components through to the plant high service pumps. The evaluation will include recommendations to eliminate the restrictions that prevent the plant from operating at its 12.0 MGD design capacity including associated cost estimates for the recommended upgrades. The proposed 6.0 MGD expansion of RO will be evaluated to identify the necessary upgrades to implement including cost estimates for the expansion. Further, the evaluation will include an analysis of the membrane elements useful life remaining, energy recovery devices, vertical turbine pumps, chemical use and identify needs for a pilot study including recommendations for the City's action.

Deliverables:

1. Report with Recommendations including:
 - a. Detail of existing equipment and condition
 - b. Summary of the current limiting components of the treatment plant
 - c. Recommendations to remedy constrictions of production capacity including cost estimates
 - d. Recommendations for 6.0 MGD expansion of the membrane facility including cost estimates

D. Peele-Dixie Alternative Process Evaluation - Evaluate the potential to rehabilitate the old, currently inactive lime softening plant on-site to provide additional treatment capacity. The

evaluation shall include cost estimates and recommendations based on the expense to rehabilitate versus expand the membrane facility. The CONSULTANT shall evaluate and provide recommendations and pipe routing to blend lime softened water with the membrane production to create a stable water supply for storage and distribution. The CONSULTANT shall evaluate the feasibility of using water from the Floridan Aquifer treated by nano-filtration and blended with lime softened water from the Biscayne Aquifer to extend the existing CUP water allocation and summarize as a MASTER PLAN report sub-section.

Deliverables:

1. Report with Recommendations including:
 - a. Evaluation of the existing plant and equipment related to the rehabilitation of the lime softening plant
 - b. Analysis of the potential blending opportunities of lime softened water with the existing membrane facility
 - c. Recommended actions to upgrade and or decommission the existing lime softening plant

E. Peele-Dixie Lime Softening Decommission Plan – If the City decides not to pursue activation of the Inactive Peele-Dixie Lime Softening Plant, the CONSULTANT shall develop a detailed plan with costs for an alternative to decommission the unused lime softening portions of the Peele-Dixie Water Treatment Plant. The plan shall include proposed new raw water main routes and abandonment of raw and effluent transmission mains and disconnections as well as any required equipment abandonment and removal.

Deliverables:

1. Report with Recommendations including:
 - a. Description of the components to be decommissioned with associated cost estimates
 - b. Identification of the step by step process to decommission the facility

F. Distribution Water Quality Improvements - Evaluate the point of entry and distribution quality and provide recommendations for improvements to the color, odor, stability, reliability and consistency. CONSULTANT shall review and summarize latest two years of available water quality sampling data from the CITY. CONSULTANT shall prepare a water age scenario for the existing water distribution hydraulic model. CONSULTANT shall prepare a protocol and perform two bulk disinfectant decay tests at each WTP point of entry (1x2 for Peele Dixie and 4x2 for Fiveash). CONSULTANT shall collect the samples (with assistance from CITY), perform the initial analyses (chloramine, ammonia, pH, color, temperature) store the samples, perform the periodic chloramine readings, process the resulting data and calculate the bulk disinfectant decay rate coefficients. Bulk disinfectant decay coefficients shall be correlated to water age and utilized to identify areas in the CITY's water distribution system with potential water quality issues.

Deliverables:

1. Report with Recommendations including:
 - a. Description of the existing conditions and components

- b. Recommendations for upgrades and improvements to distribution water quality including cost estimates for recommended upgrades

WA6. **Storage Evaluation** - Evaluate system storage facilities and compare to current and future needs. The CONSULTANT shall research current requirements and/or guidelines for water system storage and describe the CITY'S level of adequacy compared to State of Florida requirements and Ten-States Standards guidelines. The CONSULTANT shall provide an evaluation of the anticipated future system storage needs with a list of recommended improvements. The CONSULTANT shall perform hydraulic model runs to determine if the remote storage tanks are still required and identify pipeline improvements needed to take the storage tanks out of service if needed. The CONSULTANT shall provide descriptions of proposed improvements that include protective hardening measures from hurricanes and predicted sea level rise. The descriptions shall include planning level estimates of project costs.

Deliverables:

1. Report with Recommendations including:
 - a. Description of the existing conditions, components and inspection results including current issues and concerns experienced by operations staff
 - b. Identification of regulatory requirements, fire flow requirement analysis, future needs, and recommendations for improvement including conceptual cost estimates

WA7. **5 to 20-year Water CIP** - Provide a short term (five-year), mid-terms (ten- and fifteen-year) and long-term (twenty-year) interval list of improvements necessary for the evaluated water system to provide high quality service. The CONSULTANT shall divide the list into categories for well fields, treatment plants and distribution system. The CONSULTANT shall address funding methods for the improvements based on existing and proposed funding resources. The plan shall contain a prioritized list of projects as agreed upon by the City.

Deliverables:

1. Report with Recommendations including:
 - a. CIP table with single line-item descriptions for projects to be analyzed and prioritized based on the short-, mid-, and long-term intervals
 - b. Project description sheets for each project identifying the project, needs and conceptual cost estimates

WA8. **Water R&R Schedule** - Update and create the list of Renewal and Replacement (R&R) improvements and cost schedules for the evaluated water system for the planning periods 2020, 2025, 2030 and extending to 2035. The CONSULTANT shall use the CITY'S prioritized list of R&R improvements and update the R&R plan for the well fields, the Peele-Dixie Water Treatment Plant and the Fiveash Water Treatment Plant. The CONSULTANT shall use or create GIS information for the CITY'S water system and create a prioritized list of R&R improvements for the water distribution system, including water storage and pumping facilities located in the distribution system. The CONSULTANT shall create a prioritized list of R&R improvements for the Peele-Dixie Water Treatment Plants and the Fiveash Water Treatment Plants. CONSULTANT shall meet with key water treatment plant operations and maintenance

staff and perform site visits at the water treatment plants with City staff to jointly develop a list of prioritized R&R items.

Deliverables:

1. Report with Recommendations including:
 - a. R&R table with single line-item descriptions for projects to be analyzed and prioritized based on the short-term (5-year) , mid-term, (10 year) and long-term (15 and 20 year) intervals

WA9. **Water Conservation** - Evaluate the CITY's current efforts at water conservation and projected future effects. List improvements and associated costs that would increase the conservation effectiveness. The CONSULTANT shall review and evaluate the effectiveness of the City's water conservation program holistically and for specific components over the period since completion of the City's previous water master plan. Looking forward, the CONSULTANT shall provide recommendations for improving the City's program by comparing successful programs conducted by other water providing entities and evaluating implementation of key components currently not used by the CITY. The CONSULTANT shall provide cost to benefit estimates for five potential conservation efforts as part of the evaluation. The CONSULTANT shall also provide reasonable water conservation goals for residential, commercial and industrial user classifications for the forecasting intervals up to year 2035.

Deliverables:

1. Report with Recommendations including:
 - a. Assessment of the previous program
 - b. Summary and recommendations of potential water conservation measures to implement
 - c. Cost to benefit analysis for each recommendation to prioritize the recommended conservation measures

WA10. **CUP Credit/Offsets** - Describe/define the relationship/possibility of additional wastewater reuse exchanged for consumptive credits and off-sets from the CUP. The CONSULTANT shall identify large CUP users in the vicinity of the GTL Wastewater Treatment Plant and in the vicinity of the City's Biscayne well fields that includes power plants (cooling water), golf courses and other large users. The CONSULTANT shall evaluate the vicinity of irrigation CUP large users, well fields and applicable major canals to determine the likelihood of applying the reductions for additional withdrawals on the CUP. The evaluation shall include a summary of the C-12 and C-13 Canal Interconnect Project and any associated credits. The CONSULTANT shall provide planning level cost estimates for reuse improvements to provide off-set credits to the CUP. The CONSULTANT shall include an evaluation of potential external funding sources (regional, State and Federal).

Deliverables:

1. Report with Recommendations including:
 - a. Identification of potential users with conceptual cost estimates
 - b. Summary of comments from prior Reuse Plan

WA11. **Climate Change Strategies** - Describe considerations and measures that the CITY should take to adapt to climate change and resultant sea level rise and address potential effects of movement of the salt water intrusion front. The CONSULTANT shall discuss predicted effects of climate change on the water system including water sources and list areas of vulnerability. The CONSULTANT shall provide measures that the CITY should take to protect the water system and sources from the effects of climate change, including increasing temperatures, extreme weather events, salt water intrusion and sea level rise. The CONSULTANT shall provide planning level cost estimates for the measures in the descriptions.

Deliverables:

1. Report with Recommendations including:
 - a. Description of existing conditions including the saltwater intrusion
 - b. Identification of strategies to mitigate and protect against sea level rise
 - c. Summary and recommendations of potential measures to implement and harden the City's utility system

WA12. **Lime Sludge** - Evaluate options for the disposal of Water Treatment Plant solids (lime sludge). In addition, the CONSULTANT shall evaluate options for reducing the solids generated at the Fiveash Water Treatment Plant through process modifications and/or improvements. CONSULTANT shall evaluate present disposal practices at the City's water treatment and make recommendations with the objective of mitigating the cost of transportation and disposal of water treatment plant solids. CONSULTANT shall address the need for redundant sludge disposal components.

Deliverables:

1. Report with Recommendations including:
 - a. Assessment of the existing conditions and treatment options
 - b. Summary and recommendations of potential improvements and cost saving measures with conceptual cost estimates

WA13. **Energy Conservation** - Evaluate the potential for improved energy conservation. The CONSULTANT shall evaluate methods of saving energy for groundwater withdrawal and transmission, water treatment and water distribution activities up to a maximum of 50 methods. The CONSULTANT shall include operation and maintenance activities in this evaluation with the goal of complying with the City's goal to reduce traditional energy consumption by 20 percent by year 2020.

