

ARLINGTON COUNTY, VIRGINIA  
OFFICE OF THE PURCHASING AGENT  
2100 CLARENDON BOULEVARD, SUITE 500  
ARLINGTON, VIRGINIA 22201

CONTRACT AWARD COVERPAGE

<b>TO:</b> HDR ENGINEERING, INC. 2650 PARK TOWER DRIVE VIENNA, VIRGINIA 22180	DATE ISSUED: CONTRACT NO: CONTRACT TITLE:	<u>11/24/2020</u> <u>19-261-RFP</u> <u>PROGRAM MANAGEMENT SERVICES</u>
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**THIS IS A NOTICE OF AWARD OF CONTRACT AND NOT AN ORDER. NO WORK IS AUTHORIZED UNTIL THE VENDOR RECEIVES A VALID COUNTY PURCHASE ORDER ENCUMBERING CONTRACT FUNDS.**

The contract documents consist of the terms and conditions of AGREEMENT No. 19-261-RFP including any attachments or amendments thereto.

**EFFECTIVE DATE:** IMMEDIATELY  
**EXPIRES:** 11/30/2022  
**RENEWALS:** EIGHT (8) RENEWALS REMAINING, FROM 12/1/2022 UNTIL 11/31/2029  
**COMMODITY CODE(S):** 92694  
**LIVING WAGE:** N

**EMPLOYEES NOT TO BENEFIT:**  
NO COUNTY EMPLOYEE SHALL RECEIVE ANY SHARE OR BENEFIT OF THIS CONTRACT NOT AVAILABLE TO THE GENERAL PUBLIC.

<u>VENDOR CONTACT:</u> BRIAN BALCHUNAS	<u>VENDOR TEL. NO.:</u>	<u>(301) 289-7209</u>
<u>EMAIL ADDRESS:</u> BRIAN.BALCHUNAS@HDRINC.COM		
<u>COUNTY CONTACT:</u> MARY STRAWN (DES-WPCB)	<u>COUNTY TEL. NO.:</u>	<u>(703) 228-6829</u>
<u>COUNTY CONTACT EMAIL:</u> MSTRAWN@ARLINGTONVA.US		

**PURCHASING DIVISION AUTHORIZATION**

Digitally signed by Sharon Lewis	Purchasing Agent	Date	11/24/2020
89B86B1AD301462...	Title	Date	

**ARLINGTON COUNTY, VIRGINIA  
OFFICE OF THE PURCHASING AGENT  
SUITE 500, 2100 CLARENDON BOULEVARD  
ARLINGTON, VA 22201**

**AGREEMENT NO. 19-261-RFP**

THIS AGREEMENT is made, on the date of execution by the County, between HDR Engineering, Inc. 2650 Park Tower Drive, Vienna, Virginia 22180 ("Contractor") a Nebraska corporation authorized to do business in the Commonwealth of Virginia, and the County Board of Arlington County, Virginia. The County and the Contractor, for the consideration hereinafter specified, agree as follows:

**1. CONTRACT DOCUMENTS**

The "Contract Documents" consist of:

- This Agreement
- Exhibit A – Scope of Work Phase 1
- Exhibit B – Scope of Work Phase 2
- Exhibit C – Schedule
- Exhibit D – Arlington County Workshops & Deliverables
- Exhibit E - Assumptions
- Exhibit F – Contract Pricing
- Exhibit G– County Nondisclosure and Data Security Agreement (Contractor)
- Exhibit H– County Nondisclosure and Data Security Agreement (Individual)

Where the terms and provisions of this Agreement vary from the terms and provisions of the other Contract Documents, the terms and provisions of this Agreement will prevail over the other Contract Documents, and the remaining Contract Documents will be complementary to each other. If there are any conflicts, the most stringent terms or provisions will prevail.

The Contract Documents set forth the entire agreement between the County and the Contractor. The County and the Contractor agree that no representative or agent of either party has made any representation or promise with respect to the parties' agreement that is not contained in the Contract Documents. The Contract Documents may be referred to below as the "Contract" or the "Agreement".

**2. SCOPE OF WORK**

The Contractor agrees to perform the services described in the Contract Documents (the "Work"). As detailed in Exhibits A & B the primary purpose of the Work is provision of Program Management Services related to upgrade of the Arlington County wastewater treatment facilities. It will be the Contractor's responsibility, at its sole cost, to provide the specific services set forth in the Contract Documents and sufficient services to fulfill the purposes of the Work. Nothing in the Contract Documents limits the Contractor's responsibility to manage the details and execution of the Work.

**3. PROJECT OFFICER**

The performance of the Contractor is subject to the review and approval of the County Project Officer, who will be appointed by the Director of the Arlington County department or agency requesting the Work under this Contract.

**4. CONTRACT TERM**

Time is of the essence. The Work will commence on the date of the execution of the Agreement by the County and must be completed no later than November 30, 2022 ("Initial Contract Term"), subject to any modifications provided in the Contract Documents. Upon satisfactory performance by the Contractor the County may, through issuance of a unilateral Notice of Award, authorize continuation of the Agreement under the same contract prices for not more than eight (8) additional 12-month periods, from December 1, 2022 until November 30, 2029 (each a "Subsequent Contract Term"). The Initial Contract Term and any Subsequent Contract Term(s) are together the "Contract Term".

**5. CONTRACT AMOUNT**

The County will pay the Contractor in accordance with the terms of the Payment section below and of Exhibit F for the Contractor's completion of the Work as required by the Contract Documents. The Contractor will complete the Work for the total amount specified in this section ("Contract Amount").

The County will not compensate the Contractor for any goods or services beyond those included in Exhibit A & B unless those additional goods or services are covered by a fully executed amendment to this Contract. Additional services will be billed at the rates set forth in Exhibit F unless otherwise agreed by the parties in writing.

**6. CONTRACT PRICE ADJUSTMENTS**

The Contract Amount/unit price(s) will remain firm until the end of the Initial Contract Term ("Price Adjustment Date"). To request a price adjustment, the Contractor or the County must submit a written request to the other party not less than 60 days before the Price Adjustment Date. Increases in the Contract Amount/unit price(s) will not exceed the percentage of change in the U.S. Department of Labor Consumer Price Index, All Items, Unadjusted, Urban Areas ("CPI-U") for the 12-month period ending in August of each year of the Contract.

Any Contract Amount/unit price(s) that result from this provision will become effective the day after the Price Adjustment Date and will be binding for 12 months. The new Price Adjustment Date will be 12 months after the price adjustment.

If the Contractor and the County have not agreed on a requested adjustment by 30 days before the Price Adjustment Date, the County may terminate the Contract, whether or not the County has previously elected to extend the Contract's term.

**7. STANDARD OF CARE**

The County is entering into this Contract in reliance on the Contractor's experience and abilities with respect to performing the services hereunder. In performing the Work, the Contractor will require that it and its agents and employees exercise the degree of skill and care that is normally accepted by members of the same profession currently practicing under similar conditions in the same locality ("Customary Standard of Care"). The Contractor will re-perform, without additional compensation, any services not meeting this Customary Standard of Care.

The Contractor will be responsible for the professional quality, completeness, technical accuracy and coordination of all designs, drawings, specifications, cost estimates and other services or materials provided, regardless of whether such drawings and documents are prepared by the Contractor or the Contractor's consultants. The plans, drawings, specifications and other documents that the Contractor prepares must be free from material errors, complete and appropriate for the purposes intended; and the

project, if constructed in accordance with such plans, drawings, specifications, and other documents, will be structurally sound and complete and a properly functioning facility suitable for the purposes for which it is intended as it relates to the above stated Customary Standard of Care.

The Contractor is responsible for all costs and expenses incurred by the County, including increased construction costs, when such costs and expenses are the result of any violation of this Standard of Care section. The County's review, approval or acceptance of or payment for any services required under this Contract does not release the Contractor from any liability for breach of this Standard of Care.

#### **8. PAYMENT**

The County will pay the Contractor monthly according to the provisions of this section. By the tenth day of each month, the Contractor will submit to the Project Officer an invoice describing the total work done during the preceding month, broken out by task. The Project Officer will either approve the invoice or require corrections. The County will pay the Contractor within 30 days after receipt of an approved invoice.

The invoice must be based on an estimated percentage of the total work under each task that was completed during the month, subject to the Project Officer's acceptance of the work and the estimate. If the Contractor has already been paid 90% of the total amount allocated for any task and work under that task is not complete, the County will pay the remaining amount due for that task only upon completion of the task. The County will not pay more than amount allocated for any task, regardless of the number of hours spent or the amount of expenses incurred by the Contractor to complete the task.

The number of the County Purchase Order by which shipments have been made or services have been performed must appear on all invoices.

#### **9. ADJUSTMENTS FOR CHANGE IN SCOPE**

The County may order additions, deletions and other revisions in the Work within the general scope of the project. If the Contractor believes that any change is not within the scope of the project or warrants additional compensation, the Contractor must notify the Project Officer as soon as the County requests the change; and the Contractor must then provide written notice of its position to the Project Officer within ten calendar days. The Contractor's notice must detail and document the basis for the claimed amount of additional compensation. The Contractor will not receive any additional compensation pursuant to this paragraph unless the parties execute a written Contract amendment and the County issues a purchase order consistent with the amendment.

#### **10. REIMBURSABLE EXPENSES**

Only reasonable project-related expenses identified in Exhibit F will be reimbursed. The Contractor will charge allowed reimbursable expenses on a unit-price basis and must provide verified invoices. The total amount paid for project-related expenses will not exceed the amount shown in Exhibit F.

The County will not reimburse the Contractor for any expenses under this Contract. The amount in Exhibit F includes all costs and expenses of providing the services described in this Contract.

#### **11. REIMBURSABLE TRAVEL-RELATED EXPENSES**

The County will not reimburse the Contractor for travel-related expenses for employees located within the greater Baltimore-Washington Metropolitan Area, as defined by the United States Office of

Management and Budget. For employees located outside this area, the County will reimburse for pre-approved travel-related expenses, documented with receipts, as follows:

Meals: The County will reimburse at the U.S. General Services Administration's ("GSA") per diem rates for the destination, current for the date of travel, with the first and last days of travel counted at 75% of the per diem rate.

Lodging: The County will reimburse for actual lodging costs at a reasonably priced commercial facility in the immediate area of where the Work is performed, up to the GSA's daily rates for the destination, current for the date of travel. Receipts for lodging must be itemized. Only room and tax charges will be reimbursed; no reimbursement will be made for additional expenses, including but not limited to, room service, laundry, telephone and in-room movies. If the Contractor or its employee shares a room with another person who is not connected with the performance of the Work, including a spouse, the County will reimburse for only the cost of a single room.

The applicable GSA per diem rates can be obtained at <http://www.gsa.gov/portal/content/104877>.

Transportation:

General

Reservations must be made in advance whenever possible to take advantage of all available discounts.

Ground Transportation

Use of public transportation is encouraged. The County will reimburse for the business use of personal or company vehicles, if allowed, at the GSA's mileage rates current at the time of travel. The Contractor's request for reimbursement may not include any personal use of the vehicle.

The County may approve reimbursement for rental of vehicles or use of taxicabs if the Contractor can demonstrate that to be the most economical option. Any reimbursement will cover only those rental charges, insurance and/or fuel fees allocable to work on the Contract and will not cover the purchase of liability insurance and/or collision/comprehensive insurance if the Contractor's or the employee's existing insurance coverage provides such protection.

Air Travel

The County will reimburse for air travel at the lowest available fare, typically economy. Tickets must be purchased at least seven days in advance, unless otherwise approved by the County.

Time limit: The County will not honor requests for travel reimbursement that are submitted more than 60 days after completion of the travel.

Non-reimbursable Expenses: The County will never reimburse for the following expenses:

1. Alcoholic beverages
2. Personal phone calls
3. Entertainment (e.g. pay TV, movies, night clubs, health clubs, theaters, bowling)
4. Personal expenses (e.g. laundry, valet, haircuts)
5. Personal travel insurance (e.g. life, medical, or property insurance) for airfare or rental cars
6. Auto repairs, maintenance and insurance costs for personal vehicles

**12. PAYMENT OF SUBCONTRACTORS**

The Contractor is obligated to take one of the two following actions within seven days after receipt of payment by the County for work performed by any subcontractor under this Contract:

- a. Pay the subcontractor for the proportionate share of the total payment received from the County attributable to the work performed by the subcontractor under this Contract; or
- b. Notify the County and the subcontractor, in writing, of the Contractor's intention to withhold all or a part of the subcontractor's payment, with the reason for nonpayment.

The Contractor is obligated to pay interest to the subcontractor on all amounts owed by the Contractor to the subcontractor that remain unpaid after seven days following receipt by the Contractor of payment from the County for work performed by the subcontractor under this Contract, except for amounts withheld as allowed in subsection b., above. Unless otherwise provided under the terms of this Contract, interest will accrue at the rate of 1% per month.

The Contractor must include in each of its subcontracts, if any are permitted, a provision requiring each subcontractor to include or otherwise be subject to the same payment and interest requirements with respect to each lower-tier subcontractor.

The Contractor's obligation to pay an interest charge to a subcontractor pursuant to this section may not be construed to be an obligation of the County. A Contract modification may not be made for the purpose of providing reimbursement for such interest charge. A cost reimbursement claim may not include any amount for reimbursement for such interest charge.

**13. NON-APPROPRIATION**

All payments by the County to the Contractor pursuant to this Contract are subject to the availability of an annual appropriation for this purpose by the County Board of Arlington County, Virginia ("Board"). In the event that the Board does not appropriate funds for the goods or services provided under this Contract, the County will terminate the Contract, without termination charge or other liability to the County, on the last day of the fiscal year or when the previous appropriation has been spent, whichever event occurs first.

**14. ESTIMATED QUANTITIES/NON-EXCLUSIVITY OF CONTRACTOR**

This Contract does not obligate the County to purchase a specific quantity of items or services during the Contract Term. Any quantities that are included in the Contract Documents are the present expectations of the County for the period of the Contract; and the County is under no obligation to buy that or any amount as a result of having provided this estimate or of having had any normal or otherwise measurable requirement in the past. The County may require more goods and/or services than the estimated annual quantities, and any such additional quantities will not give rise to any claim for compensation other than at the unit prices and/or rates in the Contract.

The County does not guarantee that the Contractor will be the exclusive provider of the goods or services covered by this Contract. The items or services covered by this Contract may be or become available under other County contract(s), and the County may determine that it is in its best interest to procure the items or services through those contract(s).

**15. COUNTY PURCHASE ORDER REQUIREMENT**

County purchases are authorized only if the County issues a Purchase Order in advance of the transaction, indicating that the ordering County agency has sufficient funds available to pay for the purchase. If the Contractor provides goods or services without a signed County Purchase Order, it does so at its own risk and expense. The County will not be liable for payment for any purchases made by its employees that are not authorized by the County Purchasing Agent.

**16. REPLACEMENT OF PERSONNEL AND SUBCONTRACTORS**

The County has the right reasonably to reject staff or subcontractors whom the Contractor assigns to the project. The Contractor must then provide replacement staff or subcontractors satisfactory to the County in a timely manner and at no additional cost to the County. The day-to-day supervision and control of the Contractor's and its subcontractors' employees is the sole responsibility of the Contractor.

The Contractor may not replace key personnel or subcontractors identified in its proposal, including the approved Project Manager, without the County's written approval. The Contractor must submit any request to remove or replace key personnel or subcontractors to the County Project Officer at least 15 calendar days in advance of the proposed action. The request must contain a detailed justification, including identification of the proposed replacement and his or her qualifications.

If the approved Project Manager must be absent for an extended period, the Contractor must provide an interim Project Manager, subject to the County's written approval.

If the approved Project Manager resigns or is terminated by the Contractor, the Contractor will replace the Project Manager with an individual with similar qualifications and experience, subject to the County's written approval.

**17. EMPLOYMENT DISCRIMINATION BY CONTRACTOR PROHIBITED**

During the performance of its work pursuant to this Contract:

- A. The Contractor will not discriminate against any employee or applicant for employment because of race, religion, color, sex, national origin, age or disability or on any other basis prohibited by state law. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause.
- B. Notices, advertisements and solicitations placed in accordance with federal law, rule or regulation will be deemed sufficient for meeting the requirements of this section.
- C. The Contractor will state in all solicitations or advertisements for employees that it places or causes to be placed that such Contractor is an Equal Opportunity Employer.
- D. The Contractor will comply with the provisions of the Americans with Disabilities Act of 1990 ("ADA"), which prohibits discrimination against individuals with disabilities in employment and mandates that disabled individuals be provided access to publicly and privately provided services and activities and will provide, at its sole expense, such reasonable accommodations as needed to perform the work hereunder.

- E. The Contractor must include the provisions of the foregoing paragraphs in every subcontract or purchase order of more than \$10,000.00 relating to this Contract so that the provisions will be binding upon each subcontractor or vendor.

**18. EMPLOYMENT OF UNAUTHORIZED ALIENS PROHIBITED**

In accordance with §2.2-4311.1 of the Code of Virginia, as amended, the Contractor must not during the performance of this Contract knowingly employ an unauthorized alien, as that term is defined in the federal Immigration Reform and Control Act of 1986.

**19. DRUG-FREE WORKPLACE TO BE MAINTAINED BY CONTRACTOR**

During the performance of this Contract, the Contractor must: (i) provide a drug-free workplace for its employees; (ii) post in conspicuous places, available to employees and applicants for employment, a statement notifying employees that the unlawful manufacture, sale, distribution, dispensation, possession, or use of a controlled substance or marijuana is prohibited in the Contractor's workplace and specifying the actions that will be taken against employees for violating such prohibition; (iii) state in all solicitations or advertisements for employees placed by or on behalf of the Contractor that the Contractor maintains a drug-free workplace; and (iv) include the provisions of the foregoing clauses in every subcontract or purchase order of more than \$10,000.00 relating to this Contract so that the provisions will be binding upon each subcontractor or vendor.

For the purposes of this section, "workplace" means the site(s) for the performance of the work required by this Contract.

**20. SAFETY**

The Contractor must require that it and its employees and subcontractors comply with all applicable local, state and federal policies, regulations and standards relating to safety and health, including the standards of the Virginia Occupational Safety and Health program of the Department of Labor and Industry for General Industry and for the Construction Industry and the applicable Federal Environmental Protection Agency and Virginia Department of Environmental Quality standards.

**21. TERMINATION**

The County may terminate this Contract at any time as follows: (1) for cause, if, as determined by the County, the Contractor is in breach or default or has failed to perform the Work satisfactorily; or (2) for the convenience of the County.

Upon receipt of a notice of termination, the Contractor must not place any further orders or subcontracts for materials, services or facilities; must terminate all vendors and subcontracts, except as are necessary for the completion of any portion of the Work that the County did not terminate; and must immediately deliver all documents related to the terminated Work to the County.

Any purchases that the Contractor makes after the notice of termination will be the sole responsibility of the Contractor, unless the County has approved the purchases in writing as necessary for completion of any portion of the Work that the County did not terminate.

If any court of competent jurisdiction finds a termination for cause by the County to be improper, then the termination will be deemed a termination for convenience.

**A. TERMINATION FOR CAUSE, INCLUDING BREACH AND DEFAULT; CURE**



1. Termination for Unsatisfactory Performance. If the County determines that the Contractor has failed to perform satisfactorily, then the County will give the Contractor written notice of such failure(s) and the opportunity to cure them within 15 days or any other period specified by the County ("Cure Period"). If the Contractor fails to cure within the Cure Period, the County may terminate the Contract for failure to provide satisfactory performance by providing written notice with a termination date. The Contractor must submit any request for termination costs, with all supporting documentation, to the County Project Officer within 30 days after the expiration of the Cure Period. The County may accept or reject the request for termination costs, in whole or in part, and may notify the Contractor of its decision within a reasonable time.

In the event of termination by the County for failure to perform satisfactorily, the Contractor must continue to provide its services as previously scheduled through the termination date, and the County must continue to pay all fees and charges incurred through the termination date.

