

**ADDITIONAL MATERIAL
REGULAR MEETING**

OCTOBER 21, 2025

**SUBMITTED AT THE REQUEST OF

FINANCE AND ADMINISTRATIVE
SERVICES DEPARTMENT**



Finance and Administrative Services Department

PURCHASING DIVISION

115 S. Andrews Avenue, Room 212 • Fort Lauderdale, Florida 33301 • 954-357-6066 • FAX 954-357-8535

MEMORANDUM

DATE: October 13, 2025

TO: Board of County Commissioners

THRU: Stephen Farmer, Deputy Chief Financial Officer

A blue ink signature of Stephen Farmer.

Digitally signed by
STEPHEN FARMER
Date: 2025.10.13
17:33:47 -04'00'

FROM: Robert E. Gleason, Director
Purchasing Division

Constance Mangan,
Asst. Director, on
behalf of

A red ink signature of Constance Mangan.

Digitally signed by Constance
Mangan, Asst. Director, on behalf
of
Date: 2025.10.13 15:44:34 -04'00'

SUBJECT: October 21, 2025 – Commission Meeting – Agenda Item No. 23
MOTION TO APPROVE deliberately phased Agreement between Broward County
and Carollo Engineers, Inc. for Engineering Services for PFAS Water
Treatment/Transmission System Improvements, Request for Proposals (RFP) No.
PNC2128715P1 for Water and Wastewater Services

Attached is the vendor executed Agreement (Exhibit 1) for Agenda Item No. 23 for Engineering
Services for PFAS Water Treat/Transmission System Improvements, RFP No. PNC2128715P1.

Attachment

REG/no

c: Monica Cepero, County Administrator
Kevin Kelleher, Deputy County Administrator
Andrew J. Meyers, County Attorney
Robert Melton, County Auditor
Lenny Vialpando, Director, Public Works and Environmental Services Department
Alan Garcia, Director, Water and Wastewater Services
Mark Darmanin, Operations Director, Water and Wastewater Services
Constance Mangan, Assistant Director, Purchasing Division

Broward County Board of County Commissioners

Mark D. Bogen • Alexandra P. Davis • Lamar P. Fisher • Beam Furr • Steve Geller • Robert McKinzie • Nan H. Rich • Hazelle P. Rogers • Michael Udine
www.broward.org

**AGREEMENT BETWEEN BROWARD COUNTY AND CAROLLO ENGINEERS, INC.
FOR CONSULTANT SERVICES FOR ENGINEERING SERVICES FOR PFAS WATER TREATMENT AND
TRANSMISSION SYSTEM IMPROVEMENTS
(RFP/RLI # PNC2128715P1)**

This agreement ("Agreement") is between Broward County, a political subdivision of the State of Florida ("County"), and Carollo Engineers, Inc., a foreign corporation ("Consultant") (each a "Party" and collectively referred to as the "Parties").

RECITALS

A. County issued a request for proposal ("RFP") No. PNC2128715P1 for Engineering Services for PFAS Water Treatment and Transmission System Improvements

B. Consultant represents that it has experience providing professional engineering services related to PFAS Water Treatment and Transmission System

C. The County desires to engage the Consultant to provide professional engineering services for preliminary engineering, design, permitting, bidding, and award assistance associated with the County's nanofiltration treatment of perfluoroalkyl and polyfluoroalkyl substances (PFAS) at Water Treatment Plants 1A and 2A, as well as for a potable water transmission main extending from the existing stub-out located at the intersection of NE 33rd Street and Dixie Highway in Pompano Beach to the County's 1B1 Water Storage and Repump Facility, located at 300 NW 66th Street, Fort Lauderdale, Florida (the "Project").

D. This Agreement is subject to the requirements of Section 287.055, Florida Statutes, known as the Consultants' Competitive Negotiation Act (CCNA), as amended. The County confirms that it has complied with the CCNA and has selected the Consultant to perform the services described herein.

E. Consultant shall perform Services under this Agreement for a fixed lump sum amount, as defined in the Agreement. Any additional services, modifications to the scope, or changes to Consultant's compensation shall require prior written approval by the County through a formal amendment to this Agreement. No additional compensation shall be due to the Consultant unless and until such amendment is fully executed by both Parties. County's decision not to issue an amendment shall not constitute a breach of this Agreement.

Now, therefore, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties agree as follows:

ARTICLE 1. DEFINITIONS

1.1. **Applicable Law** means all applicable laws, codes, advisory circulars, rules, regulations, and ordinances of any federal, state, county, municipal, or other governmental entity, as amended.

- 1.2. **Board** means the Board of County Commissioners of Broward County, Florida.
- 1.3. **Code** means the Broward County Code of Ordinances.
- 1.4. **Contract Administrator** means the Director of Water and Wastewater Engineering Division, the Assistant Director of Water and Wastewater Engineering Division, or such other person designated by the Director of Water and Wastewater Engineering Division in writing. The Contract Administrator is the representative of County concerning the Project.
- 1.5. **Contractor** shall mean the person, firm, corporation, or other entity (if any) that enters into an agreement with County to perform construction work for the Project.
- 1.6. **County Business Enterprise** or **CBE** means an entity certified as meeting the applicable requirements of the Broward County Business Opportunity Act, Section 1-81, et seq., of the Code.
- 1.7. **Notice to Proceed** means a written authorization issued by the Contract Administrator for Consultant to proceed with the Services or a specific phase or task of the Services.
- 1.8. **Project** means the specific scope of work, deliverables, schedule, and responsibilities defined in this Agreement, including all engineering services related to PFAS Water Treatment and Transmission System Improvements, as described in the recitals and scope of services.
- 1.9. **Purchasing Director** means County's Director of Purchasing.
- 1.10. **Services** means the work set forth in the Scope of Services, attached as Exhibit A, and any Optional Services procured under this Agreement, and includes civil, structural, mechanical, and electrical engineering, architectural services, and other professional services as applicable for the Project.
- 1.11. **Small Business Enterprise** or **SBE** means an entity certified as meeting the applicable requirements of the Broward County Business Opportunity Act, Section 1-81, et seq., of the Code.
- 1.12. **Subconsultant** means any entity or individual, including any subcontractor and any third party issued a Form 1099 by Consultant, that provides Services to County through Consultant, regardless of tier.

ARTICLE 2. EXHIBITS

Exhibit A	Scope of Services
Exhibit B	Maximum Billing Rates
Exhibit B-1	Reimbursables for Direct Non-Salary Expenses
Exhibit C	Minimum Insurance Requirements
Exhibit D	Work Authorization Form
Exhibit E	Schedule of Subconsultants
Exhibit F	CBE Subconsultants and Letters of Intent

ARTICLE 3. SCOPE OF SERVICES

3.1. Consultant shall provide all Services as set forth in Exhibit A (the “Scope of Services”), including all necessary, incidental, and related activities required for full and complete performance of this Agreement.

3.2. This Agreement does not delineate every detail and minor work task required to be performed by Consultant to complete the Project. If Consultant determines that work should be performed to complete the Services and, in Consultant’s opinion, that work is outside the level of effort originally anticipated, whether or not the Scope of Services identifies the work items, Consultant will promptly notify the Contract Administrator in writing and seek written approval of the Contract Administrator before proceeding with the work. If Consultant proceeds with such work without notifying the Contract Administrator and obtaining the Contract Administrator’s written approval, the work shall be deemed to be within the original level of effort, whether or not specifically addressed in the Scope of Services, with no additional compensation or time for such work. Notice to the Contract Administrator does not constitute authorization or approval by County to Consultant to perform the work. In addition, any such work that would entail additional compensation to Consultant by County, or additional time for performance, requires an amendment to this Agreement pursuant to Section 6.1 or to the applicable Work Authorization. Unless there is an executed amendment or a dispute as set forth in Section 6.4, any work performed by Consultant outside the originally anticipated level of effort without prior written County approval shall be at no additional cost to County.

3.3. Consultant has no right to be retained for other phases of the Project or other services not included in Exhibit A. County shall have the right to procure services for other Project phases not included within this Agreement from any other source.

3.4. County will place at Consultant’s disposal all information County reasonably has available that is pertinent to the Services, including previous reports and any other data regarding the Project. County shall arrange for access to, and make all provisions for, Consultant to enter upon public and private property if required for Consultant to perform the Services. Deliverables and documents required to be submitted by Consultant to County under this Agreement will be reviewed by County and responded to in writing with any comments within the time for such comments, if any, stated in Exhibit A.

3.5. Notwithstanding any other remedy otherwise available to County, where the work product of Consultant is found to be deficient for the purpose for which it was produced, Consultant shall correct the deficiency at no cost to County.

3.6. If the Services relate to a construction project, Consultant acknowledges that it is aware of all the duties and responsibilities and agrees to perform such duties and responsibilities as set forth in County’s standard form documents or those County documents governing forms of construction delivery. Consultant agrees to meet with County at reasonable times after reasonable notice.

ARTICLE 4. TIME FOR PERFORMANCE; DAMAGES

4.1. Consultant shall perform the Services within the time periods specified in Exhibit A. Time periods shall commence from the date of the applicable Notice to Proceed.

4.2. Consultant must receive a Notice to Proceed from the Contract Administrator prior to commencement of Services (and prior to commencing any phase or task of Services for which a separate Notice to Proceed is required per Exhibit A). The Contract Administrator may, at their discretion, require Consultant to submit the deliverables and documents from one phase identified in Exhibit A for the Contract Administrator's review and approval prior to Consultant commencing Services for another phase.

4.3. If the Contract Administrator determines that Consultant is unable to timely complete all or any portion of the Services because of delays resulting from untimely review by County or other governmental agencies having jurisdiction over the Project and such delays are not the result of an act or omission by Consultant, a Subconsultant, or anyone acting by, through, or under Consultant and/or one or more Subconsultants, or because of delays caused by factors outside the control of Consultant, the Contract Administrator has authority, in their sole discretion, and subject to a written amendment to either this Agreement or a Work Authorization, to grant a reasonable extension of time for completion of the Services and additional reasonable compensation, if deemed appropriate. It shall be the responsibility of Consultant to notify the Contract Administrator in writing whenever a delay in approval by a governmental agency is anticipated or experienced, and whenever a delay has been caused by factors outside of Consultant's control, and to inform the Contract Administrator of all facts and details related to the delay, along with an estimate of expected additional time necessary to complete the applicable Services and any request for additional compensation. Consultant must provide such written notice to the Contract Administrator within three (3) business days after the occurrence of the event causing the delay.

4.4. This section is only applicable if (a) the Project involves construction work, (b) County has retained a Contractor for the Project, and (c) the Services include construction engineering and inspection services related to Contractor's work. If Contractor fails to substantially complete the Project on or before the substantial completion date specified in its agreement with County through no fault of Consultant, or if Contractor is granted an extension of time beyond said substantial completion date and Consultant's Services are extended beyond the substantial completion date through no fault of Consultant, then Consultant shall be compensated in accordance with Article 5 for all Services rendered by Consultant beyond the substantial completion date. If Contractor's failure to substantially complete the Project on or before the substantial completion date specified in its agreement with County is caused in whole or in part by Consultant, a Subconsultant, or anyone acting by, through, or under Consultant, then Consultant shall pay to County its proportional share of any claim for damages to Contractor arising out of the delay. The provisions for the computation of delay costs, damages, or any other amounts, whether direct or indirect, in the agreement between the Contractor and County are

incorporated herein. This section shall not affect the indemnification rights or obligations of either Party otherwise set forth in this Agreement.

4.5. No additional compensation, services, or extensions of time shall be permitted under this Agreement unless expressly authorized through a formal written Amendment executed by both the County and the Consultant. The Consultant shall not perform any services outside the original scope or beyond the contractual term without prior written approval via such Amendment. The County shall have no obligation to pay for services performed outside the authorized scope or term unless approved in writing in accordance with this section.

ARTICLE 5. COMPENSATION AND METHOD OF PAYMENT

5.1. Amount and Method of Compensation. The amounts set forth in this Article 5 are the total compensation payable to Consultant for Services and constitute a limitation upon County's obligation to compensate Consultant for all Services, but do not constitute a limitation of any sort upon Consultant's obligation to perform all Services. Compensation for Services is subject to the following limitations, based upon the applicable method of compensation expressly stated in Exhibit A:

5.1.1. Maximum Amount Not-To-Exceed Compensation. For Services expressly identified in Exhibit A as payable on a "Maximum Amount Not-To-Exceed" basis, compensation to Consultant is based upon the Salary Costs as defined in Section 5.2, up to a maximum not-to-exceed amount of \$0.00.

5.1.2. Lump Sum Compensation. For Services expressly identified in Exhibit A as payable on a "Lump Sum" basis, compensation to Consultant shall not exceed a total lump sum of \$38,499,031.

5.1.3. Optional Services. County may procure Optional Services pursuant to Article 6 up to a maximum amount of \$0.00. Unused Optional Services amounts shall be retained by County.

5.1.4. Reimbursable Expenses. County will reimburse Consultant for authorized Reimbursable Expenses as defined in Section 5.3 up to a maximum amount of \$2,250,969. Any unused amounts shall be retained by County.

5.1.5. Subconsultant Fees. Consultant shall bill County for Subconsultant fees using the employee categories for Salary Costs on Exhibit B and Reimbursable Expenses defined in Section 5.3. Consultant shall bill Subconsultant fees with no mark-up and within any applicable maximum amount.

5.1.6. Phased Amounts. Payments for Services shall be made as specified in Exhibit A and shall not exceed the amount set forth below for the applicable phase. The invoiced amount for each phase is subject to retainage as set forth in Section 5.5.

Phase	Fee %	Amount
Phase 1: Preliminary Engineering	23%	\$9,379,152.00
Phase 2: Engineering Design/Permitting/Bid Services	71%	\$29,119,879.00
Reimbursable Expenses	6%	\$2,250,969.00
Total Services Fee	100%	\$40,750,000.00

The Contract Administrator may, in their discretion, by written notice to Consultant, reallocate funding from any phase shown above to any other phase, provided that the Total Services Fee is not increased.

5.2. Salary Costs. The term “Salary Costs” as used herein means the hourly rate actually paid to the personnel engaged in performing Services, adjusted by an overall multiplier that consists of the following: 1) a fringe benefits factor; 2) an overhead factor; and 3) a final operating margin. Said Salary Costs are to be used only for time directly attributable to the Services. The fringe benefit and overhead rates shall be Consultant’s most recent and actual rates determined in accordance with Federal Acquisition Regulation (“FAR”) guidelines and audited by an independent Certified Public Accountant. For the purposes of this Agreement, the rates must be audited for fiscal periods of Consultant within eighteen (18) months preceding the execution date of this Agreement. These rates shall remain in effect for the duration of this Agreement except as provided for in this Agreement.

5.2.1. Consultant shall require all of its Subconsultants to comply with the requirements of Section 5.2.

5.2.2. Salary Costs shown in Exhibit B are the maximum billing rates for each Consultant and Subconsultant employee category, and are provisional subject to audit of actual costs; if the audit discloses that the actual costs are less than the costs set forth on Exhibit B for Consultant or any Subconsultant, Consultant will promptly reimburse County based upon the actual costs determined by the audit. County may withhold the amount Consultant is required to reimburse County from any payment due Consultant under this Agreement.

5.2.3. Unless otherwise noted, the Salary Costs stated above are based upon Consultant’s “home office” rates. Should it become appropriate during the course of this Agreement that a “field office” rate be applied, Consultant must submit a supplemental Exhibit B reflective of such rates to the Contract Administrator for review and, subject to Contract Administrator’s written approval, may invoice County accordingly.

5.2.4. The total hours payable by County to Consultant for any “nonexempt” personnel (i.e., personnel subject to overtime pay) shall not exceed forty (40) hours per employee in any week. If the Services require Consultant’s or Subconsultant’s nonexempt personnel to work in excess of forty (40) hours per week, any additional hours for nonexempt personnel must be authorized in advance, in writing, by the Contract Administrator. If approved, Consultant shall invoice Salary Costs for such additional hours provided by

nonexempt employees at no more than one and one-half of the employee's hourly rate and in a manner consistent with Consultant's or Subconsultant's applicable certified FAR audit and all other provisions of Section 5.2. If a "Safe Harbor" rate is elected for use by Consultant or Subconsultant, then the additional hours for both "exempt" (i.e., not subject to overtime pay) and nonexempt employees are payable at no more than the employee's regular rate.

5.2.5. Consultant and any of its Subconsultants may alternatively use a "Safe Harbor" combined fringe benefit and overhead rate of 110% in lieu of providing fringe benefit and overhead cost factors certified by an independent Certified Public Accountant in accordance with the FAR guidelines. The Safe Harbor rate, once elected, shall remain in place for the duration of this Agreement, shall be applicable for use as "home" and "field" fringe benefit and overhead rates, if applicable, and shall not be subject to audit under this Agreement. All other provisions of Section 5.2 remain in place.

5.2.6. Indemnification Related to Paycheck Protection Program Forgiveness. If the State of Florida, federal government, or any other authority seeks recovery from County, whether through offset or any other means, of Paycheck Protection Program ("PPP") funds received by Consultant or any Subconsultant under the Coronavirus Aid, Relief, and Economic Security ("CARES") Act and/or any forgiveness of such funds pursuant to Section 1106 of the CARES Act, Consultant must indemnify and hold harmless County and its employees and agents from any and all claims, causes of action, losses, fines, penalties, damages, judgments, and liabilities of any kind, including attorneys' fees, litigation expenses, and court costs, arising from or relating thereto.

5.3. Reimbursable Expenses. Reimbursement of any travel costs, travel-related expenses, or other direct non-salary expenses directly attributable to the Services (collectively, "Reimbursable Expenses") shall be limited to those permitted under Section 112.061, Florida Statutes, except as otherwise stated herein or detailed in Exhibit B-1, Reimbursables for Direct Non-salary Expenses. Mileage for travel within Palm Beach, Broward, and Miami-Dade Counties is not reimbursable. County shall not be liable for any Reimbursable Expenses that have not been approved in writing in advance by the Contract Administrator. Reimbursable Expenses of Subconsultants must also comply with the requirements of this section. Reimbursables for Direct Non-salary Expenses shall only be invoiced or reimbursed to the extent stated in Exhibit B-1.

5.4. Method of Billing.

5.4.1. For Maximum Amount Not-To-Exceed Compensation. Consultant shall submit invoices to the Contract Administrator in a timely manner, no more frequently than on a monthly basis, for all Salary Costs and Reimbursable Expenses attributable to the Services. Invoices must identify the specific project number, the nature of the Services performed, the total hours performed, and the employee category of the applicable individuals.

Invoices must itemize and summarize all expenses by category and identify the personnel incurring the expense and the nature of the Services with which such expense was associated. Where prior written approval by Contract Administrator is required for the expense, a copy of said approval must accompany the invoice for such reimbursable. Invoices must also indicate the cumulative amount of CBE participation to date. The statement must show a summary of Salary Costs and Reimbursable Expenses with accrual of the total and credits for portions paid previously. External Reimbursable Expenses and Subconsultant fees must be documented by copies of paid invoices or receipts that describe the amount and nature of the expenses and contain a project number or other identifier that clearly indicates the expense is identifiable to the Services. Subsequent addition of the identifier to the invoice or receipt by Consultant is not acceptable except for meals and travel expenses. Internal expenses must be documented by appropriate Consultant's cost accounting forms with a summary of charges by category. When requested, Consultant must provide backup for past and current invoices that records hours and Salary Costs by employee category, expenses by category, and Subconsultant fees on a task basis, so that total hours and costs by task may be determined.

5.4.2. For Lump Sum Compensation. Consultant shall submit invoices to the Contract Administrator in a timely manner, no more frequently than on a monthly basis. These invoices must identify the specific project number, the nature of the Services performed, the phase of work, and the estimated percent of Services accomplished on each phase. Invoices for each phase shall not exceed the amounts allocated to said phase. Invoices must also indicate the cumulative amount of CBE participation to date. The statement must show a summary of fees with accrual of the total and credits for portions paid previously. When requested, Consultant must provide backup for past and current invoices that record hours, salary costs, and expense costs on a task basis, so that total hours and costs by task may be determined.

5.5. Method of Payment.

5.5.1. County shall pay Consultant within thirty (30) days after receipt of Consultant's proper invoice, as defined by County's Prompt Payment Ordinance, minus any applicable retainage or other deductions permitted by this Agreement. To be deemed proper, all invoices must: (a) comply with all applicable requirements, whether set forth in this Agreement or the Code; (b) be submitted pursuant to instructions prescribed by the Contract Administrator; and (c) be submitted to both the County's Accounting Division (via email at AccountsPayable@Broward.org) and to the Contract Administrator.

5.5.2. Unless otherwise provided in this section, County shall have the right to retain an amount equal to ten percent (10%) of each invoice ("retainage") until satisfactory completion of each of the applicable phases specified in Exhibit A. When the Services to be performed are at least fifty percent (50%) complete, upon written request by Consultant and written approval by the Contract Administrator that Services have progressed in a satisfactory manner, the Contract Administrator, in the Contract

Administrator's sole discretion, may authorize the reduction of retainage, if any, to five percent (5%) of each invoice for subsequent payments. No amount shall be withheld from payments for Reimbursable Expenses or for Services performed during the construction phase, if applicable. Any decision by County not to retain amounts as provided for in this section shall not be construed as a waiver of any right or claim that County may have associated with any failure of Consultant to properly complete the applicable phase. County may set off any amounts Consultant owes to County under this Agreement against any amounts County owes to Consultant under this Agreement.

5.5.3. Upon Consultant's completion of each phase to the satisfaction of the Contract Administrator, County shall remit to Consultant any amounts withheld as retainage for that phase. Final payment for the Services must be approved by the Purchasing Director.

5.5.4. Payment will be made to Consultant at the address for notices in Section 11.11, unless otherwise requested by Consultant in writing and approved by the Contract Administrator in writing.

5.6. Fiscal Year. The continuation of this Agreement beyond the end of any County fiscal year (October 1 through September 30) is subject to both the appropriation and the availability of funds, pursuant to Chapter 129 and, if applicable, Chapter 212, Florida Statutes. If amounts to be paid by County under this Agreement are budgeted to be funded with transportation surtax proceeds pursuant to Section 212.055(1), Florida Statutes, and such proceeds are not appropriated or available for any reason, County shall have no obligation to use ad valorem funds or any other funding source to make any payment(s) required under this Agreement and County may terminate this Agreement for convenience pursuant to Article 8.

5.7. Payments to Subconsultants. Consultant must pay Subconsultants and suppliers within fifteen (15) days after receipt of payment from County for such subcontracted work or supplies. If Consultant withholds an amount as retainage from a Subconsultant or supplier, Consultant shall release such retainage and pay the same within fifteen (15) days after receipt of payment of retained amounts from County. The Contract Administrator may, at its option, increase allowable retainage or withhold progress payments unless and until Consultant demonstrates timely payments of sums due to all Subconsultants and suppliers. Consultant shall include requirements substantially similar to those set forth in this section in its contracts with Subconsultants and suppliers.

5.8. Withholding by County; Overcharges. Notwithstanding any provision of this Agreement to the contrary, County may withhold payment, in whole or in part, (a) in accordance with Applicable Law, or (b) to the extent necessary to protect itself from loss on account of (i) inadequate or defective work that has not been remedied or resolved in a manner satisfactory to the Contract Administrator, or (ii) Consultant's failure to comply with any provision of this Agreement. The amount withheld shall not be subject to payment of interest by County. In the event of an overcharge by Consultant in any amount, Consultant shall promptly refund to County such overcharged amount. If the overcharge exceeds five percent (5%) of the total amount charged in the invoice where the overcharge occurred, Consultant shall, in addition to refunding

the overcharged amount, pay liquidated damages in the amount of fifteen percent (15%) of the overcharged amount within thirty (30) days after demand by County as just compensation for damages incurred by County due to the overcharge, including, but not limited to, County's administrative costs and loss of potential investment returns (including interest).

5.9. Foreign Entity Tax Withholding. Amounts due to certain foreign persons or entities may be subject to backup withholding taxes under federal law. If Consultant is a foreign person or entity that is required to complete an Internal Revenue Service ("IRS") form to evidence exemption from backup withholding (e.g., Form W-8ECI) ("Foreign Tax Form"), Consultant shall provide County a copy of Consultant's current Foreign Tax Form prior to issuance of any invoice or payment under this Agreement. If Consultant fails to timely provide a completed, current Foreign Tax Form, County will withhold all backup withholding taxes from the amounts due Consultant, remit such sums to the IRS, and pay Consultant only the remainder. County makes no representation regarding the tax treatment of amounts due to Consultant, and Consultant releases and holds County harmless from any claims or damages in any way relating to or arising from any tax withholding by County pursuant to this section.

ARTICLE 6. OPTIONAL AND ADDITIONAL SERVICES; CHANGES IN SERVICES

6.1. County or Consultant may request changes that would increase, decrease, or otherwise modify the Services to be provided under this Agreement. Unless otherwise expressly permitted herein, such changes must be made in accordance with the provisions of the Broward County Procurement Code and must be contained in a written amendment.

6.2. If Services under this Agreement are identified as optional ("Optional Services"), County may select the type, amount, and timing of such services pursuant to a work authorization ("Work Authorization") in substantially the form attached as Exhibit D executed by Consultant and County pursuant to Section 6.3. No such selection, when combined with those Services required under this Agreement, may result in a payment obligation exceeding the applicable maximum amount stated in Article 5. A Work Authorization for Optional Services must specify the scope of services and method of compensation applicable to that Work Authorization and the required time for completion of the Optional Services.

6.3. Notwithstanding anything to the contrary in this Agreement, Work Authorizations (and amendments thereto) for Optional Services shall be executed on behalf of County as follows: (a) the Contract Administrator may execute Work Authorizations for which the total aggregate cost to County is less than \$50,000; (b) the Purchasing Director may execute Work Authorizations for which the total aggregate cost to County is within the Purchasing Director's delegated authority; and (c) any Work Authorization above the Purchasing Director's delegated authority requires express approval by the Board. Consultant shall not commence work on any Work Authorization until receipt of a purchase order and a Notice to Proceed issued by the Contract Administrator.