Deliverables:

1. Report with Recommendations including:
 - a. Assessment of the existing conditions and high energy users within the City's Utility
 - b. Summary and recommendations of potential improvements and cost saving measures with conceptual cost estimates

WA14. **Risk Assessment & Alternative Analysis** - Provide a risk assessment for components with the City's Water Utility that represent a single-point of failure that could result in loss of service for a large portion of the City's customers. The specific areas of concern are the treatment plants, permanent generator installations, singular power supplies, interconnects assessment, and major transmission pipelines including trunk lines within one mile of the respective treatment plant.

Deliverables:

1. Report with Recommendations including:
 - a. Assessment of the existing areas of high risk and single point of failures including a description of existing conditions
 - b. Analysis of interconnects for water supply redundancy
 - c. Summary of areas of concern and recommendations of potential improvements with conceptual cost estimates

WASTEWATER SYSTEM SCOPE

The Wastewater portion of the MASTER PLAN shall include the following tasks:

WW1. **Wastewater Flow Forecast** - Update the wastewater flow contribution forecast for the service area for 2020, 2025, 2030 and year 2035. The CITY shall provide historical annual and monthly water use and wastewater treated from 2006 through 2014. In addition, the City will provide meter readings for the "Large Users" such as Cities of Oakland Park, Wilton Manors, Port Everglades, and portions of Tamarac, Davie and unincorporated Broward County. The CONSULTANT shall use the CITY provided information to revise and update the flows forecasts included in the 2007 Wastewater Master Plan Update. The updated wastewater forecasts shall be used in wastewater transmission system modeling.

Deliverables:

1. Report with Recommendations including:
 - a. Demand projections for the years stated
 - b. Description of the methodology, information sources, decisions made and results
 - c. Tables and graphs depicting demands and projections over the years stated

WW2. **Wastewater Hydraulic Model** - Create a new transmission system wastewater computer model using the City selected software. The pressure pipe model shall incorporate all pressurized mains and pump stations. The CONSULTANT shall provide separate, independent gravity models for the A7 pump station basin and the Central Beach Alliance pump station basin. The CONSULTANT shall create a new model and include new pump stations added to the system, improvements constructed during the Waterworks 2011 program, subsequent in-house pump station improvements, as well as presently on-going improvement projects that are provided by the CITY. The wastewater transmission computer model shall include all force main sizes and pump stations to include pumps, wet wells, inflows and diurnal curves as provided by the CITY. The wastewater hydraulic model shall be exported and updated to City's selected software.

Deliverables:

1. Electronic version of the complete model in the selected software

WW3. Wastewater Hydraulic Evaluation - Evaluate the present and future capability of the transmission system to meet the CITY's and large user's needs. The CONSULTANT shall utilize the hydraulic model to evaluate the present and future performance of the existing transmission and collection systems. Utilizing model results, CONSULTANT shall list and prioritize addressing identified deficiencies in the system. CONSULTANT shall make recommendations for improvements to address such deficiencies in a systematic and timely manner in order to provide adequate service for all planning periods. Pre and post improvements shall be confirmed and presented for FY 2015, FY 2020, FY 2025 and FY 2035 through modeling using City selected software.

Deliverables:

1. Report with Recommendations including:
 - a. Summary of existing conditions and resulting impacts from future flows without improvements
 - b. Summary of recommended improvements and resulting impacts from future flows with improvements

WW4. Inflow and Infiltration (I/I) Prioritization Update - Estimate the impact of I/I on the collection, transmission and treatment systems. The City will provide information available for previous, on-going, and proposed FY 2015 - FY 2019 CIP gravity sewer system rehabilitation efforts. The objective is to consolidate and summarize such information and include it as part of the Master Plan. The CITY is presently performing a wastewater flow monitoring I/I study for pump station areas previously rehabilitated and shall provide such information as part of historical information to be utilized for additional rehabilitation recommendations. CONSULTANT shall perform I/I benefit analysis which shall evaluate direct benefits of reduced I/I obtained through past and present rehabilitation efforts. CONSULTANT's analysis shall quantify savings on energy and O&M costs due to reduction of flows in the collection, transmission, and wastewater treatment plant systems for each category of cost savings. CONSULTANT shall provide a summary of previous I/I prioritization reports to combine the cumulative I/I effort within the Master Plan with a conceptual cost estimate for the suggested improvements.

Deliverables:

1. Report with Recommendations including:
 - a. Summary of existing reports, recommendations and conceptual cost estimate for the cumulative I/I recommended improvements

WW5. Inflow and Infiltration Monitoring – Recommend additional rehabilitation monitoring systems to quantify I&I such as comparison of wet well inflows from SCADA to water meter use in the lift station collection area. Provide recommendations for the CITY to have the ability to quantify the cost effectiveness of lining main lines and laterals for each lift station area. Provide recommendations on innovative technologies to be used to gather historical and real-

time flow data in-house through the existing telemetry system as well as rainfall data throughout the CITY. The objective is for CITY staff to be able to readily monitor pump station areas to evaluate rehabilitated sewer areas by monitoring I/I flow using telemetry data, thus avoiding the high cost of gravity sewer flow monitoring through subcontractors.

Deliverables:

1. Report with Recommendations including:
 - a. Identification of new technologies for collecting data including SCADA for more accurate monitoring and tracking of I/I in VFD stations and other control strategy systems

WW6. **Risk Assessment & Alternative Analysis** - Provide a risk assessment for components with the City's Wastewater Utility that represent a single-point of failure that could result in loss of service for a large portion of the City's collection and/or transmission system. The specific areas of concern are permanent generator installations, portable generator installations, singular power supplies, interconnects assessment, and major transmission pipelines including trunk lines within one mile of the respective treatment plant.

Deliverables:

1. Report with Recommendations including:
 - a. Assessment of the existing areas of high risk and single point of failures including a description of existing conditions
 - b. Analysis of interconnects for wastewater transmission redundancy
 - c. Summary of areas of concern and recommendations of potential improvements with conceptual cost estimates

WW7. **Downtown Collection Analysis** - Provide a detailed analysis of the wastewater collection system in the downtown area to evaluate the capacity of the existing system to handle the anticipated growth in residential, commercial and office development. Due to recent development trends, the number of planned and allowable dwelling units and densities in the center of downtown Fort Lauderdale, zoned as the "Downtown Regional Activity Center" (RAC), has been increasing, and it is forecasted on a CITY and County planning level to continue to increase, coupled with newly-planned retail, commercial, office, and hotel land use in this area, further contributing to the increase in generated wastewater flows. The projected increase in flow will have a significant impact on the capacity of both the existing wastewater collection and wastewater transmission systems, creating the necessity to re-evaluate both the gravity sewer system and the pump stations (such as PS A-7) servicing the Downtown RAC area. The City will provide planning information for all buildings scheduled in the downtown area within the next five years with anticipated water and wastewater flows. Further, the CONSULTANT shall provide recommendations to encourage developers of high-rise buildings to implement private gray water use.

Deliverables:

1. Report with Recommendations including:
 - a. Assessment of the existing gravity collection system for the respective downtown areas including the available capacity to incorporate additional demands from

development

- b. Summary of findings and recommendations to increase or upgrade the gravity collection system if necessary

WW8. Wastewater Treatment Capacity - Address and include improvements to the wastewater treatment plant over the past five years, including improvements currently underway. Future expansion needs shall be evaluated in conjunction with on-going efforts to reduce I/I flows described in item WW4 above, to avoid unnecessary and costly improvements. An update of the permitted capacity of each major treatment process at the plant shall be evaluated, and the limiting processes for expansion of the plant capacity shall be identified. Alternatives for cost-effective expansion of the treatment plant to accommodate future flows shall be evaluated and a recommendation for the method and schedule for future plant expansion along with the proposed site for the expansion shall be developed and presented. CONSULTANT shall evaluate the ability of the existing deep injection well system at the George T. Lohmeyer WWTP to meet the current and future (through fiscal year 2035) disposal needs. CONSULTANT shall review regulatory compliance (present and future) of the WWTP deep injection well system. CONSULTANT shall recommend actions to be taken to ensure the WWTP deep injection well system is able to meet projected disposal needs and shall provide an estimate of the cost for completing the recommendations. CONSULTANT shall provide a summary of regulatory requirements (such as permit renewals and mechanical integrity testing) for the WWTP deep injection well system through 2035. The CONSULTANT shall address requirements to expand the disposal system of the WWTP effluent such as the construction of a new injection well and the cost associated with such, if I/I is not reduced and maintained under control by reducing approximately between 10-15 MGD.

Deliverables:

1. Report with Recommendations including:
 - a. Assessment of the existing areas of capacity limitation and/or deficiencies of the current process components within the plant
 - b. Summary of findings including recommendations to increase capacity and/or free up capacity within the existing treatment plant process

WW9. Wastewater Community Investment Program (CIP) - Develop a comprehensive prioritized CIP with cost estimates for the short-term (5-year), mid-terms (10-year and 15-year), and long-term (20-year) interval planning periods. Program should include 20 years of recommended projects and suggest a plan to shift components and reallocate budgets as priorities and needs change throughout planning years.

Deliverables:

1. Report with Recommendations including:
 - a. CIP table with single line-item descriptions for projects to be analyzed and prioritized based on the short-, mid-, and long-term intervals
 - b. Project description sheets for each project identifying the project, needs and conceptual cost estimates

WW10. Wastewater R&R - Incorporate the current and future Renewal and Replacement

Report Update (R&R) needs developed during 2013 and 2014 with the MASTER PLAN CIP recommendations. A copy of the R&R reports will be provided by the CITY; one R&R report developed by a consultant is for the regional wastewater system and includes the infrastructure that is funded in part by the large users. A second R&R report developed by City staff, covers the rest of the wastewater system. CONSULTANT shall make recommendations in the Master Plan for implementing and performing the following electrical power distribution system studies at the City's wastewater treatment plant: 1) condition assessment of the existing power distribution system components to determine remaining useable life, 2) review of plant energy consumption and identify where additional metering should be applied to enhance the plant's ability to track power consumption through the facility, 3) possible energy saving opportunities within the facility, and 4) possible application of alternative energy sources in the plant.