2. Termination for Breach or Default. If the County terminates the Contract for default or breach of any Contract provision or condition, then the termination will be immediate after notice of termination to the Contractor (unless the County provides for an opportunity to cure), and the Contractor will not be permitted to seek termination costs.

Upon any termination pursuant to this section, the Contractor will be liable to the County for costs that the County must expend to complete the Work, including costs resulting from any related delays and from unsatisfactory or non-compliant work performed by the Contractor or its subcontractors. The County will deduct such costs from any amount due to the Contractor; or if the County does not owe the Contractor, the Contractor must promptly pay the costs within 15 days of a demand by the County. This section does not limit the County's recovery of any other damages to which it is entitled by law.

Except as otherwise directed by the County, the Contractor must stop work on the date of receipt the notice of the termination.

#### **B. TERMINATION FOR THE CONVENIENCE OF THE COUNTY**

The County may terminate this Contract in whole or in part whenever the Purchasing Agent determines that termination is in the County's best interest. The County will give the Contractor at least 15 days' notice in writing. The notice must specify the extent to which the Contract is terminated and the effective termination date. The Contractor will be entitled to termination costs, plus any other reasonable amounts that the parties might negotiate; but no amount will be allowed for anticipatory profits.

Except as otherwise directed by the County, the Contractor must stop work on the date of receipt of the notice of the termination.

#### **22. INDEMNIFICATION**

The Contractor covenants for itself, its employees and its subcontractors to save, defend, hold harmless and indemnify the County and all of its elected and appointed officials, officers, current and former employees, agents, departments, agencies, boards and commissions (collectively the "County

Indemnitees”) from and against any and all claims, charges and investigations made by third parties or Contactor employees, for any and all losses, damages, injuries, fines, penalties, costs (including court costs and attorneys’ fees), charges, liability, demands or exposure resulting from, arising out of or in any way connected with the Contractor’s negligent acts or omissions, including the negligent acts or omissions of its employees and/or subcontractors, in performance or nonperformance of the Contract. This duty to save, defend, hold harmless and indemnify will survive the termination of this Contract. If the Contractor fails or refuses to fulfill its obligations contained in this section, the Contractor must reimburse the County for any and all resulting payments and expenses, including reasonable attorneys’ fees. The Contractor must pay such expenses upon demand by the County, and failure to do so may result in the County withholding such amounts from any payments to the Contractor under this Contract.

**23. INTELLECTUAL PROPERTY INDEMNIFICATION**

The Contractor represents that in providing services under this Contract neither the Contractor nor any subcontractor is infringing on the intellectual property rights (including, but not limited to, copyright, patent, mask and trademark) of third parties.

If the Contractor or any of its employees or subcontractors uses any design, device, work or material that is covered by patent or copyright, it is understood that the Contract Amount includes all royalties, licensing fees, and any other costs arising from such use in connection with the Work under this Contract.

The Contractor covenants for itself, its employees and its subcontractors to save, defend, hold harmless, and indemnify the County Indemnitees, as defined above, from and against any and all claims, losses, damages, injuries, fines, penalties, costs (including court costs and attorneys’ fees), charges, liability or exposure for infringement of or on account of any trademark, copyright, patented or unpatented invention, process or article manufactured or used in the performance of this Contract. This duty to save, defend, hold harmless and indemnify will survive the termination of this Contract. If the Contractor fails or refuses to fulfill its obligations contained in this section, the Contractor must reimburse the County for any and all resulting payments and expenses, including reasonable attorneys’ fees. The Contractor must pay such expenses upon demand by the County, and failure to do so may result in the County withholding such amounts from any payments to the Contractor under this Contract. It is agreed that Contractor shall not be liable for such infringements to the extent caused by third parties over which it has no control.

**24. COPYRIGHT**

By this Contract, the Contractor irrevocably transfers, assigns, sets over and conveys to the County all rights, title and interest, including the sole exclusive and complete copyright interest, in any and all copyrightable works created pursuant to this Contract. The Contractor will execute any documents that the County requests to formalize such transfer or assignment.

The rights granted to the County by this section are irrevocable and may not be rescinded or modified, including in connection with or as a result of the termination of or a dispute concerning this Contract.

The Contractor may not use subcontractors or third parties to develop or provide input into any copyrightable materials produced pursuant to this Contract without the County’s advance written approval and unless the Contractor includes this Copyright provision in any contract or agreement with such subcontractors or third parties related to this Contract.

## **25. OWNERSHIP OF WORK PRODUCT**

This Contract does not confer on the Contractor any ownership rights or rights to use or disclose the County's data or inputs.

All work product, in any form, that results from this Contract is the property of the County and must be provided or returned to the County upon completion, termination, or cancellation of this Contract. The Contractor will not use or allow others to use the work product for any purpose other than performance of this Contract without the written consent of the County. Any reuse or modification of such Work Product for purposes other than those intended by the Contractor in its Scope of Services shall be at County's sole risk and without liability to the Contractor.

The work product is confidential, and the Contractor may neither release the work product nor share its contents. The Contractor will refer all inquiries regarding the status of any work product to the Project Officer or to his or her designee. At the County's request, the Contractor will deliver all work product, including hard copies of electronic files, to the Project Officer and will destroy all electronic files. Notwithstanding the foregoing, Contractor may retain a copy of information received, developed, or otherwise relating to this contract in order to prove compliance with its contractual obligations and applicable professional standards, provided that such information is kept confidential in accordance with the provisions of this Contract. Information stored on routine back-up media for the purpose of disaster recovery will be subject to destruction in due course in accordance with Contractor's data life governance policy and will not be within the requirement for the return or destruction of records as contemplated by this paragraph. Latent data such as deleted files and other non-logical data types, such as memory dumps, swap files, temporary files, printer spool files and metadata that can customarily only be retrieved by computer forensics experts and are generally considered inaccessible without the use of specialized tools and techniques will not be within the requirement for the return or destruction of records as contemplated by this paragraph .

The Contractor must include the provisions of this section as part of any contract or agreement related to this Contract into which it enters with subcontractors or other third parties.

The provisions of this section will survive any termination or cancellation of this Contract.

## **26. DATA SECURITY AND PROTECTION**

The Contractor will hold County Information, as defined below, in the strictest confidence and will comply with all applicable County security and network resources policies, as well as all local, state and federal laws and regulatory requirements concerning data privacy and security. The Contractor must develop, implement, maintain, continually monitor and use appropriate administrative, technical and physical security measures to control access to and to preserve the confidentiality, privacy, integrity and availability of all electronically maintained or transmitted information received from or created or maintained on behalf of the County. For purposes of this provision, and as more fully described in this Contract and in the County's Non-Disclosure and Data Security Agreement (NDA), "County Information" includes, but is not limited to, electronic information; documents; data; images; financial records; personally identifiable information; personal health information (PHI); personnel, educational, voting, registration, tax and assessment records; information related to public safety; County networked resources; and County databases, software and security measures that are created, maintained, transmitted or accessed to perform the Work under this Contract.

- (a) **County's Non-Disclosure and Data Security Agreement.** The Contractor and its Designees (Contractor Designees shall include, but shall not be limited to, all Contractor-controlled agents or subcontractors working on-site at County facilities or otherwise performing any work under this Contract) must sign the NDA (Exhibit G) before performing any work or obtaining or permitting access to County networked resources, application systems or databases. The Contractor will make copies of the signed NDAs available to the County Project Officer upon request.
- (b) **Use of Data.** The Contractor will make reasonable efforts to ensure against any unauthorized use, distribution or disclosure of or access to County Information and County networked resources by itself or its Designees. Use of County Information other than as specifically outlined in the Contract Documents is strictly prohibited. The Contractor will be solely responsible for any unauthorized use, reuse, distribution, transmission, manipulation, copying, modification, access to or disclosure of County Information and for any non-compliance with this provision by itself or by its Designees.
- (c) **Data Protection.** The Contractor will protect the County's Information according to standards established by the National Institute of Standards and Technology, including 201 CMR 17.00, Standards for the Protection of Personal Information of Residents of the Commonwealth, as applicable, and no less rigorously than it protects its own data and proprietary or confidential information. The Contractor must provide to the County a copy of its data security policy and procedures for securing County Information and a copy of its disaster recovery plan(s). If requested by the County, the Contractor must also provide annually a cybersecurity audit management response and attestation letter.
- (d) **Security Requirements.** The Contractor must maintain the most up-to-date anti-virus programs, industry-accepted firewalls and other protections on its systems and networking equipment. The Contractor certifies that all systems and networking equipment that support, interact with or store County Information meet NIST 800-171 standards and industry best practices for physical, network and system security requirements. Printers, copiers or fax machines that store County Data into hard drives must provide data-at-rest encryption. The County's Chief Information Security Officer or designee must approve any deviation from these standards. The downloading of County information onto laptops, other portable storage media or services such as personal e-mail, Dropbox etc. is prohibited without the written authorization of the County's Chief Information Security Officer or designee.
- (e) **Conclusion of Contract.** Within 30 days after the termination, cancellation, expiration or other conclusion of the Contract, the Contractor must, at no cost to the County, return all County Information to the County in a format defined by the County Project Officer. The County may request that the Information be destroyed. The Contractor is responsible for ensuring the return and/or destruction of all Information that is in the possession of its subcontractors or agents. The Contractor must certify completion of this task in writing to the County Project Officer. Notwithstanding the foregoing, Contractor may retain a copy of information received, developed, or otherwise relating to this contract in order to prove compliance with its contractual obligations and applicable professional standards, provided that such information is kept confidential in accordance with the provisions of this Contract. Information stored on routine back-up media for the purpose of disaster recovery will be

subject to destruction in due course in accordance with Contractor's data life governance policy and will not be within the requirement for the return or destruction of records as contemplated by this paragraph. Latent data such as deleted files and other non-logical data types, such as memory dumps, swap files, temporary files, printer spool files and metadata that can customarily only be retrieved by computer forensics experts and are generally considered inaccessible without the use of specialized tools and techniques will not be within the requirement for the return or destruction of records as contemplated by this paragraph.

- (f) **Notification of Security Incidents.** The Contractor must notify the County Chief Information Officer and County Project Officer within three business days of the discovery of any unintended access to or use or disclosure of County Information.
- (g) **Subcontractors.** If subcontractors are permitted under this Contract, the requirements of this entire section must be incorporated into any agreement between the Contractor and the subcontractor. If the subcontractor will have access to County Information, each subcontractor must provide to the Contractor a copy of its data security policy and procedures for securing County Information and a copy of its disaster recovery plan(s).

### **27. ETHICS IN PUBLIC CONTRACTING**

This Contract incorporates by reference Article 9 of the Arlington County Purchasing Resolution, as well as all state and federal laws related to ethics, conflicts of interest or bribery, including the State and Local Government Conflict of Interests Act (Code of Virginia § 2.2-3100 et seq.), the Virginia Governmental Frauds Act (Code of Virginia § 18.2-498.1 et seq.) and Articles 2 and 3 of Chapter 10 of Title 18.2 of the Code of Virginia, as amended (§ 18.2-438 et seq.). The Contractor certifies that its proposal was made without collusion or fraud; that it has not offered or received any kickbacks or inducements from any other offeror, supplier, manufacturer or subcontractor; and that it has not conferred on any public employee having official responsibility for this procurement any payment, loan, subscription, advance, deposit of money, services or anything of more than nominal value, present or promised, unless consideration of substantially equal or greater value was exchanged.

### **28. COUNTY EMPLOYEES**

No Arlington County employee may share in any part of this Contract or receive any benefit from the Contract that is not available to the general public.

### **29. FORCE MAJEURE**

Neither party will be held responsible for failure to perform the duties and responsibilities imposed by this Contract if such failure is due to a fire, riot, rebellion, natural disaster, war, act of terrorism or act of God that is beyond the control of the party and that makes performance impossible or illegal, unless otherwise specified in the Contract.

### **30. AUTHORITY TO TRANSACT BUSINESS**

The Contractor must, pursuant to Code of Virginia § 2.2-4311.2, be and remain authorized to transact business in the Commonwealth of Virginia during the entire term of this Contract. Otherwise, the Contract is voidable at the sole option of and with no expense to the County.

### **31. RELATION TO COUNTY**

The Contractor is an independent contractor, and neither the Contractor nor its employees or subcontractors will be considered employees, servants or agents of the County. Any Contractor

employees assigned to work on the Contract are an integral part of the Contractor's business and solely the employees of the Contractor. At such, the Contractor must provide all manner of proper wage and benefit administration (including the provision and coordination of FMLA and other leave), supervision, and accommodations. The County will not be responsible for any negligence or other wrongdoing by the Contractor or its employees, servants or agents. The County will not withhold payments to the Contractor for any federal or state unemployment taxes, federal or state income taxes or Social Security tax or for any other benefits. The County will not provide to the Contractor any insurance coverage or other benefits, including workers' compensation. The Contractor shall promptly notify the Project Officer of any and all personnel issues affecting the work. The Contractor shall promptly undertake investigation and remediation of such issues, as applicable.

### **32. ANTITRUST**

The Contractor conveys, sells, assigns and transfers to the County all rights, title and interest in and to all causes of action under state or federal antitrust laws that the Contractor may have relating to this Contract.

### **33. REPORT STANDARDS**

The Contractor must submit all written reports required by this Contract for advance review in a format approved by the Project Officer. Reports must be accurate and grammatically correct and should not contain spelling errors. The Contractor will bear the cost of correcting grammatical or spelling errors and inaccurate report data and of other revisions that are required to bring the report(s) into compliance with this section.

Whenever possible, reports must comply with the following guidelines:

- printed double-sided on at least 30% recycled-content and/or tree-free paper
- recyclable and/or easily removable covers or binders made from recycled materials (proposals with glued bindings that meet all other requirements are acceptable)
- avoid use of plastic covers or dividers
- avoid unnecessary attachments or documents or superfluous use of paper (e.g. separate title sheets or chapter dividers)

### **34. AUDIT**

The Contractor must provide to the County the complete findings and all components of an independent certified public accountant's audit of its finances and program operation within two months after the close of Contractor's fiscal year. If a management letter was not prepared with the audit, the Contractor must so certify in writing as part of the audit report to the County. The Contractor must allow the County to review its records as the County deems necessary for audit purposes within 15 calendar days of the County's receipt of the findings. All accounts of the Contractor are subject to audit.

The Contractor must retain all books, records and other documents related to this Contract for at least five years after the final payment and must allow the County or its authorized agents to examine the documents during this period and during the Contract Term. The Contractor must provide any requested documents to the County for examination within 15 days of the request, at the Contractor's expense. Should the County's examination reveal any overcharging by the Contractor, the Contractor must, within 30 days of County's request, reimburse the County for the overcharges and for the reasonable costs of the County's examination, including, but not limited to, the services of external audit firm and attorney's fees; or the County may deduct the overcharges and examination costs from any amount that the County

owes to the Contractor. If the Contractor wishes to destroy or dispose of any records related to this Contract (including confidential records to which the County does not have ready access) within five years after the final payment, the Contractor must give the County at least 30 days' notice and must not dispose of the documents if the County objects.

**35. ASSIGNMENT**

The Contractor may not assign, transfer, convey or otherwise dispose of any award or any of its rights, obligations or interests under this Contract without the prior written consent of the County.

**36. AMENDMENTS**

This Contract may not be modified except by written amendment executed by persons duly authorized to bind the Contractor and the County.

**37. ARLINGTON COUNTY PURCHASING RESOLUTION AND COUNTY POLICIES**

Nothing in this Contract waives any provision of the Arlington County Purchasing Resolution, which is incorporated herein by reference, or any applicable County policy.

**38. DISPUTE RESOLUTION**

All disputes arising under this Agreement or concerning its interpretation, whether involving law or fact and including but not limited to claims for additional work, compensation or time, and all claims for alleged breach of contract must be submitted in writing to the Project Officer as soon as the basis for the claim arises. In accordance with the Arlington County Purchasing Resolution, claims denied by the Project Officer may be submitted to the County Manager in writing no later than 60 days after the final payment. The time limit for a final written decision by the County Manager is 30 days. Procedures concerning contractual claims, disputes, administrative appeals and protests are contained in the Arlington County Purchasing Resolution. The Contractor must continue to work as scheduled pending a decision of the Project Officer, County Manager, County Board or a court of law.

**39. APPLICABLE LAW, FORUM, VENUE AND JURISDICTION**

This Contract is governed in all respects by the laws of the Commonwealth of Virginia; and the jurisdiction, forum and venue for any litigation concerning the Contract or the Work is in the Circuit Court for Arlington County, Virginia, and in no other court.

**40. ARBITRATION**

No claim arising under or related to this Contract may be subject to arbitration.

**41. NONEXCLUSIVITY OF REMEDIES**

All remedies available to the County under this Contract are cumulative, and no remedy will be exclusive of any other at law or in equity.

**42. NO WAIVER**

The failure to exercise a right provided for in this Contract will not be a subsequent waiver of the same right or of any other right.

**43. SEVERABILITY**

The sections, paragraphs, clauses, sentences, and phrases of this Contract are severable; and if any section, paragraph, clause, sentence or phrase of this Contract is declared invalid by a court of competent jurisdiction, the rest of the Contract will remain in effect.

**44. ATTORNEY'S FEES**

In the event that the County prevails in any legal action or proceeding brought by the County to enforce any provision of this Contract, the Contractor will pay the County's reasonable attorney's fees and expenses.

**45. SURVIVAL OF TERMS**

In addition to any statement that a specific term or paragraph survives the expiration or termination of this Contract, the following sections also survive: INDEMNIFICATION; INTELLECTUAL PROPERTY INDEMNIFICATION; RELATION TO COUNTY; OWNERSHIP OF WORK PRODUCT; AUDIT; COPYRIGHT; DISPUTE RESOLUTION; APPLICABLE LAW AND JURISDICTION; ATTORNEY'S FEES, AND DATA SECURITY AND PROTECTION.

**46. HEADINGS**

The section headings in this Contract are inserted only for convenience and do not affect the substance of the Contract or limit the sections' scope.

**47. AMBIGUITIES**

The parties and their counsel have participated fully in the drafting of this Agreement; and any rule that ambiguities are to be resolved against the drafting party does not apply. The language in this Agreement is to be interpreted as to its plain meaning and not strictly for or against any party.

**48. NOTICES**

Unless otherwise provided in writing, all written notices and other communications required by this Contract are deemed to have been given when either (a) delivered in person; (b) delivered by an agent, such as a delivery service; or (c) deposited in the United States mail, postage prepaid, certified or registered and addressed as follows:

**TO THE CONTRACTOR:**

Brian Balchunas, Senior Vice President  
HDR Engineering, Inc.  
8115 Maple Lawn Blvd, Suite 360  
Fulton, MD 20709

**TO THE COUNTY:**

Mary Strawn, Project Officer  
Arlington County Water Pollution Control Plant  
3402 S. Glebe Road  
Arlington, Virginia 22202

AND

Sharon Lewis, Purchasing Division Chief  
Arlington County, Virginia  
2100 Clarendon Boulevard, Suite 500  
Arlington, Virginia 22201



**49. ARLINGTON COUNTY BUSINESS LICENSES**

The Contractor must comply with the provisions of Chapter 11 (“Licenses”) of the Arlington County Code, if applicable. For information on the provisions of that Chapter and its applicability to this Contract, the Contractor must contact the Arlington County Business License Division, Office of the Commissioner of the Revenue, 2100 Clarendon Blvd., Suite 200, Arlington, Virginia, 22201, telephone number (703) 228-3060.

**50. NON-DISCRIMINATION NOTICE**

Arlington County does not discriminate against faith-based organizations.

**51. ADA COMPLIANCE**

The Contractor is solely responsible for its compliance with the ADA and must defend and hold the County harmless from any expense or liability arising from the Contractor’s non-compliance.

The Contractor’s responsibilities related to ADA compliance include, but are not limited to, the following:

- The Contractor must design the project to meet all ADA requirements.
- The Contractor must monitor Work performed by the construction contractor and inform the County and the construction contractor immediately of any Work that does not conform with the ADA.