6.4. If a dispute between the Contract Administrator and Consultant arises over whether any work requested by County is within the scope of contracted Services and such dispute cannot be

resolved by the Contract Administrator and Consultant, such dispute shall be promptly presented to the County Administrator or the County Administrator's designee for resolution, whose decision shall be in writing and shall be final and binding on the Parties. During the pendency of any dispute, Consultant shall promptly perform the disputed work.

ARTICLE 7. REPRESENTATIONS AND WARRANTIES

7.1. Representation of Authority. Consultant represents and warrants that this Agreement constitutes the legal, valid, binding, and enforceable obligation of Consultant, and that neither the execution nor performance of this Agreement constitutes a breach of any agreement that Consultant has with any third party or violates Applicable Law. Consultant further represents and warrants that execution of this Agreement is within Consultant's legal powers, and each individual executing this Agreement on behalf of Consultant is duly authorized by all necessary and appropriate action to do so on behalf of Consultant and does so with full legal authority.

7.2. Claims Against Consultant. Consultant represents and warrants that there is no action or proceeding, at law or in equity, before any court, mediator, arbitrator, governmental or other board or official, pending or, to the knowledge of Consultant, threatened against or affecting Consultant, the outcome of which may (a) affect the validity or enforceability of this Agreement, (b) materially and adversely affect the authority or ability of Consultant to perform its obligations under this Agreement, or (c) have a material and adverse effect on the consolidated financial condition or results of operations of Consultant or on the ability of Consultant to conduct its business as presently conducted or as proposed or contemplated to be conducted.

7.3. Solicitation Representations. Consultant represents and warrants that all statements and representations made in Consultant's proposal, bid, or other supporting documents submitted to County in connection with the solicitation, negotiation, or award of this Agreement, including during the procurement or evaluation process, were true and correct when made and are true and correct as of the date Consultant executes this Agreement, unless otherwise expressly disclosed in writing by Consultant.

7.4. Contingency Fee. Consultant represents and warrants that it has not employed or retained any person or entity, 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 or entity, 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. If this Agreement is subject to Section 287.055, Florida Statutes, the Parties agree and stipulate that the statutory language stated in Section 287.055(6)(a) is deemed included and fully incorporated herein.

7.5. Truth-In-Negotiation Representation. Consultant's compensation under this Agreement is based upon its representations to County, and Consultant certifies that the wage rates, factual unit costs, and other information supplied to substantiate Consultant's compensation, including, without limitation, in the negotiation of this Agreement, are accurate, complete, and current as of the date Consultant executes this Agreement. Consultant's compensation may be reduced by

County, in its sole discretion, to correct any inaccurate, incomplete, or noncurrent information provided to County as the basis for Consultant's compensation in this Agreement.

7.6. Public Entity Crime Act. Consultant represents that it is familiar with the requirements and prohibitions under the Public Entity Crime Act, Section 287.133, Florida Statutes, and represents that its entry into this Agreement will not violate that statute. Consultant further represents that there has been no determination that it committed a "public entity crime" as defined by Section 287.133, Florida Statutes, 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.

7.7. Discriminatory Vendor and Scrutinized Companies Lists; Countries of Concern. Consultant represents that it has not been placed on the "discriminatory vendor list" as provided in Section 287.134, Florida Statutes, and that it has not been identified as a company or other entity subject to scrutiny under Sections 215.473 or 215.4725, Florida Statutes. Consultant represents and certifies that it is not, and for the duration of the Agreement will not be, ineligible to contract with County on any of the grounds stated in Section 287.135, Florida Statutes. Consultant represents that it is, and for the duration of this Agreement will remain, in compliance with Section 286.101, Florida Statutes.

7.8. Verification of Employment Eligibility. Consultant represents that Consultant and each Subconsultant have registered with and use the E-Verify system maintained by the United States Department of Homeland Security to verify the work authorization status of all newly hired employees in compliance with the requirements of Section 448.095, Florida Statutes, and that entry into this Agreement will not violate that statute. If Consultant violates this section, County may immediately terminate this Agreement for cause and Consultant shall be liable for all costs incurred by County due to the termination.

7.9. Warranty of Performance. Consultant represents and warrants that it possesses the knowledge, skill, experience, and financial capability required to perform and provide all required and Optional Services under this Agreement, and that each person and entity that will provide Services is duly qualified and, to the extent required, licensed and certified by all appropriate governmental authorities to perform Services, and is sufficiently experienced and skilled in the area(s) for which such person or entity will render Services. Consultant represents and warrants that the Services shall be performed in a skillful and respectful manner, that it has or will obtain all necessary permits and approvals by applicable regulatory entities to perform the Services unless otherwise expressly stated herein, and that the quality of all Services shall equal or exceed prevailing industry standards for the provision of such services.

7.10. Prohibited Telecommunications. Consultant represents and certifies that Consultant and all Subconsultants do not use, and for the duration of this Agreement will not provide or use, any equipment, system, or service that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system, as such terms are used in 48 C.F.R. §§ 52.204-24 through 52.204-26.

7.11. Criminal History Screening Practices. If this Agreement is subject to the requirements of Section 26-125(d) of the Code, Consultant represents and certifies that Consultant will comply with Section 26-125(d) of the Code for the duration of the Agreement.

7.12. Entities of Foreign Concern. The provisions of this section apply only if this Agreement provides access to an individual's personal identifying information. By execution of this Agreement, the undersigned authorized representative of Consultant hereby attests under penalty of perjury as follows: Consultant is not owned by the government of a foreign country of concern, is not organized under the laws of nor has its principal place of business in a foreign country of concern, and the government of a foreign country of concern does not have a controlling interest in Consultant; the undersigned authorized representative of Consultant declares that they have read the foregoing statement and that the facts stated in it are true. Terms used in this section that are not otherwise defined in this Agreement shall have the meanings ascribed to such terms in Section 287.138, Florida Statutes.

7.13. Domestic Partnership Requirement. Unless this Agreement is exempt from the provisions of the "Broward County Domestic Partnership Act," Section 16½-157 of the Code ("Act"), Consultant certifies and represents that it shall at all times comply with the provisions of the Act. The contract language referenced in the Act is deemed incorporated in this Agreement as though fully set forth in this section.

7.14. Breach of Representations. Consultant acknowledges that County is materially relying on the representations, warranties, and certifications of Consultant stated in this article, and County shall be entitled to exercise any or all of the following remedies if any such representation, warranty, or certification is untrue: (a) recovery of damages incurred; (b) termination of this Agreement without any further liability to Consultant; (c) set off from any amounts due Consultant the full amount of any damage incurred; and (d) debarment of Consultant.

ARTICLE 8. TERMINATION

8.1. Termination for Cause. This Agreement or any Work Authorization issued under this Agreement may be terminated for cause by the aggrieved Party if the Party in breach has not corrected the breach within ten (10) days after receipt of written notice from the aggrieved Party identifying the breach. This Agreement may be terminated for cause by County for reasons including, but not limited to, any of the following:

8.1.1. Consultant's (a) failure to suitably or continuously perform the Services in a manner calculated to meet or accomplish the objectives in this Agreement or Work Authorization, (b) suspension or debarment by a state or federal governmental entity or by a local governmental entity with a population in excess of one million people, or (c) repeated submission (whether negligent or intentional) for payment of false or incorrect bills or invoices;

8.1.2. By the County Administrator or the Director of Office of Economic and Small Business Development ("OESBD") for fraud, misrepresentation, or material misstatement

by Consultant in the award or performance of this Agreement or that violates any applicable requirement of Section 1-81, et seq., of the Code; or

8.1.3. By the Director of OESBD upon the disqualification of Consultant as a CBE or SBE if Consultant's status as a CBE or SBE was a factor in the award of this Agreement, or upon the disqualification of one or more of Consultant's CBE or SBE participants by the Director of OESBD if any such participant's status as a CBE or SBE firm was a factor in the award of this Agreement.

Unless otherwise stated in this Agreement, if this Agreement was approved by Board action, termination for cause by County must be by action of the Board or the County Administrator; in any other instance, termination for cause may be by the County Administrator, the County representative expressly authorized under this Agreement, or the County representative (including any successor) who executed this Agreement on behalf of County. If County erroneously, improperly, or unjustifiably terminates this Agreement or any Work Authorization for cause, such termination shall be deemed a termination for convenience pursuant to Section 8.2 effective thirty (30) days after such notice was provided and Consultant shall be eligible for the compensation provided in Section 8.2 as its sole remedy.

8.2. Termination for Convenience; Other Termination. This Agreement or any Work Authorization may also be terminated for convenience by the Board with at least thirty (30) days advance written notice to Consultant. Consultant acknowledges that it has received good, valuable, and sufficient consideration for County's right to terminate this Agreement or any Work Authorization for convenience, including in the form of County's obligation to provide advance written notice to Consultant of such termination in accordance with this section. This Agreement or any Work Authorization may also be terminated by the County Administrator upon such notice as the County Administrator deems appropriate under the circumstances if the County Administrator determines that termination is necessary to protect the public health, safety, or welfare. If this Agreement or any Work Authorization issued under this Agreement is terminated by County pursuant to this section, Consultant shall be paid for any Services properly performed through the termination date specified in the written notice of termination, subject to any right of County to retain any sums otherwise due and payable, and County shall have no further obligation to pay Consultant for Services under this Agreement.

8.3. Notice of termination shall be provided in accordance with the "Notices" section of this Agreement, except that notice of termination by the County Administrator to protect the public health, safety, or welfare may be oral notice that shall be promptly confirmed in writing.

8.4. In addition to any termination rights stated in this Agreement, County shall be entitled to seek any and all available contractual or other remedies available at law or in equity, including recovery of costs associated with Consultant's failure to comply with any term(s) of this Agreement.

ARTICLE 9. INSURANCE

9.1. For the duration of the Agreement, Consultant shall, at its sole expense, maintain the minimum insurance coverages stated in Exhibit C in accordance with the terms and conditions of this article. Consultant shall maintain insurance coverage against claims relating to any act or omission by Consultant, its agents, representatives, employees, or Subconsultants in connection with this Agreement. County reserves the right at any time to review and adjust the limits and types of coverage required under this article.

9.2. Consultant shall ensure that "Broward County" is listed and endorsed as an additional insured as stated in Exhibit C on all policies required under this article.

9.3. On or before the date this Agreement is fully executed or at least fifteen (15) days prior to commencement of Services, as may be requested by County, Consultant shall provide County with a copy of all Certificates of Insurance or other documentation sufficient to demonstrate the insurance coverage required in this article. If and to the extent requested by County, Consultant shall provide complete, certified copies of all required insurance policies and all required endorsements within thirty (30) days after County's request.

9.4. Consultant shall ensure that all insurance coverages required by this article remain in full force and effect without any lapse in coverage for the duration of this Agreement and until all performance required of Consultant has been completed, as determined by Contract Administrator. Consultant or its insurer shall provide notice to County of any cancellation or modification of any required policy at least thirty (30) days prior to the effective date of cancellation or modification, and at least ten (10) days prior to the effective date of any cancellation due to nonpayment, and shall concurrently provide County with a copy of its updated Certificates of Insurance evidencing continuation of the required coverage(s).

9.5. All required insurance policies must be placed with insurers or surplus line carriers authorized to conduct business in the State of Florida with an A.M. Best rating of A- or better and a financial size category class VII or greater, unless otherwise approved by County's Risk Management Division in writing.

9.6. If Consultant maintains broader coverage or higher limits than the insurance requirements stated in Exhibit C, County shall be entitled to all such broader coverages and higher limits. All required insurance coverages shall provide primary coverage and not require contribution from any County insurance, self-insurance, or otherwise, which shall be in excess of and shall not contribute to the required insurance provided by Consultant.

9.7. Consultant shall declare in writing any self-insured retentions or deductibles over the limit(s) prescribed in Exhibit C and submit to County for approval at least fifteen (15) days prior to the date this Agreement is fully executed or commencement of Services. Consultant shall be solely responsible for and shall pay any deductible or self-insured retention applicable to any claim against County. County may, at any time, require Consultant to purchase coverage with a lower retention or provide proof of ability to pay losses and related investigations, claim

administration, and defense expenses within the retention. Any deductible or self-insured retention may be satisfied by either the named insured or County, if so elected by County, and Consultant shall obtain the same in endorsements to the required policies.

9.8. Unless prohibited by the applicable policy, Consultant waives any right to subrogation that any of Consultant's insurers may acquire against County and shall obtain the same in an endorsement of Consultant's insurance policies.

9.9. Consultant shall require that each Subconsultant maintains insurance coverage that adequately covers the Services provided by that Subconsultant on substantially the same insurance terms and conditions required of Consultant under this article. Consultant shall ensure that all such Subconsultants comply with these requirements and that "Broward County" is named as an additional insured under the Subconsultants' applicable insurance policies. Consultant shall not permit any Subconsultant to provide Services unless and until all applicable requirements of this article are satisfied.

9.10. If Consultant or any Subconsultant fails to maintain the insurance required by this Agreement, County may pay any costs of premiums necessary to maintain the required coverage and deduct such costs from any payment otherwise due to Consultant. If requested by County, Consultant shall provide, within one (1) business day, evidence of each Subconsultant's compliance with this article.

9.11. If any of the policies required under this article provide claims-made coverage: (1) any retroactive date must be prior to the date this Agreement is fully executed; (2) the required coverage must be maintained after termination or expiration of the Agreement for at least the duration stated in Exhibit C; and (3) if coverage is canceled or nonrenewed and is not replaced with another claims-made policy form with a retroactive date prior to the date this Agreement is fully executed, Consultant must obtain and maintain "extended reporting" coverage that applies after termination or expiration of the Agreement for at least the duration stated in Exhibit C.

ARTICLE 10. EQUAL EMPLOYMENT OPPORTUNITY AND CBE/SBE COMPLIANCE

10.1. Consultant and Subconsultants shall not discriminate on the basis of race, color, sex, religion, national origin, disability, age, marital status, political affiliation, pregnancy, or any other basis prohibited by Applicable Law in the performance of this Agreement. Consultant shall include the foregoing or similar language in its contracts with any Subconsultants, except that any project assisted by U.S. Department of Transportation funds shall comply with the nondiscrimination requirements in 49 C.F.R. Parts 23 and 26.

10.2. By January 1 of each year, Consultant must submit, and cause each of its Subconsultants to submit, an Ownership Disclosure Form (or such other form or information designated by County), available at <https://www.broward.org/econdev/Pages/forms.aspx>, identifying the ownership of the entity and indicating whether the entity is majority-owned by persons fitting specified classifications.

10.3. Consultant shall comply with all applicable requirements of the Broward County Business Opportunity Act, Section 1-81, et seq., of the Code, in the award and administration of this Agreement. Failure by Consultant to carry out any of the requirements of this article shall constitute a material breach of this Agreement, which shall permit County to terminate this Agreement or exercise any other remedy provided under this Agreement or Applicable Law, all such remedies being cumulative.

10.4. Consultant must meet or exceed the required CBE goal by utilizing the CBE firms listed in Exhibit F (or a CBE firm substituted for a listed firm, if permitted) for twenty-five percent (25%) of total Services (the "Commitment") for the scope of work and the percentage of work amounts identified on each Letter of Intent. Promptly upon execution of this Agreement by County, Consultant shall enter into formal contracts with the CBE firms listed in Exhibit F and, upon request, shall provide copies of the contracts to the Contract Administrator and OESBD.

10.5. Each CBE firm utilized by Consultant to meet the CBE goal must be certified and their participation approved in advance by OESBD. Consultant shall inform County immediately when a CBE firm is not able to perform or if Consultant believes the CBE firm should be replaced for any other reason, so that OESBD may review and verify the good faith efforts of Consultant to substitute the CBE firm with another CBE firm, as applicable. Whenever a CBE firm is terminated for any reason, Consultant shall provide written notice to OESBD and, upon written approval of the Director of OESBD, shall substitute another CBE firm in order to meet the CBE goal, unless otherwise provided in this Agreement or agreed in writing by the Parties. Such substitution shall not be required if the termination results from modification of the Services and no CBE firm is available to perform the modified Services; in which event Consultant shall notify County, and OESBD may adjust the CBE goal by written notice to Consultant.

10.6. The Parties stipulate that if Consultant fails to meet the Commitment, the damages to County arising from such failure are not readily ascertainable at the time of contracting. If Consultant fails to meet the Commitment and County determines, in the sole discretion of the OESBD Program Director, that Consultant failed to make Good Faith Efforts (as defined in Section 1-81.1 of the Code) to meet the Commitment, Consultant shall pay County liquidated damages in an amount equal to fifty percent (50%) of the actual dollar amount by which Consultant failed to achieve the Commitment, up to a maximum amount of ten percent (10%) of the total contract amount, excluding costs and reimbursable expenses. An example of this calculation is stated in Section 1-81.7 of the Code. As elected by County, such liquidated damages amount shall be either credited against any amounts due from County, or paid to County within thirty (30) days after written demand. These liquidated damages shall be County's sole contractual remedy for Consultant's breach of the Commitment, but shall not affect the availability of administrative remedies under Section 1-81, et seq. Consultant acknowledges and agrees that the liquidated damages provided in this section are proportionate to an amount that might reasonably be expected to flow from a breach of the Commitment and are not a penalty. Any failure to meet the Commitment attributable solely to force majeure, changes to the scope of work by County, or inability to substitute a CBE Subconsultant where the OESBD Program

Director has determined that such inability is due to no fault of Consultant, shall not be deemed a failure by Consultant to meet the Commitment.

10.7. Consultant acknowledges that the Board, acting through OESBD, may make minor administrative modifications to Section 1-81, et seq., of the Code, which shall become applicable to this Agreement if the administrative modifications are not unreasonable. Written notice of any such modification shall be provided to Consultant and shall include a deadline for Consultant to notify County in writing if Consultant concludes that the modification exceeds the authority under this section. Failure of Consultant to timely notify County of its conclusion that the modification exceeds such authority shall be deemed acceptance of the modification by Consultant.

10.8. County may modify the required participation of CBE firms in connection with any amendment, extension, modification, change order, or Work Authorization to this Agreement that, by itself or aggregated with previous amendments, extensions, modifications, change orders, or Work Authorizations, increases the initial Agreement price by ten percent (10%) or more. Consultant shall make a good faith effort to include CBE firms in work resulting from any such amendment, extension, modification, change order, or Work Authorization, and shall report such efforts, along with evidence thereof, to OESBD.

10.9. Consultant shall provide monthly utilization reports, using the form available at <https://www.broward.org/EconDev/SmallBusiness/Pages/Compliance.aspx> or such other form or system as may be designated by OESBD, to the Contract Administrator, to OESBD at SBCOMP@broward.org, and to the Small Business Specialist identified by OESBD. In addition, Consultant shall allow County to engage in onsite reviews to monitor Consultant's progress in achieving and maintaining the Commitment. The Contract Administrator, in conjunction with OESBD, shall perform such review and monitoring, unless otherwise determined by the County Administrator.

10.10. The presence of a "pay when paid" provision in a Consultant's contract with a CBE firm shall not preclude County or its representatives from inquiring into claims of nonpayment or exercising any right stated in Section 5.8.

ARTICLE 11. MISCELLANEOUS

11.1. Contract Administrator Authority. The Contract Administrator is authorized to coordinate and communicate with Consultant to manage and supervise the performance of this Agreement. Consultant acknowledges that the Contract Administrator has no authority to make changes that would increase, decrease, or otherwise materially modify the Services except as expressly set forth in this Agreement or, to the extent applicable, in the Broward County Procurement Code. Unless expressly stated otherwise in this Agreement or otherwise set forth in the Code or the Broward County Administrative Code, the Contract Administrator or designee may exercise ministerial authority in connection with the day-to-day management of this Agreement provided that such instructions and determinations do not change the Services. The Contract Administrator may also approve in writing minor modifications to the Services that do not

increase the total cost to County or waive any rights of County. Consultant shall notify Contract Administrator in writing of Consultant's representative(s) to whom matters involving the Services shall be addressed.

11.2. Rights in Documents and Work. Except as provided in the section of this Agreement titled "Reuse of Materials, Deliverables, and other Work Product," any and all documents, reports, studies, photographs, surveys, drawings, maps, models, photographs, specifications, materials, or other work created by Consultant specifically for County in connection with performing Services, in their native file format, whether finished or unfinished ("Documents and Work"), shall be owned by County, and Consultant hereby transfers to County all right, title, and interest, including any copyright or other intellectual property rights, in or to the Documents and Work, and shall provide any documentation necessary to effectuate such transfer. Unless otherwise expressly stated herein, County has the right to use, reproduce, modify, distribute, and publicly display the Documents and Work, in whole or in part, in any medium and for any purpose, in perpetuity and without restriction. Consultant represents and warrants that it has all necessary legal rights to provide the Documents and Work and to grant County the rights stated in this Agreement. Consultant must deliver the Documents and Work to the Contract Administrator within ten (10) business days after expiration or termination of this Agreement. Any compensation due to Consultant may be withheld until all Documents and Work are provided as set forth herein. Consultant shall ensure that the requirements of this section are included in all Consultant's agreements with Subconsultants.

11.3. Public Records. Notwithstanding any other provision in this Agreement, any action taken by County in compliance with, or in a good faith attempt to comply with, the requirements of Chapter 119, Florida Statutes, shall not constitute a breach of this Agreement. If Consultant is acting on behalf of County as stated in Section 119.0701, Florida Statutes, Consultant shall:

11.3.1. Keep and maintain public records required by County to perform the services under this Agreement;

11.3.2. Upon request from County, provide County with a copy of the requested records or allow the records to be inspected or copied within a reasonable time and at a cost that does not exceed that provided in Chapter 119, Florida Statutes, or as otherwise provided by Applicable Law;

11.3.3. Ensure that public records that are exempt or confidential and exempt from public record requirements are not disclosed except as authorized by Applicable Law for the duration of this Agreement and after completion or termination of this Agreement if the records are not transferred to County; and

11.3.4. Upon completion or termination of this Agreement, transfer to County, at no cost, all public records in possession of Consultant or keep and maintain public records required by County to perform the services. If Consultant transfers the records to County, Consultant shall destroy any duplicate public records that are exempt or confidential and exempt. If Consultant keeps and maintains the public records, Consultant shall meet all

requirements of Applicable Law for retaining public records. All records stored electronically must be provided to County upon request in a format that is compatible with the information technology systems of County.

If Consultant receives a request for public records regarding this Agreement or the Services, Consultant must immediately notify the Contract Administrator in writing and provide all requested records to County to enable County to timely respond to the public records request. County will respond to all such public records requests.

Consultant must separately submit and conspicuously label as “RESTRICTED MATERIAL – DO NOT PRODUCE” any material (a) that Consultant contends constitutes or contains its trade secrets under Chapter 688, Florida Statutes, or (b) for which Consultant asserts a right to withhold from public disclosure as confidential or otherwise exempt from production under Florida public records laws (including Chapter 119, Florida Statutes) (collectively, “Restricted Material”). In addition, Consultant must, simultaneous with the submission of any Restricted Material, provide a sworn declaration or affidavit in a form acceptable to County from a person with personal knowledge attesting that the Restricted Material constitutes trade secrets or is otherwise exempt or confidential under Florida public records laws, including citing the applicable Florida statute and specifying the factual basis for each such claim. Upon request by County, Consultant must promptly identify the specific applicable statutory section that protects any particular document. If a third party submits a request to County for records designated by Consultant as Restricted Material, County shall refrain from disclosing such material unless otherwise ordered by a court of competent jurisdiction, authorized in writing by Consultant, or the claimed exemption is waived. Any failure by Consultant to strictly comply with the requirements of this section shall constitute Consultant’s waiver of County’s obligation to treat the records as Restricted Material. Consultant must indemnify and hold harmless County and its employees and agents from any and all claims, causes of action, losses, fines, penalties, damages, judgments, and liabilities of any kind, including attorneys’ fees, litigation expenses, and court costs, relating to nondisclosure of Restricted Material in response to a third-party request.

IF CONSULTANT HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO CONSULTANT’S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS AGREEMENT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT (954) 831-0795, MIVELASQUEZ@BROWARD.ORG, 2555 WEST COPANS RD., POMPANO BEACH, FLORIDA 33069.

11.4. Audit Rights and Retention of Records. Consultant and all Subconsultants shall preserve all Contract Records (as defined below) for a minimum period of three (3) years after expiration or termination of this Agreement or until resolution of any audit findings, whichever is longer. This section shall survive any dispute or litigation between the Parties, and Consultant expressly acknowledges and agrees to be bound by this section throughout the course of any dispute or litigation with County. Contract Records shall, upon reasonable notice, be open to County inspection and subject to audit and reproduction during normal business hours. County audits

and inspections pursuant to this section may be performed by any County representative (including any outside representative engaged by County). County may conduct audits or inspections at any time during the duration of this Agreement and for a period of three (3) years after the expiration or termination of this Agreement (or longer if required by Applicable Law). County may, without limitation, verify information, payroll distribution, and amounts through interviews, written affirmations, and on-site inspections with Consultant's employees, Subconsultants, vendors, or other laborers.

Contract Records include any and all information, materials and data of every kind and character, including, without limitation, records, books, papers, documents, subscriptions, recordings, agreements, purchase orders, leases, contracts, commitments, arrangements, notes, daily diaries, drawings, receipts, vouchers, memoranda, e-mails, and any and all other documents that pertain to rights, duties, obligations, or performance under this Agreement. Contract Records include hard copy and electronic records, written policies and procedures, time sheets, payroll records and registers, cancelled payroll checks, estimating work sheets, correspondence, invoices and related payment documentation, cost and expense reports, general ledgers, insurance rebates and dividends, and any other records pertaining to rights, duties, obligations, or performance under this Agreement, whether by Consultant or Subconsultants.