Deliverables:

1. Report with Recommendations including:
 - a. R&R table with single line-item descriptions for projects to be analyzed and prioritized based on the short-, mid-, and long-term intervals

WW11. Wastewater Regulatory Impacts - Assess the impact of regulatory changes on the wastewater collection, transmission, treatment, and disposal systems, with cost impacts.

Deliverables:

1. Report with Recommendations including:
 - a. List of potential regulations affecting the City and impacts to the Utility

WW12. Wastewater Funding - Address funding methods for the improvements and provide an evaluation of the CITY's capacity to meet the funding needs under current and anticipated revenues. Financial modeling, rate impact evaluations and revenue sufficiency studies are not included in this scope of services. In addition, the CONSULTANT shall include an evaluation of potential external funding sources (regional, State and Federal).

Deliverables:

1. Summary report including a list of funding options for grants and other funding options with recommendation for specific identified projects where applicable

WW13. Climate Change Strategies - Provide considerations and measures that the CITY should implement to adapt to climate change including increasing temperatures, extreme weather events, salt water intrusion, high tide, storm water management and impending sea level rise. The CONSULTANT shall address the impact on operations and maintenance associated with climate changes, specifically the immediate and lasting impact of high storm surge due to hurricane winds, and measures such as hardening to prepare for such events. The CONSULTANT is expected to recommend steps that the CITY should take to minimize and mitigate the impact of I/I due to high ground water table associated with sea level rise for neighborhood areas located adjacent to coastal areas and tidal waterways.

Deliverables:

1. Report with Recommendations including:

- a. Considerations and measures for potential implementation by the City
- b. Recommendations for the steps to minimize and mitigate the effects of sea level rise

WW14. **Wastewater Reuse Alternatives** - Explore and recommend wastewater reuse alternatives to the CITY which are viable for implementing a cost effective reuse system to develop an alternative water supply to decrease the CITY's dependence on the regional water supply system, as presently emphasized by the South Florida Water Management District (SFWMD) and Florida Department of Environmental Protection (FDEP). The CONSULTANT shall provide a summary of previous reuse alternative reports to prepare a report with recommendations including injection of reuse as a barrier to salt water intrusion on the City's potable wells within the Master Plan. CONSULTANT shall address carbon foot print reduction benefits by implementing such reuse measures and a cost-benefit analysis shall be included as part of the recommendations.

Deliverables:

1. Report with Recommendations including:
 - a. Identification of potential reuse alternatives and the resultant benefits to the City, including cost estimates.

WW15. **Biosolids** - Evaluate up to three options for reducing biosolids generated at the wastewater treatment plant through process modifications and/or improvements. CONSULTANT shall evaluate present solids handling practices at the City's wastewater treatment plant and make recommendations on how to improve biosolids marketability to promote beneficial reuse and regulation as a fertilizer, soil amendment, or energy source. The objective is to encourage safe and beneficial reuse and reduce the cost of transportation and disposal of biosolids.

Deliverables:

1. Report with Recommendations including:
 - a. Identification and description of alternative biosolids treatment and disposal options
 - b. Recommendations and cost estimates of the improvements necessary to reduce treatment and disposal costs of biosolids

WW16. **Wastewater Energy Conservation** - Evaluate the potential for improved energy conservation. The CONSULTANT shall review historical plant performance and energy usage data and recommend sub-metering locations. Evaluate and make recommendations for methods of saving energy for wastewater collection, wastewater treatment, plant building envelope, disposal of effluent and disposal of biosolids and residuals including; identify energy saving opportunities through equipment replacement or modification; potential incorporation of renewable energy and alternative fuels; and identification of energy saving opportunities through operational changes up to a maximum of 50 methods. The CONSULTANT shall include operation and maintenance activities as part of such evaluation. CONSULTANT shall perform an evaluation of the cost efficiency to replace the cryogenic oxygen generation system

at the GTL with a Vacuum Pressure Swing Adsorption (VPSA) system. The VPSA analysis shall include life cycle costs including repair and replacement and energy consumption. CITY will provide current energy consumption information on its systems for the last 3 years. The CONSULTANT shall investigate Florida Power and Light's (FPL) energy efficiency programs and incentives to identify potential cost savings for the CITY. Energy conservation recommendations shall be in line with the City goal to reduce traditional energy consumption 20 percent by year 2020.

Deliverables:

1. Report with Recommendations including:
 - a. Identification and descriptions of a list of potential areas for reduction in energy consumption within the wastewater Utility
 - b. Identification of capacity relief measures and resultant estimated energy reduction
 - c. Recommendations and cost estimates for priority improvements yielding the most return for investment

WW17. **Water Conservation** - Evaluate the potential for improved water conservation. The CONSULTANT shall evaluate and make recommendations for methods of saving water for wastewater treatment, plant building envelopes, and disposal of effluent. The CONSULTANT shall include operation and maintenance activities as part of such evaluation.

Deliverables:

1. Report with Recommendations including:
 - a. Identification and description of high water consumption equipment and or processes within the wastewater plant
 - b. Summary of findings including recommendations to reduce water use throughout the Wastewater Utility

UTILITY-WIDE SCOPE

The Utility-wide portion of the MASTER PLAN shall include but not be limited to the following tasks:

UW1. A. **Utilities Vision and Kickoff Workshop** (*initiate project and guide master plan vision*) - CONSULTANT shall prepare for and attend a Project Kick-off Workshop. The intent of this meeting shall be to address the administrative aspects of initiating the project, as well as to begin the technical work associated with the project. Consultant will also prepare a draft and final Utilities Vision document to guide the master plan preparation. The Utilities Vision will include the following information:

- Initiatives relating to the City's Sustainability Action Plan;
- Concepts and ideas from the City's Fast Forward 2035 Vision;
- List of most pressing Utilities' issues for the City;
- Water, wastewater and storm water utilities-specific goals and objectives for 2035;
- Climate change strategies discussion;
- Action items related to achieving goals; and

- Recommendations for monitoring and updating the Utilities Vision.

The details of the Utilities Vision shall be discussed at the Kick-off Workshop. A document review schedule shall be established with the CITY. Any comments on the Utilities Vision identified in the Kick-off and City Commission Workshops shall be incorporated into an updated version.

The project Kick-off Workshop shall also be used to commence work on technical aspects of the project. CONSULTANT shall distribute a proposed agenda, including technical topics, one week prior to the Kick-off Workshop.

CONSULTANT shall develop technical Kick-off Workshop minutes for distribution to the CITY. The minutes shall include decisions on any technical aspects of the project made at the Kick-off Workshop. Once comments on the minutes are received from the CITY, a final version shall be submitted to the group.

B. Progress and Technical Workshops - CONSULTANT shall prepare project presentations, reports, communiqués and notifications, and administer progress and technical workshops. CONSULTANT shall prepare for, attend and participate in monthly Project Progress Workshops with the CITY related to the work performed pursuant to this agreement. The primary purpose of these meetings shall be to provide project coordination, scheduling, and needed information to the CITY, the CONSULTANT, and other critical parties as invited by the CITY while soliciting direction on CONSULTANT's overall project execution and deliverables. The duration of this project is anticipated to be up to 14 months. Monthly progress workshops with CITY management staff are included in the project budget. CONSULTANT shall also develop and distribute meeting summaries/minutes within three (3) business days of each project progress workshop. In addition to the project progress meetings, a final project close-out workshop shall be held to finalize the deliverables for the project and close-out any remaining project items. A Workshop with the City Commission will be included to discuss the Utilities Vision.

In addition to the project workshops, CONSULTANT shall meet individually with Divisions' representatives between project workshops. The intent of these workshops shall be to obtain clarification and input on technical issues. For example, a technical workshop between CONSULTANT staff and CITY water treatment plant operations, distribution operations, planning, engineering, GIS or hydraulic modeling staff to discuss the details of the CITY's potable water system design or operation that does not require coordinating a progress workshop. Workshops between CITY staff and CONSULTANT shall be held to discuss the technical aspects of the project.

CONSULTANT shall also coordinate with the CITY as necessary to collect additional information or clarify collected information during the project. This additional coordination shall be accomplished by holding impromptu teleconferences or group meetings with the CITY as needed to resolve potential issues or discussion items needing resolution prior to the next scheduled progress workshop.

C. Project Administration - CONSULTANT shall provide management services to direct and coordinate work performed under this Scope. This is an internal management activity which includes day-to-day management of the specific project work efforts and management

oversight of technical tasks work performance by the CONSULTANT, including sub-consultants, for this Scope.

CONSULTANT shall monitor staffing, project schedule, and project budget on a regular basis. It shall be the ongoing responsibility of the CONSULTANT to ensure that tasks are performed within the budget and that deliverables are submitted to the CITY on time in accordance with the deliverables schedule. CONSULTANT shall submit monthly invoices for the project. As part of the invoice package, the CONSULTANT shall submit a monthly progress report to the Project Manager. The progress report shall include status of major deliverables, identification of completion of major milestones, and status of major task assignments.

D. Public Involvement and Communications (time and material task to support the CITY on an as needed basis, as directed) - This task shall be initiated on an as needed basis by the CITY and could include as needed public involvement and communication with property owners, special interest groups, interested parties, local governments, and the media throughout the project duration. Specific tasks shall be assigned to the CONSULTANT and authorized by the CITY in writing with an agreed not to exceed value. No work shall be completed under this task without prior written authorization. Coordination could include assisting the CITY with developing press releases, developing key messages such as the needs and benefits associated with the project, developing handouts or presentation materials, responding to media calls or calls from the public, addressing written questions from the public, and performing interviews. CONSULTANT shall direct communication with public through the Project Manager. The intent of this task is for the CONSULTANT to support the CITY with public involvement related issues. CONSULTANT shall direct any communications received directly from the public to the Project Manager for discussion before any response action is taken.