Neither the Arlington County Inspection Services Division, nor any County staff and/or third-party inspection service, is responsible for verifying that the Project’s design complies with the ADA.

**52. INSURANCE REQUIREMENTS**

Before beginning work under the Contract or any extension, the Contractor must provide to the County Purchasing Agent a Certificate of Insurance indicating that the Contractor has in force at a minimum the coverage below. The Contractor must maintain this coverage until the completion of the Contract or as otherwise stated in the Contract Documents. All required insurance coverage must be acquired from insurers that are authorized to do business in the Commonwealth of Virginia, with a rating of “A- “or better and a financial size of “Class VII” or better in the latest edition of the A.M. Best Co. Guides.

- a. Workers Compensation - Virginia statutory workers compensation (W/C) coverage, including Virginia benefits and employer’s liability with limits of \$100,000/100,000/500,000. The County will not accept W/C coverage issued by the Injured Worker’s Insurance Fund, Towson, MD.
- b. Commercial General Liability - \$1,000,000 per occurrence, with \$2,000,000 annual aggregate covering all premises and operations and including personal injury, completed operations, contractual liability, independent contractors, and products liability. The general aggregate limit must apply to this Contract. Evidence of contractual liability coverage must be provided with the certificate.
- c. Business Automobile Liability - \$1,000,000 combined single-limit (owned, non-owned and hired).
- d. The Contractor shall carry Errors and Omissions or Professional Liability insurance which will pay for damages arising out of errors or omissions in the rendering, or failure to render services or

perform Work under the contract, in the amount of \$1,000,000 per claim and \$3 million in the annual aggregate.

- e. Additional Insured – The County and its officers, elected and appointed officials, employees and agents must be named as additional insureds on all policies except workers compensation and automotive and professional liability; and the additional insured endorsement must be provided with the certificate.
- f. Cancellation - If there is a material change or reduction in or cancellation of any of the above coverages during the Contract Term, the Contractor must notify the Purchasing Agent immediately and must, with no lapse in coverage, obtain replacement coverage that is consistent with the terms of this Contract. Not having the required insurance throughout the Contract Term is grounds for termination of the Contract.
- g. Claims-Made Coverage - Any “claims made” policy must remain in force, or the Contractor must obtain an extended reporting endorsement, until the applicable statute of limitations for any claims has expired.
- h. Contract Identification - All insurance certificates must state this Contract’s number and title.

The Contractor must disclose to the County the amount of any deductible or self-insurance component of any of the required policies. With the County’s approval, the Contractor may satisfy its obligations under this section by self-insurance for all or any part of the insurance required, provided that the Contractor can demonstrate sufficient financial capacity. In order to do so, the Contractor must provide the County with its most recent actuarial report and a copy of its self-insurance resolution.

The County may request additional information to determine if the Contractor has the financial capacity to meet its obligations under a deductible and may require a lower deductible; that funds equal to the deductible be placed in escrow; a certificate of self-insurance; collateral; or another mechanism to guarantee the amount of the deductible and ensure protection for the County.

The County’s acceptance or approval of any insurance will not relieve the Contractor from any liability or obligation imposed by the Contract Documents.

The Contractor is responsible for the Work and for all materials, tools, equipment, appliances and property used in connection with the Work. The Contractor assumes all risks for damage or injury to the property used or persons employed in connection with the Work and for of all damage or injury to any person or property, wherever located, resulting from any negligent acts, omission, commission or operation under the Contract or in connection in any way whatsoever with the Work. The Contractor’s insurance shall be the primary non-contributory insurance for any work performed under this Contract.

The Contractor is as fully responsible to the County for the negligent acts and omissions of its subcontractors and of persons employed by them as it is for acts and omissions of persons whom the Contractor employs directly.

### **53. COUNTERPARTS**

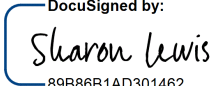
This Agreement may be executed in one or more counterparts and all of such counterparts shall together constitute one and the same instrument. Original signatures transmitted and received via facsimile or

other electronic transmission (e.g., PDF or similar format) are true and valid signatures for all purposes hereunder and shall be effective as delivery of a manually executed original counterpart.

WITNESS these signatures:

THE COUNTY BOARD OF ARLINGTON  
COUNTY, VIRGINIA

HDR ENGINEERING, INC.

AUTHORIZED SIGNATURE:  \_\_\_\_\_  
89B86B1AD301462...

AUTHORIZED SIGNATURE:  \_\_\_\_\_  
708A8FFA73904DD...

NAME: Sharon Lewis  
TITLE: Purchasing Agent  
DATE: 11/24/2020 \_\_\_\_\_

NAME AND TITLE: Andrea Ryon, Vice President  
DATE: 11/23/2020 \_\_\_\_\_

## EXHIBIT A - SCOPE OF WORK PHASE 1

### General Description and Overview

This scope describes performance of program management services pertaining to the implementation of new solids handling processes at the Arlington Water Pollution Control Plant (WPCP) for the Water Pollution Control Bureau (WPCB). The new solids handling processes will entail upgrades or replacement of nearly all solids handling processes (Facilities). A Thermal Hydrolysis Process (THP) followed by Anaerobic Digestion (THP/AD) form the backbone of the new treatment train. A marketable Class A biosolids product and biogas utilization system to clean and make use of methane gas either on- or off-site are also envisioned. HDR Engineering, Inc. (HDR) will serve as the Program Manager for this work. Brian Balchunas, P.E. will serve as the overall Program Manager and is responsible for day-to-day management, execution of the program, and all matters related to the Scope. Mary Strawn from the Arlington County WPCB will serve as the Project Officer and is the main point of contact for all matters related to the scope, unless another Arlington County staff member is designated.

HDR will develop and manage a comprehensive program for the engineering, design, construction, maintenance, startup, and operation necessary to add sustainable equipment and systems to effectively recover Arlington County renewable resources, produce a Class A biosolids product, and most efficiently utilize the biogas (the Program). HDR will build off the new solids handling Facilities identified in the "Arlington WPCB Solids Master Plan" (Report), and as described in the FY19-28 Capital Improvement Program (CIP). Generally, the services provided by HDR will include the following:

- Review and confirmation of the Report recommendation to verify that the proposed technologies continue to be the most appropriate for the WPCB
- Determine the best strategy for use of the produced biogas
- Prepare the Facilities Plan for the entire program of upgrades
- Assist in determining the optimal project delivery method(s) for the upgrades including identifying major elements (or "packages"), evaluating delivery methods, and developing criteria for selecting the most appropriate method(s)
- Based on the selected delivery method for each package, assist with procurement of project design engineers, construction contracts and/or delivery teams, and oversight of contractors once agreements are in place. For the purposes of this RFP, the "Delivery Team" is defined as any individual firm or combination of firms providing Design, Construction and/or Operations related services.
- Identify and assist in obtaining necessary local, state, and federal permits with governmental agencies
- Assist in developing agreements with outside utilities or other agencies for product use
- Engage in community outreach, including the development of correspondence, presentations, websites, and other communication platforms
- Oversee design and construction management services, including all necessary administrative and engineering processes such as progress meetings, electronic documentation and PM software management, value engineering, and coordination between delivery teams
- Coordinate the review and testing of completed program components
- Develop a product marketing plan for Class A biosolids
- Provide other related as-needed program management tasks during the term of the Agreement. Such services shall be related to the Program and may include specialized services as determined necessary by the WPCB.

The completed Program will enhance operating conditions and reliability of the solids handling processes while continuing to meet all permit requirements and ensure a continued commitment to environmental stewardship. The scope of the Program may include, but not be limited to, the following facilities:

- Sludge thickening, screening, and/or pre-dewatering
- Thermal hydrolysis pretreatment equipment
- Mesophilic anaerobic digestion systems
- Dewatering equipment
- Mitigation of impacts from any side streams
- Gas cleaning and combined heat and power generation or gas distribution equipment
- Auxiliary boiler/steam generation system
- Electrical power distribution and/or natural gas fuel systems
- Odor and air emissions control
- Instrumentation and controls
- Dewatered biosolids loading facilities
- Site preparation and site improvements

HDR will perform program management services as identified in the following seven categories (service areas): Ongoing, Scope Development, Project Delivery and Procurement, Planning and Design, Construction Oversight, Operations and Maintenance, and Other Services.

- Service Area 1 - Ongoing Services (SA1): HDR will develop a Program Management Plan (“Work Plan”) including setting up controls to track schedule and budget. HDR will also provide communication, permitting, and cost estimating throughout the program.
- Service Area 2 - Scope Development (SA2): HDR will create a Facilities Plan to serve as a bridging document to the Delivery Team. In advance of this plan, HDR will confirm the recommendation of the Report and evaluate the best use of the renewable natural gas created during anaerobic digestion.
- Service Area 3 - Project Delivery and Procurement (SA3): HDR will analyze and recommend project delivery approaches appropriate for detailed design, construction and operation of the proposed Facilities. This includes identifying packages within the Program, evaluating delivery methods, and developing criteria for selecting the most appropriate method(s). HDR will then assist with the procurement of the Delivery Team(s).
- Service Area 4 - Planning and Design (SA4): HDR's role during the design period is to ensure that planned program meets Arlington County's objectives, including reliability and operations and maintenance needs. Items affecting these needs may include design reviews, any value engineering, incorporating value added changes, project documentation and delivery team negotiations.
- Service Area 5 - Construction Oversight (SA5): HDR's role during the construction period is to ensure that executed Program meets Arlington County's operations and maintenance needs through final completion. This may include routing construction documents for review and approval, full time on-site inspections, equipment testing and verification. The level of oversight will vary based on the selected delivery method.
- Service Area 6 - Operations and Maintenance (SA6): HDR will oversee and advise WPCB staff on integrating the improved solids handling processes into daily operations. Services include asset management, evaluating operating parameters, development of system O&M manuals, providing additional training, and other assistance as needed.
- Service Area 7 - Other Services (SA7): HDR will provide other services as requested and approved by the County. These services include, but are not limited to: coordinating site visits, geotechnical

evaluations, pilot testing, process optimization, and tracking WPCB impacts to the County's sustainability goals.

Arlington County estimates that the Facilities will be complete in eight (8) to nine (9) years, commencing in 2020. As provided in Arlington County Purchasing Resolution 4-102(2)C, the Project will be executed utilizing multiphase professional services contracts to HDR because critical information developed in Phase 1 will be necessary to the negotiation of the following phases. It is envisioned that this Program will be executed in two phases, and the relationship between the anticipated phases and services areas is listed below. The scope of work provided herein is for Phase 1 services, which is generally all of SA1, SA2, SA3, and portions of SA6 and SA7.

SA	SA Title	Anticipated Phase	Notes Related to Phase 1:
1	Ongoing Services	Phase 1, and all subsequent phases	
2	Project Scope Development	Phase 1	
3	Project Delivery and Procurement	Phase 1	
4	Planning and Design	Subsequent Phases	
5	Construction Management	Subsequent Phases	
6	Operations and Maintenance	Phase 1 and subsequent phases	Phase 1 to include marketing assistance with Class A Biosolids Marking Plan listed under SA6.
7	Other Services	Phase 1 and subsequent phases	Phase 1 to include travel for site visits, pilot testing as necessary, associated technology investigations, site planning for potential future facilities, and carbon footprint analysis.

Phase 1 services are anticipated to last 24 months. Refer to Exhibit A for a preliminary schedule.

### Service Area Descriptions

#### Service Area 1: Ongoing Services

HDR will develop a Program Management Plan ("Work Plan") including setting up controls to track schedule and budget. During Phase 1, the Work Plan will be created with updates being provided at major project milestones or, at a minimum, at the beginning of each phase of the Project. The Work Plan is considered a "living document" and ongoing efforts are included in Phase 1 for periodic review and update. HDR will also provide ongoing services for communication, permitting, and cost estimating throughout the Program.

1. Perform Program Management Administration under the direction of the Project Officer:
  - a. Program Administration activities will entail the full range of duties to ensure that staffing, schedule, budget (HDR and program), and other controls are appropriate and documented.
  - b. Program Manager will provide on-site staff for Phase 1 services at an agreed upon schedule with Arlington County. It is anticipated that the Program Manager will be onsite no less than one day per week unless otherwise approved by the Project Officer. Upcoming on-site presence will be discussed and documented at regular bi-weekly program update meetings (see SA1.5.h below). Other staff, including Service Area 1 Manager, quality control lead, and staff engineering support will be frequently on-site to

facilitate data collection, on-going coordination efforts, and coordination with County staff. Visits will be aligned with progress check-in meetings with Arlington County staff and project meetings/workshops to maximize efficiencies for the project. All workshops and meetings will be held onsite at the WPCP.

- c. On-site time by HDR for Phase 2, including temporary facilities for housing on-site staff, will be negotiated in the Phase 2 amendment.
2. Within 60 days of Notice to Proceed (NTP), provide the following elements for the WPCB's review and approval:
    - a. A kickoff meeting including key stakeholders from HDR and the WPCB, to introduce team members, determine roles and responsibilities, and review the schedule for the Program. Kickoff meeting agenda to be provided one week prior to the meeting, and meeting minutes provided within a week following the meeting. Kickoff meeting will be a two-day session, six hours per day.
    - b. With the kickoff meeting minutes, provide the following additional deliverables:
      - i. Program Goals, brief summary write-up
      - ii. Program Sustainability Goals, brief summary write-up
      - iii. Operations and Maintenance Performance and Integration Goals
      - iv. Conflict Resolution Protocol, brief summary write-up
      - v. Decision Tools, brief summary write-up
      - vi. Confirmation of workshops and deliverables for Phase 1 services.
    - c. A draft schedule for the Phase 1 services. Phase 1 schedule to be integrated into the Overall Project Schedule as a part of the PM Work Plan submittal (SA1.4 below).
    - d. A process and format for internal billing and delivery of monthly progress reports. Incorporate into the PM Work Plan under the Invoicing Plan. Interim progress conference calls (weekly or biweekly) may also be needed depending on the level of activity.
    - e. A reliable electronic process for cost, schedule and resource tracking as described in SA1.9. Within the first 60 days, the e-Builder Exploratory Meeting will be held to understand the County's current capabilities and desires for system output, interaction, dashboard development and desired level of technical support.
    - f. An outline of the Program Management (PM) Work Plan for the Program as described in detail in SA1.4.
  3. Within 120 days of NTP, provide the following elements for the WPCB's review and approval:
    - a. A complete road map for development and implementation aspects of the Program documenting the roles, responsibilities, policies, requirements, and systems that will be utilized to ensure effective implementation of the Program.
    - b. A target schedule for the Program, with suggestions on how different aspects of the Program could be delivered earlier. Schedule will be integrated into the Overall Project Schedule as a part of the PM Work Plan submittal.
    - c. A staffing plan for HDR to participate in all phases of Program activities, with particular emphasis on Phase 1 services and an outline for Phase 2 services. This plan will include the names and roles and responsibilities for all key staff members. Key roles in this project include:
      - i. Program Manager
      - ii. Service Area Leads

- iii. Project Engineers
- iv. Project Administrator
- v. Inspectors
- vi. Project Controller
- vii. Other staff members

The Resource Management Plan will be integrated into the Overall Project Schedule as a part of the PM Work Plan submittal.

- d. A draft PM Work Plan for the County's review and approval that describes how the services detailed in the next section will be delivered. The Work Plan will be periodically reviewed and updated as needed throughout the course of the Program.
4. HDR will complete the services and provide deliverables required under the PM Work Plan to the satisfaction of the County and within approved budget and schedules for the PM Work Plan. The PM Work Plan will provide a complete road map for all development and implementation aspects of the program and documents roles, responsibilities, policies, requirements, and systems that will be utilized to ensure effective implementation of the Program. The PM Work Plan will be a living document and updated throughout all phases of the program. The PM Work Plan will include the following:
- a. Program Goals from the kickoff meeting
  - b. Program and Project Management Procedures that incorporate the Conflict Resolution Protocol and Decision Tools from the kickoff meeting.
  - c. Overall Program Schedule for each Phase and Resource Management Plan. Use Primavera P6 software for bar chart, schedule updates, and cost control plans.
  - d. Program Information System Plan as described in SA1.9, including document and information handling.
  - e. Program Communication Plan, both internal and external
  - f. Financial Management Plan (both internal and external)
  - g. Delivery Team Management Plan outline – full Delivery Team Management plan will be provided during subsequent phases.
  - h. Program Manager Billing
  - i. Program Manager Cost Controls Management Plan and Change Management Procedures
  - j. Program Manager Monthly Progress Reports
  - k. Program Risk Management Plan
  - l. Program Safety Plan for Program Manager's services
  - m. Safety Requirements for Delivery Teams
  - n. Coordination of other projects within the plant that may impact the Program
  - o. Program Sustainability Goals
  - p. Operations and Maintenance Performance and Integration Goals
  - q. Quality Assurance and Quality Control (QA/QC Plan)
  - r. Construction Management Plan outline (detailed plan to be developed during Phase 2 after the delivery method selected.)
    - i. Start-Up and Commissioning Plan – Plan to define the start-up and commissioning required for equipment installed as a part of the overall project. Plan to outline Program Management Staff on-site time, schedule and performance testing.
    - ii. Plant-Wide Integration Plan – Plan to define the integration needed with other facilities plant-wide affected as a part of the project. This plan will include a



series of lunch and learns and staff training for Arlington facility employees that will be working directly with equipment.

5. Throughout the course of the Program, HDR will be responsible for the following activities:
  - a. Conduct all programmatic meetings and coordinate activities to develop and implement the solids handling upgrades. This process involves targeted meetings, workshops and related sessions on specific issues, utilizing key resources, to make decisions in a timely and thoroughly developed and documented process.
    - i. Detailed agendas will be provided in advance of meetings, with the purpose of setting the goals, objectives, and decisions needed at the meeting.
    - ii. Workshops will build consensus and frame the Technical Memoranda associated with the workshop. For public facing and other limited decisions, multi-criteria analyses will be utilized during the workshop to aid in decision making.
    - iii. Minutes will be recorded by HDR and approved by the Project Officer.
    - iv. A preliminary list of anticipated workshops and their related subject areas and service areas are provided in Exhibit B – Workshop and Delivery Plan. A total of 12 full-day workshops are planned for Service Areas 2 and 3 and three half-day workshops for the Communications Plan development (see SA1.6 below). The number and duration of workshops is fluid and will be adjusted as the program is developed.
  - b. Document decisions at workshops in the form of Technical Memoranda. Facilitate reviews by the County by scheduling casual, over the shoulder reviews to review highlights of the major elements in the Technical Memoranda. Program Manager will be responsible for receiving, consolidating, and reconciling conflicts on comments (verbal, written, one-on-one, group settings, other) received from the County on deliverables.
  - c. Coordinate with the planning and execution of other projects at the WPCB that are outside of these upgrades including, but not limited to: energy efficiency upgrades and liquids side optimization projects, secondary blower upgrades, primary and secondary clarifier upgrades, and any odor control improvements outside the scope of the Program. Program Manger to lead coordination efforts for construction coordination including master schedules and site planning for projects at the WBCB. Program Manager will assist with coordination of design elements impacting biosolids projects.
  - d. Use e-Builder as an electronic project management tool approved by the County for all project information, communications, and data storage. Refer to SA1.9 below.
  - e. Monthly invoices will include a breakdown by Service Area and employee role, hours and rates. As a cost control measure, HDR will compare progress achieved versus the current Plan and then compare actual costs incurred versus planned costs. With Arlington’s input, HDR will update relevant portions of the PM Work Plan and budget for the next milestone for the County’s approval.
  - f. Prepare and distribute monthly progress reports, including design and permitting status, performance assessment, schedule status and problem area identification.
  - g. Attend regularly scheduled progress meetings with contractors, appropriate subcontractors and County representatives, and distribute minutes to review schedule, action items, status of changes, submittals, problems, safety issues, and requests for information.