County shall have the right to audit, review, examine, inspect, analyze, and make copies of all Contract Records at a location within Broward County. Consultant hereby grants County the right to conduct such audit or review at Consultant's place of business, if deemed appropriate by County, with seventy-two (72) hours' advance notice. Consultant agrees to provide adequate and appropriate workspace. Consultant shall provide County with reasonable access to Consultant's facilities, and County shall be allowed to interview all employees to discuss matters pertinent to the performance of this Agreement. Consultant shall make all Contract Records available electronically, in common file formats, and/or via remote access if and to the extent requested by County.

Consultant shall, by written contract, require all Subconsultants to agree to the requirements and obligations of this section.

Any incomplete or incorrect entry in such books, records, and accounts shall be a basis for County's disallowance and recovery of any payment based upon such entry. Consultant shall refund to County any overcharged amount identified as a result of an audit, regardless of the amount of the overcharge. If the overcharge exceeds five percent (5%) of the total contract charges audited by County, Consultant shall, in addition to refunding the overcharged amount, pay liquidated damages in the amount of fifteen percent (15%) of the overcharged amount as just compensation for damages incurred by County due to the overcharge, including, but not limited to, County's administrative costs and loss of potential investment returns (including interest). Any adjustments or payments due as a result of such audit must be made within thirty (30) days after presentation of County's findings to Consultant.

11.5. Subconsultants. Consultant shall utilize only the Subconsultants identified in Exhibit E, Schedule of Subconsultants, to provide the Services. Consultant shall obtain written approval of Contract Administrator prior to changing or modifying the Schedule of Subconsultants, which shall be automatically updated upon such written approval. Consultant shall bind in writing each and every approved Subconsultant to the terms stated in this Agreement, provided that this provision shall not, in and of itself, impose the insurance requirements set forth in Article 9 on Consultant's Subconsultants.

11.6. Subcontracting; Assignment; Change of Control. Neither this Agreement nor any interest herein shall be assigned, transferred, or encumbered without the written consent of the other Party. Any change of control (as defined herein) shall be deemed an assignment. Any assignment, transfer, encumbrance, or subcontract in violation of this section shall be void and ineffective, constitute a breach of this Agreement, and permit the nonassigning Party to immediately terminate this Agreement, in addition to any other remedies available to the nonassigning Party at law or in equity. County reserves the right to condition its approval of any assignment, transfer, encumbrance, or subcontract upon further due diligence and an additional fee paid to County to reasonably compensate it for the performance of any such due diligence.

For purposes of this section, "change of control" means: (a) a transfer of more than fifty percent (50%) of the ownership interests in Consultant, whether in a single transaction or a series of related transactions; (b) a merger, consolidation, or other reorganization that results in a change in voting control in Consultant or in the entity that controls Consultant's business; or (c) the sale, lease, or transfer of all or substantially all of Consultant's assets. A change of control does not include (i) a transfer to an entity wholly owned, directly or indirectly, by Consultant or its parent, or (ii) a transfer between existing owners of Consultant that does not result in a change in majority ownership; provided, however, that any such transfer shall not relieve Consultant of its obligations under this Agreement unless County expressly agrees otherwise in writing.

11.7. Confidential Information; Generative Artificial Intelligence. Unless expressly authorized in this Agreement or in writing in advance by the Contract Administrator, Consultant is strictly prohibited from disclosing, uploading, or otherwise making available to third parties, directly or indirectly, including but not limited to through utilization of generative artificial intelligence tools, any exempt, confidential, sensitive security, or personal information of County. Consultant must ensure that any use of generative artificial intelligence tools by Consultant or its Subconsultants does not involve the disclosure of exempt, confidential, sensitive security, or personal information, including without limitation for large language model learning or training. Consultant must implement and maintain appropriate technological and operational safeguards to ensure compliance with the obligations of this section.

11.8. Indemnification of County. If this Agreement constitutes a construction contract or a professional services contract with a design professional, then Section 11.8.1 shall apply. If this Agreement does not constitute a construction contract or a professional services contract with a design professional, then Section 11.8.2 shall apply. The terms "construction contract,"

“professional services contract,” and “design professional” used in this section have the meanings set forth in Sections 725.06 or 725.08, Florida Statutes.

11.8.1. Construction and Professional Services Contracts. Consultant shall indemnify and hold harmless County and its current, past, and future officers and employees from liabilities, damages, losses, and costs, including, but not limited to, reasonable attorneys’ fees, to the extent caused by the negligence, recklessness, or intentionally wrongful conduct of Consultant or other persons employed or utilized by Consultant in the performance of this Agreement.

11.8.2. Contracts Other than Construction or Professional Services. Consultant shall indemnify, hold harmless, and defend County and all of County’s current, past, and future officers, agents, and employees (collectively, “Indemnified Party”) from and against any and all causes of action, demands, claims, losses, liabilities, and expenditures of any kind, including attorneys’ fees, court costs, and expenses, including through the conclusion of any appellate proceedings, raised or asserted by any person or entity not a party to this Agreement, and caused or alleged to be caused, in whole or in part, by any breach of this Agreement by Consultant, or any intentional, reckless, or negligent act or omission of Consultant, its officers, employees, or agents, arising from, relating to, or in connection with this Agreement (collectively, a “Claim”). If any Claim is brought against an Indemnified Party, Consultant shall, upon written notice from County, defend each Indemnified Party with counsel satisfactory to County or, at County’s option, pay for an attorney selected by the County Attorney to defend the Indemnified Party.

11.8.3. The applicable provisions of Section 11.8 shall survive the expiration or earlier termination of this Agreement. If considered necessary by the Contract Administrator and the County Attorney, any sums due Consultant under this Agreement may be retained by County until all claims subject to indemnification have been settled or otherwise resolved. Any amount withheld shall not be subject to payment of interest by County.

11.9. Prior Agreements. This Agreement represents the final and complete understanding of the Parties regarding the subject matter of this Agreement and supersedes all prior and contemporaneous negotiations and discussions regarding the same. All commitments, agreements, and understandings of the Parties concerning the subject matter of this Agreement are contained herein.

11.10. Amendments. Unless otherwise expressly authorized herein, no modification, amendment, or alteration of any portion of this Agreement is effective unless contained in a written document executed with the same or similar formality as this Agreement and by duly authorized representatives of County and Consultant.

11.11. Notices. Unless otherwise stated herein, for notice to a Party to be effective under this Agreement, notice must be sent via U.S. first-class mail, hand delivery, or commercial overnight delivery, each with a contemporaneous copy via e-mail, to the addresses listed below and shall be effective upon mailing or hand delivery (provided the contemporaneous email is also sent). A

Party may change its notice address by providing notice of such change in accordance with this section.

FOR COUNTY:

Broward County
Water and Wastewater Services, Engineering Division
Attn: Alicia Dunne, PE, PMP
WWED Director
2555 West Copans Road
Pompano beach, Florida 33069
Email address: adunne@broward.org

FOR CONSULTANT:

Elizabeth Fujikawa PE, LEED AP, BCEE
Carollo Engineers, Inc.
2728 North University Drive, Building 2700
Coral Springs, FL 33065
Email address: efujikawa@carollo.com

11.12. Interpretation. The titles and headings contained in this Agreement are for reference purposes only and shall not in any way affect the meaning or interpretation of this Agreement. All personal pronouns used in this Agreement shall include any other gender, and the singular shall include the plural, and vice versa, unless the context otherwise requires. Terms such as “herein” refer to this Agreement as a whole and not to any particular sentence, paragraph, or section where they appear, unless the context otherwise requires. Whenever reference is made to a section or article of this Agreement, such reference is to the section or article as a whole, including all subsections thereof, unless the reference is made to a particular subsection or subparagraph of such section or article. Any reference to “days” means calendar days, unless otherwise expressly stated. Any reference to approval by County shall require approval in writing, unless otherwise expressly stated.

11.13. Consultant’s Staff. Consultant will provide the key staff identified in Exhibit A (if none listed in Exhibit A, then identified in response to County’s request for a proposal) 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 for County to determine the suitability of the proposed new key staff. Contract Administrator will be reasonable in evaluating key staff qualifications. If Contract Administrator desires to request the removal of any of Consultant’s staff, Contract Administrator shall first meet with Consultant and provide reasonable justification for said removal; upon such reasonable justification, Consultant shall use good faith efforts to remove or reassign the staff at issue.

11.14. Independent Contractor. Consultant is an independent contractor of County, and nothing in this Agreement shall constitute or create a partnership, joint venture, or any other relationship

between the Parties. In providing Services, neither Consultant nor its agents shall act as officers, employees, or agents of County, except as authorized by the Contract Administrator for permitting, licensing, or other regulatory requirements. Consultant shall not have the right to bind County to any obligation not expressly undertaken by County under this Agreement. Consultant and each Subconsultant shall be responsible for any amounts owed to their respective employees for work performed in excess of forty (40) hours in any week if the employee was misclassified as “exempt.”

11.15. Regulatory Capacity. Notwithstanding the fact that County is a political subdivision with certain regulatory authority, County’s performance under this Agreement is as a Party to this Agreement and in the capacity as owner of the Project. If County exercises its regulatory authority, the exercise of such authority and the enforcement of Applicable Law shall have occurred pursuant to County’s regulatory authority as a governmental body separate and apart from this Agreement, and shall not be attributable in any manner to County as a Party to this Agreement.

11.16. Sovereign Immunity. Except to the extent sovereign immunity may be deemed to be waived by entering into this Agreement, nothing herein is intended to serve as a waiver of sovereign immunity by County nor shall anything included herein be construed as consent by County to be sued by third parties in any matter arising out of this Agreement.

11.17. Third-Party Beneficiaries. Neither Consultant nor County intends to primarily or directly benefit a third party by this Agreement. Therefore, the Parties acknowledge that there are no third-party beneficiaries to this Agreement and that no third party shall be entitled to assert a right or claim against either of them based upon this Agreement.

11.18. 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 and care related to its performance under this Agreement. During the duration of this Agreement, none of Consultant’s officers or employees shall serve as an expert witness against County in any legal or administrative proceeding in which they or Consultant is not a party, unless compelled by legal process. Further, such persons shall not give sworn testimony or issue a report or writing, as an expression of such person’s expert opinion that is adverse or prejudicial to the interests of County in connection with any such pending or threatened legal or administrative proceeding unless compelled by legal process. The limitations of this section shall not preclude Consultant or any persons in any way from representing themselves, including giving expert testimony in support of such representation, in any action or in any administrative or legal proceeding. If Consultant is permitted pursuant to this Agreement to utilize Subconsultants to perform any Services, Consultant shall require such Subconsultants, by written contract, to comply with the provisions of this section to the same extent as Consultant.

11.19. Materiality and Waiver of Breach. Each requirement, duty, and obligation set forth in this Agreement was bargained for at arm’s-length and is agreed to by the Parties. Each requirement, duty, and obligation set forth in this Agreement is substantial and important to the formation of

this Agreement, and each is, therefore, a material term. County's failure to enforce any provision of this Agreement shall not be deemed a waiver of such provision or modification of this Agreement. A waiver of any breach shall not be deemed a waiver of any subsequent breach and shall not be construed to be a modification of this Agreement. To be effective, any waiver must be in writing and signed by an authorized signatory of the Party granting the waiver.

11.20. Compliance with Laws. Consultant and the Services must comply with all Applicable Law, including, without limitation, the Americans with Disabilities Act, 42 U.S.C. § 12101, Section 504 of the Rehabilitation Act of 1973, and the requirements of any applicable grant agreements, and all deliverables provided for online utilization must meet or exceed the World Wide Web Consortium/Web Content Accessibility Guidelines (WCAG) 2.1 Level AA standard or any higher standard as required by Applicable Law.

11.21. Severability. If any part of this Agreement is found to be unenforceable by any court of competent jurisdiction or contrary to Applicable Law, that part shall be deemed severed from this Agreement and the balance of this Agreement shall remain in full force and effect.

11.22. Joint Preparation. This Agreement has been jointly prepared by the Parties and shall not be construed more strictly against either Party.

11.23. Priority of Provisions. If there is a conflict or inconsistency between any term, statement, requirement, or provision of any document or exhibit attached to, referenced by, or incorporated in this Agreement and any provision within an article or section of this Agreement, the article or section shall prevail and be given effect.

11.24. Law, Jurisdiction, Venue, Waiver of Jury Trial. This Agreement shall be interpreted and construed in accordance with and governed by the laws of the State of Florida. The exclusive venue for any lawsuit arising from, related to, or in connection with this Agreement shall be in the state courts of the Seventeenth Judicial Circuit in and for Broward County, Florida. If any claim arising from, related to, or in connection with this Agreement must be litigated in federal court, the exclusive venue for any such lawsuit shall be in the United States District Court or United States Bankruptcy Court for the Southern District of Florida. **EACH PARTY HEREBY EXPRESSLY WAIVES ANY RIGHTS IT MAY HAVE TO A TRIAL BY JURY OF ANY CIVIL LITIGATION RELATED TO THIS AGREEMENT. IF A PARTY FAILS TO WITHDRAW A DEMAND FOR A JURY TRIAL AFTER WRITTEN NOTICE BY THE OTHER PARTY, THE PARTY MAKING THE DEMAND FOR JURY TRIAL SHALL BE LIABLE FOR REASONABLE ATTORNEYS' FEES AND COSTS OF THE OTHER PARTY TO CONTEST THE DEMAND FOR JURY TRIAL, AND SUCH AMOUNTS SHALL BE AWARDED BY THE COURT IN ADJUDICATING THE MOTION.**

11.25. Reuse of Materials, Deliverables, and other Work Product. County may, at its option, reuse (in whole or in part) the work product, materials, or deliverables resulting from Consultant's Services (including, but not limited to, drawings, specifications, other documents, and services as described herein and in Exhibit A) without additional compensation being owed to Consultant; and Consultant agrees to such reuse in accordance with this provision. This reuse may include preparation of reverse plans, changes to the program, provision for exceptional site

conditions, preparation of documents for off-site improvements, provisions for revised solar orientation, provisions for revised vehicular and pedestrian access, and modifications to building elevations, ornament, or other aesthetic features. If County elects to retain Consultant in connection with a reuse assignment, Consultant will be paid a reuse fee to be negotiated between County and Consultant. In connection with any reuse assignment that County elects to retain Consultant to perform, Consultant shall revise the design documents to comply with building codes and other jurisdictional requirements current at the time of reuse for the new use or site location. Except for the reuse payment negotiated between County and Consultant, the terms and conditions of this Agreement shall remain in force for each reuse assignment, unless otherwise agreed by the Parties in writing.

11.26. Payable Interest.

11.26.1. Payment of Interest. Unless prohibited by Applicable Law, County shall not be liable for interest to Consultant for any reason, whether as prejudgment interest or for any other purpose, and Consultant waives, rejects, disclaims, and surrenders any and all entitlement to interest in connection with a dispute or claim arising from, related to, or in connection with this Agreement.

11.26.2. Rate of Interest. If the preceding section is inapplicable or is determined to be invalid or unenforceable by a court of competent jurisdiction, the annual rate of interest payable by County under this Agreement, whether as prejudgment interest or for any other purpose, shall be, to the full extent permissible under Applicable Law, one quarter of one percent (0.25%) simple interest (uncompounded).

11.27. Incorporation by Reference. Any and all Recital clauses stated above are true and correct and are incorporated in this Agreement by reference. The attached Exhibits are incorporated into and made a part of this Agreement.

11.28. Multiple Originals and Counterparts. This Agreement may be executed in multiple originals or in counterparts, whether signed physically or electronically; each of which shall be deemed to be an original, and all of which, taken together, shall constitute one and the same agreement.

11.29. Polystyrene Food Service Articles. Consultant shall not sell or provide for use on County property expanded polystyrene products or food service articles (e.g., Styrofoam), unencapsulated expanded polystyrene products, or single-use plastic straws or stirrers, as set forth in more detail in Section 27.172, Broward County Administrative Code.

11.30. Public Art and Design. If the Project includes artwork as defined by Section 1-88 of the Code, Consultant shall cooperate with the artist for the purpose of properly incorporating the artist's design(s) into the design of the Project. Consultant shall notify the artist in writing of all design meetings and shall provide the artist with a schedule of milestone dates. If requested by County, Consultant shall provide workspace for the artist during the preliminary design and design phases. The artist's design, as properly incorporated into the design of the Project, shall

be included by Consultant in any applicable permitting as part of the master site or facility plan. Consultant's compensation pursuant to this Agreement includes the services to comply with the requirements set forth in this section. Consultant shall ensure that Subconsultants, if any, are informed of Broward County's Public Art and Design Program and any applicable requirements of working with the artist(s). If the Project is funded in whole or in part with proceeds from the transportation surtax, only artistic elements that are not prohibited under Section 212.055(1), Florida Statutes, may be funded through the surtax.

11.31. Anti-Human Trafficking. By execution of this Agreement by an authorized representative of Consultant, Consultant hereby attests under penalty of perjury that Consultant does not use coercion for labor or services, as such terms are defined in Section 787.06, Florida Statutes. Under penalties of perjury, the undersigned authorized representative of Consultant declares that they have read the foregoing statement and that the facts stated in it are true.

11.32. Use of County Name or Logo. Consultant shall not use County's name or logo in marketing or publicity materials without prior written consent from the Contract Administrator.

11.33. Iron and Steel Products. For any Project that constitutes a "public works project" as defined in Section 255.0993, Florida Statutes, any iron or steel product permanently incorporated in the Project must be produced in the United States, unless specifically exempted in writing by the Contract Administrator in accordance with Section 255.0993, Florida Statutes.

11.37. Emergency Response. If this Agreement is for Services related to emergency response for a natural emergency and Consultant breaches this Agreement during an emergency recovery period, as such period is defined in Section 252.505, Florida Statutes, Consultant must pay County a \$5,000 penalty plus damages, which shall be actual and consequential damages or, if expressly stated otherwise in this Agreement, liquidated damages, in accordance with Section 252.505, Florida Statutes.

(The remainder of this page is intentionally left blank.)

IN WITNESS WHEREOF, the Parties hereto have made and executed this Agreement: Broward County, through its Board of County Commissioners, signing by and through its Mayor or Vice-Mayor, authorized to execute same by Board action on the _____ day of _____, 20__; and Consultant, signing by and through its duly authorized representative.

COUNTY

ATTEST:

Broward County, by and through
its Board of County Commissioners

By: _____
Broward County Administrator, as
ex officio Clerk of the Broward County
Board of County Commissioners

By: _____
Mayor
____ day of _____, 20__

Approved as to form by
Andrew J. Meyers
Broward County Attorney
115 South Andrews Avenue, Suite 423
Fort Lauderdale, Florida 33301
Telephone: (954) 357-7600

Digitally signed by Matthew
Haber
Date: 2025.10.10 13:12:57
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By: Matthew Haber (Date)
Matthew Haber
Senior Assistant County Attorney

By:  (Date)
Mich
Chief Counsel

MH/tb
PNC2128715P1 - PFAS AGREEMENT BCF 202 (2025)Locked_CAO[mh][mk]review 10-8-25
10/08/2025
#1193480

**AGREEMENT BETWEEN BROWARD COUNTY AND CAROLLO ENGINEERS, INC.
FOR CONSULTANT SERVICES FOR ENGINEERING SERVICES FOR PFAS WATER TREATMENT AND
TRANSMISSION SYSTEM IMPROVEMENTS
(RFP/RLI # PNC2128715P1)**

CONSULTANT

CAROLLO ENGINEERS, INC.

By: Sandeep Sethi
Aut Signer

Sandeep Sethi, Vice President
Print Name and Title

10th day of October, 20 25

CAROLLO ENGINEERS, INC.

By: Vincent S. Hart
Authorized Signer

Vincent Hart, Executive Vice President
Print Name and Title

10th day of October, 20 25

EXHIBIT A
SCOPE OF SERVICES
PHASE 1 (PRELIMINARY ENGINEERING) AND PHASE 2 (ENGINEERING DESIGN)

BROWARD COUNTY
PFAS WATER TREATMENT AND TRANSMISSION SYSTEM IMPROVEMENTS

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PROJECT BACKGROUND

Broward County (COUNTY) owns and operates two lime softening water treatment plants (WTPs) at the District 1A and 2A service areas. WTP 1A is located at 3701 North State Road 7, in Lauderdale Lakes and currently has a rated capacity of 16 MGD (on a maximum day demand, MDD, basis). WTP 1A utilizes Biscayne Aquifer extraction wells for its raw water source. WTP 2A is located at 1390 N.E. 50th Street, in Pompano Beach, and currently has a rated capacity of 30 MGD (on a MDD basis). WTP 2A also utilizes Biscayne Aquifer extraction wells for its raw water source.

Both WTP 1A and 2A utilize the conventional lime softening treatment process with dual media filtration for hardness and color reduction, followed by chlorination for primary disinfection and ammonia addition for chloramine disinfectant residual.

The COUNTY has identified perfluoroalkyl and polyfluoroalkyl substances (PFAS) in the raw and finished water of each WTP. The existing lime softening treatment process will be unable to remove the PFAS compounds and produce the required water quality to comply with the recently enacted EPA PFAS maximum contaminant level (MCL), currently set to be in effect on April 29, 2031. The regulations require the COUNTY to be in compliance with the PFAS MCL by April 2031 based on a running annual average (RAA) of the last four quarterly samples. Based on the PFAS levels detected in the raw water, this implies that four quarterly samples prior to April 2031 will be required to be below detection to get to a RAA below the MCL by April 2031.

In April of 2024, a consultant retained by the COUNTY submitted a final report that provided a recommendation for the best and most cost-effective technology to remove PFAS from finished water. The recommendation, which was approved by the COUNTY, was to convert the existing lime softening treatment to membrane treatment technologies, more specifically, nanofiltration (NF) membranes. Also, the preliminary analyses indicated that the overall COUNTY system requires improved interconnects of water supply capabilities between the 1A and 2A service areas for reliability of water supply in the event that either of the District 1A or 2A WTPs is offline. The selected solution to improve reliability was the addition of an interconnect pipeline (30-inch) of approximately 6 miles in length.

Purpose

Carollo Engineers, Inc. (CONSULTANT) shall provide engineering services for the NF treatment of PFAS at WTP-1A and WTP-2A, and for a potable water transmission main from the existing stub out located at the intersection of NE 33rd Street and Dixie Highway in Pompano Beach to the COUNTY's 1B1 Water Storage and Repump Facility located at 300 NW 66th Street, Ft. Lauderdale. These services are divided into three phases:

- Phase 1 - Preliminary Engineering
- Phase 2 - Engineering Design, Permitting and Bidding and Award Assistance
- Phase 3 (future phase) - Engineering Services During Construction, to be authorized through a separate amendment to this Agreement.

CONSULTANT shall deliver a complete and fully operational design that meets all regulatory, permitting, and constructability requirements and complies with all Applicable Law for the facilities defined herein. Unless directed otherwise by Contract Administrator or otherwise specified herein, CONSULTANT shall coordinate with, and seek direction and feedback from, Contract Administrator and the BCWWS staff designated by Contract Administrator (BCWWS' Project Team).

The Project includes Services pertaining to the following major elements:

- 1) Water Treatment Plant 1A:
 - a) Membrane water treatment facility with a capability to provide 16 million gallons per day (MGD) on a Maximum Daily Demand (MDD) basis) and concentrate (i.e., the waste stream from treatment by membrane) disposal
 - b) Upgrades to existing facilities
 - c) Demolition and site restoration of abandoned facilities
- 2) Water Treatment Plant 2A:
 - a) Membrane water treatment facility (with a capability to provide 25 MGD on MDD basis) and concentrate (i.e., the waste stream from treatment by membrane) disposal
 - b) Upgrades to existing facilities
 - c) Demolition and site restoration of abandoned facilities
- 3) Potable Water Transmission Main Interconnect

The buildings, equipment and processes included in the Project are summarized in Table 1. Table 1 identifies the unit processes and major Project components included in this Scope of Services. If a component not listed - such as offsite piping for injection wells - is determined to be necessary during the Project, it may be incorporated into this Scope of Services through an amendment to the Agreement.

Table 1. Structures and Processes Included in the Project Scope at WTP-1A and WTP-2A

No.	Description
1	Membrane building (including generator room)
2	Chemical building
3	Raw water booster pumps with tie-in to the raw water piping at the WTP (to boost pressure for the sand strainers and cartridge filters)
4	Sand strainers
5	Cartridge filters

6	High pressure NF feed pumps
7	NF membrane trains / permeate flush
8	Pretreatment chemicals (Scale inhibitor, sulfuric acid) and associated equipment
9	Clean-In-Place system, Scavenger by product disposal
10	Generators (with 1 redundant) for new equipment loads (meeting required EPA emissions)
11	Degasification
12	Odor control scrubbers
13	Clearwell (for required disinfection) at WTP-1A. For WTP-2A, use of the existing 4-log piping system is planned instead of a clearwell.
14	Transfer pumping
15	Post treatment chemicals (sodium hydroxide, sulfuric acid, corrosion inhibitor), chemical piping and conveyance modifications (if needed) for existing sodium hypochlorite, ammonia and fluoride systems
16	CO2 system and storage
17	Injection well (1 each) for routine concentrate disposal at WTP-1A and WTP-2A, and a backup concentrate disposal system (lift station upgrades with tie-in piping to the membrane concentrate) for concentrate disposal into the sewer system.
18	Existing treatment system demolition

Raw Water Quality Characterization

- 1) The COUNTY will conduct raw water quality characterization and well inspections using a checklist to be provided by CONSULTANT. This is necessary to confirm the raw water wells are in good condition to supply water to an NF facility (e.g., no air intrusion at wells and no bacteria slime in raw water conveyance pipes, etc.).
- 2) CONSULTANT will specify sampling methods and frequency to capture seasonal variations, especially during periods of high pumping rates.
- 3) The COUNTY will provide both historical data and a current set of raw water quality results.