E. Regulatory Meetings (*time and material task to support the CITY on an as needed basis, as directed*) - This task shall be initiated on an as needed basis by the CITY and could include as needed meetings and communication with regulatory agencies throughout the project duration. Specific tasks shall be assigned to the CONSULTANT and authorized by the CITY in writing with an agreed not to exceed value. No work shall be completed under this task without prior written authorization. The intent of this task is for the CONSULTANT to support the CITY with regulatory agency coordination. CONSULTANT shall direct any communications received directly from the regulatory agencies to the Project Manager for discussion before any response action is taken.

Deliverables:

Draft and final Utilities Vision.

UW2. **CITY-Wide SCADA** - Evaluate the CITY's needs for a holistic CITY-wide Supervisory Control and Data Acquisition (SCADA) System for the water-wastewater utility system, review the CITY's efforts to add SCADA system(s) and make recommendations for best completing the installation of a secure, holistic CITY-wide SCADA system. CONSULTANT shall ensure security measures shall be included to protect the system against attacks by electromagnetic impulses (EMP), malware and or unauthorized access to any portion of the system. The CONSULTANT shall include evaluation of the City's current and planned utility monitoring activities and make recommendations for adjustments to the CITY's plan to bring it in-line with

state of the art systems used by other municipalities and meet standard practice and hazard prevention/detection guidelines. CONSULTANT shall evaluate the City's utility SCADA system to make recommendations for a master utility wide SCADA platform for all utility systems SCADA. CONSULTANT shall evaluate the City's current and planned utility monitoring activities and make recommendations for adjustments to the CITY's plan to improve performance with respect to hazard prevention/detection guidelines, vulnerabilities to attack from external sources, and internal security measures. CONSULTANT shall identify improvements in the SCADA system and data retrieval to improve evaluation and monitoring of systems and I/I. The CONSULTANT shall evaluate a typical operating scenarios for SCADA control of VFD driven pump stations including high flows, rain and tide conditions.

Deliverables:

1. Report with Recommendations including:
 - a. Identification and description of deficiencies within the existing SCADA system including plants, lift stations, system wide monitoring and communication within the City's assets
 - b. Identify SCADA communications and integration among other utilities within the municipal water and wastewater industry
 - c. Summary of recommended action items including the upgrades necessary for standardization of SCADA communications, connectivity within each separate Utility's assets, integration among the entire City's Utilities and identification of a long-term plan to achieve complete SCADA integration
 - d. Recommendations for the City to fast track installation of the remaining wastewater pump stations and related facilities and recommendations for streamlining City efforts to install SCADA.
 - e. Plan for using SCADA to optimize operation of the wastewater transmission system, especially during high rain and tide events.

UW3. Treatment Plants Electrical Study - Conduct an electrical study for each of the CITY's Water and Wastewater Plants and provide a report recommending improvements necessary to promote safe, reliable and efficient operation of the facilities for each evaluation period through 2035. Consultant will review the grounding and lightning protection system reports from City provided reports conducted in 2014/2015 for the two water treatment plants and one wastewater treatment plant. The CONSULTANT shall conduct site visits to visually inspect each City water and wastewater treatment plant to observe the existing electrical systems and discuss with operations personnel concerns and needs for improvements in these systems on a 1 year, five year and 10 year basis. CONSULTANT shall provide input to the master plan for recommended improvements.

Deliverables:

1. Report with Recommendations including:
 - a. Summary of the existing conditions, safety and reliability concerns within the City's Utility
 - b. Summary and recommendations of potential improvements with conceptual cost estimates

UW4. **Manual Operations** – The CONSULTANT shall evaluate each of the City’s water and wastewater treatment plant’s control system for the ability of operator manual control in the event of PLC based control system failure. The CONSULTANT shall provide recommendations resulting from the evaluations. As part of the evaluation, the CONSULTANT shall review operator training routines and their capability to operate the plants without the computer controls.

Deliverable:

1. Report with Recommendations including:
 - a. Evaluation of the existing automated systems within the Utility’s assets with a description of non-manual operation systems
 - b. Summary and recommendations of potential improvements and manual override measures with conceptual cost estimates

UW5. **Comprehensive Utility Asset Management System** – Evaluate the CITY’s various existing asset management systems and their capabilities including GIS compatibility. Interview Public Works (Engineering, Utilities, Environmental and other Divisions) staff to discuss the capability of such existing systems and identify if there are any gaps with respect to their needs and requirements. Understand present and future needs for utility management needs for the water, sewer and storm water utilities, including treatment plants, buildings, pump stations, metering facilities, drainage culverts, drainage wells, swales, outfalls, natural systems (ponds, lakes and wetlands), seawalls, canals and all other applicable systems.

Consideration shall be given to Capacity, Management, Operation and Maintenance (CMOM) present and future compliance support, ArcGIS compatibility, and Computerized Maintenance Management System (CMMS) capabilities when evaluating such software. CONSULTANT shall select up to three software developers meeting CITY’s needs and arrange for presentation workshops. CONSULTANT shall make a recommendation to CITY staff based on needs and adequacy of the software for its intended use. The recommendation shall include three potential software systems/configurations for the CITY to consider and a cost estimate for their implementation. Such costs shall include staff level needs, training needs and costs estimates for gathering and integrating complete and accurate data, as well as sustaining and maintaining such data for the system. The Consultant’s evaluation shall highlight the benefits and advantages of implementing the asset management system and the challenges that could hinder its implementation.

The asset management system shall encompass reporting and cost evaluation capabilities for the various utility components, as well as maintenance financial analysis capabilities. The system shall include information on the age and condition of existing assets; determine the level of maintenance needed and replacement. The recommended system shall help management staff to understand the tradeoffs and implications of management decisions about the assets, and use better information to justify proposed rate increases or capital investments. The CONSULTANT shall identify benefits for the various utility asset management systems in order to aid CITY staff to make final a selection.

Deliverables:

1. Facilitate and participate in the software selection workshops to be held at the City’s selected training room.

2. Report with Recommendations including:

- a. Recommendation of software selection based on CITY's needs, ease of implementation and deployment, and overall cost and maintenance agreement benefits.
- b. Provide detailed information on the types of modules and capabilities used as reasoning for software selection.
- c. Provide CITY with recommendations on the items to be included in an RFQ for future solicitation of such asset management software and based on our needs and including ArcGIS compatibility requirements.

UW6. **Strategic Initiatives** - Include initiatives as part of the MASTER PLAN to implement the CITY's Vision Plan, Five-year Strategic Plan, Sustainability Action Plan, Climate Change Adaptation, and "green" initiatives. CONSULTANT shall be expected to incorporate "green" initiatives that would help the CITY comply with the Vision and Sustainability Plans.

Deliverable:

1. Report with Recommendations including:

- a. Identification of the applicable improvements contained within the CIP and R&R reports for both the water and wastewater utility
- b. Summary of overall savings and green initiative statistics for comparison with the City's Strategic Initiative Plans

UW7. **Comprehensive Utilities Strategic Master Plan** - CONSULTANT shall compile and prepare the comprehensive utilities strategic master plan.

Project Deliverables

For all draft deliverables developed as part of this project, CONSULTANT shall submit one (1) electronic copy (in Adobe pdf or MS Word format) to the CITY (in a manner dictated by the Project Manager) for review and comment. The allotted review period by the CITY shall be determined and documented at the Kickoff Meeting and the revised project schedule. Once comments on draft documents are received from the CITY, the CONSULTANT shall incorporate the comments into the document and submit one (1) electronic copy incorporating revisions (in PDF format) to the CITY. An additional review cycle for the overall Master Plan Report (a final draft version of the document) shall also be incorporated into the project. The project deliverables are summarized as follows:

- Draft Master Plan (electronic)
- Final Master Plan (electronic and 10 hard copies)
- Hydraulic Models in City selected format
- Early output report sections/conclusions on the Water Storage Evaluation and the GTL Oxygen Generation System.

All deliverables, reports, drawings, files, etc. shall be in their Native Format (Word, GIS, CADD, Excel, etc.) as well as PDF. Many of the Master Plan contents will be use by the City in later presentations, studies, and planning, etc.

Quality Control and Quality Assurance

CONSULTANT shall implement an ongoing quality assurance and quality control (QA/QC) program as an integral part of the delivery of the project. Quality reviews shall be conducted throughout the project on key technical issues and on major deliverables prior to delivery to the CITY. Quality reviews are an internal QA/QC procedure that shall be done by senior level technical experts who were not involved in development of the documents. The senior level technical peers shall review draft documents for proper application of the approved assumptions, calculation methods, design methods and technologies.

The time and budget to adequately complete QA/QC reviews shall be included within individual technical tasks.

Project Schedule

The project schedule is attached as Exhibit "C". The schedule may be revised as necessary as approved by the City.