- h. Conduct bi-weekly program update meetings with the Project Officer and others as needed to provide progress updates. Establish a standing agenda and customize the agenda before each meeting. Include past two-week progress, four-week look ahead, change management, action item review, and expected onsite presence for next two weeks in each meeting. Meetings will be held onsite unless otherwise agreed to via e-mail ahead of the meeting. Document each meeting with informal notes.
  - i. Maintain project files, records, correspondence and submittals.
6. Communications and Outreach Program: HDR will work with the Department of Environmental Services' Communications Team to develop and conduct a proactive community outreach effort to educate residents and facilitate public support for new THP/AD facilities. HDR will assist in public outreach by providing the following services:
- a. Prepare an overall program communications plan.
    - i. The communications plan will be developed at the beginning of the program to identify and outline outreach efforts, branding and program messaging, key audiences, social and political risk, comment management protocol, and vision and goals for stakeholder engagement. The Plan will document the approaches, objectives, and activities to be completed during the program. Program Manager to provide draft and final written communications plan to the County for review and comment.
    - ii. Include in the Communications Plan technical, regulatory, and environmental analyses and tactics needed to prepare for the public outreach effort.
    - iii. Conduct and develop material for three (3) facilitated workshops to define and finalize key elements of the communications plan and the program's brand.
    - iv. These workshops will also be used to gain information and insights to develop the program's brand identity. It is assumed that the County will ultimately choose one brand concept to implement.
      - 1. Workshop One: This workshop will be used to establish goals, themes and phrases for use in brand development and will include development of a mission statement.
      - 2. Workshop Two: Mood boards will be developed in collaboration with the County to establish brand tone and personality. The County will react to name options, mood boards, and determine naming conventions.
      - 3. Workshop Three: HDR will develop up to three logos, one of which will be selected by key project representatives. The County will review logo options and brand direction during this workshop. Once the logo and direction have been selected, a brand book will be developed to established guidelines for their use.
        - v. In addition to the Communications Plan, develop a draft and final branding book including brand information.
  - b. Assist with public meetings, including preparing agendas, slides, handouts and other outreach materials. Document the outreach process, including issues, discussions, goals, outcomes and any action items.
    - i. HDR will coordinate up to two (2) general public meetings and informational events for Phase 1 of the program, scheduled in connection with major project milestones, to allow community members to engage with the program team. The meeting formats will emphasize flexibility and accessibility to allow community members to drop in at times and in places that are convenient for

- them. HDR will develop content for the public meetings in coordination with the County.
- ii. Online Meetings: HDR will coordinate up to two (2) online meetings for Phase 1 of the program to supplement public meetings for those who prefer to participate virtually. Participants will be able to participate in online meetings by computer, tablet, or phone, and the content will mirror what the program team presents at in-person events. The online meetings created at each phase will remain live for the duration of the project, however, the ability for public to provide comments through the online forum will only be available during the County's predetermined comment periods associated with each phase of the Program. HDR will provide a summary, track and resolve the online forum comments as described in paragraph f. below. The online meetings will be available on the Program website described in SA 1.6.c.
  - iii. Stakeholder Group Meetings: The County will identify and invite representatives of target audiences to re-engage in the stakeholder group established during the master planning process. HDR will help the County facilitate the stakeholder group to gather input on program progress, milestones, and possible challenges that may arise. HDR will coordinate logistics, support meeting material production, record meeting minutes, and provide facilitation support for up to four (4) meetings for Phase 1 of the program. HDR will coordinate the meeting locations and be responsible for print production of meeting materials
  - iv. Community Pop-up Events: In partnership with the County, HDR will prepare up to three (3) easy-to-manage mobile meetings over Phase 1 of the program to deploy at community gatherings such as the Arlington County Fair and local farmers markets. These "pop-up meetings" engage a diverse group of individuals, including underrepresented communities. Suitable events and locations will be identified through online research and discussions with the County. These pop-ups will be scheduled in conjunction with major project milestones. HDR will be responsible for print production of pop-up materials.
- c. Prepare written communications suitable for a variety of formats such as newsletters, flyers, websites, listservs, etc.
- i. HDR will produce email newsletters with program updates for internal and external stakeholders (three total for Phase 1 of the Program). HDR will also identify opportunities for the County to provide articles to existing stakeholder newsletters.
  - ii. Infographic Brochure/Flyer: HDR will develop a customized, visually compelling infographic brochure/flyer that will highlight program elements to educate stakeholders about the program online and at in-person events. The graphics will also be utilized in presentations and on social media. The infographic brochure will be updated semi-annually (three total for Phase 1 of the program).
  - iii. Educational Videos: Program Manager will develop up to two (2) educational videos to reach stakeholders through different communications channels including in-person meetings, online meetings, program website, and social media. The topic of each video will be determined based on program progress and the messages that would have the biggest impact through visual

communication. Videos will be provided to the County to host on social media and video sharing channels.

- iv. Social Media: HDR will develop monthly social media content calendars and graphics for the County's use to communicate about the program. Google ads and social media marketing will be utilized to target residents with advertising about community in-person events and online meetings. HDR will provide social listening services on a monthly basis to assess online conversations and sentiment about the program. HDR will leverage the existing County Department of Environmental Services Facebook and Twitter, and the County's YouTube and Next Door accounts for program outreach. The County Communications team will manage dissemination of online and social media advertising with support from HDR.
- v. Program Website: HDR will design a program website with current information and documents related to the program for installation on the County's servers. HDR's web development services will include, development of content and updates, site structure, and layout. The website will include links to join the mailing list, to provide comments and questions, and to stay connected. HDR will approach the process as follows:
  1. Content Development: HDR will identify content areas and generate website content. The County will review content and the final content will be used to inform the design mockup of the website.
  2. Design Mockup Website: HDR will develop a design mockup to show what the final website will look like. HDR will develop an interactive design mockup using appropriate website design software for up to five subpages including but not limited to pages for quarterly updates, issue-based pages, and engineering milestones.
  3. Website Development: HDR will use the content document and design mockup to develop the website. The website will be loaded to a staging link for review. HDR will conduct performance and responsive design testing prior to launch.
    - d. Review internal communications to ensure WPCB staff is kept informed.
      - i. HDR will collaborate with the County to coordinate up to four (4) small group staff trainings in Phase 1 of the program to share updates, communicate decisions and options, introduce new terms, and gather input on facility updates. Each training session will be held multiple times to reflect shift work.
      - ii. HDR will collaborate with the County to coordinate up to three (3) lunch- and-learn events in Phase 1 of the program. Lunch-and-learn events will focus on specific technical or management issues associated with the program.
      - iii. HDR will support the development of short presentations for up to four (4) WPCB all-hands meetings in Phase 1 of the Program. The presentations will be geared toward high-level updates, lasting 5-10 minutes.
      - iv. HDR will support the development of email blasts, flyers by timeclocks, and program update for the WPCB newsletter and posting on the WPCB SharePoint site. Articles, flyers, and newsletter updates are envisioned to be not more than one paragraph each or a series of concise bullet points. Flyers shall incorporate updated graphics.
    - e. Develop briefing information for WPCB management and DES and County leadership.
      - i. The Program Manger will develop a cover letter targeted at leadership to accompany the full newsletter mentioned in task SA1. 6.c.i. The cover letter will provide a high-level summary key program progress and milestones.

- ii. HDR will support presentation development for leadership updates as needed. Assume up to two (2) presentations in Phase 1.
  - f. Comment Management and Tracking. HDR will manage program comments and responses received through the program website, email, comment forms (hardcopy or electronic), face-to-face communications and meeting notes. HDR will implement the Comment Management and Contact Protocol adopted in the communication plan to organize and summarize comments in the database, code comment contact information and summary information into database, summarize comment information in monthly comment reports.
7. Permitting and Coordination with Outside Agencies: HDR will work with the Delivery Teams and the County to obtain all necessary permits for the successful completion of the Program. Examples of permits include, but are not limited to, modifications to air permits, Certificates to Construct/Operate, and construction permits. For Phase 1, permitting services are anticipated to include:
- a. Two meetings with the Virginia Department of Environmental Quality (DEQ) Water Program to discuss the overall program, potential permits, and permit submittal requirements. Note, meetings with the Virginia DEQ air program are included in SA2.
  - b. Four meetings with Arlington County Permit Office (environmental and building) to discuss the overall program, potential permits, and permit submittal requirements.
  - c. Development of permit tracking log, listing all known permits, responsibilities and requirements.
  - d. Initiate discussions with outside agencies, such as Washington Gas and Dominion Virginia Power, to determine if service upgrades are necessary to supply the new Facilities.
8. Perform Cost Estimating Functions and Project Funding Opportunities: Programmatic-level cost estimating will be completed by HDR in order to monitor and control cost changes in the market or created by decisions made in program development. In particular, HDR will provide the following:
- a. Develop cost estimating guidelines and consistency-control for cost estimating.
  - b. CIP Coordination:
    - i. Program Manager shall assist with the preparation of the proposed CIP for future years. Estimated that coordination will take place once every two years throughout the life of the program. HDR shall also attend a series of discussions leading up to the yearly CIP update, including preparation of background documents for formal CIP update as related to the Solids Handling projects.
    - ii. Within each year of the program, when changes in cost to the Program are known, HDR shall periodically review the program's progress against the current CIP and provide updates to the County. At a minimum, these periodic updates will happen at major milestones, but they should also occur when other factors that impact costs are identified.
  - c. Define cost estimate parameters including O&M and other agreed-upon goals.
  - d. Develop base cost estimate for Program's capital components and O&M costs for project elements. Cost Estimating for Phase 1 efforts will be at a Class 4 effort – defined by Association of Advancement of Cost Engineering (AACE) as +/- 1% to 15% level of project definition utilized for study for feasibility purposes.

- e. During Phase 2 services, conduct design cost estimates / validation for all new solids handling facilities as designed and constructed by the Delivery Team(s).
  - f. During Phase 2 services, track cost estimates over time for any changes and justify cost changes.
  - g. HDR will also assist in identifying Federal, state or other grant and/or loan funding opportunities. Program Manager will provide an initial investigation into the funding types available at the start of the program. Periodically, the PM will review and provide an update on funding available for this project. At a minimum, this periodic update will correspond with the PM Work Plan update.
9. E-Builder Project Management Tool: Program Manager will provide consulting in e-Builder Best Practices regarding implementation and training activities. Services include:
- a. E-Builder Exploratory Meeting (Kick-Off): This workshop will be used to collect, organize, and analyze information provided by Arlington County to HDR specific to their current e-Builder methods and modules available. The information collected will identify the needs, processes and technologies, uses, anticipated benefits, and potential effects at an organizational level. The findings of this Workshop will be used to establish organizational goals which are the basis of the Program Information System Plan (a component of the PM Work Plan).
  - b. Discovery: HDR will conduct a series of video conference meetings to discover the current state of e-Builder use within Arlington County. Questions will be asked as it relates to all of the functions of e-Builder with each call themed for one of the modules.
  - c. Based on results of the Discovery phase, provide recommendations to the County for how the modules and systems available to Arlington County can be utilized on this Program. Include assessment of how the Program can be set-up to manage multiple projects and which modules should be adopted for the Program. Assist the County power users in setting up the modules and projects appropriate for the Program.
  - d. Provide training to the County and HDR end users for implementation. Training for Delivery Teams will be included in the Phase 2 scope.

#### 10. Sustainability Goals and Envision Efforts

- a. Align with County Energy Plan - HDR will review the County Energy Plan and provide specific documentation for alignment with this plan through the development of the Program Sustainability Goals. These goals will be used throughout the Scope Development. Additional efforts are discussed in SA7.
- b. Engagement with Arlington Initiative to Reduce Emissions (AIRE) – The project team will communicate with the County’s AIRE team on a regular basis, including County Wide meetings as discussed in SA1.6. Program manager will consider large and small projects or processes when evaluating sustainability (e.g. recycled materials, energy efficient designs, and low or no-cost operational modifications that can reduce the plant’s baseline carbon footprint).
- c. Envision – One workshop will be conducted to communicate the principles of Envision, which a sustainability rating system for infrastructure projects. HDR will track decisions related to Envision certification. The County has a requirement of a minimum Envision Silver rating for this Program. Refer to SA7 for additional information.

**Service Area 2: Scope Development**

HDR will confirm the recommendation of the Report and evaluate the best use of the renewable natural gas created during anaerobic digestion. HDR will then create a Facilities Plan to serve as a bridging document to the Delivery Team(s). The Facilities Plan will be a culmination of a series of workshops and evaluations.

1. Review of Past Work and Confirmation of Overall Path Forward: Review the Report to confirm the recommendations align with the current state of the industry.
  - a. Update information and understanding of recent THP/AD operations and maintenance practices. The results of the evaluation will be documented in the Thermal Hydrolysis Process Evaluation Technical Memorandum.
  - b. Identify any technology improvements (i.e. state of the market) that should be considered for the Facilities Plan. Class A biosolids and energy recovery need to remain as primary drivers. The results of the evaluation will be documented in a Summary Technical Memorandum
  - c. Assess the current market for biosolids and determine which product(s) are most suitable to bring to market. Determine processing requirements to produce needed product characteristics, where required. The results of the assessment will be documented in the Biosolids Product Market Analysis Technical Memorandum.
2. Existing Facilities Condition Assessment: HDR will complete a detailed condition assessment of the existing solids handling facilities. This assessment will be the foundation for what facilities will be retained or replaced and how to coordinate tie-ins. This assessment will also inform HDR on key operational considerations. This assessment will include:
  - a. A two-day walkthrough of the existing plant site to review existing condition of both facilities and equipment. This walk through would include Program Manager discipline (structural, architectural, electrical), process, and condition assessment staff.
  - b. Interviews with County staff to discuss operational and maintenance issues with the existing equipment and facilities.
  - c. Validate sizing and condition of existing assets for future use, including mechanical, electrical (including adequacy of sizing of standby generators), instrumentation/control equipment, and program software and hardware. Incorporate outcomes into the Facilities Plan.
  - d. The findings will be presented in the Condition of Existing Facilities TM.
3. Process Characterization
  - a. Gather, review and analyze relevant historical data relative to the solids handling processes. It is anticipated that five years of past data will be provided and reviewed.
  - b. Conduct sludge characterization, solids process modeling, and process calculations for all pertinent elements of the solids handling processes, including thickening, dewatering, thermal hydrolysis, anaerobic digestion, gas utilization, and ancillary services. Assess sludge/biosolids characteristics to maximize the development of valued products. Any special sampling required will be done as part of SA7.
  - c. Coordinate with Virginia Tech on laboratory pilot testing, see SA7. Update the HDR solids process model based on results from Virginia Tech studies.

- d. Solids process modeling should account for both start-up and future conditions, both with and without supplemental feedstocks (i.e. fats, oils, and grease), as quantified in SA7.
  - e. The County will be hiring a separate consultant to develop a liquid process model. Coordinate with this consultant to model projected recycle loads from the solids handling processes, both with and without side stream treatment for nitrogen removal. Use data from analysis to inform side stream treatment evaluations (SA 2.5.g). Coordinate with the consultant to validate future solids production numbers with this model.
  - f. The outcomes of this process characterization will serve as the Basis of Design for the upgrades and will be presented in the Solids Production and Design Criteria Technical Memorandum.
4. Process Specific Evaluations. Complete various technical evaluations for project refinement and definition as part of the Facilities Plan process. In general, the evaluations should consider constructability, operability, maintenance requirements, and redundancy. Each evaluation will include a conceptual level design, including potential locations or layouts and consider economic, energy, environmental, operating, maintenance, and other comparative information. Arlington County preferences will be included with the evaluations. Each evaluation will be presented in one or more workshops and summarized in a subject-area Technical Memorandum. The Technical Memorandum will identify if the results of the evaluations are prescriptive (i.e. required) or preferences for future Delivery Teams. In some cases, the resulting Technical Memorandum may only document future considerations, not a preferred or required alternative. The following evaluations will be completed:
- a. Sludge Thickening: The Report indicated no thickening of solids are required. Validate that assumption by evaluating processes for primary and waste activated sludge thickening. Evaluation will include supporting equipment for thickening process (feed pumps and polymer systems). Reuse of the existing structures will be considered.
  - b. Screening, and Pre-Dewatering: Evaluate a combined screening and pre-dewatering facility. Consider both re-use of existing equipment and facilities, incorporating results of Condition Assessment, and new facilities. Consider alternatives loadout facilities for pre-dewatered solids when THP is out of service. Also consider re-use of existing centrifuges vs. installation of new pre-dewatering equipment. Include support systems in the evaluation.
  - c. THP evaluations are included in SA3.2.
  - d. Digestion and Digester Mixing: Present various options for digester configuration, digester construction, digester covers, and mixing. Present alternatives for consideration of secondary digester and solids storage. Review different construction techniques for anaerobic digesters. Review different options for digester covers and mixing systems.
  - e. Cooling Systems: Evaluate potential locations and configurations for cooling thermally hydrolyzed solids. Consider materials of construction and maintenance in evaluations.
  - f. Plant Effluent Water (PEW) Systems: Evaluate adequacy of capacity and quality of existing PEW system to meet all of the new biosolids facilities. Evaluate existing PEW demands and complete field testing to verify. Model existing system and proposed improvements to determine if any PEW improvements are required.
  - g. Plant Drain: Evaluate plant drain needs for the new biosolids facilities. Determine if any existing plant drains can be reused.



- h. Final Dewatering: Evaluate locations and dewatering technologies for a new final dewatering facility. Consider plant and local roadway traffic patterns as well as Arlington County preferences for truck loadout. Incorporate cake storage into the evaluation.
  - i. Recycle Management and Side stream Treatment: Evaluate the benefits and challenges of side stream treatment against treating the increased nitrogen load in the mainstream liquid stream process. Economic and non-economic factors will be considered.
  - j. Odor Control: Evaluate facilities to be provided with odor control. Consider existing odor control performance based on the Condition Assessment findings. Identify the sources requiring odor control and preferred technologies, include both biological and chemical systems in the evaluation.
  - k. Fats, Oils and Grease Receiving Station: Provide a conceptual level review of future potential for a fats, oils, and grease (FOG) receiving station. Incorporate potential impacts on Renewable Identification Number (RIN) market, digester gas production, energy recovery, and overall digester performance. Identify potential size and location of future FOG facilities.
5. Develop the Gas Utilization Plan: The beneficial use of the biogas generated from digestion is be a key component of the upgrades. This decision on how to best use the biogas will impact the layout of solids handling facilities and will be evaluated during the technical development phase and then incorporated into the Facilities Plan. HDR will provide the following services:
- a. Evaluate the CHP and CNG options to determine which is the most suitable for the County based on environmental and community impacts, life cycle costs, biogas value, ease of operations, and other system characteristics. Utilize multi-criteria evaluation tools for evaluation of gas utilization options.
  - b. HDR will coordinate with Arlington County Energy Plan requirements. This will include local power generation requirements, and County's vision for sustainable energy use. This coordination will be supported by the analyses included in SA7.
  - c. Evaluate sizing of gas handling equipment and any ancillary equipment (including emissions control equipment, gas cleaning equipment, and flare) to ensure compatibility with THP/AD system.
  - d. Identify customer base for methane gas and initiate negotiations with agencies such as Dominion Energy, Washington Gas, Washington Metropolitan Area Transit Authority and Arlington Rapid Transit to develop contracts or agreements for the supply of renewable natural gas of sufficient quality to the customer. It is assumed that the County will negotiate the agreements with potential customers, and Program Manager will assist in negotiations including providing technical assistance to the County Attorney's Office, assist with meeting preparations, and provide meeting documentation in the form of meeting minutes. Assess impacts on electrical and natural gas interconnection requirements.
  - e. Assess current Renewable Identification Number and Low Carbon Fuel Standard (LCFS) markets to forecast anticipated future values.
  - f. Define steam requirements for the THP system and any other heating needs of the system. Examine standby boiler needs.
  - g. Evaluate gas handling and steam system site layout, considering digester location and other factors.
  - h. Based on the evaluation of options and feedback from potential customers and stakeholders, develop a recommendation for a gas handling approach for review and approval by Arlington County, prior to incorporation into the Facilities Plan. The gas

processing and management technical evaluation will be presented in multiple subject-area Technical Memoranda.