Well Rehabilitation

- 1) If needed based upon the historical and current testing, the COUNTY will rehabilitate the wells to enable a cost-effective and simplified pretreatment process at WTP1A and WTP2A.
- 2) The following maximum raw water quality values are required to support the use of cartridge filtration as the sole treatment method:
 - a) Dissolved oxygen: < 0.1 mg/L (to prevent iron oxidation)
 - b) Absence of bacteria
 - c) SDI (Silt Density Index): < 3
 - d) Total Suspended Solids (TSS): < 1 mg/L
 - e) Turbidity: < 1 NTU
 - f) Particle size distribution: 80% > 5 µm
 - g) Total Organic Carbon (TOC): < 5 mg/L

Deviation from Design Water Quality Parameters

If the raw water quality exceeds the maximum values listed above, and the COUNTY's efforts are unable to achieve them through a well rehabilitation program, CONSULTANT shall evaluate the data and recommend low-cost, simpler alternatives if deemed sufficient by CONSULTANT (e.g., acid addition, or replacement of certain wells with new wells, etc.), as part of the Services. Should those low-cost, simpler alternatives be deemed insufficient, and a more elaborate pretreatment system be required, this shall be performed at COUNTY's discretion through an amendment to the Agreement. Some such possible more elaborate pretreatment systems may include:

- 1) Addition of multimedia pretreatment
- 2) Pressure filtration
- 3) Microfiltration or Ultrafiltration

The proposed improvements recommended by CONSULTANT shall adhere to all Applicable Law, building codes, and all other applicable standards in effect at the time of the Agreement. Improvements may include those identified by CONSULTANT during detailed scope development and the preliminary and final design phases.

The Services required are broadly described below and more specifically in this Scope of Services:

- 1) Task A - Project Administration
- 2) Task B - Preliminary Engineering
- 3) Task C - Design
- 4) Task D - Bidding and Award

A. PROJECT ADMINISTRATION

A-1 Project Management

CONSULTANT shall provide project management services, including project controls and reporting, preparation of invoices, progress reports, and directing the Work in a manner so that Project milestones and deliverables are met as scheduled. CONSULTANT shall coordinate meeting and workshop schedules with BCWWS' Project Team, at times acceptable to the Contract Administrator.

CONSULTANT'S tasks associated with managing the Project include the following:

A-1.1 Project Meetings

CONSULTANT shall facilitate meetings necessary for efficient Project execution. This shall include establishing the meeting objectives, identifying participants, preparing agendas, and conducting the meetings. CONSULTANT shall prepare and distribute summary notes documenting decisions and assigned action items. The following meetings are anticipated:

- a. Project Kick-off Meeting (Hybrid; combination of in-person and virtual)
CONSULTANT shall attend and prepare for one initial Project kick-off meeting with BCWWS' Project Team. The purpose of the meeting is to introduce the Project team, establish communication protocols, review Project background and scope, discuss schedule and milestones, confirm key technical requirements, identify critical issues, outline quality management procedures, procurement considerations and data needs.
- b. COUNTY Project Team Monthly Progress Meetings (Virtual)
Monthly progress meetings shall be conducted by CONSULTANT with BCWWS' Project Team to discuss Project progress/status, schedule, budget, potential issues, and upcoming activities, in addition to specific task results, and permit applications. Progress meetings are in addition to the design workshops, meetings, and site visits that are separately described in the other Tasks. To optimize Project resources, meetings shall be attended only by CONSULTANT'S essential personnel.
- c. COUNTY Senior Management Meetings – Milestone Based (Virtual)
CONSULTANT shall have meetings with Contract Administrator and other senior members of BCWWS' Project Team at each milestone, as listed below, to discuss Project status, including all Project issues and actions for follow-up.
Milestones for Senior Management Meetings
 - i. Basis of Design Reports (BODRs) for WTA-1A, WTP-2A, and Potable Water Transmission Main (PWTM)
 - ii. 30% design submittal for WTA-1A, WTP-2A, and PWTM
 - iii. 60% design submittal for WTA-1A, WTP-2A, and PWTM
 - iv. 90% design submittal for WTA-1A, WTP-2A, and PWTM
 - v. 100% design submittal for WTA-1A, WTP-2A, and PWTM
- d. COUNTY Monthly Operations Meeting (Virtual)
CONSULTANT shall attend and give an overview on Project status to the COUNTY staff and Contract Administrator. To optimize Project resources, meetings shall be attended only by CONSULTANT's essential personnel.

A-1.2 Project Work Plan, Invoicing, Schedule

- a. Project Work Plan
CONSULTANT shall develop a Project work plan (Plan) detailing the lines of communication, filing systems, design and CAD standards, and other related information to be shared with Project team members.
CONSULTANT's Plan shall address quality management, staffing, initial Project schedule, design standards, CAD standards, BIM standards, deliverables, and delivery plan. CONSULTANT shall include in the Plan a Schedule for Design Services with agreed-upon critical milestones. This Schedule for Design Services shall be incorporated into the overall

Project schedule. The Plan shall identify information needed to perform the Services and provide the Deliverables while establishing the contact information, lines of communication, and procedures for the Project. The draft Plan shall be provided to BCWWS' Project Team at the Project Kickoff Meeting.

b. Monthly Progress Reports

CONSULTANT shall provide monthly progress reports that identify the Services performed during the month. These reports shall be delivered as part of the monthly progress payment request. CONSULTANT'S progress reports shall each include earned value analysis, showing key metrics such as Planned Value (PV), Earned Value (EV), Actual Cost (AC) and key performance indicators such as Schedule Performance Index (SPI) and Cost Performance Index (CPI).

c. Project Schedule

CONSULTANT shall develop, work within, and maintain the schedule for each phase of the Project. CONSULTANT'S schedule shall be developed and maintained in "Microsoft Project" software.

A-1.3 Project Dashboard with Metrics and Project Documentation Management

a. Project Dashboard with Metrics (for the COUNTY's use)

With BCWWS' Project Team input, CONSULTANT shall create and regularly update an overall Project dashboard with key performance parameters, such as schedule, percent complete for each item/process of the Services, and risk register items.

b. Project Documentation Management

CONSULTANT shall manage Project documentation by establishing a shared location, which will be accessible to Project team members and authorized employees of the COUNTY. CONSULTANT shall maintain the shared channel/folder to facilitate access and review of Project deliverables. Comments from participants on design elements or issues will be logged, updated, and tracked by CONSULTANT.

A-2 Quality Management

CONSULTANT shall coordinate and perform quality assurance and quality control (QA/QC) for the Project, including a QA/QC review of all CONSULTANT'S Project deliverables.

A-3 Permitting Services

All permits required for construction of a fully functional WTP-1A, WTP-2A, and PWTM are included in the Services. CONSULTANT shall prepare and deliver meeting minutes and agenda for all meetings held. Demolition plans are included in the Services, but the demolition permitting shall be obtained by the Contractor during construction.

a. Communications and Pre-Application Meeting

CONSULTANT shall schedule and attend pre-permitting application meetings, as requested by the Contract Administrator.

b. Application Preparation

CONSULTANT shall prepare permit applications, and submittals, required documentation, and coordinate and obtain the required signatures to submit the completed permit applications on the COUNTY's behalf. Depending on the permit type and associated agency requirements, the pertinent design submittal shall be used to facilitate the permit application.

c. RAI and Permit Condition Negotiation

Following submittal of the permit applications, CONSULTANT shall provide the following services:

- i. Respond to requests for additional information (RAI) from the permitting agencies
- ii. Draft permit review and permit condition negotiation
- iii. Prepare for and attend public meetings (if required)

All permit application fees shall be paid by CONSULTANT except the Building Department permit dry run fees and any demolition permits fees.

CONSULTANT'S DELIVERABLES (PROJECT ADMINISTRATION)

1. Meeting Minutes – PDF
2. CBE Compliance Reports to OESBD – PDF.
3. Monthly Invoices and Progress Report – PDF.
4. Project Work Plan, Draft and Final – PDF.
5. Project Schedule – PDF.
6. Project Dashboard and shared file location for Project Documentation Management
7. Permit Applications including all required support documents
8. Signed and Sealed plans and Specifications

B. PHASE 1 – PRELIMINARY ENGINEERING

B-1 Field Investigations

CONSULTANT shall perform the following Services, including field investigations, during Phase 1 of the Project.

B-1.1 Water Treatment Plants (WTP) 1A & 2A

a. Wells Rehabilitation Recommendations

CONSULTANT shall prepare a presentation to the BCWWS' Project Team which will summarize CONSULTANT's observations and recommendations for either no action or

improvements concerning existing water wells providing raw water to WTP-1A and WTP-2A. CONSULTANT shall also provide recommendations for maintenance and rehabilitation, or replacement of existing wells, or well components in the presentation.

b. Site Visits for Evaluation of Existing Conditions

At times acceptable to Contract Administrator, CONSULTANT shall conduct multiple site visits. CONSULTANT shall conduct a combined site visit-meeting with BCWWS' Project Team at each WTP to assess and document the existing conditions. CONSULTANT'S visits shall result in CONSULTANT'S evaluation of the existing chemical systems, existing fiber network at the proposed nanofiltration panel interface point, existing electrical systems, existing utilities visible at the surface, environmental, and other relevant site characteristics that may impact Project feasibility and design. CONSULTANT shall request as-built drawings and maintenance records from BCWWS's Project Team. CONSULTANT shall conduct another site visit at each WTP to investigate the existing facilities including, without limitation, existing buildings to be demolished, retention areas to be relocated, above ground utilities, stormwater management infrastructure, trees, lighting, lift station, electrical transformers, overhead lines, gas meters, signage, etc. CONSULTANT shall also evaluate the existing trees that may need to be removed, relocated, or mitigated as part of the Project. CONSULTANT shall perform a tree survey with locations and species. CONSULTANT shall provide written observations, evaluations, and recommendations based on these site visits and evaluations.

c. FPL Coordination

At times acceptable to Contract Administrator, CONSULTANT shall conduct Project coordination meetings with Florida Power & Light (FPL) and BCWWS' Project Team at each WTP to review key design parameters of existing electrical service upgrades due to new treatment facility load additions, the generator upgrades, and associated paralleling generator controls as required, and infrastructure improvements to address electric service resiliency.

d. Geotechnical Investigations and Support

CONSULTANT shall conduct geotechnical investigations/borings at each WTP for new building foundations, pads for new structures, and other pertinent strategic locations to establish a basis for structural design of the new facilities and for design of the paving, sitework, and surface water management systems. CONSULTANT'S geotechnical investigations shall include drilling and sampling borings for the proposed new structures and buildings to determine subsoil conditions and laboratory analyses that shall include a soil profile of the different soil layers, seasonal high-water table, and recommendations. Additionally, CONSULTANT shall provide open hole soil percolation testing in areas where

potential new dry retention and swales will be located onsite. Corrosion testing shall be included in the Services.

Upon completion, CONSULTANT shall review the information resulting from the geotechnical investigations completed by its geotechnical subconsultant. CONSULTANT shall perform a Ground Penetrating Radar (GPR) survey in the area of the proposed boring locations to aid in confirming utility clearance. CONSULTANT shall report to Contract Administrator, in writing, the findings, conclusions, and recommendations pertaining to the preliminary design of new facilities.

e. Environmental Investigations

At times acceptable to Contract Administrator, CONSULTANT shall conduct another site visit and evaluation at each WTP to determine whether any environmental issues or concerns need to be addressed, including, without limitation, protected endangered species, wetlands, contamination (including, without limitation, asbestos and lead based paint evaluation for facilities to be demolished or repurposed), hazardous substances, and air quality. CONSULTANT shall conduct necessary environmental assessments of each WTP site for wetlands delineation and shall provide guidelines for environmental work to be performed under this Project. CONSULTANT'S analyses and Services include jurisdictional wetland delineations, completion of any required wetland functional assessments and associated documentation, conducting specific state and federal listed species surveys (identified during the environmental review), and agency coordination through pre-application meetings. CONSULTANT shall provide BCWWS' Project Team with a desktop (non-field testing) analysis and field verification of endangered species habitats and wetland delineations within the designated Project area.

f. Survey and Subsurface Investigations

CONSULTANT shall conduct site topographical and boundary survey assessments of each WTP for the new membrane treatment facilities and shall conduct a survey of both entire WTP sites. LiDAR (Light Detection and Ranging) technology shall be used by CONSULTANT.

CONSULTANT shall conduct full topographic surveys of the existing surface conditions, which shall include NAVD88 grades on a 25-foot grid. Existing buildings with finish floor elevations, existing trees and species, above ground utilities (including, without limitation, meters, valves, manholes, drainage inlets, electrical transformers, fire hydrants, lift stations, etc.) shall be included by CONSULTANT in the topography.

CONSULTANT'S surveys shall establish the perimeter property lines, and adjacent road rights-of-way based on existing legal descriptions. CONSULTANT'S surveys shall provide a minimum of three permanent horizontal and vertical control monuments on each site in favorable locations, established by a Professional Land Surveyor registered in the State of Florida. Underground utilities shall be graphically depicted by CONSULTANT on the survey

drawings. CONSULTANT'S surveys shall also include verification of dimensions for existing structures and existing wetland boundaries.

CONSULTANT shall utilize the best available as-builts, ground penetrating radar (GPR), and soft digs to accurately identify all subsurface utilities including, without limitation, drainage, potable water, chemical piping, sanitary sewer, gas, fire, telecommunication ducts, irrigation and electrical infrastructure, horizontally and vertically in NAVD88.

CONSULTANT shall perform Subsurface Utility Engineering (SUE) services in accordance with ASCE 38-22, "Standard Guideline for Investigating and Documenting Existing Utilities," to identify and map existing underground utilities within the Project limits of each WTP. The SUE services provided by CONSULTANT shall be conducted at the Quality Levels (QLs) A, B, C, and D.

Hand digs and SUE services are necessary for the new membrane facility sites and are included in the Services.

CONSULTANT shall collect and document utility attributes, including, without limitation, size, material, depth, and condition. CONSULTANT shall provide surveyed utility data and incorporate findings into the utility base maps. CONSULTANT shall restore all test hole locations to pre-existing conditions in accordance with Applicable Law and jurisdictional requirements.

CONSULTANT shall provide a written report to Contract Administrator the findings, conclusions, and recommendations pertaining to the preliminary and final design of the new facilities. Copies of the electronic files including site mapping, and other products of the site survey shall be provided to BCWWS' Project Team.

- g. Existing Programmable Logic Controller (PLC) Assessment (Remote Wells, High Service PS, GST, chemical injection points), Network and SCADA Assessment

CONSULTANT shall perform the following field investigations and activities for each WTP:

- i. Request from BCWWS' Project Team and WTP staff the existing standards, and any design documents from recent upgrades.
- ii. Field investigation of legacy fiber or pathways closest to new connection point for new equipment.
- iii. Field investigation of existing Remote Wells, High Service Pump Stations, GST and chemical injection points and associated controls in case these would be modified based on the new process.
- iv. Gather information about construction sequencing constraints and note any interdependencies, possible shutdowns and durations, affected process, etc.

B-1.2 Potable Water Transmission Main (PWTM)

a. Site Visits for Evaluation of Existing Conditions

CONSULTANT shall conduct site visits as necessary to assess and document the existing conditions of the Project location. CONSULTANT shall evaluate the right-of-way, existing utilities visible at the surface, environmental, and other relevant site characteristics that may impact Project scope, feasibility, or design.

CONSULTANT shall provide BCWWS' Project Team with written observations, reports, and recommendations based on these evaluations.

b. Geotechnical Investigations and Support

At the conclusion of the PWTM route study (described in Task B-3.2), when concurrence from BCWWS' Project Team has been received, CONSULTANT shall perform geotechnical investigation during Phase 2.

CONSULTANT shall conduct geotechnical investigations at strategic locations throughout the PWTM route, including soil borings and pavement cores. CONSULTANT shall perform a Ground Penetrating Radar (GPR) survey in the area of the proposed boring locations to aid in confirming utility clearance. Corrosion testing shall be included in the Services.

Upon completion, CONSULTANT shall review the information resulting from the geotechnical investigations. Based on the anticipated pipeline length and routing, CONSULTANT shall use the appropriate soil boring logs and provide a written report to the COUNTY with the findings, conclusions, and recommendations pertaining to the preliminary design of the PWTM.

c. Environmental Investigations

CONSULTANT shall conduct environmental investigations, assessments, and studies to evaluate potential environmental impacts associated with the Project. CONSULTANT'S investigations shall include reviewing tree and landscape, bathometric surveys, endangered species assessments, contaminated sites, and regulatory compliance reviews.

CONSULTANT shall perform Services in compliance with all Applicable Law, regulations, and guidelines, including but not limited to all Applicable Law concerning environmental protection. Any findings, reports, or recommendations shall be documented and submitted to BCWWS' Project Team in a timely manner by CONSULTANT. CONSULTANT shall also provide recommendations for mitigation, remediation, and further action if environmental concerns are identified.

At times acceptable to Contract Administrator, BCWWS' Project Team will provide reasonable access to COUNTY secured sites for investigative purposes. CONSULTANT shall exercise due diligence in compliance with industry best practices to minimize site disturbances and restoring affected areas to pre-investigation conditions in accordance with Applicable Law and jurisdictional requirements.

d. Survey and Subsurface Investigations

CONSULTANT shall contact Sunshine 811 to obtain a list of known utility owners within the Project area. All utility owners shall be contacted to collect as-builts, GIS files, atlas drawings and other utility documents that identify the locations of known facilities. These documents shall be incorporated by CONSULTANT into a GIS and the Basis of Design Report (BODR).

At the conclusion of the of the tasks detailed above and, when concurrence from BCWWS' Project Team on a recommended route has been received, CONSULTANT shall perform survey and subsurface investigations during Phase 2.

B-2 Pilot and Bench Scale Treatability Study

B-2.1 WTP 2A

CONSULTANT shall perform pilot-scale testing, supplemented with bench-scale testing as needed, to aid in development of the BODR for WTP 2A. The bench-scale testing component shall be performed by CONSULTANT either in parallel with and/or ahead of the pilot-scale testing.

The pilot-scale testing shall be used by CONSULTANT to:

- a. Develop additional source water quality data necessary to support full scale design
- b. Screen and select the appropriate membrane for PFAS reduction
- c. Calibrate process modeling against actual operating data.
- d. Characterize the membrane cleaning frequency and cleaning efficiency.
- e. Validate design criteria for the membrane system.
- f. Determine what pretreatment is required prior to the membranes
- g. Perform pipe loop testing and pipe coupon testing to evaluate impact on corrosion indices

CONSULTANT'S pilot-scale testing study shall run for a duration recommended by CONSULTANT, and acceptable to Contract Administrator, for the intended membrane testing purposes in this Project.

The bench-scale testing shall be used by CONSULTANT to:

- a. Collect data to aid in determination of pre-treatment requirements.
- b. Test and determine design criteria for bypass stream treatment technologies for PFAS and color.

In addition, CONSULTANT shall:

- a. Coordinate the procurement and installation of membrane pilot skid at WTP-2A.
- b. Perform corrosion control testing to determine corrosion potential to downstream pipes within the distribution system.
- c. Prepare slides and discuss bench-scale testing results with the BCWWS' Project Team at one review meeting, scheduled at a time acceptable to Contract Administrator.
- d. Compile and provide a professional interpretation of performance data from the bench-scale testing at WTP-2A and prepare a written summary (tables and graphs) to review with BCWWS' Project Team.

In furtherance of the above, CONSULTANT shall also perform the following Services under this task:

a. Pilot-Scale Testing Plan

CONSULTANT shall develop a testing plan for executing the pilot-scale test for WTP-2A including pertinent operational parameters and protocols. CONSULTANT shall perform membrane process modeling. CONSULTANT shall determine and recommend the membranes to be further tested at pilot-scale. CONSULTANT shall discuss and confirm the recommended selection with BCWWS' Project Team.

CONSULTANT shall include, without limitation, the following items in the pilot-scale testing plan:

- i. Pilot-scale equipment data. This shall include flow requirements, power requirements, chemical requirements, and waste disposal.
- ii. Testing matrix listing the various tests to be conducted and their duration.
- iii. Sampling protocol to measure and establish the values for specific water quality parameters.
- iv. Standard protocol that states the frequency of performance monitoring and sampling. This protocol shall also specify any routine instrument calibration or verification procedures required.
- v. Electronic data logging or data log sheets to facilitate the collection of routine system operational and performance/water quality parameters.
- vi. Graphical layout of necessary equipment and ancillary items for the pilot-scale test.
- vii. Implementation schedule and duration.

b. WTP-2A Coordinate, Provide, Install, and Startup Pilot-Scale Equipment

CONSULTANT shall provide the pilot-scale equipment for the COUNTY. CONSULTANT shall provide the following Services for pilot-scale equipment procurement, installation, and startup at WTP-2A:

- i. Provide and install the appropriate temporary pilot-scale equipment and all related components to provide for a complete and operational set up at WTP-2A.

- ii. Perform and coordinate training of COUNTY staff to oversee the pilot during weekends and startup of the pilot-scale equipment.
- iii. Install a temporary disposal system to handle waste (neutralization of pilot chemical waste and then subsequent disposal to sewer) and coordination with FDEP requirements. Pilot membrane concentrate from the pilot-scale testing shall be blended back with the permeate and disposed to the sewer.

c. WTP-2A Pilot-Scale Testing Oversight, Site Visits, and Sampling

CONSULTANT shall provide the following Services for the pilot-scale operations at WTP-2A:

- i. CONSULTANT shall perform site visits for pilot-scale operations on 5 working days per week, for as long as necessary. Membranes shall be tested by CONSULTANT in sequence to evaluate PFAS rejection versus raw water. Over the weekends, the COUNTY staff will oversee basic pilot-scale equipment operation and perform necessary field data collection and monitoring. Sample Data collection shall be minimized by CONSULTANT to only the most critical field-measurements during the days that COUNTY staff are monitoring the pilot-scale equipment.
- ii. CONSULTANT shall perform equipment monitoring, data collection, and coordination with an external certified laboratory.
- iii. CONSULTANT shall perform selected water quality analyses in the field during the 5 visits per week.
- iv. CONSULTANT shall obtain the services of an external certified laboratory and CONSULTANT shall coordinate sample collection and analytical analysis of water quality parameters.

d. WTP-2A Pilot-Scale Testing Data Analysis and Reporting

CONSULTANT shall provide the following Services for data analysis and reporting at WTP-2A:

- i. Regularly compile and provide a professional interpretation of monitoring and performance data to confirm testing conditions and duration.
- ii. Prepare monthly written summaries (tables and graphs) of membrane performance testing and review with the BCWWS' Project Team, along with the plans for the testing in the subsequent month.

e. WTP-2A Pilot-Scale Testing Study Results Review Meetings

CONSULTANT shall prepare and discuss pilot-scale testing results with BCWWS' Project Team during the review meetings.

f. WTP-2A Pilot Study Technical Manual (TM)

CONSULTANT shall develop and submit a Draft TM including the description and results from the pilot-scale testing at WTP-2A.

At a time acceptable to Contract Administrator, CONSULTANT shall review Draft TM results and recommendations in a meeting with BCWWS' Project Team.

CONSULTANT shall address and incorporate the BCWWS' Project Team's comments received on Draft TM and submit a Final TM to COUNTY for pilot-scale testing at WTP-2A.

B-3 Corrosion and Water Main Route Study Analyses

CONSULTANT shall prepare written analyses of alternatives to BCWWS' Project Team (Alternatives Analysis), which shall include data collection, review of previous reports and record drawings, evaluation of pertinent alternatives, and recommendations for each major alternative for corrosion inhibitor and PTWM routes. CONSULTANT shall provide observations, evaluation, and recommendations based on these analyses.

B-3.1 Water Treatment Plants

CONSULTANT shall perform the following activities under this task:

- a. Review previous reports and record drawings for WTPs.
- b. Evaluate PFAS data previously collected by COUNTY for source water for WTPs.
- c. Perform a review of any latest developments in PFAS regulations and other regulatory considerations.
- d. Perform desktop corrosion study and evaluate alternatives for corrosion inhibitor with change in treatment. CONSULTANT shall perform a broader corrosion study to evaluate impact of predicted membrane treated finished water quality on corrosion indices. This desktop corrosion study task shall include calculation of corrosion indices under the current treatment approach with lime softening and future conditions with NF. CONSULTANT shall evaluate the impact of different corrosion control treatment adjustments on the stability of the NF treated water. Results shall be used to advise on corrosion control treatment conditions for pilot-scale testing and/or design implementation. CONSULTANT shall perform associated pipe loop testing as part of the pilot-scale testing. Calculation shall include but not be limited to, Langelier Saturation Index, Ryznar Index, Aggressiveness Index, calcium carbonate precipitation potential (CCPP), Larson's Ratio (LR), and chloride to sulfate mass ratio.
- e. Interpretation of pH versus dissolved inorganic carbon (DIC) lead solubility and Iron solubility diagrams. These, diagrams shall be reviewed by CONSULTANT to assess whether any past or planned future changes would be expected to impact lead and iron solubility

B-3.2 Potable Water Transmission Main (PWTM)

- a. CONSULTANT shall prepare and provide an analysis, which includes friction loss calculations, routing study, and material recommendations for each major component of the PWTM. CONSULTANT shall provide observations, reports, and recommendations based on these analyses. The route study provided by CONSULTANT shall include, at a minimum, the following items:
 - ii. Determination of connection point(s).
 - iii. Preliminary PWTM layout for each alternative.
 - iv. Discussion of any route and connection issues.
 - v. Material selection.
 - vi. Cathodic protection.
- b. Route Study TM

CONSULTANT shall prepare the draft route study TM summarizing the findings and recommendation of the alternatives analyses task for the PWTM.

CONSULTANT shall conduct a workshop to review a draft Alternatives Analysis TM with the COUNTY and receive comments. CONSULTANT shall prepare and submit the final Alternatives Analysis TM. CONSULTANT shall perform, and provide to BCWWS' Project Team, an evaluation of the topographic survey and elevation data. CONSULTANT shall prepare a digital terrain model (DTM) using the AutoCAD Civil 3D data from the 3D survey information for proposed PWTM route of roughly 6 miles.