A-2 SUBCONSULTANT'S SCOPE OF WORK

A-2.a JLA Geosciences Scope of Work

JLA Geosciences

1. Provide a description of the status of external issues and their potential effect on the CITY's water system planning including, pending and predicted regulatory changes, water supply issues, salt intrusion into the aquifer inland, sea level rise and other pertinent influences on performance and forecasting of the CITY's water supply system. CONSULTANT shall provide the implementation status of the Lower East Coast Water Supply Plan including potential effects to the CITY's water supply.
2. Describe considerations and measures that the CITY should take to adapt to climate change and resultant sea level rise and address potential effects of movement of the salt water intrusion front. The CONSULTANT shall discuss predicted effects of climate change on the water system including water sources and list areas of vulnerability. The CONSULTANT shall provide measures that the CITY should take to adapt to climate change, salt water intrusion and resultant sea level rise. The CONSULTANT shall provide planning level cost estimates for the measures in the descriptions.
3. Evaluate the present and future ability of the water treatment plants Biscayne Aquifer wellfields to meet the CITY's needs. The CONSULTANT shall evaluate both of the CITY's water treatment plants to assess their ability to meet present and anticipated future performance and regulatory requirements. CITY provided well pumpage and drawdown data shall be evaluated and compared to pump performance curves to evaluate well system operation. The consultant shall review the latest annual SALT report prepared by the City for the South Florida Water Management District and address potential effects of movement of the salt water intrusion front due to sea level rise. Deficiencies shall be prioritized. The CONSULTANT shall provide descriptions of proposed improvements and provide planning level estimates of project costs. Provide a short term (five-year) and long-term (ten-year) list of improvements necessary for the evaluated wells to provide high quality service. Project costs shall be categorized by wellfield and prioritized.
4. The CONSULTANT shall review Upper Floridan Aquifer (UFA) reports for the CITY's UFA test wells for planning of future brackish water supply for low pressure reverse osmosis. Likely well production rates and expected present and

future water quality will be discussed. CONSULTANT will provide a description of findings and probable effects to the CITY for the SFWMD's Floridan Aquifer study.

5. Review Aquifer Storage and Recovery (ASR) cycle testing data and provide recommendations for the implementation of a modified ASR program for the CITY that may include permitting for the raw Biscayne Aquifer water injection. CONSULTANT shall identify ways to improve efficiency of the CITY's ASR well.
6. Describe/define the relationship/possibility of additional wastewater reuse exchanged for consumptive credits and off-sets from the CUP.

A-2.b McNabb Hydrogeologic Consulting, Inc. Scope of Work

SCOPE OF SERVICES

I. PROJECT DESCRIPTION

The City of Fort Lauderdale Public Works Department has requested professional services from Reiss Engineering, Inc. to create a Comprehensive Utility Strategic Master Plan (CUSMP) to assist in updating the City's Water and Wastewater Master Plan. The City owns and operates a deep injection well system at its George T. Lohmeyer Wastewater Treatment Plant (WWTP) for disposal of treated wastewater. The City owns and operates another deep injection well system at its Peele-Dixie Water Treatment Plant (WTP) for disposal of reverse-osmosis concentrate. Reiss Engineering, Inc. has requested McNabb Hydrogeologic Consulting, Inc. (MHC) to prepare this Scope of Services to delineate the consulting services required to address the WWTP deep injection well portion of the CUSMP. These services are listed below.

II. SCOPE OF SERVICES

Task A - George T. Lohmeyer Wastewater Treatment Plant Deep Injection Well System Evaluation

1. MHC will evaluate the ability of the existing deep injection well system at the George T. Lohmeyer WWTP to meet the current and future (through fiscal year 2035) disposal needs.
2. MHC will review regulatory compliance (present and future) of the WWTP deep injection well system.
3. MHC will recommend actions to be taken to ensure the WWTP deep injection well system is able to meet projected disposal needs and will provide an estimate of the cost for completing the recommendations.
4. MHC will provide a summary of regulatory requirements (such as permit renewals and mechanical integrity testing) for the WWTP deep injection well system through 2035.

Task B - Fiveash Water Treatment Plant Aquifer Storage and Recovery Well System Evaluation

1. MHC will evaluate the available options for utilizing the Fiveash WTP aquifer storage and recovery (ASR) well system.
2. MHC will make recommendations for the use of the ASR well system and will provide an estimate of the cost for completing the recommendations.
3. MHC will provide a summary of regulatory requirements (such as permit renewals) for the ASR well system through 2035.

Task C - Meetings

1. MHC will attend and participate up to four (4) meetings associated with this project.

III. ASSUMPTIONS

1. Reiss Engineering, Inc. will provide projected disposal needs for the WTP through fiscal year 2035.

A-2.c Hillers Electrical Engineering, Inc. Scope of Work



HILLERS ELECTRICAL ENGINEERING, INC.

March 16, 2015

Mr. Edward Talton, Jr., P.E.
Reiss Engineering
1016 Spring Villas Point
Winter Springs, FL 32708

Subject: City of Ft. Lauderdale Utilities Master Plan

Dear Ed:

Hillers Electrical Engineering, Inc. (HEE) is pleased to provide Reiss Engineering (Reiss) this revised proposal for electrical engineering services for the above referenced project. The City of Ft. Lauderdale (City) is updating its utilities master plan through planning year 2035. There have been significant changes in the City's population and water growth projections that have greatly changed the basis of the 2007 Master Plan with growth at a significantly slower rate than projected. Using updated growth projections, the 2007 Master Plan is to be revised and augmented with utility system improvements identified to prepare the City's water/wastewater utility infrastructure to meet the demands of the growth projections, as well as, identify improvements to comply with regulatory changes, city initiatives and goals. HEE's participation is to support Reiss with electrical, control and instrumentation study services in updating the utilities Master Plan. Specifically our scope of services is as follows:

Water Systems

Task WA-5: HEE will assist Reiss in determining the electrical, instrumentation and control system impacts to process and facility improvements identified by Reiss stemming from the updated projections used as the basis for the Master Plan. HEE will provide narrative input briefly describing electrical system/impacts and improvements, and budgetary cost opinions, for improvements/modifications identified in the City's wellfields, treatment facilities and distribution systems.

Task WA-13: HEE will assist Reiss in evaluating as many as five potential energy saving opportunities for City facilities, if any, that may be recommended in the Master Plan.

Wastewater Systems

Task WW-9: HEE will assist Reiss in making recommendations in the Master Plan for implementing and performing the following electrical power distribution system studies at the City's wastewater treatment plant:

1. Condition assessment of the existing power distribution system components to determine remaining useable life.
2. Review of plant energy consumption and identify where additional metering should be applied to enhance the plant's ability to track power consumption through the facility.
3. Possible energy saving opportunities within the facility.

4. Possible application of alternative energy sources in the plant.

Task WW-16: HEE will assist Reiss in evaluating as many as five potential energy saving opportunities for the City's wastewater collection and treatment system, if any, that may be recommended in the Master Plan.

Utility Wide

Task UW-2: HEE will assist Reiss with evaluating the City's utility SCADA system to make recommendations for a master utility wide SCADA platform for all utility systems SCADA. HEE will assist Reiss with evaluating the City's current and planned utility monitoring activities and make recommendations for adjustments to the CITY's plan to improve performance with respect to hazard prevention/detection guidelines, vulnerabilities to attack from external sources, and internal security measures. HEE will assist Reiss with identifying improvements in the SCADA system and data retrieval to improve evaluation and monitoring of systems and I/L.

Task UW-3: HEE will conduct site visits to visually inspect each City water and wastewater treatment plant to observe the existing electrical systems and discuss with operations personnel concerns and needs for improvements in these systems on a 1 year, five year and 10 year basis. HEE will review the grounding and lightning protection system report from Bonded Lightning Protection. HEE will provide input to the master plan for recommended improvements.

Task UW-4: HEE will assist Reiss with evaluating each treatment plant's control system for the ability of operator manual control in the event of PLC based control system failure. HEE will assist with the recommendations resulting from the evaluations and provide input to the master plan where appropriate.

Assumptions

1. HEE will not be performing a condition assessment, or asset management, survey of the electrical power distribution, instrumentation or control system at each City facility or station.
2. HEE will not be performing any detailed design analysis or pre-design (30% PDR level design) analysis for electrical power distribution, instrumentation or control systems in the City's utility system. HEE's analysis will be conceptual level only.
3. HEE will perform on a time and materials basis for each of the tasks identified above. No work will be performed out of budget or out of scope without an equitable adjustment to the contract.
4. HEE will make recommendations for further detailed studies when the depth of subject goes beyond that of a conceptual level analysis.

Our proposed time and materials budget for Task WA-5 is:	\$5,018.05
Our proposed time and materials budget for Task WA-13 is:	\$5,018.05
Our proposed time and materials budget for Task WW-9 is:	\$5,018.05
Our proposed time and materials budget for Task WW-16 is:	\$5,018.05
Our proposed time and materials budget for Task UW-2 is:	\$30,105.45
Our proposed time and materials budget for Task UW-3 is:	\$32,217.90
Our proposed time and materials budget for Task UW-4 is:	\$10,071.25

Page 3

Mr. Edward Talton, Jr., P.E.

Subject: City of Ft. Lauderdale Utilities Master Plan

HEE wishes to thank Reiss Engineering for the opportunity to assist with this project. Please do not hesitate to call me if you have any questions regarding this proposal or any other related matter.

Sincerely,

A handwritten signature in cursive script that reads "Mark E. Luther".

Mark E. Luther, PE

MEL/mel

Attachment

HEE/Proposal/Reiss Engineering/Reiss-City of Ft. Lauderdale Master Plan.doc

EXHIBIT "B"

B-1 CONSULTANT (REISS ENGINEERING, INC.) COMPENSATION

The project budget is presented in **Table B-1**. These prices include all labor and expenses anticipated to be incurred by CONSULTANT for the completion of these tasks, on a time and material basis, for a not to exceed fee of One million one hundred ninety-nine thousand, eight hundred twelve dollars and eighty cents \$1,199,812.80).