6. Emissions Analysis: Determining the air quality impacts will be critical to setting design requirements. Data from the air quality impact analysis will also be used in assessing the carbon footprint (See SA7.4). HDR will provide:
  - a. Define / verify the air quality and air emission requirements. Update existing data on current emissions, particularly combustion sources.
  - b. Determine emission quantities from the new Facilities or retrofits on biosolids facilities. It is assumed that a new model will be provided based on process evaluations. HDR will organize and facilitate discussions between Arlington County and Virginia Department of Environmental Quality to get their input prior to running an air quality model. It is assumed that two (2) meetings will be needed for this discussion – an initial discussion, and final approval discussion.
  - c. Model emissions impacts on facility and surrounding areas.
  - d. Develop conceptual level design of emissions controls appropriate for the gas handling equipment recommended.
  - e. Coordinate air emissions / permitting issues.
  - f. The modeled emissions on impacted facilities and surrounding areas will be presented in the Emissions Study Report. HDR will provide draft and pre-final reports for review and discussion with the County.
  - g. Present the pre-final report to the external stakeholder group and finalize the report based on feedback from the County and stakeholders.
7. Overall Site Plan: Incorporate the results of the various evaluations and stakeholder communications into an overall site plan. The site plan should accommodate all projected current, near term, and planned future facilities, including all facilities that are to be reused. The site plan will incorporate best practices for siting facilities to maximize constructability while maintaining plant operations, operability, and public acceptance. The site plan will be reviewed in multiple workshops.
  - a. Once the site plan is finalized, develop 3-D renderings from multiple angles and animated model of new facilities for use in presentation and public outreach materials.
8. Facilities Plan: The Facilities Plan will serve as the basis of design for the future Delivery Team(s). It will include all the major and ancillary equipment, facilities, siting, and other factors that will make up the treatment train that will handle sludge and solids streams. Facilities may include, but are not limited to: sludge thickening and storage, screening, and/or pre-dewatering; thermal hydrolysis pretreatment equipment; anaerobic digestion systems; dewatering equipment and dewatered solids loading facilities; mitigation of impacts from any side streams; gas utilization systems; odor control; control rooms and other occupied spaces; major electrical facilities; and instrumentation and control systems. The Facilities Plan is intended to be a 15-25% design document that defines the complete scope that will be required for the program as well as define all applicable standards and codes that will govern the design and construction of the facilities. The Facilities Plan is not intended to be a full Preliminary Engineering Report. By way of example, process flow diagrams will be included, but full Process and Instrumentation Diagrams will not. The full design is the responsibility of the Delivery Teams.

- a. Technical Memoranda developed for subject-areas during the Scope Development will supplement the Facilities Plan.
- b. A list of anticipated Technical Memoranda and their related subject areas and service areas are provided in Exhibit B – Workshop and Delivery Plan
- c. Either AutoCAD or BIM will be utilized to develop site and facility layouts and plans as necessary to convey the entirety of the project. It is estimated that plans will be advanced to a 15-25% level design.
- d. In the development of the Facilities Plan, HDR will utilize Arlington County’s available current design standards, where applicable.
- e. Program Manager will conduct a workshop to review the Facilities Plan with the County and revise the report as needed to incorporate County’s final recommendations.

### **Service Area 3: Project Delivery and Procurement**

HDR will analyze and assist with selecting project delivery approaches appropriate for detailed design, construction and operation of the proposed facilities. This includes identifying packages within the program, evaluating delivery methods, and developing criteria for selecting the most appropriate method(s). HDR will assemble packages of work to be procured separately. HDR will then assist the County with the procurement of the Delivery Team(s). Service Area 3 will be completed concurrently with Service Areas 1 and 2. Workshops for Service Area 3 will be combined with workshops from Service Areas 1 and 2.

1. Package Identification and Delivery Method Selection: HDR will assist County staff with evaluating and determining the most appropriate project delivery method(s) to deliver the requested solids handling facilities. Project delivery methods must consider the specific needs of the facilities being proposed, schedule and program cost limits, and encourage competition among bidders and/or proposers. HDR will:
  - a. Provide assistance with the development of the package definition, goals, objectives, outcomes and the overall conceptualization and organization of the procurement for each element of the Program.
  - b. Review the structure, function and advantages and disadvantages of various project delivery methods, including design-bid build (competitive sealed bidding) and the following alternative project delivery methods: design-build, construction management, contract operations through competitive negotiation, and incentive contracting.
  - c. Develop qualitative and quantitative assessments of the project delivery methods to determine the extent to which each meets the Arlington County’s goals and objectives for the Program.
  - d. Hold workshops with County staff to describe the alternative delivery methods, pros/cons, and risks to help inform decision-making. The following topics will be included in various workshops:
    - i. Project delivery risk analysis
    - ii. Project delivery drivers
    - iii. Project delivery options review
    - iv. Market assessment
    - v. Project packaging
    - vi. Market outreach
  - e. Develop a final recommendation memo to the County to include all relevant factors pertaining to the development of bidding and procurement processes. This memo should document the number and type of projects expected to be executed under this program,

the delivery method for each package, and the coordination required between the projects.

- f. Should the Program Management team recommend Competitive Negotiation for the Acquisition of Construction (either Construction Management or Design-Build, as noted in Section 4-102(3) of the Arlington County Purchasing Resolution), provide a written determination for approval by Purchasing and/or County Attorney's Office that competitive sealed bidding is not practicable or fiscally advantageous, and document the basis for the determination of the delivery method.
  - g. Following the determination of the project delivery method(s), HDR will assist the County in updating the overall design, construction, procurement and implementation schedule for all packages within the solids handling upgrades. HDR will also identify tasks required to accomplish the schedule, define critical path elements, and coordinate the developed schedule with other ongoing design and construction projects.
2. Thermal Hydrolysis Process (THP) Pre-selection: There are multiple THP manufacturers and systems that might be applicable for use at the Arlington WPCP. The solids handling facilities that interface with THP will be different for each technology. Therefore, a detailed THP analysis will be completed. It is assumed that this analysis will result in a formal pre-selection process, with development of an agreement for the selected manufacturer. The agreement will be transferred to the Delivery Team, once selected.
- a. Subsequent to site visits (virtual or in person) to THP installations (SA7), complete a detailed analysis of the current THP market and provide recommendations for THP pre-selection. This will be documented in the THP Procurement Evaluation TM.
  - b. Request for Proposals (RFP): Develop an RFP for the THP system consistent with Section 4-102 of the Arlington County Purchasing Resolution ("Competitive Negotiations"). It is anticipated that the resulting outcome of the Request for Proposals will be development of an agreement to be signed by both the selected vendor and Arlington County that will define the cost, technical and performance requirements, and various terms and conditions for payment, delivery, and other requirements. This agreement will not commit the County to purchase the specific equipment, but rather serve as a commitment for use of the selected vendor's equipment should the project move to construction. The agreement will be transferred to the Delivery Team construction contractor, once selected.
    - i. Develop drawings and detailed specifications in sufficient detail for the pre-selection of the THP equipment.
    - ii. Hold workshops with County staff to assist in development of the RFP. The following topics will be included in various workshops:
      1. Evaluation criteria
      2. Review of drawings and specifications
      3. Development of draft term sheet
        - iii. Facilitate review and selection of pre-selected THP vendor
        - iv. Facilitate finalization of the term sheet with selected vendor
  - c. Should the evaluation noted in paragraph a. above find that there is only one THP vendor practicably available to meet the requirements of the project, HDR will work with the County to develop a Sole Source Procurement recommendation consistent with Section 4-104 ("Sole Source Procurement") of the Arlington County Purchasing Resolution.

Contents of a term sheet, including drawings and specifications, will be similar to those required in paragraph b. above.

3. Procurement of Package Delivery Team(s): Once the Work Plan, Facilities Plan, and package delivery methods are finalized by HDR, Delivery Team(s) will be procured for implementation of the various components of the Program. It is assumed that a total of three separate procurements will be required to deliver all of the work on the program. However, this number is not a constraint and will be evaluated as part of SA3.1 above. To assist Arlington County with this process, HDR will:
  - a. Coordinate the scopes of work between the packages to minimize interferences and to provide logical transitions and interfaces.
  - b. Coordinate and implement procurement procedures in alignment with County standards, County Purchasing Resolution, the Virginia Public Procurement Act, and any other applicable requirements.
  - c. Coordinate revisions to County standard contract templates, as necessary, for the selected procurements. The scope of this task is limited to review of existing templates and recommendations on considerations to commercial terms and conditions.
  - d. Assist with the development of solicitations based on the selected delivery method, such as RFQs, RFPs and ITBs, for procurement of various elements of the Program.
  - e. Develop solicitation documents, including: technical scope of work, fixed and operating cost forms, design and performance criteria, facility development requirements, scheduling requirements, permitting requirements, design review and submittal requirements, construction submittals, start-up and acceptance testing requirements, safety requirements, and operation and maintenance requirements.
  - f. Assist the County in development of requirements and procedures for the review of qualifications submittals and proposal/bidding submittals including the development of evaluation criteria and a scoring methodology for proposals.
  - g. Conduct outreach programs to educate the consultant and contractor communities about the projects, and their scope, schedule, and budget.
  - h. Participate in pre-submittal and pre-proposal conferences and facility tours to assist in providing potential respondents a summary of the project, a description of solicitation requirements and answers to questions concerning the packages and procurement process.
  - i. Prepare written responses to questions raised at pre-submittal and pre-proposal conferences and those submitted in writing by prospective respondents for incorporation into procurement document Addenda.
  - j. Review responses for conformance with RFQ and RFP requirements, including confirmation that mandatory minimum requirements have been met. Assist with the analysis of the technical, financial, cost and business information and data included in proposals.
  - k. Assist with the evaluation, ranking and selection of potential contractors.
  - l. Facilitate and coordinate the efforts of the County in connection with the short listing of delivery teams for each package.
  - m. Participate in interviews with proposers and short-listed firms.
  - n. Perform reference checks for top-ranked proposers/bidders.

- o. Lead internal negotiating strategy sessions and participate in negotiation sessions with any proposing firms to reach agreement on the terms of a final service contract for the applicable portion of the program.
- p. Assist in development of public presentation(s) to County Board, if necessary, in connection with the recommendation of any contract awards.

#### **Service Area 4: Planning and Design**

HDR's role during the design period is to ensure that planned program meets Arlington County's operations and maintenance needs. Items affecting these needs may include the basis of design, any value engineering, incorporating value added changes, project documentation, and delivery team negotiations. No scope or fee is included for Phase 1 services. See Exhibit C for framework of future scope requirements.

#### **Service Area 5: Construction Management**

HDR's role during the construction period is to ensure that executed program meets Arlington County's operations and maintenance needs through final completion. This may include routing construction documents for review and approval, site inspections, equipment testing and verification. The level of oversight will vary based on the selected delivery method. No scope or fee is included under the Phase 1 services. See Exhibit C for framework of future scope requirements.

#### **Service Area 6: Operations and Maintenance**

HDR will oversee and advise WPCB staff on integrating the improved solids handling processes into daily operations. Services include asset management, evaluating operating parameters, development of system O&M manuals, providing additional training, and other assistance as needed. The majority of these services will be provided during subsequent phases of the program. See Exhibit C for framework of future scope requirements. During Phase 1, HDR will:

1. Develop a Class A biosolids marketing plan to include various end use options, permitting requirements, market demand, communication strategies, and next steps. The biosolids market assessment provided in Phase 1 services will include investigation of potential options with other local utilities, understanding the current market, and leveraging benefits of other work in the area. The outcomes of this market analysis will be presented in subject-area Technical Memorandum.
2. Provide training and lunch-and-learns for County staff. Refer to the Communications Plan under SA1.
3. Validate County staffing requirements determined in the Report and make recommendations for when new staff should be hired for the Program.

#### **Service Area 7: Other Services**

HDR will provide other services as requested and approved by the County. These services include, but are not limited to: coordinating site visits, geotechnical evaluations, pilot testing, process optimization, and tracking WPCB impacts to the County's sustainability goals. For Phase 1, these other services will include technical assistance to work not provided in other tasks. Allowance budgets will be established for all SA7 work and will not be utilized without prior written authorization of the County.

1. Coordinate site visits to other facilities as needed. Potential site visits might include evaluation of operating THP systems, digestion, solids co-thickening systems, plant recycle treatment systems, CHP, CNG, and/or phosphorus recovery systems. Program Manager to assist with planning site visits and provide a site visit trip report summarizing each site visit. Should site visits not be possible or altered as a result of COVID-19 travel restrictions or social distancing requirements,

alternative arrangements may be considered to obtain similar information from operating facilities, as reasonably possible. Alternative arrangements may include virtual walkthroughs, virtual meetings, review of previous site visit reports as available, etc. All site visits and/or alternative arrangements will be approved through the County.

2. Coordinate on-going pilot work that is being completed by Virginia Tech through a separate contract with the County. HDR will provide specific protocols and recommendations for pilot work, including facilitating any special sampling at the WPCB, and review findings from the pilot work. The results from the pilot work will validate design criteria including digestibility, dewaterability, inhibition, and final product quality; estimate biogas production; confirm recycle loads and their impacts (inhibitory or other) to the liquid stream; and identify potential process pitfalls.
3. Monitor and investigate additional technologies of interest including, but not limited to: receiving and blending of FOG or other high-energy waste streams; efficient treatment of plant recycle streams; advantages / disadvantages of P-recovery; potential impacts of THP & AD additions on effluent disinfection performance.
4. Develop calculations and documentation to demonstrate reduced impact of the new processes on the WPCP's carbon footprint, to ensure consistency with the County's Energy Plan and that the County's Energy Plan goals are met. These evaluations will support the gas utilization analyses in SA2 as well as support the equipment evaluations conducted in SA2.
5. Conduct a review of the Envision checklist with the County during a workshop. Prepare and submit documentation necessary to support Envision silver certification.
6. Evaluate existing information and all prior geotechnical work at the site by reviewing available reports provided by Arlington County. Determine need for additional information. If additional information is deemed necessary before the Delivery Team is selected, perform site investigations, including geotechnical borings and test pits to confirm geotechnical design criteria and location of existing yard piping and other underground utilities. Make this information available to the Delivery Team(s), as applicable, in connection with the applicable solicitation for each package. The results of these findings will be summarized in the Geotechnical Report.
7. Recommend geotechnical-based design criteria for site layouts deemed most feasible by the project team, keeping in mind impacts on adjacent properties, and assess cost differences.
8. Review Building Information Modeling (BIM) best practices and desired future uses, including integration into asset management. Summarize the findings as part of the Delivery Team requirements in the Facilities Plan.
9. Additional communications meetings or deliverables.
10. Develop e-Builder or custom dashboard using key performance indices (KPIs) available from e-Builder or other platforms.
11. Additional unscoped items that are a requirement of the Program and may arise through development of the Program.

12. Any Policies and Procedures developed as part of the Program shall be in conformance with the American Public Works Association best practices.



## EXHIBIT B – SCOPE OF WORK PHASE 2

### General Description and Overview

This document supplements the Overall Scope of Services for the initial phase (Phase 1) for program management services pertaining to the implementation of new solids handling processes at the Arlington Water Pollution Control Plant (WPCP) for the Water Pollution Control Bureau (WPCB). As provided in Arlington County Purchasing Resolution 4-102(2)C, the Project will be executed utilizing multiphase professional services contracts to HDR because critical information developed in Phase 1 will be necessary to the negotiation of the following phases. The framework of the Phase 2 services is provided herein. This framework will be updated as decisions are made in Phase 1. Phase 2 services generally include all of SA4 and SA5, and portions of SA1, SA6, and SA7.

SA	SA Title	Anticipated Phase
1	Ongoing Services	Phase 2
2	Project Scope Development	Complete in Phase 1
3	Project Delivery and Procurement	Complete in Phase 1
4	Planning and Design	Phase 2
5	Construction Management	Phase 2
6	Operations and Maintenance	Phase 2
7	Other Services	Phase 2

Phase 2 schedule will be determined in Phase 1.

### Service Area Descriptions

#### Service Area 1: Ongoing Services

HDR will update the Program Management Plan (“Work Plan”) for Phase 2 services. HDR will also provide ongoing services for communication, permitting, and cost estimating throughout the Program.

1. Perform Program Management Administration under the direction of the Project Officer:
  - a. Program Administration activities will entail the full range of duties to ensure that staffing, schedule, budget (HDR and program), and other controls are appropriate and documented.
  - b. HDR will provide on-site staff for Phase 2 services at an agreed upon schedule with Arlington County. At a minimum, full-time staff will be provided for Service Area 5, Construction Management Services (see SA5 below). Temporary facilities for housing the on-site staff will be provided.
2. HDR will complete the services and provide deliverables required under the PM Work Plan to the satisfaction of the County and within approved budget and schedules for the PM Work Plan. The Phase 2 PM Work Plan will update the road map for all development and implementation aspects of the program and documents roles, responsibilities, policies, requirements, and systems that will be utilized to ensure effective implementation of the Program. The PM Work Plan will be a living document and updated throughout all phases of the program. The PM Work Plan will include the following:
  - a. Update Program Goals
  - b. Update Program and Project Management Procedures that incorporates the Conflict Resolution Protocol and Decision Tools from the kickoff meeting.

- c. Update Overall Program Schedule for each Phase and Resource Management Plan. Use Primavera P6 software for bar chart, schedule updates, and cost control plans.
- d. Update Program Information System Plan
- e. Update Program Communication Plan, both internal and external
- f. Update Financial Management Plan (both internal and external)
- g. Develop Delivery Team Management Plan
- h. Update HDR Billing and Delivery Team Invoice Control including Procurement Procedures
- i. Update HDR Cost Controls Management Plan and Change Management Procedures
- j. HDR Monthly Progress Reports
- k. Update Program Risk Management Plan
- l. Update Program Safety Plan for HDR's services
- m. Update Coordination of other projects within the plant that may impact the program
- n. Update Program Sustainability Goals
- o. Update Operations and Maintenance Performance and Integration Goals
- p. Update Quality Assurance and Quality Control (QA/QC Plan)
- q. Develop Construction Management Plan
  - i. Start-Up and Commissioning Plan – Plan to define the start-up and commissioning required for equipment installed as a part of the overall project. Plan to outline Program Management Staff on-site time, schedule and performance testing.
  - ii. Plant-Wide Integration Plan – Plan to define the integration needed with other facilities plant-wide affected as a part of the project. Envisioned this plan to include a series of lunch and learns and staff training for Arlington facility employees that will be working directly with equipment.

3. Throughout the course of the Program, HDR will be responsible for the following activities:

- a. Conduct all programmatic meetings and coordinate activities to develop and implement the solids handling upgrades. This process involves targeted meetings, workshops and related sessions on specific issues, utilizing key resources, to make decisions in a timely and thoroughly developed and documented process. It is assumed that all meetings will be coordinated by the Delivery Team(s).
- b. Coordinate with the planning and execution of other projects at the WPCB that are outside of these upgrades including, but not limited to: energy efficiency upgrades and liquids side optimization projects, secondary blower upgrades, primary and secondary clarifier upgrades, and any odor control improvements outside the scope of the Program. Program Manger to lead coordination efforts for construction coordination including master schedules and site planning for projects at the WBCB. HDR will assist with coordination of design elements impacting biosolids projects.
- c. Use e-Builder as an electronic project management tool approved by the County for all project information, communications, and data storage.
- d. Monthly invoices will include a breakdown by Service Area and employee role, hours and rates. As a cost control measure, HDR will compare progress achieved versus the current Plan and then compare actual costs incurred versus planned costs. With Arlington's input, HDR will update relevant portions of the PM Work Plan and budget for the next milestone for the County's approval.