B-4 Water Treatment Plant Improvements (WTPs 1A and 2A)

B-4.1 Membrane Treatment Facility

CONSULTANT shall prepare a preliminary design to be included in the Basis of Design Report (BODR), for each new membrane treatment facilities, which include various plant components including, without limitation, site layout, design criteria, process design, architectural, structural, mechanical, civil, electrical, and instrumentation and control design, construction cost estimates, and schematics. CONSULTANT shall design the nanofiltration system to allow for future conversion to Reverse Osmosis (RO) by incorporating appropriate space allocations and electrical provisions consistent with RO requirements. Membrane skids shall be designed by CONSULTANT to be compatible with both nanofiltration and RO membrane elements, allowing future conversion without significant modifications.

- a. PFAS and Other Regulatory Requirements

CONSULTANT shall summarize the PFAS regulations and other pertinent regulatory considerations for the design of new membrane treatment facility at each WTP.

- b. Design Standards and Codes

CONSULTANT shall identify the applicable standards and building codes for the preliminary and detailed design of each WTP. For WTP 2A, CONSULTANT shall review all standards for the City of Pompano Beach during the preliminary engineering design. For WTP 1A, CONSULTANT shall review all standards for the City of Lauderdale Lakes during the preliminary engineering design. The list of design standards and codes that CONSULTANT shall follow includes, without limitation, the following:

- i. City of Pompano Beach Building Department
- ii. City of Lauderdale Lakes Building Department
- iii. Florida Building Code
- iv. Broward County Water and Wastewater Division
- v. South Florida Water Management District (SFWMD) Volume 4
- vi. Broward County Health Department
- vii. Broward County Environmental Protection
- viii. Florida Department of Environmental Protection
- ix. US Army Corps of Engineers (USACE)
- x. FEMA 100-year Flood Map

c. Technical Evaluations and Recommendations

CONSULTANT shall perform the technical evaluations of unit treatment processes for the preliminary design phase and provide associated recommendations in the BODR.

d. Treatment Capacity and Phasing

CONSULTANT shall confirm with Contract Administrator the initial and build-out capacity for the treatment facilities (25 MGD on Maximum Daily Demand (MDD) basis for WTP-2A and 16 MGD on MDD basis for WTP-1A), along with the number of phases. CONSULTANT shall determine if there will be any modification of the Water Use Permit (WUP).

e. Raw Water Quality Substantiation and Basis of Design

CONSULTANT shall determine the initial basis of design for the raw water quality based on historical and current water quality and associated future water quality projections. CONSULTANT shall subsequently refine the assessment of raw water quality with the pilot-scale testing data (and associated future water quality projections) once available. This basis of design for the raw water quality shall be used by CONSULTANT for the design criteria and cost estimates to be developed in CONSULTANT's BODR design package.

CONSULTANT shall specify the finished water quality goals for the new membrane facility and, as needed, the interim blended finished water quality goals for combined (i.e., membrane and lime treated) treatment facilities.

f. Preliminary Design Development - Treatment Process

i. Hydraulic Modeling

CONSULTANT shall perform hydraulic modeling and establish the hydraulic profile for the new membrane treatment facility (minimum and maximum plant flows) at each WTP.

The basis of design shall be that the existing raw water transmission main has available capacity to account for the water loss in NF treatment due to generation of the concentrate (i.e., waste residual) stream, regardless of where the wells are in any part of the relevant wellfield. Although, design improvements to the raw water transmission main are not included in the Services, raw water booster pumps are included in the Services if required at any WTP to provide needed pressure for the sand strainers and cartridge filters ahead of the membrane feed pumps.

BCWWS' Project Team will provide existing well pump curves, pipeline drawings, and well drawdown information. CONSULTANT shall perform the hydraulic modeling needed to design the raw water booster pumps.

ii. Diagrams and Tables

CONSULTANT shall develop a preliminary process flow diagram, mass and flow balance tables, hydraulic profile (minimum and maximum) tables, and design criteria tables, all of which shall be included by CONSULTANT in the design documents.

iii. Process and Process Mechanical Design

CONSULTANT shall develop the initial process design, which shall include, without limitation, major design parameters and criteria for major piping, hydraulic profiles, pretreatment systems, main treatment system, chemical systems, pumping systems, and concentrate disposal. The major building(s) and equipment for each WTP will be developed by CONSULTANT as 3D models. Preliminary drawings with plans for major treatment processes for each WTP shall also be included by CONSULTANT.

iv. Site/Civil and Stormwater Design

CONSULTANT shall develop a general site layout for each WTP showing major facilities, site grading, access roadways and parking areas, major yard piping, perimeter treatments, and horizontal and vertical controls, preliminary topographic drawings, site drainage, and stormwater retention systems.

CONSULTANT shall provide schematic onsite paving, parking and walkways plans for any new paved areas or concrete walkways, schematic onsite potable drinking water

connection plans, schematic onsite sanitary sewer lateral plans, schematic onsite fire line plans, schematic onsite signage and pavement marking plans for new parking areas, schematic horizontal control plans, schematic onsite landscape and irrigation plans, and schematic onsite lighting plans.

CONSULTANT shall develop schematic onsite demolition plans for each WTP, including existing buildings, paved areas that will be demolished, retention areas that will be filled in, and any underground utilities that will be removed or relocated.

CONSULTANT shall develop schematic onsite grading and drainage design plans for each WTP based on the required attenuation (dry retention) to meet water quantity and water quality criteria set forth by SFWMD and Broward County Environmental Permitting Division.

CONSULTANT shall provide a flood routing numerical model (ICPR 4) for each WTP. The ICPR 4 model shall be built and calibrated by CONSULTANT for both existing conditions and proposed improvements for each WTP site to determine the quantity of dry retention storage necessary to meet the water quantity criteria. Additionally, CONSULTANT shall develop SFWMD water quality criteria (SFWMD ERP Volume 4 Manual) preliminary drainage calculations to accompany the water quantity results and shall prepare a preliminary engineering drainage report.

v. Architectural Design and Facility Layout

CONSULTANT shall develop an architectural preliminary design for each WTP based on input from the BCWWS' Project Team and consistent with architecture and landscaping specific to the Project site. CONSULTANT shall prepare renderings of two general building architectural themes/concepts for review by BCWWS' Project Team. CONSULTANT shall develop applicable design criteria and conduct a preliminary building code and Applicable Law review. Additionally, schematic architectural design for the new operations building and chemical building shall be completed by CONSULTANT. The layout of the new operations building shall include, without limitation, a SCADA control room (hurricane-safe room), laboratory, restrooms, meeting/training room, office, and an electrical/HVAC room.

vi. Structural Design

CONSULTANT shall develop structural design requirements, including foundation systems designs, preliminary wall sizing, preliminary footing and column schedules, and preliminary structural design of the buildings and structures. CONSULTANT shall coordinate with the process mechanical discipline design team for initial sizing and layout of each of the structures. CONSULTANT shall identify in such designs the location, quantity, and depth of borings (review report when available). CONSULTANT shall provide the structural design criteria and material requirements.

vii. Electrical Design

CONSULTANT'S electrical design for each new treatment facility shall include new major electrical equipment including transformer, generator, medium voltage (MV) and low voltage (LV) Switchgear, motor control centers (MCCs), distribution/lighting panels and variable frequency drives (VFDs). The new switchgears, MCCs, and electrical rooms shall be designed by CONSULTANT to accommodate the electrical requirements of the new treatment facilities in this Project. CONSULTANT shall develop electrical design requirements, including preliminary electrical load studies, generator sizing calculations, one-line diagrams, site electrical and electrical room layouts/plans for operations building. CONSULTANT'S electrical design shall be consistent with the Applicable law and building codes and COUNTY's preferences in equipment, installation, and operation and maintenance.

viii. Building Mechanical (HVAC), Plumbing, and Fire Protection Design

For each WTP, CONSULTANT shall develop and provide preliminary building mechanical (HVAC), plumbing, and fire protection concepts based upon area classification and use. CONSULTANT shall provide air flow schematics and preliminary equipment schedules for the membrane building, chemical building, and the electrical/generator room.

ix. Instrumentation and Control Design/SCADA - WTP wide and Membrane Treatment

CONSULTANT'S SCADA design services for Phase 1 and Phase 2 shall include the new membrane treatment system at each WTP, as well as SCADA upgrade for existing raw water wells and other components at each WTP as described below:

- 1) Remote Wells
 - a. Includes replacement of well control panels with new programmable logic controllers (PLCs) and radios.
 - b. New radios and compatibility with existing radio and polling system required. May require new master polling PLC or similar.
- 2) High Service Pump Station (HSPS) and ground storage tank (GST) PLC
 - a. Includes one control panel that covers the HSPS, GST, and tanks.
- 3) Includes finished water chemicals:
 - a. Includes one control panel that covers the finished water chemicals that is not part of the nanofiltration upgrade.
- 4) Includes new main server rack located in the existing admin building or in a room in the new membrane building.
- 5) Cost includes development of a typical well process and instrumentation diagrams and elevations that are typical of all sites.
- 6) Does not include programming costs (programming and integration shall be part of Phase 3 Construction Phase Services).

CONSULTANT'S instrumentation Services for Phase 1 shall include research, site visits, information gathering interviews with COUNTY staff, and summary reports for the following:

- 1) Recommendation for new digital IO for nanofiltration.
- 2) Evaluation of legacy fiber or pathways closest to new connection point for new equipment.
- 3) Tie-in for Remote Wells, High service PS new SCADA
- 4) Main Server rack
- 5) Plan for equipment and instrumentation tagging.

Phase 1 work shall include development of network drawings as needed to convey nanofiltration addition.

g. Preliminary Design Development - Finished Water Conveyance at WTP and Tie-Ins

CONSULTANT shall design transfer pumps that convey treated water from the new degasifiers to the existing 4-log piping system. CONSULTANT shall perform data collection and review of record drawings to establish the preliminary alignment and preliminary hydraulics for the treated water conveyance. CONSULTANT shall include points of connection and tie-ins in its design.

B-4.2 WTP Injection Wells and Concentrate Piping

CONSULTANT shall design Class I Underground Injection Control (UIC) well systems for disposal of concentrate, consisting of one injection well and one dual-zone monitoring well in full compliance with Applicable Law, located at each WTP site. The basis of design for concentrate disposal during planned out-of-service periods is to dispose of concentrate into the Broward County sanitary sewer system. The associated design of the related yard piping and lift station upgrade at each WTP is included in the Services.

a. Concentrate Injection Well Design Preliminary Development

Develop Preliminary designs including site layouts and process and instrumentation diagrams (P&ID) for one injection well system design for concentrate disposal from each WTP improvement.

b. Concentrate Injection Well Basis of Design

CONSULTANT shall design the concentrate UIC well system and prepare basis of design documents, which shall provide preliminary design of the injection well systems prior to

developing final drawings and specifications. The basis of design documents shall be submitted in support of the UIC construction and testing permit applications. CONSULTANT shall develop the basis of design based upon the disposal capacity for the new Class 1 UIC injection wells systems, project site constraints, local hydrogeological conditions, constructability, regulatory requirements, and construction costs. The basis of design criteria for the system shall include the injection wells and monitoring wells subsurface configurations. CONSULTANT shall review and analyze hydraulic data to confirm appropriate well and material sizes. This task shall be used for interim coordination and quality checking and includes the following:

- i. Drawings and Details. The drawing set incorporates construction requirements for Class I industrial wells pursuant to Chapter 62-528 of the Florida Administrative Code (FAC) to be used in the UIC Construction and Testing Permit application submittal.
- ii. Civil drawings including construction limits, site plan, clearing and grubbing plans for the injection well and monitor well site within the limits of each WTP.
- iii. Mechanical drawings showing site plan, injection well plan, section, and temporary wellhead details of the injection well and monitor well.
- iv. Electrical single line schematic diagrams, load lists, and site plans.
- v. P&ID.
- vi. Specification table of contents.
- vii. Opinion of Probable Construction Cost (OPCC) representing the design level.

Design documents shall be submitted by CONSULTANT in electronic format (pdf) to BCWWS' Project Team for review.

B-4.3 WTP Basis of Design Report (BODR)

CONSULTANT shall develop BODRs for each WTP to be used for permitting applications to Florida's Department of Environmental Protection (FDEP). CONSULTANT'S BODRs shall satisfy the requirements specified by Applicable Law, including, without limitation, FAC 62-555.520, which must accompany an application for a Specific Permit to Construct PWS Components. CONSULTANT'S BODRs shall be based on preliminary design development and shall include, at a minimum, the following components:

- a. Introduction and purpose.
- b. Design criteria including:
 - i. Process mechanical design criteria.
 - ii. Structural design criteria.

- iii. Electrical and Security design criteria.
- iv. Instrumentation and control design criteria.
- v. Civil/Stormwater design criteria.
- vi. Building Mechanical (HVAC), Plumbing and Fire Protection design criteria
- vii. Architectural Code review.
- viii. Hydraulics and hydraulic design criteria including a detailed hydraulic profile of the main process as well as the concentrate and process waste disposal.
- c. A written description of the materials and equipment to be incorporated into the project.
- d. List of required permits.
- e. Preliminary drawings, including:
 - i. Overall site plan.
 - ii. Site piping plan with piping and electrical utility corridors
 - iii. Hydraulic profiles.
 - iv. Overall Process Flow diagram.
- f. Detailed Process Flow diagrams.
- g. Design Criteria
 - i. Flow and Mass Balance.
 - ii. Mechanical plan view drawings.
 - iii. Structural drawings.
 - iv. Architectural drawings.
 - v. Electrical single-line diagrams and electrical room (plan) layouts.
- h. Overview Network diagrams
- i. Conceptual stormwater mitigation plan/drawings during construction.
- j. Preliminary Opinion of Probable Construction Cost
- k. Preliminary construction schedule

CONSULTANT shall submit draft BODRs to BCWWS' Project Team for review and comments. CONSULTANT shall present and discuss each draft BODR with BCWWS' Project Team during a workshop and receive any initial comments. A two-week review period is anticipated for reviews by BCWWS' Project Team.

CONSULTANT shall address and incorporate BCWWS' Project Team's comments and submit final BODRs.

B-5 Potable Water Transmission Main (PWTM)

The Services include the design, permitting, and bidding and award assistance necessary to install one 30-inch diameter PWTM from the intersection of NE 33rd Street and Dixie Highway in Pompano Beach to the COUNTY's 1B1 Water Storage and Repump Facility located at 300 NW 66th Street in the City of Fort Lauderdale. The major improvements related to the PWTM include approximately six miles of 30-inch diameter ductile iron pipe, the finalize size of which will be confirmed by CONSULTANT'S friction loss calculations. The actual length of the ductile iron pipe may change depending on the findings of the routing study. Related Services also involve associated restoration of pavement and other features, installation of pipeline by open excavations and trenchless technology, re-sodding of grassed areas, and route restoration.

CONSULTANT shall perform the preliminary design engineering to develop a BODR for the PWTM. CONSULTANT'S BODR shall include, at a minimum, the following components:

- 1) Introduction and purpose.
- 2) Design criteria including:
 - a. Evaluation of existing agreements and constraints.
 - b. Material selections.
 - c. Recommended manufacturers.
 - d. Specific recommended design features.
- 3) Evaluation of pipe installation methods such as open trench, horizontal directional drilling, micro-tunnel, jack and bore, and other trenchless methods.
- 4) Evaluation of major roadway, railroad track crossings, and canal crossings.
- 5) Evaluation outline of the design criteria for the proposed Project. The description shall include applicable design standards and, design loads, descriptions and properties of the building materials, the type of construction, soil foundation design parameters, existing site conditions, and constructability
- 6) Evaluation of regulatory issues, potable water transmission permits, and all other operational and construction permits necessary to implement the Project;
- 7) Evaluation of restoration requirements, regulatory jurisdiction, regulatory issues, and proposed improvements to address the issues.
- 8) Evaluation of design and construction phasing recommendations, if needed.
- 9) Evaluation on system maintenance including valving and other maintenance activities.
- 10) A written description of the materials and equipment to be incorporated into the Project.
- 11) List of required permits.
- 12) Preliminary drawings, including a schematic layout of the PWTM:

- 13) Overall site plan.
- 14) A list of the proposed design specifications.

CONSULTANT shall submit the draft BODR to BCWWS' Project Team for review and comments. CONSULTANT shall present and discuss the draft BODR with BCWWS' Project Team during a workshop and receive any initial comments. A two-week review period is anticipated for reviews by BCWWS' Project Team.

CONSULTANT shall address and incorporate BCWWS' Project Team's comments and submit final BODR as described in the list of CONSULTANT'S deliverables below.

CONSULTANT shall provide updated decision and action logs.

B-6 Project Construction Cost and Schedule

CONSULTANT shall develop and provide the Opinion of Probable Construction Cost (OPCC), construction Project schedule, preliminary list of drawings, and Project manual table of contents.

B-6.1 Preliminary Opinion of Probable Construction Cost

CONSULTANT shall develop a draft preliminary OPCC including, without limitation, WTP-2A improvements and wells, WTP-1A improvements and wells, and the PWTM. The draft preliminary OPCC shall be AACE Class 5. CONSULTANT shall include the draft preliminary OPCC in the draft BODRs for review and comments by BCWWS' Project Team. CONSULTANT shall present and discuss the draft cost estimate at the BODRs review workshop and receive comments from BCWWS' Project Team. CONSULTANT shall address and incorporate BCWWS' Project Team's comments and finalize and submit the preliminary OPCC.

B-6.2 Preliminary Project Construction Schedule

CONSULTANT shall develop and submit a draft preliminary project construction schedule in the draft BODR for review and comments by BCWWS' Project Team. CONSULTANT shall present and discuss the draft preliminary project construction schedule at the BODR review workshop and receive comments from BCWWS' Project Team during and after the workshop. CONSULTANT shall address and incorporate BCWWS' Project Team's comments and finalize and submit the preliminary project construction schedule.

B-6.3 Preliminary Drawing List

CONSULTANT shall develop and submit a draft preliminary list of drawings for Phase 2 final design. CONSULTANT shall present and discuss the draft drawings list at the BODR review workshop and receive comments from BCWWS' Project Team during and after the workshop.

CONSULTANT shall address and incorporate BCWWS' Project Team's comments and finalize and submit the preliminary drawing list.

B-6.4 Project Manual Table of Contents (Spec List)

CONSULTANT shall develop and submit a draft preliminary Project manual table of contents containing a list of specifications for final design. CONSULTANT shall present and discuss the draft preliminary Project manual table of contents at the BODR review workshop and receive comments from BCWWS' Project Team during and after the workshop. CONSULTANT shall address and incorporate BCWWS' Project Team's comments and finalize and submit the preliminary Project manual table of contents.

CONSULTANT'S DELIVERABLES (PRELIMINARY ENGINEERING)

1. Meeting Minutes – PDF
2. Action and Decision Logs – PDF.
3. WTP-1A & WTP 2A Well Rehab Studies TM Draft and Final – PDF.
4. WTP-1A & 2A Geotechnical Investigation Reports – PDF.
5. WTP-1A & 2A Environmental Investigation Reports – PDF.
6. WTP-1A & 2A Surveys and Subsurface Investigation Reports – PDF.
7. WTP-2A Bench-Scale Testing Test Plan, Draft and Final – PDF.
8. WTP-2A Pilot-Scale Testing Test Plan, Draft and Final – PDF.
9. WTP-2A Pilot-Scale Testing TM, Draft and Final – PDF.
10. PWTM Alternatives Analysis TM, Draft and Final – PDF.
11. WTP-1A & 2A BODRs, Draft and Final – PDF and 6 hard copies (including 11x17 drawings).

C. PHASE 2 – ENGINEERING DESIGN

CONSULTANT shall prepare a set of plans and technical specifications based on the design concepts and criteria developed in Phase 1 and the BODRs. CONSULTANT'S design Services for the PWTM, WTP-1A, and WTP-2A shall proceed concurrently. CONSULTANT'S deliverables include Construction Documents, suitable for obtaining permits and constructing the Project.

The following software and versions shall be used for design:

- 1) Autodesk Revit: 2024 (Architectural, Structural, HVAC/Plumbing, Electrical, and Process Mechanical modeling platform)
- 2) AutoCAD Civil3D 2025: (civil modeling platform surface, pipes, and pipe profiles)
- 3) AutoCAD Civil 3D 2025: 2D cad work

- 4) Autodesk BIM Collaboration Pro: for site access to Autodesk Construction Cloud (ACC) server

All project specifications shall be completed in Construction Specifications Institute's latest Master Format (50-division). The CONSULTANT shall provide design files, models, and associated data to BCWWS' Project Team for integration into COUNTY systems. CONSULTANT shall convert files, if required, using the software's built-in commands and conversion tools for compatibility with appropriate COUNTY platform(s).

C-1 Field Investigations

C-1.1 WTP 1A & 2A

CONSULTANT shall perform additional field investigations as needed throughout the design phase at each WTP site as necessary to ensure an accurate and comprehensive design.

C-1.2 Potable Water Transmission Main (PWTM)

a. Geotechnical Investigations and Support

Upon conclusion of the PWTM route study and concurrence from BCWWS' Project Team on the recommended route, CONSULTANT shall promptly perform geotechnical investigations during Phase 2.

CONSULTANT shall conduct geotechnical investigations at strategic locations throughout the PWTM route. These investigations shall include soil borings and pavement cores, ground penetrating radar (GPR) survey in the area of the proposed boring locations to aid in confirming utility clearance, and corrosion testing.

Upon completion of the geotechnical investigations, CONSULTANT shall review the resulting information. Based on the anticipated pipeline length and routing, CONSULTANT shall use the appropriate soil boring reports. CONSULTANT shall report in writing to BCWWS' Project Team the findings, conclusions, and recommendations pertaining to the preliminary design of the PWTM.

b. Environmental Investigations

CONSULTANT shall conduct additional environmental investigations as necessary to obtain the pertinent permits for the PWTM (see Task A-4.3).

c. Survey and Subsurface Investigations

Upon conclusion of the PWTM route study and concurrence from BCWWS' Project Team on the recommended route, CONSULTANT shall promptly perform survey and subsurface investigations during Phase 2. The survey shall follow CONSULTANT'S standards and industry best practices.

CONSULTANT shall contact Sunshine 811 to obtain a list of known utility owners within the project area. All utility owners shall be contacted by CONSULTANT to collect as-builts, GIS files, atlas drawings, and other utility documents that identify the locations of known facilities. These documents shall be incorporated by CONSULTANT into GIS and utilized during the PWTM route study efforts.

C-2 WTP-1A & 2A Improvements

CONSULTANT shall provide detailed design packages for each WTP and associated injection well.

CONSULTANT shall submit the design documents following the 30%, 60%, 90%, and 100% submittal schedule for all required disciplines, which shall incorporate BCWWS' Project Team's review and comments. A two-week review period is anticipated for reviews by BCWWS' Project Team, assuming that CONSULTANT shall have presented technical elements to BCWWS' Project Team through the corresponding Design Review Workshop(s) at each stage.

CONSULTANT'S design documents shall consist of the following major components at each design level:

- Membrane Treatment Facility Drawings (30%, 60%, 90%, 100%)
- Specifications (30% (list only), 60%, 90%, 100%)

The Membrane Treatment Facility Drawings shall include concentrate disposal, and demolition, and site restoration of abandoned facilities.

The design Services of the following buildings and structures are included for each WTP:

New Enclosed Buildings

- 1) New Membrane Building (including Generator Room)
- 2) New Chemical Building with Metering Equipment (for scale inhibitor, sodium hydroxide, sulfuric acid, corrosion inhibitor)

New Outdoor Structures

- 1) New Chemical Bulk Storage Area (under canopy; for scale inhibitor, sodium hydroxide, sulfuric acid, corrosion inhibitor)
- 2) New CO2 System and Storage

- 3) New Degasifier Area
- 4) New Transfer Pump Station Area
- 5) New Scrubber Area
- 6) New Injection Well

CONSULTANT shall perform an internal Quality Assurance and Quality Control (QAQC) review for the draft design packages (30%, 60%, 90%, and 100%) before submittal to Contract Administrator.

At each design stage the following sequence of review workshop/meetings is included:

- 1) Submit the design submittal for BCWWS' Project Team review.
- 2) Design Review Workshop - to discuss the design submittal and receive BCWWS' Project Team's initial comments on the design submittal.
- 3) Design Review Meeting - to receive and discuss BCWWS' Project Team's final comments on the design submittal.

C-2.1 WTPs 30 % Design and Cost Estimating

a. 30% Design Development

Based on the final BODRs, CONSULTANT shall provide the design for each WTP and the associated injection wells to overall 30% level in all disciplines (the individual disciplines will be at different levels of percent complete as the design process is staggered). The discipline areas shall include:

- i. Process and Hydraulic Modeling
- ii. Process and Process Mechanical Design
- iii. Site/Civil/Stormwater Design
- iv. Architectural Design and Facility Layout
- v. Structural Design
- vi. Electrical and Generator Design
- vii. Mechanical (HVAC/Plumbing) Design
- viii. Instrumentation and Control Design including SCADA for Membrane Treatment, Remote Wells, High Service PSs, and GSTs.