Table B-1. Fort Lauderdale Comprehensive Utilities Strategic Master Plan Fee Worksheet with Subtask Breakdown		Project Principal Engineer		Project Manager II		Senior Specialty Engineer - Energy/Water Conservation/LEED Engineer		Project Manager I		Senior Specialty Engineer - Treatment Process Engineer		Specialty Engineer		Master Planning/Design Project Engineer		Senior (RISCAD)Hydraulic Modeling Technicians		Production Support Engineering Intern		Accounting Billing/Support Administrative		Production Support Administrative		Subtotal (Hours)	Subtotal (\$)	J-LA Sub- contractor Subtotal (\$)	McMillin Hyatt Sub- contractor Subtotal (\$)	Other Contractors Sub- contractor Subtotal (\$)	Total (\$)	
		Rate = \$225.00	Rate = \$185.00	Rate = \$190.00	Rate = \$150.00	Rate = \$190.00	Rate = \$132.00	Rate = \$110.00	Rate = \$90.00	Rate = \$55.00	Rate = \$55.00	Rate = \$50.00	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	Hours							Cost
		Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost							Hours
TASK WA - WATER SYSTEM SCOPE																														
WA.1 - Internal Planning Issues	2	\$ 450.00	8	\$ 1,480.00	0	\$ -	0	\$ -	0	\$ -	0	\$ -	18	\$ 1,980.00	0	\$ -	9	\$ 495.00	0	\$ -	9	\$ 450.00	46	\$ 4,855.00	\$ 11,760.00	\$ -	\$ -	\$ -	\$ 16,615.00	
WA.2 - Water Demand Forecast	0	\$ -	8	\$ 1,480.00	0	\$ -	8	\$ 1,200.00	0	\$ -	0	\$ -	62	\$ 6,820.00	0	\$ -	22	\$ 1,210.00	0	\$ -	3	\$ 250.00	105	\$ 10,960.00	0	0	0	0	\$ 10,960.00	
WA.3.A - Water Distribution Hydraulic Model Update	0	\$ -	34	\$ 9,990.00	0	\$ -	110	\$ 16,300.00	0	\$ -	0	\$ -	356	\$ 33,820.00	0	\$ -	0	\$ -	0	\$ -	0	\$ -	320	\$ 60,310.00	0	0	0	0	\$ 60,310.00	
WA.3.B - Model Software Training	0	\$ -	32	\$ 9,620.00	0	\$ -	0	\$ -	0	\$ -	0	\$ -	35	\$ 3,325.00	0	\$ -	0	\$ -	0	\$ -	0	\$ -	87	\$ 12,945.00	0	0	0	0	\$ 12,945.00	
WA.4 - Hydraulic Modeling	0	\$ -	30	\$ 9,250.00	0	\$ -	102	\$ 15,300.00	0	\$ -	0	\$ -	277	\$ 26,315.00	0	\$ -	0	\$ -	0	\$ -	0	\$ -	429	\$ 50,865.00	0	0	0	0	\$ 50,865.00	
WA.5.A - Water Treatment Plant Evaluation	2	\$ 450.00	16	\$ 2,960.00	0	\$ -	21	\$ 3,150.00	34	\$ 6,460.00	64	\$ 8,448.00	39	\$ 4,290.00	0	\$ -	12	\$ 660.00	0	\$ -	0	\$ -	184	\$ 26,418.00	\$ 15,125.00	\$ -	\$ 5,018.05	\$ 46,561.05		
WA.5.B - Filtration Process Evaluation	0	\$ -	16	\$ 2,960.00	0	\$ -	24	\$ 3,600.00	62	\$ 11,780.00	96	\$ 12,672.00	43	\$ 4,730.00	0	\$ -	17	\$ 935.00	0	\$ -	0	\$ -	258	\$ 36,577.00	\$ 5,340.00	\$ 6,230.00	\$ -	\$ -	\$ 48,287.00	
WA.5.C - Peels-Date Membrane Plant Evaluation	4	\$ 900.00	10	\$ 1,850.00	0	\$ -	0	\$ -	23	\$ 4,250.00	34	\$ 4,488.00	33	\$ 3,630.00	0	\$ -	14	\$ 730.00	0	\$ -	4	\$ 200.00	124	\$ 16,588.00	\$ -	\$ -	\$ -	\$ -	\$ 16,588.00	
WA.5.D - Peels-Date WTP Process Evaluation	0	\$ -	13	\$ 2,405.00	0	\$ -	21	\$ 3,150.00	49	\$ 9,310.00	95	\$ 12,540.00	30	\$ 3,500.00	0	\$ -	20	\$ 1,200.00	0	\$ -	0	\$ -	244	\$ 34,005.00	\$ -	\$ -	\$ -	\$ -	\$ 34,005.00	
WA.5.E - Peels-Date Decommission Plan/Implementation	0	\$ -	13	\$ 2,405.00	0	\$ -	32	\$ 4,800.00	18	\$ 3,420.00	88	\$ 11,616.00	42	\$ 4,620.00	0	\$ -	12	\$ 660.00	0	\$ -	6	\$ 300.00	211	\$ 27,821.00	0	0	0	0	\$ 27,821.00	
WA.5.F - Distribution Water Quality Improvements	0	\$ -	30	\$ 9,250.00	0	\$ -	0	\$ -	13	\$ 2,470.00	12	\$ 1,584.00	36	\$ 3,960.00	144	\$ 17,480.00	22	\$ 1,210.00	0	\$ -	0	\$ -	317	\$ 35,954.00	0	0	0	0	\$ 35,954.00	
WA.6 - Storage Evaluation	0	\$ -	27	\$ 4,995.00	0	\$ -	0	\$ -	0	\$ -	0	\$ -	66	\$ 7,260.00	30	\$ 4,730.00	24	\$ 1,320.00	0	\$ -	0	\$ -	167	\$ 18,325.00	0	0	0	0	\$ 18,325.00	
WA.7 - 5 to 20-Year CIP	2	\$ 450.00	34	\$ 6,290.00	0	\$ -	29	\$ 4,350.00	13	\$ 2,470.00	31	\$ 6,732.00	83	\$ 9,130.00	0	\$ -	24	\$ 1,320.00	0	\$ -	11	\$ 500.00	247	\$ 31,292.00	0	0	0	0	\$ 31,292.00	
WA.8 - Water R&R Schedule	0	\$ -	18	\$ 3,330.00	0	\$ -	28	\$ 4,200.00	43	\$ 8,170.00	48	\$ 6,336.00	82	\$ 9,020.00	0	\$ -	28	\$ 1,540.00	0	\$ -	15	\$ 750.00	262	\$ 33,346.00	0	0	0	0	\$ 33,346.00	
WA.9 - Water Conservation	0	\$ -	16	\$ 2,960.00	32	\$ 9,880.00	0	\$ -	0	\$ -	0	\$ -	48	\$ 5,280.00	0	\$ -	23	\$ 1,265.00	0	\$ -	0	\$ -	139	\$ 19,385.00	0	0	0	0	\$ 19,385.00	
WA.10 - CIP Credit/Offsets	0	\$ -	2	\$ 370.00	8	\$ 1,520.00	8	\$ 1,200.00	0	\$ -	17	\$ 2,244.00	32	\$ 3,520.00	0	\$ -	16	\$ 880.00	0	\$ -	0	\$ -	83	\$ 9,734.00	\$ 2,640.00	\$ -	\$ -	\$ -	\$ 12,374.00	
WA.11 - Climate Change Strategies	4	\$ 900.00	18	\$ 3,330.00	0	\$ -	16	\$ 2,400.00	0	\$ -	44	\$ 5,808.00	0	\$ -	0	\$ -	0	\$ -	0	\$ -	0	\$ -	82	\$ 12,438.00	\$ 6,500.00	\$ -	\$ -	\$ -	\$ 18,938.00	
WA.12 - Lime Sludge	0	\$ -	4	\$ 740.00	0	\$ -	15	\$ 2,235.00	25	\$ 4,750.00	67	\$ 8,844.00	14	\$ 1,540.00	0	\$ -	5	\$ 275.00	0	\$ -	0	\$ -	110	\$ 18,399.00	0	0	0	0	\$ 18,399.00	
WA.13 - Energy Conservation	0	\$ -	22	\$ 4,070.00	42	\$ 7,980.00	0	\$ -	0	\$ -	37	\$ 4,884.00	32	\$ 3,520.00	0	\$ -	15	\$ 825.00	0	\$ -	0	\$ -	144	\$ 21,279.00	\$ -	\$ -	\$ 5,018.05	\$ 26,297.05		
WA.14 - Risk Assessment & Alternative Analysis	0	\$ -	5	\$ 925.00	12	\$ 2,280.00	0	\$ -	10	\$ 1,800.00	16	\$ 2,112.00	28	\$ 3,080.00	24	\$ 2,640.00	24	\$ 1,320.00	0	\$ -	6	\$ 300.00	125	\$ 14,197.00	0	0	0	0	\$ 14,197.00	
Task Total	14	\$ 3,150.00	406	\$ 10,660.00	114	\$ 21,660.00	414	\$ 62,100.00	292	\$ 55,480.00	609	\$ 88,308.00	708	\$ 77,880.00	926	\$ 87,870.00	287	\$ 15,785.00	0	\$ -	56	\$ 2,800.00	3,916	\$ 495,793.00	\$ 41,365.00	\$ 6,270.00	\$ 10,036.10	\$ 553,464.10		
TASK WW - WASTEWATER SYSTEM SCOPE																														
WW.1 - Wastewater Flow Forecast	0	\$ -	12	\$ 2,220.00	0	\$ -	16	\$ 2,400.00	0	\$ -	0	\$ -	84	\$ 9,240.00	0	\$ -	26	\$ 1,430.00	0	\$ -	4	\$ 200.00	142	\$ 15,490.00	\$ -	\$ -	\$ -	\$ -	\$ 15,490.00	
WW.2 - Wastewater Hydraulic Model Update	0	\$ -	46	\$ 8,510.00	0	\$ -	124	\$ 18,600.00	0	\$ -	0	\$ -	297	\$ 28,215.00	0	\$ -	0	\$ -	0	\$ -	0	\$ -	467	\$ 55,325.00	0	0	0	0	\$ 55,325.00	
WW.3 - Wastewater Hydraulic Evaluation	0	\$ -	35	\$ 10,175.00	0	\$ -	86	\$ 12,900.00	0	\$ -	0	\$ -	237	\$ 24,415.00	0	\$ -	0	\$ -	0	\$ -	0	\$ -	394	\$ 47,490.00	0	0	0	0	\$ 47,490.00	
WW.4 - IT Prioritization Update	0	\$ -	45	\$ 8,325.00	0	\$ -	0	\$ -	0	\$ -	0	\$ -	97	\$ 10,670.00	16	\$ 1,820.00	35	\$ 1,705.00	0	\$ -	0	\$ -	189	\$ 22,220.00	0	0	0	0	\$ 22,220.00	
WW.5 - IT Monitoring	0	\$ -	14	\$ 2,590.00	0	\$ -	9	\$ 1,350.00	0	\$ -	0	\$ -	40	\$ 4,400.00	58	\$ 5,510.00	12	\$ 660.00	0	\$ -	0	\$ -	133	\$ 14,510.00	0	0	0	0	\$ 14,510.00	
WW.6 - Risk Assessment & Alternative Analysis	0	\$ -	6	\$ 1,110.00	18	\$ 3,420.00	16	\$ 2,400.00	0	\$ -	0	\$ -	24	\$ 2,640.00	28	\$ 2,660.00	24	\$ 1,320.00	0	\$ -	0	\$ -	116	\$ 13,530.00	0	0	0	0	\$ 13,530.00	
WW.7 - Downflow Collection Analysis	0	\$ -	18	\$ 3,330.00	0	\$ -	32	\$ 4,800.00	0	\$ -	0	\$ -	133	\$ 14,600.00	112	\$ 10,640.00	41	\$ 2,235.00	0	\$ -	0	\$ -	396	\$ 35,655.00	0	0	0	0	\$ 35,655.00	
WW.8 - Wastewater Treatment Capacity	4	\$ 900.00	18	\$ 3,330.00	0	\$ -	43	\$ 6,450.00	80	\$ 15,200.00	121	\$ 15,972.00	62	\$ 6,820.00	0	\$ -	20	\$ 1,100.00	0	\$ -	0	\$ -	344	\$ 49,722.00	\$ -	\$ 6,600.00	\$ -	\$ -	\$ 56,322.00	
WW.9 - Wastewater CIP	0	\$ -	32	\$ 5,920.00	0	\$ -	28	\$ 4,200.00	26	\$ 4,340.00	36	\$ 4,732.00	86	\$ 9,460.00	0	\$ -	32	\$ 1,760.00	7	\$ 385.00	30	\$ 1,500.00	277	\$ 32,917.00	\$ -	\$ -	\$ 5,018.05	\$ 37,935.05		
WW.10 - Wastewater R&R	0	\$ -	8	\$ 1,480.00	0	\$ -	15	\$ 2,250.00	42	\$ 7,980.00	22	\$ 2,904.00	67	\$ 7,370.00	0	\$ -	18	\$ 990.00	0	\$ -	24	\$ 1,200.00	196	\$ 24,174.00	\$ -	\$ -	\$ -	\$ -	\$ 24,174.00	
WW.11 - Wastewater Regulatory Impacts	3	\$ 675.00	8	\$ 1,480.00	0	\$ -	0	\$ -	26	\$ 4,340.00	32	\$ 4,224.00	0	\$ -	0	\$ -	0	\$ -	0	\$ -	0	\$ -	69	\$ 11,319.00	0	0	0	0	\$ 11,319.00	
WW.12 - Wastewater Funding	0	\$ -	33	\$ 6,105.00	0	\$ -	0	\$ -	0	\$ -	0	\$ -	42	\$ 4,620.00	0	\$ -	18	\$ 990.00	0	\$ -	8	\$ 400.00	101	\$ 12,115.00	0	0	0	0	\$ 12,115.00	
WW.13 - Climate Change Strategies	2	\$ 450.00	27	\$ 4,995.00	41	\$ 7,790.00	0	\$ -	0	\$ -	16	\$ 2,112.00	0	\$ -	0	\$ -	0	\$ -	0	\$ -	10	\$ 500.00	96	\$ 15,847.00	\$ 4,000.00	\$ -	\$ -	\$ -	\$ 19,847.00	
WW.14 - Wastewater Reuse Alternatives	0	\$ -	12	\$ 2,220.00	0	\$ -	20	\$ 3,000.00	0	\$ -	0	\$ -	153	\$ 16,830.00	127	\$ 12,265.00	46	\$ 2,530.00	0	\$ -	0	\$ -	354	\$ 36,645.00	\$ -	\$ -	\$ -	\$ -	\$ 36,645.00	
WW.15 - Biosolids	2	\$ 450.00	12	\$ 2,220.00	0	\$ -	25	\$ 3,750.00	80	\$ 15,200.00	84	\$ 11,088.00	0	\$ -	0	\$ -	0	\$ -	0	\$ -	0	\$ -	203	\$ 32,708.00	0	0	0	0	\$ 32,708.00	
WW.16 - Wastewater Energy Conservation	0	\$ -	7	\$ 1,295.00	66	\$ 12,540.00	14	\$ 2,100.00	28	\$ 5,300.00	23	\$ 3,036.00	34	\$ 3,740.00	0	\$ -	17	\$ 935.00	0	\$ -	0	\$ -	189	\$ 28,966.00	\$ -	\$ -	\$ 5,018.05	\$ 33,984.05		
WW.17 - Water Conservation	0	\$ -	4	\$ 740.00	64	\$ 12,180.00	5	\$ 750.00	0	\$ -	0	\$ -	23	\$ 2,530.00	0	\$ -	15	\$ 825.00	0	\$ -	0	\$ -	111	\$ 17,005.00	0	0	0	0	\$ 17,005.00	
Task Total	11	\$ 2,475.00	357	\$ 66,945.00	189	\$ 35,910.00	433	\$ 64,950.00	282	\$ 53,580.00																				