- e. Prepare and distribute monthly progress reports, including design and permitting status, performance assessment, schedule status and problem area identification.
  - f. Attend regularly scheduled progress meetings with contractors, appropriate subcontractors and County representatives, and distribute minutes to review schedule, action items, status of changes, submittals, problems, safety issues, and requests for information.
  - g. Conduct bi-weekly program update meetings with the Project Officer and others as needed to provide progress updates. Establish a standing agenda and customize the agenda before each meeting. Include past two-week progress, four-week look ahead, change management, action item review, and expected onsite presence for next two weeks in each meeting. Meetings will be held onsite unless otherwise agreed to via e-mail ahead of the meeting. Document each meeting with informal notes.
  - h. Maintain project files, records, correspondence and submittals.
4. Communications and Outreach Program: HDR will work with the Department of Environmental Services' Communications Team to develop and conduct a proactive community outreach effort to facilitate public support for new THP/AD facilities. HDR will assist in public outreach by providing the following services:
- a. Update the overall program communications plan.
  - b. Assist with public meetings, including preparing agendas, slides, handouts and other outreach materials. Document the outreach process, including issues, discussions, goals, outcomes and any action items.
  - c. Prepare written communications suitable for a variety of formats such as newsletters, flyers,
  - d. Review internal communications to ensure WPCB staff is kept informed.
  - e. Develop briefing information for WPCB management and DES and County leadership.
  - f. Comment Management and Tracking. HDR will manage program comments and responses received through the program website, email, comment forms (hardcopy or electronic), face-to-face communications and meeting notes. HDR will implement the Comment Management and Contract Protocol adopted in the communication plan to organize and summarize comments in the database, code comment contact information and summary information into database, summarize comment information in monthly comment reports.
5. Permitting and Coordination with Outside Agencies: HDR will work with the Delivery Teams and the County to obtain all necessary permits for the successful completion of the Program. Examples of permits include, but are not limited to, modifications to air permits, Certificates to Construct/Operate, and construction permits.
6. Perform Cost Estimating Functions and Project Funding Opportunities: Programmatic-level cost estimating will be completed by HDR in order to monitor and control cost changes in the market or created by decisions made in program development. In particular, HDR will provide the following:
- a. Conduct design cost estimates / validation for all new solids handling facilities as designed and constructed by the Delivery Team(s).
  - b. Track cost estimates over time for any changes and justify cost changes.
  - c. CIP Coordination:
    - i. HDR shall assist with the preparation of the proposed CIP for future years. Estimated that coordination will take place once every two years throughout the life of the program. HDR

- shall also attend a series of discussions leading up to the yearly CIP update, including preparation of background documents for formal CIP update as related to the Solids Handling projects.
- ii. Within each year of the program, when changes in cost to the Program are known, HDR shall periodically review the program's progress against the current CIP and provide updates to the County. At a minimum, these periodic updates will happen at major milestones, but they should also occur when other factors that impact costs are identified.
  - d. HDR will also assist in identifying Federal, state or other grant and/or loan funding opportunities. Program Manager will provide an initial investigation into the funding types available at the start of the program. Periodically, the PM will review and provide an update on funding available for this project. At a minimum, this periodic update will correspond with the PM Work Plan update.
7. E-Builder Project Management Tool: HDR will provide consulting in e-Builder Best Practices regarding implementation and training activities. Additional services required will be defined as Phase 1 progresses.
8. Sustainability Goals and Envision Efforts
- a. Align with County Energy Plan
  - b. Engagement with Arlington Initiative to Reduce Emissions (AIRE)
  - c. Envision – HDR will work with the Delivery Team to track information required for submittal of Envision certification.

**Service Area 2: Scope Development**

All Service Area 2 work will be completed in Phase 1.

**Service Area 3: Project Delivery and Procurement**

All Service Area 3 work will be completed in Phase 1.

**Service Area 4: Planning and Design**

HDR's role during the design period is to ensure that planned program meets Arlington County's operations and maintenance needs. Items affecting these needs may include the basis of design, any value engineering, incorporating value added changes, project documentation, and delivery team negotiations. It is assumed that three separate design projects will be managed and that each will have a Guaranteed Maximum Price (GMP) component.

1. Manage Work of Delivery Team(s): HDR will provide administrative monitoring and contract management services for any design work performed by delivery teams, including the provision of the following services during the design development phase:
  - a. Develop guidelines / management plan for managing the delivery teams.
  - b. Monitor the progress of the design effort per the agreed schedule, including periodic meetings with delivery teams.
  - c. Actively participate in design phase meetings and workshops to facilitate final decisions on process configuration and discipline needs.
  - d. Conduct design reviews that incorporate a mutually agreed upon QA/QC process that provides Arlington with a high-quality review. Facilitate County review and consolidate comments from HDR and the County for transmittal to the Delivery Teams. Track resolution of comments.

- e. Conduct pre-construction deliverable reviews, including procurement plans, quality control plans, permitting plans, Delivery Team developed cost estimates, Delivery Team developed schedules, health and safety plans, and security plans.
  - f. Facilitate development of preliminary Maintenance of Plant Operations, Commissioning and Testing, and Performance Guarantee plans. The goal of the plans during design will be to confirm an acceptable approach and define the level of effort on all parties required during construction.
  - g. Review design documents for compliance with the contract documents (including design and performance criteria), and coordinate review comments with the County to ensure implementation into the design.
  - h. Actively coordinate all disciplines of the project design, including but not limited to civil, structural, corrosion, mechanical, electrical, and instrumentation and control with the delivery teams.
  - i. Review delivery team work to ensure O&M and other agreed-upon goals are implemented in the design.
  - j. Perform biddability and constructability reviews.
  - k. Perform operability and maintainability reviews.
  - l. Assist the County to manage and expedite contract changes, if necessary.
  - m. Manage and respond to contractor claims and provide validity and entitlement recommendations to the County.
2. Development and Negotiation of Final Guaranteed Maximum Price
- a. Review Delivery Team procurement approach and overall bidding process.
  - b. Review and approve self-performance approach.
  - c. Attend interviews with potential subcontractors for critical bid packages.
  - d. Review and provide recommendations on non-bid work, including general conditions.
  - e. Review complete proposal for GMP and make recommendations to the County on actions to be taken.
  - f. Lead negotiating sessions with Delivery Teams. Provide guidance on negotiating strategies.
  - g. Provide final recommendation to Arlington County.
3. Coordination with Outside Utilities
- a. Assist in negotiations, assist with meeting preparations, and provide meeting documentation in the form of meeting minutes for continued discussions with Washington Gas, Washington Metropolitan Area Transit Authority and Arlington Rapid Transit for use or supply of renewable natural gas.
4. Other services may include:
- a. HAZOP workshop: A HAZOP study is one technique for identifying potential deficiencies in the design or layout of an installation, or in the procedures used for operating it. The consequences of possible faults and breakdowns are also considered. The HAZOP study is a critique of the design as it stands with respect to its ability to meet its design intent in a safe and efficient manner. It will take into account materials of construction and plant

layout. A HAZOP study is intended to identify potential hazards but does not quantify the frequency or likelihood of such hazards occurring.

- b. Facilitate partnering between the County, Program Management Team, and Delivery Team(s)
- c. Assist with selection of brokers or other methods for selling of RINs for RNG market.

### **Service Area 5: Construction Management**

HDR's role during the construction period is to ensure that executed program meets Arlington County's operations and maintenance needs through final completion. This may include routing construction documents for review and approval, site inspections, equipment testing and verification. The level of oversight will vary based on the selected delivery method.

1. Provide Construction Management Services: HDR's role during the construction period is to ensure that completed program meets Arlington County's operations and maintenance needs. Items affecting these needs may include the basis of design, any value engineering, incorporating value added changes, and project documentation. HDR's construction management services will include the following:
  - a. Provide temporary field office facilities for field personnel during construction phase of the project. A total field staff of six to eight people is anticipated at various times during construction.
  - b. Receive, track, review, and distribute contractor's RFIs, shop drawings submittals, schedules, progress payment requests, etc. and process them to the appropriate staff for review and approval. Upon the receipt of any review comments, HDR shall consolidate the comments and prepare a response for the WPCB Project Officer's review and approval.
  - c. Provide full-time construction inspection services during construction phase for compliance with contract documents (including performance and owner's criteria); provide multiple full-time on-site inspector services as needed to ensure an appropriate level of oversight during all phases of construction. Provide daily inspection reports with labeled photographs arranged by project/area and date. It is anticipated that Quality Control services will be provided by the Delivery Team(s) and that the on-site Program Management staff will generally serve in a Quality Assurance role.
  - d. Facilitate regularly-scheduled construction progress meetings with contractors, primary subcontractors and County representatives, and other applicable meetings, and prepare and distribute minutes from these meetings.
  - e. Track schedule, action items, status of changes, submittals, change order requests, problems, safety issues, and prepare recommendations for the County's Project Officer's review and approval.
  - f. Prepare change orders, field orders and all correspondence for the Arlington Project Officer's approval and signature.
  - g. Coordinate construction activities impacting plant processes with WPCB Operations and Maintenance. This includes reviewing shutdown plans and activities sequence, meeting with affected parties, providing sufficient notice to WPCB staff, and coordinating activities during the shutdown to ensure that the plan is executed.
  - h. Review and approve the use of any temporary equipment that is used to maintain operations during construction to ensure proper sizing and tie-ins with existing systems.
  - i. Assist the County in expediting decisions on changes that may be needed to maintain project schedule.

- j. Assist the County in developing monetary levels that will guide the change management process.
- k. Manage and respond to contractor claims and provide validity and entitlement recommendations to the County.
- l. Supervise Startup and Testing activities, including:
  - i. Oversee and monitor factory acceptance, dry and functional equipment testing, equipment manufacturer's inspections and certification of installations, walk down functional equipment systems with contractor, and document results of system performance testing. Review test reports prepared by contractor. Track readiness for facility acceptance and turnover.
  - ii. Conduct start-up meetings with contractors before scheduled start-up, and review start-up and testing plans.
  - iii. Actively participate in equipment / systems testing and start-ups, commissioning, and generate deficiency list(s) for completion or acceptance.
  - iv. Coordinate system and equipment trainings with vendors. Trainings will repeat so that all responsible staff members can attend.
  - v. Prepare training materials, including but not limited to presentations, knowledge assessments, and certificates of completion. Training sessions may need to be repeated multiple days/times.
  - vi. Review and approve contractor O&M manuals.
- m. Monitor project closeout, including the following:
  - i. Conduct a comprehensive final inspection of the project to verify that the materials furnished and work performed are in accordance with the contract documents,
  - ii. Coordinate the preparation and completion of punch lists indicating items of work remaining to be accomplished.
  - iii. Determine the value of any uncorrected or deficient work.
  - iv. Assemble and deliver to the County all equipment lists, recommended spare parts lists, guarantees, warranties, and operating and maintenance manuals required by the contract documents.
  - v. Review contractor's record drawings in accordance with the specifications and provide approved record documents to the County upon completion.
  - vi. Conduct warranty walkthroughs with contractors to assure the County that all elements under warranty are functioning properly and provide documentation of any deficiencies that need attention.
  - vii. Submit paper (where applicable) and electronic records for archiving, along with an index for record retrieval.

#### **Service Area 6: Operations and Maintenance**

HDR will oversee and advise WPCB staff on integrating the improved solids handling processes into daily operations. Services include asset management, evaluating operating parameters, development of system O&M manuals, providing additional training, and other assistance as needed.

- 4. Services may include:
  - a. Develop system O&M manuals, SOPs and other documents facilitating the operations and maintenance of the new treatment processes and associated buildings. As appropriate, update existing documents to incorporate the new treatment processes.
  - b. Develop performance criteria and targets to optimize the new Facilities.
  - c. During startup, compare actual operating conditions to performance requirements.

- d. Provide training on new solids handling systems, as needed.
- e. Investigate regional opportunities for Class A product marketing.
- f. Finalize a Class A biosolids marketing and management plan to include various end use options, permitting requirements, market demand, communication strategies, and next steps. Services may include identifying operations and maintenance required to meet Class A EQ requirements.
- g. Develop protocols for integrating new equipment into an existing Computerized Maintenance Management System (CMMS).
- h. Ensure that equipment tagging, location identification, warranty tracking, spare parts, and preventive maintenance strategies are updated and comply with Arlington County WPCB standards.
- i. Upload all asset information, and recommended maintenance activities and frequencies into the CMMS.

**Service Area 7: Other Services**

HDR will provide other services as requested and approved by the County. These services include, but are not limited to: coordinating site visits, geotechnical evaluations, pilot testing, process optimization, and tracking WPCB impacts to the County’s sustainability goals. Allowance budgets will be established for all SA7 work and will not be utilized without prior authorization of the County.

- 13. Coordinate with the designer on any necessary digester mixing evaluations which may include the following: viscosity issues for digesters with thermal-hydrolysis feed, mixing options and mixing performance, mixing equipment vendors, rapid rise foaming concerns, energy requirements, costs, and related factors.
- 14. Prepare and submit documents necessary to support Envision Silver certification (at a minimum).
- 15. Assist with development of solicitation documents for biosolids beneficial reuse contracts.
- 16. Assist with obtaining Class A utilization permit.
- 17. Additional unscoped items that are a requirement of the Program and may arise through development of the Program.
- 18. Any Policies and Procedures developed as part of the Program shall be in conformance with the American Public Works Association best practices.



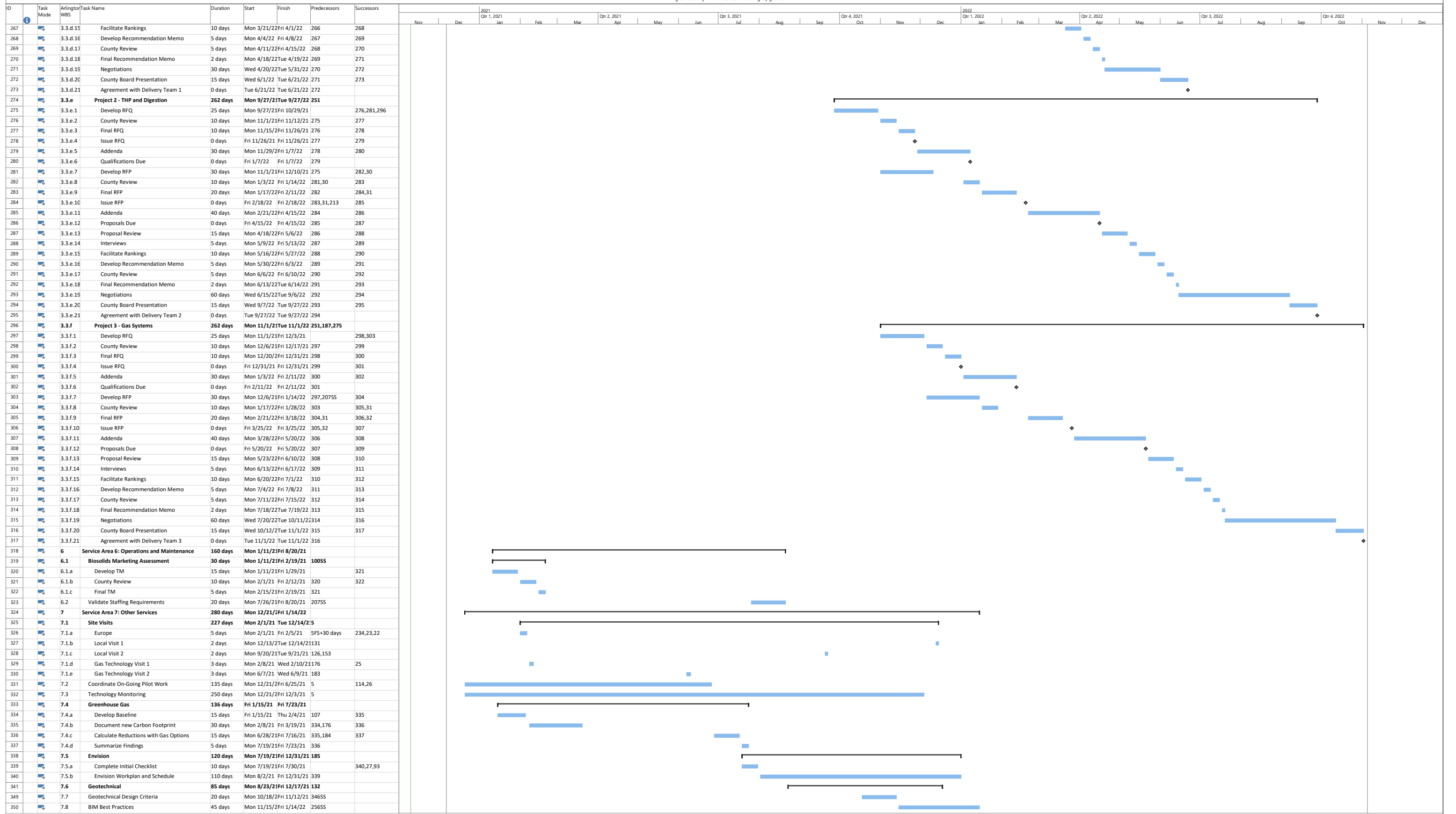






Exhibit C - Preliminary Program Management Schedule

Arlington County WPCB Solids Handling Upgrades



Project: Exhibit A - Schedule.mpp  
Date: Tue 11/10/20

Legend for Gantt chart symbols: Task (blue bar), Milestone (diamond), Project Summary (thick black bar), Inactive Milestone (grey diamond), Manual Task (green bar), Manual Summary Rollup (teal bar), Start-only (blue bar with start cap), External Tasks (blue bar with external cap), Deadline (grey bar), Manual Progress (blue bar with diamond), Split (dotted line), Summary (dashed line), Inactive Task (grey bar), Inactive Summary (grey bar), Duration-only (grey bar), Manual Summary (teal bar), Finish-only (blue bar with finish cap), External Milestone (grey diamond), Progress (grey bar).

**EXHIBIT D – ARLINGTON COUNTY WORKSHOPS & DELIVERABLES**

This document lists preliminary workshop agenda items and associated deliverables for the Phase 1 of the Program Management Services for the Arlington County Biosolids Program. This preliminary list will be a living document, updated as work progresses throughout the program.