CONSULTANT'S design shall include the various discipline plans and sections as appropriate to the level of 30% design. The 30% design documents shall include, at a minimum, design criteria sheets, hydraulic profiles, civil site and utility plans, code review

sheets, network diagrams, process and instrumentation diagrams (P&IDs), enhanced/additional versions of process mechanical plans, an electrical site plan showing major duct bank routing, and enhanced/additional versions of the electrical one-line diagrams and electrical plans.

b. 30% Design Documents

CONSULTANT shall compile and submit the draft 30% design documents for review and comments by BCWWS' Project Team.

c. 30% Opinion of Probable Construction Cost

CONSULTANT shall compile and submit the draft 30% Opinion of Probable Construction Cost for review and comments by BCWWS' Project Team. The 30% Opinion of Probable Construction Cost shall be AACE Class 4.

d. 30% Design Review

CONSULTANT shall coordinate and conduct the Design Review Workshop to review the 30% design documents and Opinion of Probable Construction Cost with BCWWS' Project Team and receive initial comments from same.

e. 30% Decision and Action Logs

CONSULTANT shall develop a log of BCWWS' Project Team's review comments and decisions and submit CONSULTANT's responses to comments on the 30% submittal with the 60% design review submittal.

f. Construction Schedule Development

CONSULTANT shall further develop the Phase 1 preliminary Project construction schedule based on the 30% design progression and Design Review Workshops. CONSULTANT shall review the construction schedule with BCWWS' Project Team at the 30% Design Review Meeting and receive comments from same. CONSULTANT shall update the construction schedule during the design progression through the 100% submittal.

g. Constructability Review

CONSULTANT shall perform a preliminary constructability review to identify potential construction risks and other systems/processes which may be affected by construction activities.

CONSULTANT shall submit the preliminary constructability review to BCWWS' Project Team for review and comments from same.

h. 30% Design Review Meeting with County to Discuss Comments

CONSULTANT shall coordinate and conduct a design review meeting to discuss the Project construction schedule, constructability review, and BCWWS' Project Team's final comments on the draft 30% design documents and Opinion of Probable Construction Cost.

C-2.2 WTPs 60% Design and Cost Estimating

a. 60% Design Development

For each WTP, CONSULTANT shall address BCWWS' Project Team's comments from the 30% Design Review and incorporate those that are agreed-upon while developing the 60% design. CONSULTANT shall develop the design for each WTP and associated injection wells to 60% level in all disciplines (as applicable). CONSULTANT'S design shall include the various discipline plans, sections, specifications, and details as appropriate to the level of 60% design. CONSULTANT shall prepare all permit documents and prepare to submit for permits at the conclusion of the 60% level of design development.

i. Process and Process Mechanical Design:

For each WTP, process and mechanical design provided by CONSULTANT shall include a 3D model and major design parameters for major piping, membrane trains, membrane pretreatment and post-treatment systems, chemical systems, pumping systems, and concentrate disposal. The 60% process design for each WTP provided by CONSULTANT shall include the plans, sections, and specifications.

ii. Site/Civil/Stormwater Design

For each WTP, Site/Civil design provided by CONSULTANT shall include a 3D model and 60% drawings to include access roadways, yard piping, stormwater collection and storage/treatment and conveyance facilities, site grading, erosion and sediment control, sanitary sewer collection and onsite septic tank/field, potable water distribution system, and other miscellaneous site elements such as sidewalks, parking lots, etc. CONSULTANT, through its Site/Civil discipline lead, shall coordinate with the disciplines for the other proposed facilities at the site (e.g., buildings, tanks, miscellaneous structures, lighting, site piping, and other below or above-grade facilities, etc.). The construction plans provided by CONSULTANT shall, at a minimum, include the following:

1. Existing conditions/demolition plans.
2. Horizontal geometry plans.
3. Site grading and drainage plans.
4. Utility and yard piping plans.

5. Sanitary sewer plans.
6. Signing & striping plans.
7. Erosion control plans.

iii. Architectural Design and Facility Layout

For each WTP, the architectural design provided by CONSULTANT shall include a 3D model and renderings, floor plans, roof plans, exterior elevations, and schedules. The 60% architectural design provided by CONSULTANT shall include drawings and extractions of the architectural plans and sections, and specifications for the related design elements. The construction of the buildings shall be Concrete Masonry Units (CMU).

CONSULTANT shall prepare landscape design drawings in compliance with applicable landscape code requirements. Drawings provided by CONSULTANT shall include planting notes and schedule for a Florida-friendly plant palette and shall include irrigation plans with notes and schedules.

iv. Structural Design

For each WTP, structural design provided by CONSULTANT shall include a 3D model and design of new structures, buildings, and slabs. The 60% structural design provided by CONSULTANT shall include drawings and extractions of the structural plans and sections, and specifications for the related design elements.

v. Electrical and Generator Design

For each WTP, electrical design documents provided by CONSULTANT shall include electrical one-line diagrams, site and building plans showing major duct bank routing, electrical room plans and elevations, grounding and electrical plans for all process areas. Electrical one-line diagrams provided by CONSULTANT shall include distribution information from incoming electric utility service level to the low voltage motor control center equipment and include major mechanical equipment and special system ratings. Power requirements shall be determined by the CONSULTANT and communicated to Florida Power & Light (FP&L). CONSULTANT shall ensure the electrical service capacity is increased at each WTP by FP&L. The generators at each WTP shall be sized in CONSULTANT'S design for new NF treatment equipment process load at full capacity with one associated redundant generator unit. The existing plant loads (e.g. high service pump station/pump loads) are excluded and shall continue to use existing generator capacity.

vi. Mechanical (HVAC/Plumbing) Design

For each WTP, CONSULTANT shall perform the HVAC, plumbing, and fire protection design for the new buildings and the chemical storage area. The fire protection design provided by CONSULTANT shall be compliant with life safety measures and Applicable

Law. The 60% mechanical design provided by CONSULTANT shall include plans, sections, and specifications for the related HVAC, plumbing, and fire protection design elements.

vii. Instrumentation and Control (I&C) Design and Programming

For each WTP, the I&C design documents provided by CONSULTANT shall include process and instrumentation diagrams (P&IDs) (without duplication of additional trains of equipment at the 60% level), control schematics, network diagrams, digital input/output (I/O) tables, control system block diagrams, specifications, control strategies, and legends.

A tagging system shall be developed by CONSULTANT to assign unique identifiers to all Project assets, and shall include location/facility numbers, unit process numbers, equipment identifiers, subsequent numbering, and program functioning.

Based on the determinations and decisions made in Phase 1 and BODRs:

1. CONSULTANT shall perform the design of the control system for the membrane system, pre- and post-treatment, chemical systems, and pumping systems.
2. CONSULTANT shall develop the network block diagram, process and instrumentation diagrams (P&IDs) for the membrane treatment facility.
3. CONSULTANT'S design of the control system for nanofiltration shall be consistent with the BCWWS' standards (where available) and preferences to provide for continuity in protocol, software, and hardware.
4. CONSULTANT'S design of the controls for the injection wells shall be a part of the site control system

b. 60% Design Documents

For each WTP, CONSULTANT shall compile and submit the draft 60% design documents for review and comments by BCWWS' Project Team.

c. 60% Opinion of Probable Construction Cost

For each WTP, CONSULTANT shall compile and submit the draft 60% Opinion of Probable Construction Cost for review and comments by the COUNTY. CONSULTANT'S 60% Opinion of Probable Construction Cost shall be AACE Class 3.

d. 60% Design Review

CONSULTANT shall coordinate and conduct the Design Review Workshop for each WTP to review the 60% design documents and 60% Opinion of Probable Construction Cost with BCWWS' Project Team and receive initial comments from same.

e. 60% Decision and Action Logs

For each WTP, CONSULTANT shall develop a log of BCWWS' Project Team's review comments and decisions and submit CONSULTANT'S written responses to comments on the 60% submittal with the 90% design review submittal.

f. Construction Sequencing

For each WTP, CONSULTANT shall develop an initial proposed construction sequencing plan that allows for operation of existing plant processes, which shall minimize construction time while maintaining adequate available capacity of existing plant processes and minimizing operational shutdowns. CONSULTANT shall define critical tie-in requirements in this initial proposed construction sequencing plan.

CONSULTANT shall submit the initial proposed construction sequencing plan to BCWWS' Project Team's for review and comments from same. CONSULTANT'S initial proposed construction sequencing plan shall include considerations for maintenance of plant operations (MOPO) such that the lime treatment process can remain operational during the entire construction phase. CONSULTANT'S initial proposed construction sequencing plan shall initially be presented to BCWWS' Project Team and discussed in a meeting.

CONSULTANT'S final construction sequencing plan shall be included in the design specifications.

g. 60% Design Review Meeting with County to Discuss Comments

At a time acceptable to Contract Administrator, CONSULTANT shall coordinate and conduct a Design Review Meeting with BCWWS' Project Team to discuss the construction sequencing plan, and BCWWS' Project Team's final comments on the draft 60% design documents and 60% Opinion of Probable Construction Cost.

C-2.3 90% Design and Cost Estimating

a. 90% Design Development

For each WTP, CONSULTANT shall address BCWWS' Project Team's comments from the 60% Design Review and incorporate those that are agreed-upon while developing the 90% design. CONSULTANT shall develop the design for each WTP and the associated injection wells to 90% level in all disciplines (as applicable).

CONSULTANT shall prepare documentation necessary for submittal to County Purchasing Division.

- i. Process and Process Mechanical Design
- ii. Site/Civil/Stormwater Design
- iii. Architectural Design and Facility Layout
- iv. Structural Design
- v. Electrical and Generator Design
- vi. Mechanical (HVAC/Plumbing)/Generator Design
- vii. Instrumentation and Control Design

CONSULTANT'S 90% design drawings shall include typical details for all disciplines, along with the 90% specifications. The 90% P&IDs shall include all trains of equipment shown, and the 90% specifications shall include instrument datasheets and typical details.

b. 90% Design Documents

For each WTP, CONSULTANT shall compile and submit draft 90% design documents for review and comments by BCWWS' Project Team, which shall provide CONSULTANT with review comments within two weeks of receipt of the 90% design submittal.

c. 90% Opinion of Probable Construction Cost

For each WTP, CONSULTANT shall compile and submit the draft 90% Opinion of Probable Construction Cost for review and comments by BCWWS' Project Team. CONSULTANT'S 90% Opinion of Probable Construction Cost shall be AACE Class 2.

d. 90% Design Review

For each WTP, CONSULTANT shall coordinate and conduct the Design Review Workshop to review the 90% design documents and 90% Opinion of Probable Construction Cost with BCWWS' Project Team and receive initial comments.

e. 90% Decision and Action Logs

For each WTP, CONSULTANT shall develop a log of BCWWS' Project Team's review comments and decisions and submit CONSULTANT'S responses to comments on the 90% submittal with the 100% design review submittal.

f. 90% Design Review Meeting with County to Discuss Comments

At a time acceptable to Contract Administrator, CONSULTANT shall coordinate and conduct a Design Review Meeting with BCWWS' Project Team to discuss BCWWS' Project

Team's final comments on the draft 90% design documents and 90% Opinion of Probable Construction Cost.

C-2.4 100% Final Design and Cost Estimating

a. 100% Design Development

For each WTP, CONSULTANT shall address BCWWS' Project Team comments from the 90% Design Review and incorporate those that are agreed-upon while developing the 100% design. CONSULTANT shall develop the design for each WTP and the associated injection wells to 100% level in all disciplines (as applicable).

- i. Process and Process Mechanical Design
- ii. Site/Civil/Stormwater Design
- iii. Architectural Design and Facility Layout
- iv. Structural Design
- v. Electrical and Generator Design
- vi. Mechanical (HVAC/Plumbing)/Generator Design
- vii. Instrumentation and Control Design

b. 100% Design Documents

For each WTP, CONSULTANT shall compile and submit draft 100% design documents for review and comments by BCWWS' Project Team, which shall provide CONSULTANT with review comments within two weeks of receipt of the 100% design submittal, assuming that CONSULTANT shall have presented technical elements to the BCWWS' Project Team through the 100% Design Workshop.

c. 100% Opinion of Probable Construction Cost

For each WTP, CONSULTANT shall compile and submit the draft 100% Opinion of Probable Construction Cost for review and comments by BCWWS' Project Team. CONSULTANT'S 100% Opinion of Probable Construction Cost shall be AACE Class 2.

d. 100% Design Review

For each WTP, CONSULTANT shall coordinate and conduct a Design Review Workshop to review the 100% design documents and 100% Opinion of Probable Construction Cost with the BCWWS' Project Team and receive comments.

e. 100% Decision and Action Logs

For each WTP, CONSULTANT shall develop and submit a log of BCWWS' Project Team review comments, CONSULTANT recommendations, and team decisions.

f. 100% Design Review Meetings with County to Discuss Comments

For each WTP, CONSULTANT shall coordinate and conduct a design review meeting to discuss BCWWS' Project Team's and Purchasing Division final comments on the 100% design documents and 100% Opinion of Probable Construction Cost. See task D-1 for Services related to bidding documents. After comments are incorporated into the 100% documents they shall be considered "Bid Ready" for public advertisement.

C-2.5 Conformed Documents for Construction (post bidding)

See Task D-1 for Services related to bidding and award assistance.

After the bidding phase, CONSULTANT shall update and complete the Contract Documents for construction to incorporate revisions resulting from permitting agency comments and Purchasing Addenda, including, without limitation, technical specifications and construction drawings for the Project. CONSULTANT'S Contract Documents shall incorporate revisions from addenda received during bidding and award.

C-3 Potable Water Transmission Main (PWTM)

The Services under this task shall include the development of the detailed design packages for the PWTM.

CONSULTANT shall submit the design documents following the 30%, 60%, 90%, and 100% submittal schedule for all required disciplines, which shall incorporate COUNTY review and comments.

CONSULTANT shall perform an internal QAQC review for the draft design packages (30%, 60%, 90%, and 100%) before submittal to the COUNTY.

CONSULTANT shall develop the design for the PWTM. CONSULTANT's design shall include the following components and activities:

- 1) Design of PWTM for two (2) and up to three (3) separate bid packages, including demolition and restoration plans.
- 2) Design drawings for the PWTM (1" = 30' scale @ ANSI D)
- 3) Prepare details for connection points, as necessary.
- 4) Determine phasing of system improvements to be made during construction.
- 5) Complete geotechnical testing and review associated reports to determine soil conditions and roadway restoration requirements for final transmission main routes.

- 6) Complete utility vacuum test holes to determine accurate locations (horizontal and vertical) of existing underground facilities in-line with the final transmission main routes. Including surveying and recording the location and grade elevations of all utility vacuum test holes and additional geotechnical borings
- 7) Determine existing utilities to be relocated and/or replaced.
- 8) Provide information on design drawings for utility crossings and required utility adjustments.
- 9) Prepare technical specifications for construction of improvements.
- 10) Determine locations for the installation of valves.
- 11) Calculate quantities and prepare opinion of probable cost of construction for each design submittal required for this phase.
- 12) CONSULTANT shall provide the following geohydrologic services:
 - a) Review the Broward County Resilient Environment Department (BCRED) Semi-Annual Inventory Report of Contaminated Locations in Broward County, Florida (Current) to identify known sites of groundwater contamination that exist within one-quarter mile of the Project Route.

C-3.1 PWTM 30% Design and Cost Estimating

Based on the final PWTM BODR, CONSULTANT shall develop the design for PWTM to 30% level.

30% Design Documents

CONSULTANT shall compile and submit the draft 30% design documents for review and comments by BCWWS' Project Team, which shall provide CONSULTANT with review comments within 30 days of receipt of the 30% design submittal.

30% Opinion of Probable Construction Cost

CONSULTANT shall compile and submit the draft 30% Opinion of Probable Construction Cost for review and comments by BCWWS' Project Team.

30% Decision and Action Logs

CONSULTANT shall develop a log of BCWWS' Project Team's review comments and decisions and submit CONSULTANT'S responses to comments on the 30% submittal with the 60% design review submittal.

Construction Schedule Development

CONSULTANT shall further develop the Phase 1 preliminary Project construction schedule for the PWTM based on the 30% design progression. CONSULTANT shall present the Phase 1 preliminary Project construction schedule to BCWWS' Project Team at the 30% Design Review Meeting and receive comments from same.

C-3.2 PWTM 60% Design and Cost Estimating

CONSULTANT shall address and incorporate BCWWS' Project Team's comments from the 30% Design Review while developing the 60% design. CONSULTANT shall develop the design for the PWTM to 60% level.

60% Design Documents

CONSULTANT shall compile and submit the draft 60% design documents including response log addressing 30% design comments for review and comments by BCWWS' Project Team, which shall provide CONSULTANT with review comments within 30 days of receipt of the 60% design submittal.

60% Opinion of Probable Construction Cost

CONSULTANT shall compile and submit the draft 60% Opinion of Probable Construction Cost for review and comments by BCWWS' Project Team.

60% Decision and Action Logs

CONSULTANT shall develop a log of BCWWS' Project Team's review comments and decisions and submit CONSULTANT's responses to comments on the 60% submittal with the 90% design review submittal.

C-3.3 PWTM 90% Design and Cost Estimating

CONSULTANT shall address and incorporate BCWWS' Project Team's comments from the 60% Design Review while developing the 90% design. CONSULTANT shall develop the design for the PWTM to 90% level.

90% Design Documents

CONSULTANT shall compile and submit the draft 90% design documents including response log addressing 60% design comments for review and comments by BCWWS' Project Team, which shall provide CONSULTANT with review comments within two weeks of receipt of the 90% design submittal.

90% Opinion of Probable Construction Cost

CONSULTANT shall compile and submit the draft 90% Opinion of Probable Construction Cost for review and comments by BCWWS' Project Team.

90% Decision and Action Logs

CONSULTANT shall develop a log of BCWWS' Project Team's review comments and decisions and submit CONSULTANT'S responses to comments on the 90% submittal with the 100% design review submittal.

C-3.4 PWTM 100% Final Design and Cost Estimating

CONSULTANT shall address and incorporate BCWWS' Project Team's comments from the 90% Design Review while developing the 100% design. CONSULTANT shall develop the design for the PWTM to 100% level.

100% Design Documents

CONSULTANT shall compile and submit the draft 100% design documents including response log addressing 90% design comments for review and comments by BCWWS' Project Team, which shall provide CONSULTANT with review comments within 30 days of receipt of the 100% design submittal.

100% Opinion of Probable Construction Cost

CONSULTANT shall compile and submit the draft 100% Opinion of Probable Construction Cost for review and comments by BCWWS' Project Team.

100% Decision and Action Logs

CONSULTANT shall develop and submit a log of BCWWS' Project Team's review comments and decisions.

100% Design Review Meeting with County to Discuss Comments

At a time acceptable to Contract Administrator, CONSULTANT shall coordinate and conduct a Design Review Meeting with BCWWS' Project Team to discuss the Project construction schedule, constructability review, and BCWWS' Project Team's final comments on the draft 100% design documents and Opinion of Probable Construction Cost.

C-3.5 PWTM Conformed Documents for Construction (post bidding)

Post bidding phase, CONSULTANT shall prepare complete Contract Documents for construction, including, without limitation, technical specifications and construction drawings. CONSULTANT'S Contract Documents shall incorporate revisions from addenda received during bidding and award.

CONSULTANT'S DELIVERABLES (ENGINEERING DESIGN)

1. Meeting Minutes – PDF
2. Action and Decision Logs – PDF.
3. PWTM Geotechnical Investigation Report – PDF.
4. PWTM Environmental Investigation Report – PDF.

5. PWTM Survey and Subsurface Investigation Report – PDF.
6. Contaminated Site location report – PDF.
7. WTP-1A & 2A Revit 3D and Civil 3D Models
8. PWTM Civil 3D Models
9. WTP-1A & 2A 30% Design Drawings – PDF and 6 hard copies of 11x17 drawings.
10. PWTM 30% Design Drawings – PDF, 6 hard copies of 11x17 drawings, and 1 hard copy of 22x34 drawings.
11. WTP-1A & 2A 30% List of Specifications – PDF.
12. PWTM 30% List of Specifications – PDF.
13. WTP-1A & 2A 30% Opinion of Probable Construction Cost – Excel and PDF format
14. PWTM 30% Opinion of Probable Construction Cost – Excel and PDF format
- 15. WTP-1A & 2A Construction Schedule (30% design)**
- 16. PWTM Construction Schedule (30% design)**
17. WTP-1A & 2A 60% Design Drawings – PDF and 6 hard copies of 11x17 drawings.
18. PWTM 60% Design Drawings – PDF, 6 hard copies of 11x17 drawings, and 1 hard copy of 22x34 drawings.
19. WTP-1A & 2A 60% Specifications – PDF and 6 hard copies.
20. PWTM 60% Specifications – PDF and 6 hard copies.
21. WTP-1A & 2A 60% Opinion of Probable Construction Cost – Excel and PDF format
22. PWTM 60% Opinion of Probable Construction Cost – Excel and PDF format
23. WTP-1A & 2A Construction Sequencing (60% design)
24. PWTM Construction Sequencing (60% design)
25. WTP-1A & 2A 90% Design Drawings – PDF, 6 hard copies of 11x17 drawings, and 1 hard copy of 22x34 drawings.
26. PWTM 90% Design Drawings – PDF, 6 hard copies of 11x17 drawings, and 1 hard copy of 22x34 drawings.
27. WTP-1A & 2A 90% Specifications – PDF and 6 hard copies.
28. PWTM 90% Specifications – PDF and 6 hard copies.
29. WTP-1A & 2A 90% Opinion of Probable Construction Cost – Excel and PDF format
30. PWTM 90% Opinion of Probable Construction Cost – Excel and PDF format
31. WTP-1A & 2A 100% Design Drawings – PDF, 6 hard copies of 11x17 drawings, and 1 hard copy (including 22x34 drawings).

32. PWTM 100% Design Drawings – PDF, 6 hard copies of 11x17 drawings, and 1 hard copy of 22x34 drawings.
33. WTP-1A & 2A 100% Specifications – PDF and six (6) hard copies
34. PWTM 100% Specifications – PDF and six (6) hard copies.
35. WTP-1A & 2A 100% Opinion of Probable Construction Cost – Excel and PDF format
36. PWTM 100% Opinion of Probable Construction Cost – Excel and PDF format
37. WTP-1A & 2A Conformed Documents for Construction (Post Bidding) – PDF.
38. PWTM Conformed Documents for Construction (Post Bidding) – PDF.
39. WTP-1A & 2A Materials (Asbestos, Lead Paint) Testing Analysis Analytical Results - PDF.

D. BIDDING AND AWARD ASSISTANCE

CONSULTANT shall assist COUNTY staff, including BCWWS' Project Team and COUNTY Purchasing Division staff, as applicable, during the bidding for the job of Contractor and award of the Contract Documents.

The Bid Documents shall be bid ready, and the conformed documents shall be construction ready.

D-1 WTP 1A and WTP 2A - Packages

CONSULTANT shall prepare two (2) separate bid packages for the WTPs: Bid Package 1 shall cover all improvements related to WTP 1A; and Bid Package 2 shall cover all improvements related to WTP 2A.

D-1.1 Bidding Documents

a. WTPs Bidding Documents

Following the 100% Design Review Meeting for each WTP, CONSULTANT shall prepare bid documents for each WTP.

CONSULTANT shall finalize, seal, and submit design drawings, specifications, and details promptly after acceptance from BCWW's Project Team, Broward County Purchasing Division, and all permit authorities.

CONSULTANT shall pre-submit 6 hard copies of the bid documents including 11x17 drawings and specifications.

D-1.2 Pre-Bid Conference and Job Walk Through

CONSULTANT shall attend the pre-bid conference and walk through for WTP-1A and WTP-2A (1 day), with COUNTY staff. CONSULTANT shall be responsible for providing an overview of the Project, explaining important technical aspects of the Project, and responding to technical questions from prospective bidders. CONSULTANT shall provide written meeting notes to COUNTY staff for use in preparing the official meeting minutes.

D-1.3 Addenda & RFIs

CONSULTANT shall provide its interpretation, and clarifications, of the technical components of the Contract Documents to potential bidders. CONSULTANT shall document and answer questions in writing on a standard Project Information Request Form to be provided to COUNTY staff.

CONSULTANT shall assist COUNTY staff with preparation of addenda to plans and specifications, and transmission of the same during bid period. COUNTY staff shall prepare the final addenda.

CONSULTANT shall incorporate all addenda into conformed Contract Documents after Bid award.

D-1.4 Evaluation and Recommendation

CONSULTANT shall assist COUNTY staff with evaluating bid results. CONSULTANT shall review the qualifications and references for the apparent low bidder and issue a letter of recommendation to Contract Administrator and COUNTY staff.

D-2 Potable Water Transmission Main (PWTM) - Package: Pipeline

CONSULTANT shall prepare a bid package for the PWTM.

D-2.1 Bidding Documents

Following the 100% Design Review for PWTM, CONSULTANT shall prepare bid documents for PWTM Bid Package - Pipeline for bidding and award that incorporate the 100% design review comments received from the COUNTY staff.

CONSULTANT shall finalize, seal, and submit design drawings, specifications, and details following receipt and incorporation of COUNTY staff's comments and review agency comments. CONSULTANT shall pre-submit the following to the COUNTY staff for back-check review prior to submitting final documents:

- a. 2 hard copies 22x 34 of design drawings
- b. 6 hard copies of 11x17 design drawings

- c. 6 copies of technical specifications of the 100% design documents (along with a copy of 100% design submittal comments log).

Following a final review by the COUNTY staff, CONSULTANT shall provide signed and sealed final drawings, specifications, and details for public record and construction.

D-2.2 Pre-Bid Conference and Job Walk Through

CONSULTANT shall attend the pre-bid conference for PWTM pipeline with the COUNTY staff. The COUNTY staff shall host and run the pre-bid conference and prepare and issue the official meeting minutes. CONSULTANT shall be responsible for providing an overview of the Project, explaining important technical aspects of the Project, and responding to technical questions from prospective bidders. CONSULTANT shall provide written meeting notes to the COUNTY staff for use in preparing the official meeting minutes.

D-2.3 Addenda & RFIs

CONSULTANT shall provide its interpretation, and clarifications, of the technical components of the Contract Documents to potential bidders. CONSULTANT shall document and answer all questions in writing on a standard Project Information Request Form to be provided to the COUNTY.

CONSULTANT shall assist the COUNTY with preparation of addenda to plans and specifications as well as transmission of the same during bid period. The COUNTY shall prepare the final addenda.