B-2 SUBCONSULTANT COMPENSATION TABLES

B-2.a JLA Geosciences Scope of Work

Hydrogeologic Services Estimate

JLA Geosciences, Inc.

PROJECT: City of Ft Lauderdale Master Plan	SHEET 1 OF 1
CLIENT: Riess Engineering	FILE NO.
ESTIMATOR: Jim Andersen, P.G., JLA Geosciences	DATE: 09/19/2014 3/13/2015 rev3

NO.	TASK	MAN HOURS/EXPENSES										LINE TOTAL	TASK TOTAL	
		Pin Hydro	Certified Prof/ Geologist	Sr Hydro II	Sr Hydro I	Hydro II	Hydro I	Hydro Tech	Admin	COC / Subcontract	Mileage/ Exp.			
Hydrogeologic services related to City of Ft Lauderdale master planning for the 5 and 10 year horizon. Services include evaluations of water supply issues affecting the City; climate change; Biscayne and UFA raw water supplies; ASR and Reclaim water as it relates to water use permitting.														
1.0 External issues that may Affect the City's Water Supply														\$5,000
	Literature search and water supply plan review	20											\$5,000	
	Prepare narrative	20											\$5,000	
	Subtotal	40												
2.0 Climate Change Issues														\$10,500
	Literature search, discussions with researchers, available groundwater model review	33											\$5,200	
	Prepare narrative and recommendations	20											\$5,300	
	Cost estimating	4			12								\$1,920	
	Subtotal	30			12									
3.0 Biscayne Aquifer Water Supply														\$15,020
	Meetings (5) with well and water treatment plants, followup meeting w/ recommendations	12										\$185	\$2,185	
	Preserv Wellfield - Review well performance and drawdown data provided by City for 15 in-service production wells	2			6								\$960	
	Prospect Wellfield - Review well performance and drawdown data provided by City for 35 in-service production wells	4			12								\$1,020	
	Review pump curves vs production rates	2			6								\$900	
	Data evaluation, cost estimating, reporting and recommendations	24			24								\$6,480	
	Review SALT report and address salt water intrusion front due to sea level rise	16											\$2,640	
	Subtotal	60			40							\$755		
4.0 Upper Floridan Aquifer Supply Wells														\$5,980
	Review completion reports for existing UFA test wells	4			8								\$1,500	
	Review UFA allocation in water use permit	4			8								\$1,500	
	Evaluated expected UFA water use and additional raw water capacity needed to meet permitted demands, evaluate realistic well capacity relative to permitted well capacity	8			8								\$2,180	
	Subtotal	16			24									
5.0 Upper Floridan ASR Well														\$5,340
	Review UFA permit for ASR well	2			6								\$1,050	
	Review cycle testing results	2			6								\$1,050	
	RD	8			16								\$3,240	
	Subtotal	12			28									
6.0 Wastewater Reuse and Consumptive Use Permit Credits														\$2,040
	Have discussions with SFWMD rulemaking and regulation or staff	8											\$1,200	
	Prepare narrative	8											\$1,200	
	Subtotal	16												
	TOTAL HOURS	200			36	84							185	
	LABOR (\$/HOUR)		185	150	120	105	90	80	50	50				
	TOTALS	33200			3360	8820						\$785	\$48,395	\$45,365

B-2.b McNabb Hydro geologic Scope of Work

Budget Breakdown Ft. Lauderdale CUSMP					
Activity No.	DESCRIPTION	HRS	RATE	EXPENSES	BUDGET AMOUNT
A	G.T. Lohmeyer WWTP DIW System Evaluation				
	Evaluate DIW System Capacity	8	\$165.00	\$0.00	\$1,320
	Regulatory Review	6	\$165.00	\$0.00	\$990
	Recommendations	6	\$165.00	\$0.00	\$990
	Summary of Permit Renewals and Required Testing	8	\$165.00	\$0.00	\$1,320
	Task A Sub-Total	28		\$0.00	\$4,620
B	Fiveash ASR Well System Evaluation				
	Evaluate Options for Utilizing the ASR Well	12	\$165.00	\$0.00	\$1,980
	Recommendations	6	\$165.00	\$0.00	\$990
	Summary of Regulatory Requirements	8	\$165.00	\$0.00	\$1,320
	Task B Sub-Total	26		\$0.00	\$4,290
C	Meetings				
	Up to 4 Meetings	24	\$165.00	\$0.00	\$3,960
	Task C Sub-Total				\$3,960
TOTAL HOURS AND BUDGET		78			\$12,870.00