<b>Workshop No. (Timing TBD)</b>	<b>Agenda Items</b>	<b>Deliverable Review Following Workshop Documenting Decisions/Path forward</b>
Kickoff Workshop	<p><b>Service Area 1 Topics:</b></p> <ul style="list-style-type: none"> <li>• Kickoff Workshop</li> <li>• Roles and Responsibilities</li> <li>• Risk Management</li> <li>• Program Management (PM) Work Plan</li> <li>• e-Builder Tool</li> <li>• Sustainability Goals and Envision Efforts</li> </ul> <p><b>Service Area 7 Topics:</b></p> <ul style="list-style-type: none"> <li>• THP Site Visit Planning</li> </ul>	<ul style="list-style-type: none"> <li>• One-page summary write-ups for topics discussed</li> <li>• Project Risk Register</li> <li>• PM Work Plan (Preliminary Documents)</li> </ul>
1	<p><b>Service Area 1 Topics:</b></p> <ul style="list-style-type: none"> <li>• PM Work Plan</li> <li>• Communications Plan</li> <li>• e-Builder Tool</li> </ul> <p><b>Service Area 2 Topics:</b></p> <ul style="list-style-type: none"> <li>• Process Characterization</li> <li>• Condition Assessment</li> <li>• Design Criteria Development, Mass and Energy Balance</li> <li>• Condition Assessment</li> <li>• Review of Past Work and State of the Market</li> </ul> <p><b>Service Area 3 Topics:</b></p> <ul style="list-style-type: none"> <li>• Project Delivery Risk Analysis</li> <li>• Project Delivery Options Review</li> </ul>	<ul style="list-style-type: none"> <li>• PM Work Plan (Final Documents)</li> <li>• Program Information System Plan (e-Builder)</li> <li>• Solids Model</li> <li>• TM No. 1 – Solids Production and Design Criteria</li> <li>• TM No. 2 – Review of Past Work and State of the Market</li> <li>• TM No. 3 – Condition of Existing Facilities</li> </ul>
2	<p><b>Service Area 1 Topics:</b></p> <ul style="list-style-type: none"> <li>• Cost Estimation Guidelines</li> </ul> <p><b>Service Area 2 Topics:</b></p> <ul style="list-style-type: none"> <li>• Biosolids Product Market Analysis</li> <li>• Thermal Hydrolysis Process Evaluation</li> <li>• Thickening Evaluations</li> </ul>	<ul style="list-style-type: none"> <li>• THP Site Visit Trip Report</li> <li>• TM. No. 6 – Thickening</li> </ul>

Workshop No. (Timing TBD)	Agenda Items	Deliverable Review Following Workshop Documenting Decisions/Path forward
	<ul style="list-style-type: none"> <li>• Sustainability, Carbon Footprint, Energy and Envision</li> <li>• Gas Utilization</li> <li>• Gas Utilization Site Visit Planning</li> </ul> <p><b>Service Area 3 Topics:</b></p> <ul style="list-style-type: none"> <li>• Market Assessment</li> <li>• Continued Project Delivery Options Review</li> </ul> <p><b>Service Area 7 Topics:</b></p> <ul style="list-style-type: none"> <li>• THP Site Visits</li> </ul>	
3	<p><b>Service Area 2 Topics:</b></p> <ul style="list-style-type: none"> <li>• Biosolids Product Market Analysis</li> <li>• Thickening Evaluations</li> <li>• Thermal Hydrolysis Process Evaluation</li> <li>• Gas Utilization</li> <li>• Side stream and Recycles</li> </ul> <p><b>Service Area 3 Topics:</b></p> <ul style="list-style-type: none"> <li>• Thermal Hydrolysis Process Procurement</li> <li>• Project Packaging</li> </ul>	<ul style="list-style-type: none"> <li>• TM No. 4 – Biosolids Product Market Analysis</li> <li>• TM. No. 5 – Thermal Hydrolysis Process Technical Evaluation</li> <li>• TM. No. 8 – Recycle Management and Side stream Treatment</li> </ul>
4	<p><b>Service Area 2 Topics:</b></p> <ul style="list-style-type: none"> <li>• Side stream and Recycles</li> <li>• Plant drain</li> <li>• Gas Utilization Site Visits</li> <li>• Gas Utilization</li> <li>• Screening and Pre-Dewatering</li> </ul> <p><b>Service Area 3 Topics:</b></p> <ul style="list-style-type: none"> <li>• Project Packaging</li> <li>• Market Outreach</li> <li>• Thermal Hydrolysis Process Procurement</li> <li>• THP Request for Proposals</li> </ul>	<ul style="list-style-type: none"> <li>• TM. No. 7 – Thermal Hydrolysis Process Procurement Evaluation</li> <li>• Gas Treatment Site Visit Trip Report</li> <li>• THP Specifications and Drawings (Draft)</li> </ul>
5	<p><b>Service Area 2 Topics:</b></p> <ul style="list-style-type: none"> <li>• Gas Utilization</li> <li>• Gas Processing and Management</li> <li>• Air Emissions Evaluation/Modeling</li> <li>• Screening and Pre-Dewatering</li> <li>• Final Dewatering</li> </ul> <p><b>Service Area 3 Topics:</b></p>	<ul style="list-style-type: none"> <li>• TM. No. 9 – Gas Utilization Plan</li> <li>• TM. No. 10 – Gas Processing and Management Evaluation</li> <li>• TM. No. 11 – Project Delivery and Packaging</li> <li>• TM. No. 13 – Screening and Pre-Dewatering</li> <li>• THP Request for Proposals (Draft)</li> </ul>

Workshop No. (Timing TBD)	Agenda Items	Deliverable Review Following Workshop Documenting Decisions/Path forward
	<ul style="list-style-type: none"> <li>• Project Packaging and Delivery</li> <li>• THP Request for Proposals</li> <li>• THP Procurement Agreement</li> </ul> <p><b>Service Area 7 Topics:</b></p> <ul style="list-style-type: none"> <li>• Pilot Testing</li> </ul>	<ul style="list-style-type: none"> <li>• THP Procurement Agreement (Draft)</li> <li>• THP Specifications and Drawings (Final)</li> </ul>
6	<p><b>Service Area 2 Topics:</b></p> <ul style="list-style-type: none"> <li>• Sustainability, Carbon Footprint, Energy and Envision</li> <li>• Final Dewatering</li> <li>• Heat and Energy</li> <li>• Digestion Configuration</li> <li>• Temporary Facilities</li> <li>• Plant effluent water</li> </ul> <p><b>Service Area 3 Topics:</b></p> <ul style="list-style-type: none"> <li>• THP Procurement Agreement</li> </ul>	<ul style="list-style-type: none"> <li>• TM No. 12 – Carbon Footprint Analysis</li> <li>• Envision Checklist, Including decisions for Gas Utilization.</li> <li>• TM. No. 14 – Final Dewatering</li> <li>• THP Request for Proposals (Final)</li> <li>• THP Procurement Agreement (Final)</li> </ul>
7	<p><b>Service Area 2 Topics:</b></p> <ul style="list-style-type: none"> <li>• Emissions Evaluation/Modeling</li> <li>• Heat and Energy</li> <li>• Digestion Design, including Digester Mixing</li> <li>• MOPO/Startup and Integration</li> </ul> <p><b>Service Area 3 Topics:</b></p> <ul style="list-style-type: none"> <li>• Request for Qualifications</li> </ul>	<ul style="list-style-type: none"> <li>• TM. No. 15 – Cooling and Heating Systems</li> <li>• Request for Qualifications (Draft)</li> </ul>
8	<p><b>Service Area 2 Topics:</b></p> <ul style="list-style-type: none"> <li>• Emissions Report</li> <li>• Odor Control Evaluation</li> <li>• Digestion and Digester Mixing</li> <li>• Electrical, Controls and Standby Power</li> <li>• Site Plan</li> </ul> <p><b>Service Area 3 Topics:</b></p> <p>Request for Qualifications Review</p> <p><b>Service Area 7 Topics:</b></p> <ul style="list-style-type: none"> <li>• Fats, Oils and Grease Receiving</li> </ul>	<ul style="list-style-type: none"> <li>• Emissions Study Report</li> <li>• TM. No. 16 – Odor Control</li> <li>• TM. No. 17 – Digestion and Digester Mixing</li> <li>• TM. No. 18 – Fats, Oils and Grease Receiving Station</li> <li>• Request for Qualifications (Final)</li> <li>• Draft Site Plan</li> </ul>
9	<p><b>Service Area 2 Topics:</b></p> <ul style="list-style-type: none"> <li>• Geotechnical Evaluation</li> <li>• Site Plan</li> <li>• Facility Plan Content Review</li> </ul> <p><b>Service Area 3 Topics:</b></p>	<ul style="list-style-type: none"> <li>• Geotechnical Report</li> <li>• Revised Site Plan</li> <li>• Request for Proposals (Draft)</li> <li>• Facility Plan and Drawings (Draft)</li> </ul>

<b>Workshop No. (Timing TBD)</b>	<b>Agenda Items</b>	<b>Deliverable Review Following Workshop Documenting Decisions/Path forward</b>
	<ul style="list-style-type: none"> <li>Request for Proposals</li> </ul>	
10	<p><b>Service Area 1 Topics:</b></p> <ul style="list-style-type: none"> <li>Cost Estimation Baseline Cost Estimate</li> </ul> <p><b>Service Area 2 Topics:</b></p> <ul style="list-style-type: none"> <li>Facility Plan Review</li> </ul> <p><b>Service Area 3 Topics:</b></p> <ul style="list-style-type: none"> <li>Request for Proposals Review</li> </ul>	<ul style="list-style-type: none"> <li>Facility Plan and Drawings</li> <li>Request for Proposals (Final)</li> </ul>
11	<p><b>Service Area 1 Topics:</b></p> <ul style="list-style-type: none"> <li>Cost Estimation Baseline Cost Estimate</li> </ul> <p><b>Service Area 3 Topics:</b></p> <ul style="list-style-type: none"> <li>Contract Development</li> </ul>	<ul style="list-style-type: none"> <li>Baseline Cost Estimate</li> <li>Contract</li> </ul>
Envision	<p><b>Service Area 1/7 Topics:</b></p> <ul style="list-style-type: none"> <li>Principals of Envision</li> <li>Review initial scoring</li> <li>Evaluate scope items that may increase Envision credits</li> </ul>	<ul style="list-style-type: none"> <li>Initial scoring summary</li> <li>Envision Workplan and schedule</li> </ul>

The following workshops are anticipated for development of the communications plan and Program branding.

<b>Workshop No. (Timing TBD)</b>	<b>Agenda Items</b>	<b>Deliverables Following Workshop Documenting Decisions/Path forward</b>
Kickoff Workshop	<p><b>Service Area 1 Topics:</b></p> <ul style="list-style-type: none"> <li>Communications Plan (and Branding)</li> </ul>	<ul style="list-style-type: none"> <li>Meeting Summary to include key decisions on branding and communications.</li> </ul>
1	<p><b>Service Area 1 Topics:</b></p> <ul style="list-style-type: none"> <li>Communications Plan (and Branding)</li> </ul>	<ul style="list-style-type: none"> <li>Meeting Summary</li> <li>Draft Mood Boards</li> <li>Draft Logo Concepts</li> <li>Draft Communications Plan</li> </ul>
2	<p><b>Service Area 1 Topics:</b></p> <ul style="list-style-type: none"> <li>Communications Plan (and Branding)</li> </ul>	<ul style="list-style-type: none"> <li>Final Mood Boards</li> <li>Final Program Logo</li> <li>Final Brand Book and Templates</li> <li>Final Communications Plan</li> </ul>



## EXHIBIT E - ASSUMPTIONS

The following provides general assumptions for the Scope of Work for the Engineering Program Management Consulting services for the Arlington WPCB Solids Facility upgrades. Note, main task headings match scope items and numbering in fee spreadsheet. Subtask numbering may not match exactly.

### Service Area Assumptions

#### Service Area 1: Ongoing Services

1. Perform Program Management Administration:
  - a. General project management and oversight for the project will consist of approximately 2 hours per month for Program Principal, 4 hours a week for the Program Manager, and 3 hours a week for the SA1 Senior Engineer.
  - b. Hours onsite per scope. The hours throughout the rest of the proposal account for this time onsite.
  - c. On-site time by the Program Manager for Phase 2, including temporary facilities for housing on-site staff, will be negotiated in the Phase 2 amendment.
  - d. General – QC by Technical Leads, Program Principal, Program Manager, or dedicated QC staff. All deliverables to be QC'd by those not directly involved in the work.
  
2. Within 60 days of Notice to Proceed (NTP), provide the following elements for the WPCB's review and approval:
  - a. A kickoff meeting attendee: Program Manager, all Service Area leads, three other support staff.
  - b. Deliverables: Kick-off Meeting agenda and meeting minutes, Draft Project Schedule, Program Goals, Guiding Principles, Program Sustainability Goals, Conflict resolution protocol, decision tools, confirmation of workshops and deliverables for Phase 1 services.
  - c. Schedule: Fee assumes time for SA1 leaders. Time for Project Scheduler included within SA1.4
  - d. Invoicing plan: Fee assumes time for SA1 leader to help develop plan with project controller.
  - e. E-Builder services in SA1.9.
  - f. PM Work Plan outline: Assumes time for SA1 leader for development of the outline.
  
3. Within 120 days of NTP, provide the following elements for the WPCB's review and approval:
  - a. Road map similar to Overall Work Plan graphic provided at interview.
  - b. Schedule: Fee assumes time for SA1 leaders. Time for Project Scheduler included within SA1.4
  - c. Staffing plan: Fee assumes time for SA1 leader to help develop plan with HDR project manager and project controller.
  - d. Full draft PM Work Plan for review by the Project Officer is included in SA1.4 below.

4. PM Work Plan:

- a. Overall PM Work Plan to be led by SA1 lead with input from program manager where applicable.
- b. Program and Project Management Procedures
- c. Overall Program Schedule
- d. Program Information System Plan
- e. Program Communication Plan
- f. Financial Management Plan (both internal and external)
- g. Delivery Team Management Plan outline
- h. Program Manager Billing and Delivery Team Invoice Control
- i. Program Manager Cost Controls Management Plan and Change Management Procedures
- j. Program Manager Monthly Progress Reports
- k. Program Risk Management Plan
- l. Program Safety Plan for Program Manager's services
- m. Safety Requirements for Delivery Teams
- n. Coordination of other projects
- o. Program Sustainability Goals
- p. Operations and Maintenance Performance and Integration Goals
- q. Quality Assurance and Quality Control (QA/QC Plan)
- r. Construction Management Plan outline

5. Ongoing activities:

- a. Meetings and workshops. – The fee estimate includes a separate tab for the Workshops with detailed break out of attendees and hours associated. The estimate of hours for 16 total workshops is estimated for SA1.5a. These will be conducted through the life of the project and include meeting preparation time and time attending meetings. Time for workshop preparation is included within SA2 and SA3.
  - i. Meeting preparation: Assumed to be 6 hours per staff member just prior to the meeting with the County.
  - ii. No assumptions in ii.
  - iii. Meeting minutes: Comments register will be maintained by HDR project manager.
  - iv. 12 workshops for SA2 and SA3, 3 workshops for Communications Plan, 1 Envision workshop.
  - v. Attendees and time for attendance documented in workshop spreadsheet. Only Program Manager, SA1 lead, and 1 Engineer-in-Training in attendance at all workshops.
  - vi. If in-person workshops are doable, we will not have anyone travel for this phase other than local (DC-MD-VA) personnel, plus our SA1 and SA2 managers. All others will participate via MS Teams or WebEx.
- b. Technical memo hours included in Service Area descriptions. Facilitated review built-in to on-site hours Comment register maintained and assumes 2 hours per deliverable for SA1 leader, and 4 hours per deliverable for EIT to maintain and document resolution of comments.
- c. Coordination with other project: Assumes 4 four-hour meetings with on-call consultants to discuss any potential design impacts based on work on-going by others.

- d. E-Builder use: Incorporated in SA1.9
- e. Monthly cost control: 23 updates over Phase 1
- f. Monthly progress reports: 23 progress reports
- g. Meetings with others: 2 four-hour meetings over Phase 1
- h. Bi-weekly meetings – assume 4 hours for 50 meetings for program manager and SA1 lead.
- i. Maintain files and systems: Assumes 2 hours per month for SA1 lead and 4 hours per month for EIT.

6. Communications and Outreach Program:

- a. Communications plan.
  - i. Communications plan: County to provide Program Manager with geographic area of importance for the communication plan’s demographic and socioeconomic analysis.
  - ii. Technical, regulatory, and environmental analyses and tactics to be developed in workshop settings
  - iii. Communications workshops: Three workshops, Meeting material will include draft and final agenda, handouts, sign-in sheets, presentations, and meeting summaries for three facilitated workshops. Workshop time factored into the Workshops Tab, with the exception of the Graphics Designer time.
  - iv. Workshop 1.
    - 1. Workshop One: Attendees as listed in Workshop Tab
    - 2. Workshop Two: Attendees as listed in Workshop Tab
    - 3. Workshop Three: Attendees as listed in Workshop Tab
  - v. Branding book to be developed as a result of the workshops
- b. Public Meetings
  - i. General public meetings: Two (2) total.
    - 1. The County’s Communications team will promote public meetings via existing channels (i.e., email distribution lists, social media, etc.).
    - 2. Direct mail invitations will be sent to a specific radius of residents around the facility for public meetings. The County will manage logistics of mailings.
    - 3. The Program Manager will be responsible for print production of meeting materials.
    - 4. Attendance at public meetings – Program Manager and communications lead.
    - 5. 40 hours per meeting for communications lead, 20 hours per meeting for graphics designer.
  - ii. Online Meetings: Two (2) total.
    - 1. Attendance at meetings – Program Manager and communications lead
    - 2. 20 hours per meeting for communications lead, 20 hours per meeting for graphics designer
  - iii. Stakeholder Group Meetings: Four (4) total.
    - 1. Attendance at meetings – Program Manager and communications lead
    - 2. 40 hours per meeting for communications specialist, 10 hours per meeting for graphics designer.
  - iv. Community Pop-up Events: Three (3) total.
    - 1. Attendance at events – Program Manager and communications lead

2. 12 hours per meeting for communications specialist, 6 hours per meeting for graphics designer
- v. No hours for DEQ required public meetings are included in Phase 1. These meetings will be included in Phase 2.
- c. Prepare written communications suitable for a variety of formats such as newsletters, flyers, websites, listservs, etc.
  - i. Three newsletters in Phase 1. The Program Manager will be responsible for developing content, graphics, and distribution lists. The Program Manager will design and create content. Newsletters will be provided in English and Spanish. The County will be responsible for distributing the email newsletter. Technical content and review by Program Manager and SA1 lead. 8 hours per newsletter for communications specialist, 8 hours per newsletter for graphics designer.
  - ii. Infographic Brochure/Flyer. Updated semi-annually (three total for Phase 1). Similar effort for newsletters.
  - iii. Educational Videos: Two videos. The Program Manager will develop a strategic planner, scripts, graphics, storyboards, and final educational videos. The Program Manager will produce program videos using vector animation and live footage (if needed). The Program Manager will provide up to two languages in subtitles on the videos. Review by Program Manager. 60 hours per video for Communications Specialist, 30 hours per video for graphics designer.
  - iv. Social Media: The County will be responsible for costs associated with social media advertising. 2 hours per month for 16 months for HDR coordination.
  - v. Program Website: Program Manager will build, County will host.
- d. Review internal communications to ensure WPCB staff is kept informed. The Program Manager will provide materials for the trainings and lunch and learn events. The County will be responsible for sharing via internal platforms.
  - i. Four small group staff trainings, each training held three times to accommodate shift work. Led by HDR technical staff. Four hours per training for program manager, 16 hours per training session for prep and training by Sr. Engineer (6 hours presenting over 3 shifts and 10 hours preparation for each session)
  - ii. Three lunch and learns. Led by HDR technical staff. Two hours per training for program manager, 10 hours per lunch and learn for Sr. Engineer.
  - iii. Four updates. The presentations will be geared toward high-level updates, lasting 5-10 minutes. Use content from other presentations. Program Manager to lead.
- e. Develop briefing information for WPCB management and DES and County leadership.
  - i. Leadership presentations: Assume up to two (2) presentations in Phase 1. Attendance by Program Manager and SA1 lead. Preparation by Program Manager with assistance from Communications Specialist. Limited effort given on-going regular communications between WPCB and DES leadership, using existing materials created elsewhere.
- f. Comment Management and Tracking. The Program Manager will use the secure web-based database, Zoho, to log communication activity and track participation throughout the project. County will have access and HDR will provide monthly reports. 8 hours per month for Communications Specialist to manage.