D-2.4 Evaluation and Recommendation

CONSULTANT shall assist the COUNTY staff with evaluating bids. CONSULTANT shall review the qualifications and references for the apparent low bidder and issue a letter of recommendation to Contract Administrator and the COUNTY staff.

D-3 Potable Water Transmission Main (PWTM) - Package: Crossings

CONSULTANT shall prepare a bid package for the PWTM crossings.

D-3.1 Bidding Documents

Following the 100% Design Review Meeting for PWTM, CONSULTANT shall prepare bid documents for PWTM Bid Package Crossings for bidding and award that incorporate the 100% design review comments received from the COUNTY staff.

CONSULTANT shall finalize, seal, and submit design drawings, specifications, and details following receipt and incorporation of the COUNTY staff and review agency comments. CONSULTANT shall

prepare and pre-submit the following to the COUNTY staff for back-check review prior to submitting final documents:

- a. 2 hard copies of 22 x 34 design drawings
- b. 6 hard copies of 11x17 design drawings
- c. 6 hard copies of the technical specifications of the 100% design documents (along with a copy of 100% design submittal comments log).

Following a final review by the COUNTY staff, CONSULTANT shall provide signed and sealed final drawings, specifications, and details for public record and construction.

D-3.2 Pre-Bid Conference and Job Walk Through

CONSULTANT shall attend the pre-bid conference for PWTM crossings with COUNTY staff. CONSULTANT shall be responsible for providing an overview of the project, explaining important technical aspects of the Project, and responding to technical questions from prospective bidders. CONSULTANT shall provide written meeting notes to the COUNTY staff for use in preparing the official meeting minutes.

D-3.3 Addenda & RFIs

CONSULTANT shall provide its interpretation, and clarifications, of the technical components of the Contract Documents to potential bidders. CONSULTANT shall document and answer all questions in writing on a standard Project Information Request Form to be provided to the COUNTY staff.

CONSULTANT shall assist the COUNTY staff with preparation of addenda to plans and specifications as well as transmission of the same during bid period. The COUNTY staff shall prepare the final addenda.

D-3.4 Evaluation and Recommendation

CONSULTANT shall assist the COUNTY staff with evaluating bid results and prepare a bid tabulation summarizing the bids received. CONSULTANT shall review the qualifications and references for the apparent low bidder and issue a letter of recommendation to Contract Administrator and the COUNTY staff.

D-4 Task Meetings

CONSULTANT shall conduct coordination and bid-leveling meetings with the COUNTY staff as needed as part of the Bidding and Award Assistance task.

CONSULTANT'S DELIVERABLES (BIDDING AND AWARD)

1. Bidding Documents: Two separate Bid Packages for WTP-2A and WTP-1A (including injection wells) () – PDF.
2. Bidding Documents: Bid Package Pipeline – PDF
3. Bidding Documents: Bid Package Crossings – PDF.
4. Pre-bid Conference Notes: Bid Packages for WTP-2A and WTP-1A – PDF.
5. Pre-bid Conference Notes: Bid Package Pipeline – PDF
6. Pre-bid Conference Notes: Bid Package Crossings – PDF.
7. Response to Bidders' Questions: Bid Packages WTP-2A and WTP-1A – PDF.
8. Response to Bidders' Questions: Bid Package Pipeline – PDF
9. Response to Bidders' Questions: Bid Package Crossings – PDF.
10. Bid Addenda Delivered to the COUNTY Project Manager: Bid Packages WTP-2A and WTP-1A – PDF.
11. Bid Addenda Delivered to the COUNTY Project Manager: Bid Package Pipeline – PDF
12. Bid Addenda Delivered to the COUNTY Project Manager: Bid Package Crossings – PDF.
13. Bid Tabulation Summarizing the Bids Received: Bid Package WTP-2A and WTP-1A – Excel.
14. Bid Tabulation Summarizing the Bids Received: Bid Package Pipeline – Excel.
15. Bid Tabulation Summarizing the Bids Received: Bid Package Crossings – Excel.
16. CONSULTANT's Bid Evaluation and Award Recommendation Letter: Bid Packages WTP-2A and WTP-1A – PDF.
17. CONSULTANT's Bid Evaluation and Award Recommendation Letter: Bid Package Pipeline – PDF
18. CONSULTANT's Bid Evaluation and Award Recommendation Letter: Bid Package Crossings – PDF.
19. CONSULTANT shall provide a complete set of AutoCAD (DWG) files for all bid documents (Bid Packages 1, 2, 3 and 4), including external reference files (XREFs), custom line types, fonts, and all associated support files. Additionally, the CAD files shall include the finalized plot style tables (pen tables – .ctb or .stb files) used for printing, to ensure consistent reproduction of the contract drawings. All files shall be organized and submitted in a clearly labeled digital package, suitable for archiving and future use by the COUNTY.

TIME FOR PERFORMANCE

Milestone/Deliverable	Days from Notice To Proceed (NTP)	Estimated Date (Based on NTP in November 2025)
BODR	274	9/1/2026
30% Submittal	335	10/31/2026
60% Submittal	457	2/28/2027
90% Submittal	594	7/17/2027
100% Submittal	639	9/1/2027

iManage # 1193629

**Exhibit B
Maximum Billing Rates**

Project No: PNC2128715P1
Project Title: PFAS Water Treatment and Transmission System Improvements
Consultant/ Subconsultant: Carollo Engineers

TITLE	MAXIMUM HOURLY RATE (\$/HR)	X	MULTIPLIER	=	MAXIMUM BILLING RATE
			3.07		(\$/HR)
Company Officer	\$142.20		3.07		\$350.00*
Principal Professional	\$137.58		3.07		\$350.00*
Specialist	\$128.02		3.07		\$350.00*
Senior Project Professional	\$99.40		3.07		\$300.00*
Lead Project Professional	\$91.83		3.07		\$281.92
Project Professional	\$84.36		3.07		\$258.99
Professional	\$72.87		3.07		\$223.71
Assistant Professional II	\$54.51		3.07		\$167.35
Assistant Professional I	\$49.56		3.07		\$152.15
Senior Construction Manager	\$97.75		3.07		\$300.00*
Operations Specialist	\$92.75		3.07		\$284.74
Construction Manager	\$81.14		3.07		\$249.10
Resident Engineer	\$70.33		3.07		\$215.91
Resident Inspector	\$66.92		3.07		\$205.44
CAD Specialist	\$101.81		3.07		\$300.00*
CAD Discipline Lead	\$85.17		3.07		\$261.47
Senior CAD Designer	\$68.74		3.07		\$211.03
CAD Designer	\$65.31		3.07		\$200.50
Drafter Designer	\$42.89		3.07		\$131.67
Senior Administrative Assistant	\$44.92		3.07		\$137.90
Administrative Assistant	\$39.12		3.07		\$120.10

* MAXIMUM BILLING RATE CAPPED. THE CAP WILL BE ESCALATED BY 3% ANNUALLY.

Multiplier of 3.07 is calculated as follows:

OVERHEAD = HOURLY RATE x OVERHEAD (101.00%)

FRINGE = HOURLY RATE x FRINGE (73.02%)

OPERATING MARGIN = (HOURLY RATE + OVERHEAD + FRINGE) x OPERATING MARGIN (12.00%)

MULTIPLIER = (HOURLY RATE + OVERHEAD + FRINGE + OPERATING MARGIN) / HOURLY RATE

**Exhibit B
Maximum Billing Rates**

Project No: PNC2128715P1
Project Title: PFAS Water Treatment and Transmission System Improvements
Subconsultant: CDM Smith Inc.

TITLE	MAXIMUM HOURLY RATE (\$/HR)	X	MULTIPLIER 2.85	=	MAXIMUM BILLING RATE* (\$/HR)
Officer/Technical Expert	\$132.00		2.85		\$376.20, use \$350**
Principal/Associate/Technical Lead	\$110.00		2.85		\$313.50, use \$300**
Senior Professional	\$90.00		2.85		\$256.50
Professional II	\$61.00		2.85		\$173.85
Professional I	\$44.00		2.85		\$125.40
Senior Staff Support Services	\$80.00		2.85		\$228.00
Staff Support Services	\$43.00		2.85		\$122.55
Field Senior Professional	\$63.00		2.85		\$179.55
Field Professional	\$52.00		2.85		\$148.20
Project Administrative	\$64.00		2.85		\$182.40

*Maximum Billing Rate Multiplier of 2.85 is calculated based on 2023 FAR rates as follows:

OVERHEAD = HOURLY RATE x OVERHEAD (98.57%)

FRINGE = HOURLY RATE x FRINGE (55.46%)

OPERATING MARGIN = (HOURLY RATE + OVERHEAD + FRINGE) x OPERATING MARGIN (12.00%)

MULTIPLIER = (HOURLY RATE + OVERHEAD + FRINGE + OPERATING MARGIN) / HOURLY RATE

** MAXIMUM BILLING RATE CAPPED. THE CAP WILL BE ESCALATED BY 3% ANNUALLY.

PROPOSED CDM SMITH CONTRACTUAL MULTIPLIER = 3.0

**Exhibit B
Maximum Billing Rates**

Project No: PNC2128715P1
Project Title: PFAS Water Treatment and Transmission System Improvements
Consultant / Chen Moore and Associates
Subconsultant:

	MAXIMUM HOURLY RATE (\$/HR)		MULTIPLIER		MAXIMUM BILLING RATE
TITLE		X	2.96	=	(\$/HR)
President	\$201.03		2.96		\$350.00*
Principal	\$150.80		2.96		\$350.00*
Principal Engineer	\$130.21		2.96		\$350.00*
Senior Engineer	\$83.66		2.96		\$247.63
Project Engineer	\$72.96		2.96		\$215.96
Associate Engineer	\$51.86		2.96		\$153.51
Engineer	\$44.66		2.96		\$132.19
Principal Landscape Architect	\$86.25		2.96		\$255.30
Senior Landscape Architect	\$66.06		2.96		\$195.54
Project Landscape Architect	\$50.19		2.96		\$148.56
Associate Landscape Architect	\$40.72		2.96		\$120.53
Senior Landscape Designer	\$44.66		2.96		\$132.19
Landscape Designer	\$34.51		2.96		\$102.15
Principal Planner	\$89.09		2.96		\$263.71
Senior Planner	\$45.41		2.96		\$134.41
Project Planner	\$32.48		2.96		\$96.14
Associate Planner	\$29.00		2.96		\$85.84
Urban Designer	\$33.47		2.96		\$99.07
Senior Project Manager	\$96.22		2.96		\$284.81
Senior Environmental Scientist	\$59.22		2.96		\$175.29
Project Environmental Scientist	\$43.50		2.96		\$128.76
Senior Designer	\$59.39		2.96		\$175.79
Designer	\$43.50		2.96		\$128.76
Senior Technician	\$35.15		2.96		\$104.04
Technician	\$34.80		2.96		\$103.01
Senior Construction Specialist	\$54.98		2.96		\$162.74
Construction Specialist	\$46.40		2.96		\$137.34
Administrative Staff	\$47.41		2.96		\$140.33
Intern	\$23.20		2.96		\$68.67

Multiplier of 2.96 is calculated as follows:

OVERHEAD = HOURLY RATE x OVERHEAD (138.34%)

FRINGE = HOURLY RATE x FRINGE (31.10%)

OPERATING MARGIN = (HOURLY RATE + OVERHEAD + FRINGE) x OPERATING MARGIN (10.00%)

MULTIPLIER = (HOURLY RATE + OVERHEAD + FRINGE + OPERATING MARGIN) / HOURLY RATE

* MAXIMUM BILLING RATE CAPPED. THE CAP WILL BE ESCALATED BY 3% ANNUALLY.

**Exhibit B
Maximum Billing Rates**

Project No: PNC2128715P1
Project Title: Engineering Services for PFAS Water Treatment/Transmission System Improvements
Consultant/
Subconsultant: Brown and Caldwell

TITLE	MAXIMUM HOURLY RATE (\$/HR)	X	MULTIPLIER 3.07	=	MAXIMUM BILLING RATE (\$/HR)
Office/Support Services IV	31.25		3.07		95.94
Engineer I	38.48		3.07		118.13
Geologist/Hydrogeologist I	40.80		3.07		125.26
Project Analyst II	36.25		3.07		111.29
Scientist I	37.61		3.07		115.46
Engineer II	45.56		3.07		139.87
Engineer/Operations Tech III	52.44		3.07		160.99
Geologist/Hydrogeologist II	45.84		3.07		140.73
Project Analyst III	47.10		3.07		144.60
Scientist II	43.08		3.07		132.26
Engineer III	51.77		3.07		158.93
Scientist III	82.24		3.07		252.48
Senior Designer	58.36		3.07		179.17
Senior Business Consultant	88.39		3.07		271.36
Senior Construction Engineer	62.77		3.07		192.70
Senior Engineer	79.40		3.07		243.76
Senior Scientist	65.71		3.07		201.73
Principal Business Consultant	100.54		3.07		\$300.00*
Principal Engineer	87.70		3.07		269.24
Principal Geol/Hydrogeologist	72.44		3.07		222.39
Principal Scientist	84.61		3.07		259.75
Supervising Designer	80.07		3.07		245.81
Supervising Construction Engin	114.05		3.07		300.00*
Supervising Engineer	103.08		3.07		300.00*
Supervising Scientist	84.61		3.07		259.75

Managing Geol/Hydrogeologist	96.94		3.07		297.61
Managing Engineer	121.43		3.07		300.00*
Managing Scientist	113.89		3.07		300.00*
Chief Engineer	146.47		3.07		300.00*
Chief Geol/Hydrogeologist	126.41		3.07		300.00*
Chief Business Consultant	117.31		3.07		300.00*
Executive Engineer	125.15		3.07		300.00*
Vice President	140.23		3.07		350.00*

Multiplier of 3.07 is calculated as follows:

OVERHEAD = HOURLY RATE x OVERHEAD (138.80%)

FRINGE = HOURLY RATE x FRINGE (48.95%)

OPERATING MARGIN = (HOURLY RATE + OVERHEAD + FRINGE) x OPERATING MARGIN (6.80%)

MULTIPLIER = (HOURLY RATE + OVERHEAD + FRINGE + OPERATING MARGIN) / HOURLY RATE

*MAXIMUM BILLING RATES CAPPED. THE CAP WILL BE ESCALATED BY 3% ANNUALLY.

**Exhibit B
Maximum Billing Rates**

Project No: PNC2128715P1
Project Title: PFAS Water Treatment and Transmission System Improvements
Subconsultant: Ross Engineering, Inc.

TITLE	MAXIMUM HOURLY RATE (\$/HR)	X	MULTIPLIER	=	MAXIMUM BILLING RATE (\$/HR)
Principal Engineer	\$127.60		2.68		\$341.97
Senior Project Manager	\$127.60		2.68		\$300.00*
Technical Advisor	\$92.80		2.68		\$248.70
QA/QC Manager	\$75.40		2.68		\$202.07
Project Manager	\$52.20		2.68		\$139.90
Project Engineer II	\$49.18		2.68		\$131.81
Project Engineer I	\$41.18		2.68		\$110.36
Administrative Assistant II	\$41.18		2.68		\$110.36
Administrative Assistant I	\$29.00		2.68		\$77.72
Resident Project Rep. II	\$43.50		2.68		\$116.58
Resident Project Rep. I	\$37.64		2.68		\$100.88
CADD Designer	\$37.64		2.68		\$100.88
Engineering Intern II	\$26.10		2.68		\$69.95
Engineering Intern I	\$23.20		2.68		\$62.18

*Maximum Billing Rate Capped. The Cap will be escalated by 3% annually

Multiplier of 2.68 is calculated as follows:

OVERHEAD = HOURLY RATE x OVERHEAD (103.58%)

FRINGE = HOURLY RATE x FRINGE (40.38%)

OPERATING MARGIN = (HOURLY RATE + OVERHEAD (103.58%) + FRINGE (40.38%) x OPERATING MARGIN (10.0%)

MULTIPLIER (2.68) = (HOURLY RATE + OVERHEAD (103.58%) + FRINGE (40.38%) + OPERATING MARGIN (10%) / HOURLY RATE

**Exhibit B
Maximum Billing Rates**

Project No: PNC2128715P1
Project Title: PFAS Water Treatment and Transmission System Improvements
Subconsultant: Dickey Consulting Services, Inc.

TITLE	MAXIMUM HOURLY RATE (\$/HR)	X	MULTIPLIER	=	MAXIMUM BILLING RATE
			2.31		(\$/HR)
Principal	\$70.76		2.31		\$163.46
Project Director	\$34.80		2.31		\$80.39
Project Manager	\$34.22		2.31		\$79.05
Project Coordinator	\$27.84		2.31		\$64.31
Technician	\$25.52		2.31		\$58.95
Administrative Assistant	\$23.20		2.31		\$53.59
Intern	\$20.88		2.31		\$48.23

Multiplier of 2.31 is calculated as follows:

OVERHEAD = HOURLY RATE x OVERHEAD (100%)

FRINGE = HOURLY RATE x FRINGE (10%)

OPERATING MARGIN = (HOURLY RATE + OVERHEAD + FRINGE) x OPERATING MARGIN (10%)

MULTIPLIER = (HOURLY RATE + OVERHEAD + FRINGE + OPERATING MARGIN) / HOURLY RATE

Notes:

Consultant/Subconsultant Dickey Consulting Services, Inc. has elected to use "Safe Harbor" combined fringe benefit and overhead rate of 110% in accordance with Section 5.2.5.

**Exhibit B
Maximum Billing Rates**

Project No: PNC2128715P1
Project Title: PFAS Water Treatment and Transmission System Improvements
Subconsultant: Design Kollaborative Architects/Planners, Inc.

TITLE	MAXIMUM HOURLY RATE (\$/HR)	X	MULTIPLIER	=	MAXIMUM BILLING RATE (\$/HR)
PROJECT ARCHITECT	\$64.44		3.00		\$193.32
ARCHITECTURAL PROJ MGR	\$64.02		3.00		\$192.06
ARCHITECTURAL JOB CAPT	\$58.00		3.00		\$174.00
ARCHITECTURAL DESIGNER	\$64.34		3.00		\$184.02
ADMINISTRATOR	\$34.80		3.00		\$104.40
ANTICIPATED HIRES:					
SR PROJECT MGR	\$65.00		3.00		\$195.00
ASSISTANT PROJ MGR	\$60.00		3.00		\$180.00
CAD DRAFTER IV	\$50.00		3.00		\$150.00
CAD DRAFTER III	\$45.00		3.00		\$135.00
ADMINISTRATIVE ASST	\$30.00		3.00		\$90.00

Multiplier of 3.99 is calculated as follows:

OVERHEAD = HOURLY RATE x OVERHEAD (232.43%)

FRINGE = HOURLY RATE x FRINGE (30.99%)

OPERATING MARGIN = (HOURLY RATE + OVERHEAD + FRINGE) x OPERATING MARGIN (10%)

MULTIPLIER = (HOURLY RATE + OVERHEAD + FRINGE + OPERATING MARGIN) / HOURLY RATE

DUE TO BROWARD COUNTY MULTIPLIER CAP, WE USED A MULITPLIER OF 3.00

Exhibit B
Maximum Billing Rates

Project No: PNC2128715P1
Project Title: PFAS Water Treatment and Transmission System Improvements
Subconsultant Name: Engenuity Group, Inc.

TITLE	MAXIMUM HOURLY RATE (\$/HR)	X	MULTIPLIER	=	MAXIMUM BILLING RATE (\$/HR)
Department Director	\$66.92		2.31		\$154.59
Sr. Project Land Surveyor	\$69.60		2.31		\$160.78
Project Land Surveyor	\$43.50		2.31		\$100.49
Sr. AutoCAD Drafter	\$34.80		2.31		\$80.39
AutoCAD Drafter	\$32.74		2.31		\$75.63
Survey Crew Chief	\$32.48		2.31		\$75.03
Survey Crew Member	\$29.00		2.31		\$66.99
SUE Utility Technician	\$38.28		2.31		\$88.43
SUE Technical Locator	\$30.16		2.31		\$69.67
Administrative Assistant	\$38.28		2.31		\$88.43

Multiplier of 2.31 is calculated as follows:

OVERHEAD = HOURLY RATE X OVERHEAD (100%)

FRINGE = HOURLY RATE X FRINGE (10%)

OPERATING MARGIN = 10%

MULTIPLIER = (1 + OVERHEAD + FRINGE + ((1 + OVERHEAD + FRINGE) X
OPERATING MARGIN)) / 1

Notes:

Consultant has elected to use "Safe Harbor" combined fringe benefit and overhead rate of 110% in accordance with Section 5.2.5.

Exhibit B
Maximum Billing Rates

Project No: PNC2128715P1
Project Title: PFAS Water Treatment and Transmission System Improvements
Subconsultant: WIRX Engineering, LLC

TITLE	MAXIMUM HOURLY RATE (\$/HR)	X	MULTIPLIER 2.31	=	MAXIMUM BILLING RATE (\$/HR)
Principal Engineer (PE)	\$88.23		2.31		\$203.81
Senior Engineer (PE) / Project Manager	\$67.78		2.31		\$156.57
Project Engineer (PE)	\$61.14		2.31		\$141.23
Staff Engineer	\$50.19		2.31		\$115.94
Senior Inspector	\$51.04		2.31		\$117.90
Inspector	\$37.92		2.31		\$87.60
CADD Operator	\$33.47		2.31		\$77.32

Multiplier of 2.31 is calculated as follows:

OVERHEAD = HOURLY RATE x OVERHEAD (100%)

FRINGE = HOURLY RATE x FRINGE (10%)

OPERATING MARGIN = (HOURLY RATE + OVERHEAD + FRINGE) x OPERATING MARGIN (10%)

MULTIPLIER = (HOURLY RATE + OVERHEAD + FRINGE + OPERATING MARGIN) / HOURLY RATE

Notes:

WIRX Engineering, LLC has elected to use "Safe Harbor" combined fringe benefit and overhead rate of 110% in accordance with Section 5.2.5.

Exhibit B
Maximum Billing Rates

Project No: PNC2128715P1
Project Title: PFAS Water Treatment and Transmission System Improvements
Subconsultant: Smith Engineering Consultants, Inc.

TITLE	MAXIMUM HOURLY RATE (\$/HR)	X	MULTIPLIER	=	MAXIMUM BILLING RATE (\$/HR)
Principal	\$66.92		2.31		\$154.59
Engineer	\$62.64		2.31		\$144.70
CADD Designer	\$35.96		2.31		\$83.07
Clerical	\$27.84		2.31		\$64.31

Multiplier of 2.31 is calculated as follows:

OVERHEAD = 100.00%

FRINGE = 10.00%

OPERATING MARGIN = 10.00%

$MULTIPLIER = (1 + OVERHEAD + FRINGE + ((1 + OVERHEAD + FRINGE) \times OPERATING MARGIN)) / 1$

Notes:

Subconsultant has elected to use "Safe Harbor" combined fringe benefit and overhead rate of 110% in accordance with Section 5.2.5.

Exhibit B
Maximum Billing Rates

Project No: PNC2128715P1
Project Title: PFAS Water Treatment and Transmission System Improvements
Subconsultant: C Solutions, Inc.

TITLE	MAXIMUM HOURLY RATE (\$/HR)	X	MULTIPLIER	=	MAXIMUM BILLING RATE (\$/HR)
Company Officer / Senior Technical Expert	\$137.81		2.31		\$ 318.34
Technical Expert	\$116.00		2.31		\$ 267.96
Project Manager / Engineer IV	\$72.50		2.31		\$ 167.48
Engineer III	\$64.55		2.31		\$ 149.11
Engineer II	\$48.19		2.31		\$ 111.32
Engineer I	\$41.80		2.31		\$ 96.56
Senior CAD Designer	\$87.00		2.31		\$ 200.97
Administrative Support	\$34.80		2.31		\$ 80.39

Multiplier of 2.31 is calculated as follows:

OVERHEAD = HOURLY RATE x OVERHEAD (100.00%)

FRINGE = HOURLY RATE x FRINGE (10.00%)

OPERATING MARGIN = (HOURLY RATE + OVERHEAD + FRINGE) x OPERATING MARGIN (10.00%)

MULTIPLIER = (HOURLY RATE + OVERHEAD + FRINGE + OPERATING MARGIN) / HOURLY RATE

Notes:

Subconsultant has elected to use "Safe Harbor" combined fringe benefit and overhead rate of 110% in accordance with Section 5.2.5.