B-3 TERMS OF COMPENSATION

HOURLY BILLING RATES FOR TASK ORDERS FOR ADDITIONAL SERVICES

REISS ENGINEERING, INC.
(Prime Consultant)

Labor Category	Hourly Rate
Production Support Administrator	\$50.00
Accounting/Invoicing Administrator	\$55.00
Production Support Engineering Intern	\$55.00
GIS/CAD/Hydraulic Modeling Technician	\$65.00
Senior GIS/CAD/Hydraulic Modeling Technician	\$95.00
GIS/CAD Planner/Coordinator/Manager	\$90.00
Master Planning/Design Project Engineer	\$110.00
Project Manager I	\$150.00
Project Manager II	\$185.00
Project Principal Engineer	\$225.00
Senior Specialty Engineer	\$190.00
Specialty Engineer	\$132.00

HILLERS ELECTRICAL ENGINEERING, INC.
(Electrical Subconsultant)

Labor Category	Hourly Rate
President	\$190.00
Chief Engineer	\$167.85
Project Manager	\$137.87
Professional Engineer	\$113.90
Project Engineer	\$89.92
CADD/Technician	\$64.00
Clerical	\$50.00

JLA GEOSCIENCES, INC.
(Hydrogeological Subconsultant)

Labor Category	Hourly Rate
Project Manager/Principal Hydrogeologist	\$165.00
Professional Geologist	\$150.00
Senior Hydrogeologist II	\$120.00

Senior Hydrogeologist I	\$105.00
Geologist/Hydrogeologist II	\$90.00
Geologist/Hydrogeologist I	\$80.00
Hydrologic Technician	\$50.00
Administrative	\$50.00

McNABB HYDROGEOLOGIC CONSULTING, INC.
(Hydrogeological Subconsultant)

Labor Category	Hourly Rate
Project Manager/Principal Hydrogeologist	\$165.00
Senior Hydrogeologist II	\$120.00

EXHIBIT "C" PROJECT SCHEDULE

ID	Task Name	Duration	Start	Finish	Nov '14	Jan '15	Mar '15	May '15	Jul '15	Sep '15	Nov '15	Jan '16	Mar '16	May '16	Jul '16
1	TASK WA - WATER SYSTEM SCOPE	304 days	Tue 3/17/15	Fri 5/13/16											
2	WA.1 - External Planning Issues	43 days	Wed 4/15/15	Fri 6/12/15											
3	WA.2 - Water Demand Forecasts	21 days	Thu 4/30/15	Thu 5/28/15											
4	WA.3.A - Water Distribution Hydraulic Model Update	43 days	Fri 4/17/15	Tue 6/16/15											
5	WA.3.B - Model Software/Training	23 days	Thu 12/17/15	Mon 1/18/16											
6	WA.4 - Hydraulic Modeling	45 days	Fri 5/22/15	Thu 7/23/15											
7	WA.5.A - Water Treatment Plant Evaluation	162 days	Thu 5/21/15	Fri 1/1/16											
8	WA.5.B - Fiveash WTP Process Evaluation	11 days	Mon 7/20/15	Mon 8/3/15											
9	WA.5.C - Peele-Dixie Membrane Plant Evaluation	67 days	Thu 12/17/15	Fri 3/18/16											
10	WA.5.D - Peele-Dixie WTP Process Evaluation	67 days	Thu 12/17/15	Fri 3/18/16											
11	WA.5.E - Peele-Dixie Decommission Plan/Implementation	11 days	Mon 7/20/15	Mon 8/3/15											
12	WA.5.F - Water Distribution Quality Improvements	9 days	Mon 9/21/15	Thu 10/1/15											
13	WA.6 - Storage Evaluation	21 days	Mon 4/20/15	Mon 5/18/15											
14	WA.7 - 5 and 20-Year CIP	52 days	Mon 12/21/15	Tue 3/1/16											
15	WA.8 - Water R&R Schedule	47 days	Mon 12/28/15	Tue 3/1/16											
16	WA.9 - Water Conservation	11 days	Mon 7/20/15	Mon 8/3/15											
17	WA.10 - CUP Credits/Offsets	11 days	Mon 7/20/15	Mon 8/3/15											
18	WA.11 - Climate Change Strategies	137 days	Mon 5/25/15	Tue 12/1/15											
19	WA.12 - Lime Sludge	23 days	Mon 8/17/15	Wed 9/16/15											
20	WA.13a - Energy Conservation (Pure OX)	55 days	Tue 3/31/15	Mon 6/15/15											
21	WA.13b - Energy Conservation (Other)	60 days	Mon 9/28/15	Fri 12/18/15											
22	WA.14 - Risk Assessment & Alternatives Analysis	69 days	Mon 9/28/15	Thu 12/31/15											
23	TASK WW - WASTEWATER SYSTEM SCOPE	305 days	Tue 3/17/15	Mon 5/16/16											
24	WW.1 - Wastewater Flow Forecast	43 days	Mon 4/20/15	Wed 6/17/15											
25	WW.2 - Wastewater Hydraulic Model Update	45 days	Mon 5/18/15	Fri 7/17/15											
26	WW.3 - Wastewater Hydraulic Evaluation	31 days	Mon 6/22/15	Mon 8/3/15											
27	WW.4 - I/I Prioritization Update	8 days	Mon 6/22/15	Wed 7/1/15											
28	WW.5 - I/I Monitoring	7 days	Mon 8/24/15	Tue 9/1/15											
29	WW.6 - Risk Assessment & Alternatives Analysis	44 days	Mon 6/22/15	Thu 8/20/15											
30	WW.7 - Downtown Collection Analysis	44 days	Mon 7/27/15	Thu 9/24/15											
31	WW.8 - Wastewater Treatment Capacity	7 days	Fri 5/22/15	Mon 6/1/15											
32	WW.9 - Wastewater CIP	51 days	Mon 11/23/15	Mon 2/1/16											
33	WW.10 - Wastewater R&R	115 days	Mon 10/26/15	Fri 4/1/16											
34	WW.11 - Wastewater Regulatory Impacts	6 days	Fri 12/25/15	Fri 1/1/16											
35	WW.12 - Wastewater Funding	206 days	Mon 4/20/15	Mon 2/1/16											
36	WW.13 - Climate Change Strategies	52 days	Mon 9/21/15	Tue 12/1/15											
37	WW.14 - Wastewater Reuse Alternatives	32 days	Mon 7/20/15	Tue 9/1/15											
38	WW.15 - Biosolids	75 days	Mon 9/21/15	Fri 1/1/16											
39	WW.16 - Wastewater Energy Conservation	160 days	Wed 4/22/15	Tue 12/1/15											
40	WW.17 - Water Conservation	8 days	Thu 10/22/15	Mon 11/2/15											
41															

Project: Master Plan2mpp Date: Thu 3/5/15	Task		Project Summary		Inactive Milestone		Manual Summary Rollup		Deadline	
	Split		External Tasks		Inactive Summary		Manual Summary		Progress	
	Milestone		External Milestone		Manual Task		Start-only			
	Summary		Inactive Task		Duration-only		Finish-only			

ID	Task Name	Duration	Start	Finish	Nov '14	Jan '15	Mar '15	May '15	Jul '15	Sep '15	Nov '15	Jan '16	Mar '16	May '16	Jul '16
42	TASK UW - UTILITY-WIDE SCOPE	338 days	Tue 3/17/15	Thu 6/30/16											
43	<i>UW.1.A - Data Request</i>	69 days	Tue 3/17/15	Fri 6/19/15											
44	<i>UW.1.B - Work Plan and Kickoff Meeting</i>	21 days	Wed 4/22/15	Wed 5/20/15											
45	<i>UW.1.C - Progress & Technical Workshops (in individual tasks)</i>	286 days	Mon 3/30/15	Mon 5/2/16											
46	<i>UW.1.D - Project Administration</i>	291 days	Mon 3/23/15	Mon 5/2/16											
47	<i>UW.1.E - Public Involvement and Communications</i>	312 days	Mon 3/23/15	Tue 5/31/16											
48	<i>UW.1.F - Regulatory Meetings</i>	182 days	Mon 9/21/15	Tue 5/31/16											
49	<i>UW.2 - City-Wide SCADA</i>	107 days	Fri 6/5/15	Mon 11/2/15											
50	<i>UW.3 - Plant Electrical Study</i>	94 days	Mon 5/25/15	Thu 10/1/15											
51	<i>UW.4 - Manual Operations</i>	72 days	Mon 7/27/15	Tue 11/3/15											
52	<i>UW.5 - Comprehensive Utility Asset Management</i>	109 days	Tue 9/1/15	Sun 1/31/16											
53	<i>UW.6 - Strategic Initiatives</i>	51 days	Mon 5/25/15	Mon 8/3/15											
54	<i>UW.667 - Comprehensive Utilities Strategic Master Plan</i>	159 days	Thu 10/22/15	Tue 5/31/16											

Project: Master Plan2mpp Date: Thu 3/5/15	Task		Project Summary		Inactive Milestone		Manual Summary Rollup		Deadline	
	Split		External Tasks		Inactive Summary		Manual Summary		Progress	
	Milestone		External Milestone		Manual Task		Start-only			
	Summary		Inactive Task		Duration-only		Finish-only			