Exhibit B-1
Reimbursables for Direct Non-Salary Expenses

Reimbursable	Maximum Reimbursable
Carollo Engineers	\$587,377.92
CDM Smith Inc.	\$90,039.00
Chen Moore and Associates	\$92,000.00
Brown and Caldwell	-
Ross Engineering, Inc.	\$35,260.00
Design Kollaborative Architects/Planners, Inc.	\$15,000.00
Smith Engineering Consultants, Inc.	-
C Solutions, Inc.	-
Reina Engineering, LLC	-
Engenuity Group, Inc	\$916,133.41
WIRX Engineering, LLC	\$457,681.27
Florida Digital Reproduction Corp.	\$57,477.40
Total Maximum Reimbursables	\$2,250,969.00

Exhibit C Minimum Insurance Requirements

MINIMUM INSURANCE REQUIREMENTS

Project: Consultant Engineering Services for the PFAS Water Treatment and Transmission System Improvement
Agency: Water and Wastewater Services

TYPE OF INSURANCE	ANNUAL RISK	RISK WYD	MINIMUM LIABILITY LIMITS		
				Each Occurrence	Aggregate
GENERAL LIABILITY - Broad form ☒ Commercial General Liability ☒ Premises-Operations ☐ XCU Explosion/Collapse/Underground ☒ Products/Completed Operations Hazard ☒ Contractual Insurance ☒ Broad Form Property Damage ☒ Independent Contractors ☒ Personal Injury Per Occurrence or Claims-Made: ☒ Per Occurrence ☐ Claims-Made Gen'l Aggregate Limit Applies per: ☐ Project ☐ Policy ☐ Loc. ☐ Other _____	☒	☒	Bodily Injury Property Damage Combined Bodily Injury and Property Damage Personal Injury Products & Completed Operations	 \$1,000,000 	 \$2,000,000
AUTO LIABILITY ☒ Comprehensive Form ☒ Owned ☒ Hired ☒ Non-owned ☒ Any Auto, If applicable <i>Note: May be waived if no driving will be done in performance of services/project.</i>			Bodily Injury (each person) Bodily Injury (each accident) Property Damage Combined Bodily Injury and Property Damage	 \$500,000 	
☐ EXCESS LIABILITY / UMBRELLA Per Occurrence or Claims-Made: ☐ Per Occurrence ☐ Claims-Made <i>Note: May be used to supplement minimum liability coverage requirements.</i>					
☒ WORKER'S COMPENSATION <i>Note: U.S. Longshoremen & Harbor Workers' Act & Jones Act is required for any activities on or about navigable water.</i>	N/A	☒	Each Accident	STATUTORY LIMITS	
☒ EMPLOYER'S LIABILITY			Each Accident	\$1,000,000	
☒ PROFESSIONAL LIABILITY (ERRORS & OMISSIONS) All engineering, surveying, and design professionals.	N/A		Each Claim:	\$3,000,000	
			*Maximum Deductible:	\$100,000	
☐ POLLUTION/ENVIRONMENTAL LIABILITY			Each Claim:		
			*Maximum Deductible:	\$10,000	
<i>Description of Operations:</i> Broward County is additional insured for liability. Insured's insurance shall provide primary coverage and shall not require contribution from the County, self-insurance or otherwise. Waiver of subrogation applies in favor of Broward County. For Claims-Made policies insurance must be maintained and evidence of insurance must be provided for at least three (3) years after completion of the contract of work.					

CERTIFICATE HOLDER:

Broward County
115 South Andrews Avenue
Fort Lauderdale, Florida 33301

Digitally signed by
COLLEEN A.
POUNALL
Date: 2024.04.17
13:36:19 -04'00'

Risk Management Division

Exhibit D
Work Authorization No. [] under
Agreement [] between Broward County and []
for []

1. This Work Authorization is issued pursuant to the Agreement between Broward County ("County") and [] ("Consultant") (collectively referred to as the "Parties") for [], dated [] (as amended, the "Agreement").

2. This Work Authorization directs Consultant to provide the services described in Exhibit A, attached hereto and incorporated into this Work Authorization, and is issued pursuant to Article 6 of the Agreement.

3. Compensation and Method of Payment.

3.1 Payment for the Services authorized by this Work Authorization shall be in accordance with Article 5 of the Agreement and the agreed method of compensation is as follows (check those boxes that apply):

☐ 3.1.1 Maximum Amount Not-To-Exceed Compensation. County shall pay Consultant for the performance of all Services identified in Exhibit A to this Work Authorization as payable on a "Maximum Amount Not-To-Exceed" basis based upon the Salary Costs as described in Section 5.2 of the Agreement and Exhibit B of this Work Authorization, up to a maximum not-to-exceed amount of \$[].

☐ 3.1.2 Lump Sum Compensation. County shall pay Consultant for the performance of all Services identified in Exhibit A to this Work Authorization as payable on a "Lump Sum" basis and as set forth in Exhibit B of this Work Authorization, in a total lump sum amount of \$[].

☐ 3.1.3 Reimbursable Expenses. County has established a maximum not-to-exceed amount of \$[] for potential Reimbursable Expenses for work under this Work Authorization, which may be utilized consistent with Section 5.3 of the Agreement. County will retain any unused amounts of those reimbursable expenses.

4. Consultant shall perform the Services described in Exhibit A within:

☐ [] calendar days ("Time for Performance"); or

☐ the time periods specified in Exhibit A. The Time for Performance shall commence on the date of the Notice to Proceed for such services.

5. CBE Goals.

5.1 In an effort to assist County in achieving its overall goal as set forth in the Agreement, Consultant agrees to meet the CBE participation goal of [_____] % by utilizing CBE firms for the Services provided under this Work Authorization and the dollar values described in Section 5.2 below.

5.2 In performing Services under this Work Authorization, County and Consultant hereby incorporate Consultant's participating CBE firms, addresses, scope of work, and dollar value identified in Exhibit C.

6. The terms and conditions of the Agreement are hereby incorporated into this Work Authorization. Nothing contained in this Work Authorization shall alter, modify, or change in any way the terms and conditions of the Agreement.

7. This Work Authorization is effective upon complete execution by County and Consultant. This Work Authorization may be executed in multiple originals or in counterparts, whether signed physically or electronically, each of which shall be deemed to be an original, and all of which, taken together, shall constitute one and the same agreement.

List of Exhibits:

Exhibit A – Scope of Services

Exhibit B – Negotiated Fee

Exhibit C – CBE Schedule

(The remainder of this page is intentionally left blank.)

IN WITNESS WHEREOF, the Parties have made and executed this Work Authorization No. [____]: Broward County, by and through its [____], as authorized pursuant to the Agreement; and Consultant, signing by and through its duly authorized representative.

COUNTY

Broward County

By _____

Its _____

(Print Name and Title)

____ day of _____, 20____.

Approved as to form by
Andrew J. Meyers
Broward County Attorney
115 South Andrews Avenue, Suite 423
Fort Lauderdale, Florida, 33301
Telephone: (954) 357-7600

By _____

Name _____ Date _____

Senior/Assistant County Attorney

By _____

Name _____ Date _____

Senior/Assistant County Attorney

CONSULTANT

[Insert Consultant Name]

By _____

Authorized Signer

Its _____

(Print name and title)

____ day of _____, 20____.

Exhibit E
Schedule of Subconsultants

Agreement No.: PNC2128715P1

Agreement Title: PFAS Water Treatment and Transmission System Improvements

No.	Firm Name	Discipline
1.	CDM Smith Inc.	Site/Civil, Process, Architectural, Structural, Mechanical, HVAC, Electrical, I&C, SCADA, Environmental, Wellfield, Injection Wells, Regulatory
2.	Chen Moore and Associates	Pipeline Design, Site/Civil, Process, Architectural, Structural, Mechanical, HVAC, Electrical, I&C, SCADA, Environmental, Regulatory
3.	Brown and Caldwell	Regulatory, Process, Mechanical
4.	Ross Engineering, Inc.	Site/Civil, Stormwater, Environmental, Regulatory
5.	Dickey Consulting Services, Inc.	Administration Services
6.	Design Kollaborative Architects/Planners, Inc.	Architectural
7.	Engenuity Group, Inc	Surveying and Mapping
8.	WIRX Engineering, LLC	Geotechnical Engineering Services
9.	Smith Engineering Consultants, Inc.	Electrical and Instrumentation Engineering
10.	C Solutions, Inc.	Process Mechanical

Exhibit F CBE Subconsultants and Letters of Intent



LETTER OF INTENT BETWEEN BIDDER/OFFEROR AND COUNTY BUSINESS ENTERPRISE (CBE) FIRM/SUPPLIER

This form is to be completed and signed for each CBE firm. If the PRIME is a CBE firm, please indicate the percentage performing with your own forces:

Solicitation No.: PNC2128715P1

Project Title: Engineering Services for PFAS Water Treatment/Transmission System Improvements

Bidder/Offeror Name: Carollo Engineers, Inc.

Address: 2728 North University Drive, Bldg. 2700 **City:** Coral Springs **State:** FL **Zip:** 33065

Authorized Representative: Elizabeth Fujikawa, PE **Phone:** 954-837-0030

CBE Firm/Supplier Name: Ross Engineering, Inc.

Address: 3325 S. University Dr., Suite 111 **City:** Davie **State:** FL **Zip:** 33328

Authorized Representative: Robert Ross, PE **Phone:** 954-318-0624

- A. This is a letter of intent between the bidder/offeror on this project and a CBE firm for the CBE to perform work on this project.
- B. By signing below, the bidder/offeror is committing to utilize the above-named CBE to perform the work described below.
- C. By signing below, the above-named CBE is committing to perform the work described below.
- D. By signing below, the bidder/offeror and CBE affirm that if the CBE subcontracts any of the work described below, it may only subcontract that work to another CBE.

Work to be performed by CBE Firm

Description	NAICS ¹	CBE Contract Amount ²	CBE Percentage of Total Project Value
Site/civil, Stormwater, Permits	541330	\$2,610,390.00	6.41 %
			%
			%

AFFIRMATION: I hereby affirm that the information above is true and correct.

CBE Firm/Supplier Authorized Representative

Signature: [Signature] **Title:** Vice President **Date:** 08/05/2025

Bidder/Offeror Authorized Representative

Signature: Elizabeth Fujikawa, P.E. Digitally signed by Elizabeth B. Fujikawa, P.E.; DN: cn=2025.08.05 10:04:27 -0400 **Title:** Vice President **Date:** 08/05/2025

¹ Visit [Census.gov](https://www.census.gov) and select **NAICS** to search and identify the correct codes. Match type of work with NAICS code as closely as possible.

² To be provided only when the solicitation requires that bidder/offeror include a dollar amount in its bid/offer.

In the event the bidder/offeror does not receive award of the prime contract, any and all representations in this Letter of Intent and Affirmation shall be null and void.

Rev.: June 2018

Compliance Form No. 004



LETTER OF INTENT

BETWEEN BIDDER/OFFEROR AND
COUNTY BUSINESS ENTERPRISE (CBE) FIRM/SUPPLIER

This form is to be completed and signed for each CBE firm. If the PRIME is a CBE firm, please indicate the percentage performing with your own forces.

Solicitation No.: PNC2128715P1

Project Title: Engineering Services for PFAS Water Treatment/Transmission System Improvements

Bidder/Offeror Name: Carollo Engineers, Inc.
Address: 2728 North University Drive, Bldg. 2700 **City:** Coral Springs **State:** FL **Zip:** 33065
Authorized Representative: Elizabeth Fujikawa, PE **Phone:** 954-837-0030

CBE Firm/Supplier Name: Design Kollaborative Architects/Planners, Inc.
Address: 200 NE 1st Ave, Suite 115 **City:** Pompano Beach **State:** FL **Zip:** 33060
Authorized Representative: Andre S. Capi **Phone:** 954-941-3329 x 101

- A. This is a letter of intent between the bidder/offeror on this project and a CBE firm for the CBE to perform work on this project.
- B. By signing below, the bidder/offeror is committing to utilize the above-named CBE to perform the work described below.
- C. By signing below, the above-named CBE is committing to perform the work described below.
- D. By signing below, the bidder/offeror and CBE affirm that if the CBE subcontracts any of the work described below, it may only subcontract that work to another CBE.

Work to be performed by CBE Firm

Description	NAICS ¹	CBE Contract Amount ²	CBE Percentage of Total Project Value
Architectural Services	541310	\$1,611,450.00	3.95 %
			%
			%

AFFIRMATION: I hereby affirm that the information above is true and correct.

CBE Firm/Supplier Authorized Representative

Signature: *A. Capi* Title: Director Date: 08/05/2025

Bidder/Offeror Authorized Representative

Signature: Elizabeth Fujikawa, P.E. Title: Vice President Date: 08/05/2025

¹ Visit [Census.gov](https://www.census.gov) and select [NAICS](https://www.census.gov/naics/) to search and identify the correct codes. Match type of work with NAICS code as closely as possible.

² To be provided only when the solicitation requires that bidder/offeror include a dollar amount in its bid/offer.

In the event the bidder/offeror does not receive award of the prime contract, any and all representations in this Letter of Intent and Affirmation shall be null and void.

Rev.: June 2018

Compliance Form No. 004



LETTER OF INTENT

BETWEEN BIDDER/OFFEROR AND
COUNTY BUSINESS ENTERPRISE (CBE) FIRM/SUPPLIER

This form is to be completed and signed for each CBE firm. If the PRIME is a CBE firm, please indicate the percentage performing with your own forces.

Solicitation No.: PNC2128715P1

Project Title: Engineering Services for PFAS Water Treatment/Transmission System Improvements

Bidder/Offeror Name: Carollo Engineers, Inc.
Address: 2728 North University Drive, Bldg. 2700 **City:** Coral Springs **State:** FL **Zip:** 33065
Authorized Representative: Elizabeth Fujikawa, PE **Phone:** 954-837-0030

CBE Firm/Supplier Name: C Solutions, Inc.
Address: 500 NE 4th Street, Suite 100 **City:** Fort Lauderdale **State:** FL **Zip:** 33301
Authorized Representative: Mark Drummond, P.E. **Phone:** 954-320-7899

- A. This is a letter of intent between the bidder/offeror on this project and a CBE firm for the CBE to perform work on this project.
- B. By signing below, the bidder/offeror is committing to utilize the above-named CBE to perform the work described below.
- C. By signing below, the above-named CBE is committing to perform the work described below.
- D. By signing below, the bidder/offeror and CBE affirm that if the CBE subcontracts any of the work described below, it may only subcontract that work to another CBE.

Work to be performed by CBE Firm

Description	NAICS ¹	CBE Contract Amount ²	CBE Percentage of Total Project Value
Process mechanical design and associated tasks/deliverables for chemicals and post-treatment for both plants.	541330	\$846,280.00	2.08 %
			%
			%

AFFIRMATION: I hereby affirm that the information above is true and correct.

CBE Firm/Supplier Authorized Representative

Signature:  Digitally signed by Mark Drummond Signature **Title:** President **Date:** 08/05/2025

Bidder/Offeror Authorized Representative

Signature: Elizabeth Fujikawa, P.E. Digitally signed by Elizabeth Fujikawa, P.E. Date: 2025.08.05 13:49:01 -0400 **Title:** Vice President **Date:** 08/05/2025

¹ Visit [Census.gov](https://www.census.gov) and select [NAICS](#) to search and identify the correct codes. Match type of work with NAICS code as closely as possible.

² To be provided only when the solicitation requires that bidder/offeror include a dollar amount in its bid/offer.

In the event the bidder/offeror does not receive award of the prime contract, any and all representations in this Letter of Intent and Affirmation shall be null and void.

Rev.: June 2018

Compliance Form No. 004



LETTER OF INTENT

BETWEEN BIDDER/OFFEROR AND
COUNTY BUSINESS ENTERPRISE (CBE) FIRM/SUPPLIER

This form is to be completed and signed for each CBE firm. If the PRIME is a CBE firm, please indicate the percentage performing with your own forces.

Solicitation No.: PNC2128715P1

Project Title: Engineering Services for PFAS Water Treatment/Transmission System Improvements

Bidder/Offeror Name: Carollo Engineers, Inc.
Address: 2728 North University Drive, Bldg. 2700 **City:** Coral Springs **State:** FL **Zip:** 33065
Authorized Representative: Elizabeth Fujikawa, PE **Phone:** 954-837-0030

CBE Firm/Supplier Name: Reina Engineering, LLC
Address: 6750 N. Andrews Ave, Suite 200 **City:** Fort Lauderdale **State:** FL **Zip:** 33309
Authorized Representative: Francisco Reina, P.E. **Phone:** 561-571-2210

- A. This is a letter of intent between the bidder/offeror on this project and a CBE firm for the CBE to perform work on this project.
- B. By signing below, the bidder/offeror is committing to utilize the above-named CBE to perform the work described below.
- C. By signing below, the above-named CBE is committing to perform the work described below.
- D. By signing below, the bidder/offeror and CBE affirm that if the CBE subcontracts any of the work described below, it may only subcontract that work to another CBE.

Work to be performed by CBE Firm

Description	NAICS ¹	CBE Contract Amount ²	CBE Percentage of Total Project Value
Pipeline, Civil, Permits	541330	\$200,005.00	0.49 %
			%
			%

AFFIRMATION: I hereby affirm that the information above is true and correct.

CBE Firm/Supplier Authorized Representative

Signature: Francisco Reina, P.E. Digitally signed by Francisco Reina, P.E., Date: 2025.08.05 10:05:17 -0400 **Title:** President **Date:** 08/05/2025

Bidder/Offeror Authorized Representative

Signature: Elizabeth Fujikawa, P.E. Digitally signed by Elizabeth Fujikawa, P.E., Date: 2025.08.05 10:05:27 -0400 **Title:** Vice President **Date:** 08/05/2025

¹ Visit [Census.gov](https://www.census.gov) and select [NAICS](#) to search and identify the correct codes. Match type of work with NAICS code as closely as possible.

² To be provided only when the solicitation requires that bidder/offeror include a dollar amount in its bid/offer.

In the event the bidder/offeror does not receive award of the prime contract, any and all representations in this Letter of Intent and Affirmation shall be null and void.

Rev.: June 2018

Compliance Form No. 004



LETTER OF INTENT BETWEEN BIDDER/OFFEROR AND COUNTY BUSINESS ENTERPRISE (CBE) FIRM/SUPPLIER

This form is to be completed and signed for each CBE firm. If the PRIME is a CBE firm, please indicate the percentage performing with your own forces.

Solicitation No.: PNC2128715P1

Project Title: Engineering Services for PFAS Water Treatment/Transmission System Improvements

Bidder/Offeror Name: Carollo Engineers, Inc.

Address: 2728 North University Drive, Bldg. 2700 **City:** Coral Springs **State:** FL **Zip:** 33065

Authorized Representative: Elizabeth Fujikawa, PE **Phone:** 954-837-0030

CBE Firm/Supplier Name: Smith Engineering Consultants

Address: 412 SE 18th Street **City:** Fort Lauderdale **State:** FL **Zip:** 33316

Authorized Representative: Larry M. Smith **Phone:** 954-590-0488

- A. This is a letter of intent between the bidder/offeror on this project and a CBE firm for the CBE to perform work on this project.
- B. By signing below, the bidder/offeror is committing to utilize the above-named CBE to perform the work described below.
- C. By signing below, the above-named CBE is committing to perform the work described below.
- D. By signing below, the bidder/offeror and CBE affirm that if the CBE subcontracts any of the work described below, it may only subcontract that work to another CBE.

Work to be performed by CBE Firm

Description	NAICS ¹	CBE Contract Amount ²	CBE Percentage of Total Project Value
Electrical/I&C and HVAC/Plumbing/Fire	541330	\$1,353,252.00	3.32 %
			%
			%

AFFIRMATION: I hereby affirm that the information above is true and correct.

CBE Firm/Supplier Authorized Representative

Signature: [Signature] **Title:** President **Date:** 08/05/2025

Bidder/Offeror Authorized Representative

Signature: [Signature] **Title:** Vice President **Date:** 08/05/2025

¹ Visit [Census.gov](https://www.census.gov) and select [NAICS](#) to search and identify the correct codes. Match type of work with NAICS code as closely as possible.

² To be provided only when the solicitation requires that bidder/offeror include a dollar amount in its bid/offer.

In the event the bidder/offeror does not receive award of the prime contract, any and all representations in this Letter of Intent and Affirmation shall be null and void.

Rev.: June 2018

Compliance Form No. 004



LETTER OF INTENT

BETWEEN BIDDER/OFFEROR AND
COUNTY BUSINESS ENTERPRISE (CBE) FIRM/SUPPLIER

This form is to be completed and signed for each CBE firm. If the PRIME is a CBE firm, please indicate the percentage performing with your own forces.

Solicitation No.: PNC2128715P1

Project Title: Engineering Services for PFAS Water Treatment/Transmission System Improvements

Bidder/Offeror Name: Carollo Engineers, Inc.
Address: 2728 North University Drive, Bldg. 2700 **City:** Coral Springs **State:** FL **Zip:** 33065
Authorized Representative: Elizabeth Fujikawa, PE **Phone:** 954-837-0030

CBE Firm/Supplier Name: WIRX Engineering, LLC
Address: 515 E. Las Olas Boulevard, Suite 120 **City:** Fort Lauderdale **State:** FL **Zip:** 33301
Authorized Representative: Andrew Nixon, P.E. **Phone:** 561-762-8918

- A. This is a letter of intent between the bidder/offeror on this project and a CBE firm for the CBE to perform work on this project.
- B. By signing below, the bidder/offeror is committing to utilize the above-named CBE to perform the work described below.
- C. By signing below, the above-named CBE is committing to perform the work described below.
- D. By signing below, the bidder/offeror and CBE affirm that if the CBE subcontracts any of the work described below, it may only subcontract that work to another CBE.

Work to be performed by CBE Firm

Description	NAICS ¹	CBE Contract Amount ²	CBE Percentage of Total Project Value
Geotechnical Engineering	541330	\$457,681.27	1.12 %
			%
			%

AFFIRMATION: I hereby affirm that the information above is true and correct.

CBE Firm/Supplier Authorized Representative

Signature: [Signature] **Title:** Managing Partner **Date:** 08/05/2025

Bidder/Offeror Authorized Representative

Signature: Elizabeth Fujikawa, P.E. ¹ Digitally signed by Elizabeth Fujikawa, P.E.
Date: 2025.08.05 16:07:39 -0400 **Title:** Vice President **Date:** 08/05/2025

¹ Visit [Census.gov](https://www.census.gov) and select [NAICS](#) to search and identify the correct codes. Match type of work with NAICS code as closely as possible.

² To be provided only when the solicitation requires that bidder/offeror include a dollar amount in its bid/offer.

In the event the bidder/offeror does not receive award of the prime contract, any and all representations in this Letter of Intent and Affirmation shall be null and void.

Rev.: June 2018

Compliance Form No. 004



LETTER OF INTENT

BETWEEN BIDDER/OFFEROR AND
COUNTY BUSINESS ENTERPRISE (CBE) FIRM/SUPPLIER

This form is to be completed and signed for each CBE firm. If the PRIME is a CBE firm, please indicate the percentage performing with your own forces.

Solicitation No.: PNC2128715P1

Project Title: Engineering Services for PFAS Water Treatment/Transmission System Improvements

Bidder/Offeror Name: Carollo Engineers, Inc.
Address: 2728 North University Drive, Bldg. 2700 **City:** Coral Springs **State:** FL **Zip:** 33065
Authorized Representative: Elizabeth Fujikawa, PE **Phone:** 954-837-0030

CBE Firm/Supplier Name: Engenuity Group, Inc.
Address: 300 Lock Road, Suite 302 **City:** Deerfield Beach **State:** FL **Zip:** 33442
Authorized Representative: C. Andre Rayman, PSM, President **Phone:** 954-895-0174

- A. This is a letter of intent between the bidder/offeror on this project and a CBE firm for the CBE to perform work on this project.
- B. By signing below, the bidder/offeror is committing to utilize the above-named CBE to perform the work described below.
- C. By signing below, the above-named CBE is committing to perform the work described below.
- D. By signing below, the bidder/offeror and CBE affirm that if the CBE subcontracts any of the work described below, it may only subcontract that work to another CBE.

Work to be performed by CBE Firm

Description	NAICS ¹	CBE Contract Amount ²	CBE Percentage of Total Project Value
Survey and Mapping	541370	\$916,133.41	2.25 %
			%
			%

AFFIRMATION: I hereby affirm that the information above is true and correct.

CBE Firm/Supplier Authorized Representative

Signature: C. Andre Rayman Digitally signed by C. Andre Rayman
Date: 2025.08.05 10:07:07 -0400 **Title:** President **Date:** 08/05/2025

Bidder/Offeror Authorized Representative

Signature: Elizabeth Fujikawa, P.E. Digitally signed by Elizabeth A. Fujikawa, P.E.
Date: 2025.08.28 13:19:22 -0400 **Title:** Vice President **Date:** 08/05/2025

¹ Visit [Census.gov](https://www.census.gov) and select [NAICS](#) to search and identify the correct codes. Match type of work with NAICS code as closely as possible.

² To be provided only when the solicitation requires that bidder/offeror include a dollar amount in its bid/offer.

In the event the bidder/offeror does not receive award of the prime contract, any and all representations in this Letter of Intent and Affirmation shall be null and void.

Rev.: June 2018

Compliance Form No. 004



LETTER OF INTENT BETWEEN BIDDER/OFFEROR AND COUNTY BUSINESS ENTERPRISE (CBE) FIRM/SUPPLIER

This form is to be completed and signed for each CBE firm. If the PRIME is a CBE firm, please indicate the percentage performing with your own forces.

Solicitation No.: PNC2128715P1

Project Title: Engineering Services for PFAS Water Treatment/Transmission System Improvements

Bidder/Offeror Name: Carollo Engineers, Inc.

Address: 2728 North University Drive, Bldg. 2700 City: Coral Springs State: FL Zip: 33065

Authorized Representative: Elizabeth Fujikawa, PE Phone: 954-837-0030

CBE Firm/Supplier Name: Florida Digital Reproduction Corp.

Address: 2830 W. State Rd 84 104 City: Fort Lauderdale State: FL Zip: 33312

Authorized Representative: Glenford Diston Phone: 954-963-2593

- A. This is a letter of intent between the bidder/offeror on this project and a CBE firm for the CBE to perform work on this project.
- B. By signing below, the bidder/offeror is committing to utilize the above-named CBE to perform the work described below.
- C. By signing below, the above-named CBE is committing to perform the work described below.
- D. By signing below, the bidder/offeror and CBE affirm that if the CBE subcontracts any of the work described below, it may only subcontract that work to another CBE.

Work to be performed by CBE Firm

Description	NAICS ¹	CBE Contract Amount ²	CBE Percentage of Total Project Value
Printing and Binding	423990, 541850, 561439	\$57,477.40	0.14 %
			%
			%

AFFIRMATION: I hereby affirm that the information above is true and correct.

CBE Firm/Supplier Authorized Representative

Signature: [Signature] Title: V.P. Date: 08/05/2025

Bidder/Offeror Authorized Representative

Signature: [Signature] Title: Vice President Date: 08/05/2025

¹ Visit Census.gov and select **NAICS** to search and identify the correct codes. Match type of work with NAICS code as closely as possible.

² To be provided only when the solicitation requires that bidder/offeror include a dollar amount in its bid/offer.

In the event the bidder/offeror does not receive award of the prime contract, any and all representations in this Letter of Intent and Affirmation shall be null and void.

Rev.: June 2018

Compliance Form No. 004