## 7. Permitting services

- a. Two meetings with the Virginia Department of Environmental Quality water program to discuss the overall program, potential permits, and permit submittal requirements. Air permit meetings included in SA2.
  - b. Four meetings with Arlington County Permit Office (environmental and building) to discuss the overall program, potential permits, and permit submittal requirements. Briefings will be limited, and virtual as needed, to present the program and receive feedback on overall permitting requirements.
  - c. Permit tracking log to be maintained throughout.
  - d. Utility discussions. Two meetings included here for general coordination.
8. Cost and funding:
- a. Guidelines: Led by Cost Estimator.
  - b. CIP Updates: Assuming one a year, total 2 times.
  - c. Parameters: Used for evaluations in SA2.
  - d. Base cost estimate: 400 hours for full estimate by cost estimators.
  - e. No assumptions on Phase 2.
  - f. No assumptions on Phase 2.
  - g. Funding: Assumes a through first check through grant funding options. Light check on second year.
9. E-Builder Project Management Tool: The Program Manager will provide consulting in e-Builder Best Practices regarding implementation and training activities. Services include:
- a. E-Builder Exploratory Meeting (Kick-Off): One four-hour virtual meeting.
  - b. Discovery: Several calls/meetings with WPCB to review how e-Builder is being used and modules.
  - c. Recommendations: Develop recommendations for modules available.
  - d. Training: Develop and provide training for County staff. No project funds will be used to train HDR staff.
10. Sustainability Goals and Envision Efforts: Work scoped within SA1 is exploratory and meant to be the building blocks for Envision Efforts for SA7.5
- a. Align with County Energy Plan – 8 hours by SA2 Sr. Engineer and 8 hours for two ENV SP engineers to review energy plan.
  - b. Engagement with Arlington Initiative to Reduce Emissions (AIRE):
    - i. As needed calls with AIRE team to discuss updates on project (two total assumed toward the end of Phase 1) sustainability efforts.
    - ii. County engagement will support Envision efforts.
  - c. Envision workshop: to evaluate the project based on 64 criteria in the Envision Guidance Manual (v3) and to review program details in relation to attaining an Envision Silver Rating for the project.
    - i. Facilitated by an experienced Envision Sustainability Professional (ENV SP)
    - ii. A four-hour Envision Workshop will be conducted with the purpose of:
      1. Introducing participants to the Envision framework.
      2. Assessing a “baseline” verification level for the project, with known information as of the time of the workshop.

3. Evaluating at a high-level potential scope items that might be needed to increase the verification level to meet the Silver verification requirement.
4. Identifying documentation requirements for Envision credits and indicating when and where reference documents will be available.
5. Establishing consensus
- iii. Assumptions
  1. County staff knowledgeable about related County initiatives (Energy Plan, AIRE, etc.) will participate in the workshop to provide a holistic view of County initiatives policies and processes and their respective impacts to the Project.
- iv. Deliverables
  1. Envision Workshop Summary Report

### **Service Area 2: Scope Development**

The Program Manager will create a Facilities Plan to serve as a bridging document to the Delivery Team(s). In addition, as a part of subject-area technical memorandum development, the Program Manager will confirm the recommendation of the Report and evaluate the best use of the renewable natural gas created during anaerobic digestion. All work will be led by SA2 lead with support from Sr. Engineers, Engineers, and EITs to complete the evaluations.

1. Review of Past Work and Confirmation of Overall Path Forward: Review the Report to confirm the recommendations align with the current state of the industry.
  - a. Review the Biosolids Master Plan Report – focusing on technology evaluations and THP configuration selection.
  - b. State of the Technology Market Memo: Evaluate up to three technologies (including alternate THP configurations) that have the potential to produce Class A biosolids. Prepare a draft/final TM summarizing the results. Evaluation to be limited to technologies that may have been “proven” since completion of the Report.
  - c. State of the land application market memo: Assess current market for biosolids and characteristics – build on work previously completed; identify, interview, and document interview results with potential end users among the following biosolids markets/agencies (up to 10 virtual/telephone interviews):
    - i. Arlington County agencies who use or specify compost, soil and soil amendment products for County properties/projects
    - ii. Biosolids management/land application contractors
    - iii. Soil blenders
    - iv. Compost facility operators
    - v. Construction contractors (targeting contractors who perform large facility, transportation, site improvement projects requiring specified soil blends)
2. Existing Facilities Condition Assessment:
  - a. Two-day walkthrough would include the following staff:
    - i. Program Manager
    - ii. Condition Assessment Technical Specialist
    - iii. SA2 Sr. Engineer
    - iv. Sr. Structural Engineer
    - v. Sr. Architect
    - vi. Sr. Electrical Engineer

- vii. Sr. HVAC Engineer
    - viii. Sr. Process/Mechanical Engineer
    - ix. Engineer in Training
  - b. Process interviews: Will be conducted during two-day walkthrough via informal conversations with operations and maintenance staff. Follow-up may be required through virtual meetings.
  - c. Electrical and process control review and sizing: Review onsite, follow-up included elsewhere.
  - d. Condition of Existing Facilities TM. – Draft TM will be submitted prior to Workshop. Comments received at workshop will be incorporated into the Final TM.
3. Process Characterization
- a. Historical data: Arlington County will provide 5 years of process data in excel or similar electronic format.
  - b. Solids Process modeling: Start-up and one future condition will be modeled. These design conditions will be developed based on the Historical data analysis and made in agreement with the County.
  - c. Update Solids Model Based on Pilot Testing: hours reserved to update the model following receipt of results from Virginia Tech pilot.
  - d. Solids Mass Balance: No additional assumptions on FOG.
  - e. Plant modeling coordination: HDR will provide pertinent data from the solids model to the consultant who will be developing the liquid process model. In turn, the Consultant developing the liquid process model will provide data confirming/validating the current and future solids production criteria.
  - f. Solids Production and Design Criteria Technical Memorandum. – Draft TM will be submitted prior to Workshop. Comments received at workshop will be incorporated into the Final TM.
4. Process Specific Evaluations. – for each item below the Draft TM will be submitted prior to Workshop. Comments received at workshop will be incorporated into the Final TM.
- a. Sludge Thickening: Two processes/configurations each for primary and WAS.
  - b. Screening, and Pre-Dewatering: Four options for combined screening and pre-dewatering facilities.
  - c. THP evaluations are included in SA3.2.
  - d. Digestion and Digester Mixing: Evaluate up to three (3) options for digester configuration. Present materials on digester construction, covers and mixing.
  - e. Cooling Systems: Evaluate up to three (3) options for cooling systems.
  - f. Plant Effluent Water (PEW) Systems: The County will assist with compilation/confirmation of existing PEW usage to help determine available capacity in the existing system. HDR will develop an appropriate PEW model to evaluate usage and impacts of cooling water, dilution water, and other uses.
  - g. Plant drain:
    - i. The County will assist with confirming sources that flow to the Plant Drain System.
    - ii. Evaluation includes a hydraulic evaluation of the plant drain piping system in the vicinity of new/existing solids handling facilities. Improvements, as determined necessary by the evaluation, will be of the piping system only.
    - iii. Design of new plant drain pump stations is not included in this work.
  - h. Final Dewatering: Evaluate two different locations and three dewatering technologies.

- i. Recycle Management and Side stream Treatment: Evaluate location and up to three (3) technologies for nitrogen removal. It is assumed that side stream treatment would be a deammonification process. Phosphorus removal/recover is not included in this evaluation.
  - j. Odor Control: Three (3) odor control technologies/configurations will be included in this evaluation.
  - k. Fats, Oils and Grease Receiving Station: FOG quantities will be based off of publicly available information or per capita/per restaurant metrics. No conceptual level design will be provided for future FOG facilities, only potential future locations.
5. Develop the Gas Utilization Plan:
- a. Following options will be considered:
    - i. Use of gas onsite for energy and steam generation (CHP) with baseline gas cleaning.
    - ii. Gas upgrading to renewable natural gas (RNG) plus direct sale to the natural gas grid for vehicle fuel, both with and without CHP for energy and steam production.
    - iii. Gas upgrading to compressed natural gas (CNG) or RNG plus direct sale to local users (bus fleets) for vehicle fuel, both with and without CHP for energy and steam production.
  - b. Energy plan requirements: Relevant county energy goals are assumed to be:
    - i. Goal 2, Policy 2.3: Assess microgrid (islanding) options for highest response, delivery and continuity of critical services.
    - ii. Goal 3
      - 1. Policy 3.1: Government operations will achieve 50% Renewable Electricity by 2022, and 100% Renewable Electricity by 2025.
      - 2. Policy 3.2: The community will achieve 100% Renewable Electricity by 2035.
      - 3. Policy 3.4: Optimize the use of renewable energy technologies in the public, private, and non-profit sectors, from a variety of on- and off-site sources, transactional options, cooperatives and diverse utility models.
    - iii. Goal 4, Policy 4.1: Reduce the amount of carbon produced from transportation to 0.5 mt CO<sub>2</sub> e/capita/year by 2050.
    - iv. Goal 5
      - 1. Policy 5.1: Reduce County government CO<sub>2</sub> e emissions to be carbon neutral by 2050, compared to 2007 levels, and improve energy security throughout County operations
      - 2. Policy 5.5: The design and construction of new and major renovations of County facilities should presume Net Zero Ready targets, and the design and building of new and major renovations of County facilities should achieve energy efficiency targets consistent with Arlington County Government's Facility Sustainability Policy for New Construction and Major Renovation.
  - c. Identify customer base: Assume two meetings each with Washington Gas, WMATA, and ART. Final agreements will be in Phase 2.
  - d. RIN market: Review of current market, trends and predictions. Establish upper and lower bounds of RIN values to be used in evaluation.
  - e. Design Criteria: will be based on the startup and future design criteria established in Task 2.3- Process Characterization, considering the decisions made for gas upgrading technology and biogas utilization.
  - f. Gas storage: Two (2) options will be evaluated.
  - g. Gas treatment: Four (4) technologies will be screened for gas treatment.



- h. Steam requirements. To be evaluated for onsite use and purchase of natural gas.
  - i. Steam technology: Three (3) options for steam generation will be evaluated.
  - j. Layout/location: Two (2) potential locations for steam generation, gas storage, and gas handling equipment will be considered.
  - k. Technical memos: Draft, Pre-Final, and Final TMs will be developed for this analysis. The Draft TM will be submitted prior to Workshop. Comments received at workshop will be incorporated into the Pre-Final TM. Any additional comments from Arlington County will be incorporated into the Final TM.
6. Emissions Analysis:
- a. Source evaluation: The permitting of the new projects is driven by the permitting status of the existing plant operations. HDR will verify existing equipment information included in previous modeling efforts and will develop a calculation to verify current emissions.
  - b. Emission quantities:
    - i. Two meetings with DEQ
    - ii. Two (2) meetings, including one HDR air quality staff, at VDEQ offices are included.
    - iii. Up to four (4) hours of conference call meetings are included.
  - c. Modeling: Modeled inputs will be similar to what was completed previously, namely NO<sub>x</sub>, SO<sub>2</sub>, CO, and particulate matter. The perimeter of the surrounding areas will be determined by the Program Manager. It is intended that this will match what was done in the Solids Master Plan with adjustments discussed with the County.
    - i. HDR will use the same modeling methodology used by CDM Smith.
    - ii. HDR will use the AERMOD modeling system and associated input data processors, the version of which are current at the time of project implementation.
    - iii. Two (2) scenarios will be modeled – as determined in other portions of Task 2.5. Only the most probable layout for each will be modeled.
    - iv. Two (2) iterations for each will be modeled.
    - v. All criteria pollutants (except ozone), and associated averaging periods, will be modeled. Ozone impacts will be evaluated using the current USEPS Modeled Emission Rates for Precursors (MERPS) guidance.”
    - vi. HDR will follow VDEQ regulatory exemption and modeling requirements for toxics.
  - d. Emission controls: HDR will provide a summary of the emissions controls that are typically used meet the anticipated requirements. The evaluation of potential emissions controls will be limited to commercially available equipment that is typically used in this industry to achieve the required emission limits. Conceptual design will be developed for one option for the purposes of estimating and layout.
  - e. Permitting: Services provided in Phase 1 will focus on defining the permitting process and sequencing steps.
  - f. Report:
    - i. One (1) set of consolidated County comments to the draft and the pre-final reports will be provided and addressed.
7. Overall Site Plan: Site plan will be developed in AutoCAD and will be revised throughout Phase 1. The final site plan will be developed into 3-d renderings showing perspectives from four (4) different directions.

8. Facilities Plan:
  - a. Facilities plan will incorporate Maintenance of Plant operations and temporary facilities required for continued service during construction.
  - b. Facilities Plan Drawings include: Site plan, Overall Process Flow Diagram (PFD), PFDs for each unit process evaluated in Service Area 2, Task 2.5, conceptual layouts and sections for selected unit processes.
  - c. For the purposes of determining the feasibility of retrofitting existing structures, up to three (3) existing facilities, including the existing Dewatering Building will be modeled using BIM.
  - d. Draft and Final Facility plan will be developed. The Draft Facilities Plan will be submitted prior to Workshop. Comments received at workshop and any additional comments from Arlington County will be incorporated into the Final Facilities Plan.

### **Service Area 3: Project Delivery and Procurement**

Service Area 3 will be completed concurrently with Service Areas 1 and 2. Workshops for Service Area 3 will be combined with workshops from Service Areas 1 and 2.

1. Package Identification and Delivery Method Selection:
  - a. Overall conceptualization – hours from Program Manager and SA3 lead, supported by engineer
  - b. Review project delivery alternatives – hours from Program Manager and SA3 lead, supported by engineer
  - c. Assessments – hours from Program Manager and SA3 lead, supported by engineer and EIT. Includes analysis of both delivery types and project packaging. Assume quantitative assessment includes eight separate package/delivery method alternatives. These combinations will be screened through prior workshops. Hours based on:
    - i. PM – 2 hours /alternative + 4 hours for recommendation
    - ii. SA3 lead – 3 hours /alternative + 6 hours for recommendation
    - iii. Engineer - 6 hours /alternative + 8 hours for recommendation
    - iv. EIT - 6 hours /alternative + 8 hours for recommendation
  - d. Workshops included in SA1.
  - e. Recommendation – hours from Program Manager and SA3 lead, supported by engineer and EIT.
  - f. (h) Competitive negotiations – most work will be included in TM.
  - g. (k) Update schedule – 20 hours for project controls supported by PM and SA3 lead
2. Thermal Hydrolysis Process (THP) Pre-selection:
  - a. THP Evaluation TM – led by SA2 Sr. Engineer, supported by Engineer and EIT. Includes research with vendors, calls to end users, and update on status of equipment operation.
    - i. Evaluate up to three most mature THP technologies and manufacturers, as determined by number of installations, installation size and operation duration. Prepare Draft/Final THP Evaluation Memo with recommendations for THP technology selection.
  - b. Request for Proposals (RFP)/procurement contract development: Take advantage of previous work completed by HDR but accommodate additional THP vendors (up to 3). RFP hours based on:
    - i. Drawings and specs:

1. Cambi – 4 hours Sr. Engineer, 8 hrs EIT, 12 hours CAD
  2. Two others (each) – 8 hours Sr. Engineer, 24 hours EIT, 32 hours CAD
  3. 8 hours QC
  - ii. Evaluation Criteria – Sr. Engineer led
  - iii. Draft Agreement – use previous examples. Will require coordination with County Procurement (assume two meetings).
  - iv. RFP – led by Sr. Engineer with support from EIT
  - v. Review Proposals – 4 hours each by PM and SA3 lead, 16 hours each by Sr. Engineer and EIT
  - vi. Negotiating assistance – assume two meetings with selected vendor and Sr. Engineer with conference calls as required. Support Best and Final pricing and final agreement negotiations. Document negotiations in Record of Negotiations.
  - c. Sole source memo: Hours in b. will be sufficient to cover if this is the direction that the team decides on.
3. Procurement of Package Delivery Team(s): is assumed that a total of three separate procurements will be required to deliver all of the work on the program. This number nor the assumptions used to build the fee estimate identified below are not constraints and will be evaluated as part of SA3.1 above.
- a. Scope coordination – led by SA3 lead and Engineer
  - b. Procedures
  - c. Contracts: No legal assistance will be provided to finalize the contract templates. Contract template review – requires significant involvement of PM and SA3 lead to confirm templates are appropriate for the programs identified and to review the Commercial Terms. Includes meetings with Procurement.
  - d. Bidder Outreach: Utilize program manager and SA3 lead contacts to develop interest.
  - e. Project 1:
    - i. Assume Site Preparation Package, Design-Build:
    - ii. Procurement documents led by Sr. Engineer with PM and SA3 lead involvement.
    - iii. RFQ development includes development of recommended evaluation criteria and development of scoring spreadsheets. These are to be vetted through workshops. Review and QC by PM and SA3 lead.
    - iv. Two addenda during RFQ
    - v. Assume six SOQs received, total of 8 hours per review for each, led by Sr. Engineer.
    - vi. Facilitate rankings of SOQs – one meeting with County + ranking spreadsheet development.
    - vii. Assume RFP includes development of documents sufficient for fixed pricing. Say 20 drawings at 15 hours per drawing. Additional 80 hours for RFP development.
    - viii. Three addenda during RFP
    - ix. Assume three proposals, total of 20 hours per review for each, led by Sr. Engineer.
    - x. Assume three interviews, 2 hours each attended by PM and Sr. Engineer. 4-hour prep time for each.
    - xi. Facilitate rankings of RFP – one meeting with County + ranking spreadsheet development.
    - xii. Recommendation memo – by Sr. Engineer, with QC by PM and SA3 lead.
    - xiii. Negotiations - with PM and Sr. Engineer. As fixed price, assume negotiations are relatively minor.

- xiv. County Board Presentation – PM and Sr. Engineer with support from Communications Team
- f. Project 2:
- i. Assume THP and Digestion, Design-Build:
  - ii. Procurement documents led by SA3 lead with PM and Engineer support. Support also from HDR DB lead.
  - iii. RFQ development includes development of recommended evaluation criteria and development of scoring spreadsheets. These are to be vetted through workshops. Review and QC by PM and SA3 lead.
  - iv. Two addenda during RFQ
  - v. Assume six SOQs received, total of 8 hours per review for each, led by SA3 lead and PM.
  - vi. Facilitate rankings of SOQs – one meeting with County + ranking spreadsheet development.
  - vii. Assume RFP includes Facilities Plan as sole technical support. 160 hours for RFP development.
  - viii. Three addenda during RFP. Include one confidential 4-hour meeting with each proposer. 4-hour prep and summary for each. Attended by PM and SA3 lead.
  - ix. Assume three proposals, total of 30 hours per review for each, led by SA3 lead.
  - x. Assume three interviews, 3 hours each attended by PM and SA3 lead. 6-hour prep time for each.
  - xi. Facilitate rankings of RFP – one meeting with County + ranking spreadsheet development.
  - xii. Recommendation memo – by Sr. Engineer, with QC by PM and SA3 lead.
  - xiii. Negotiations - with PM and Sr. Engineer. Assume four four-hour meetings with DB, plus Record of Negotiations and internal meetings with County.
  - xiv. County Board Presentation – PM and Sr. Engineer with support from Communications Team
- g. Project 3:
- i. Assume Gas Handling, Design-Build:
  - ii. Procurement documents led by SA3 lead with PM and Engineer support. Assume similar to Project 2.
  - iii. RFQ development includes development of recommended evaluation criteria and development of scoring spreadsheets. These are to be vetted through workshops. Review and QC by PM and SA3 lead. Approximately 50% of hours of Project 2
  - iv. Two addenda during RFQ
  - v. Assume six SOQs received, total of 8 hours per review for each, led by SA3 lead and PM.
  - vi. Facilitate rankings of SOQs – one meeting with County + ranking spreadsheet development.
  - vii. Assume RFP includes Facilities Plan as sole technical support. 120 hours for RFP development.
  - viii. Three addenda during RFP. Include one confidential 4-hour meeting with each proposer. 4-hour prep and summary for each. Attended by PM and SA3 lead.
  - ix. Assume three proposals, total of 20 hours per review for each, led by SA3 lead.
  - x. Assume three interviews, 3 hours each attended by PM and SA3 lead. 4-hour prep time for each.

- xi. Facilitate rankings of RFP – one meeting with County + ranking spreadsheet development.
- xii. Recommendation memo – by Sr. Engineer, with QC by PM and SA3 lead.
- xiii. Negotiations - with PM and Sr. Engineer. Assume four four-hour meetings with DB, plus Record of Negotiations and internal meetings with County.
- xiv. County Board Presentation – PM and Sr. Engineer with support from Communications Team

**Service Area 4: Planning and Design**

No scope or fee is included for Phase 1 services. See Exhibit C for framework of future scope requirements.

**Service Area 5: Construction Management**

No scope or fee is included under the Phase 1 services. See Exhibit C for framework of future scope requirements.

**Service Area 6: Operations and Maintenance**

During Phase 1:

- 1. Biosolids marketing plan
  - a. Update market analysis for final Class A biosolids product(s): Up to six (6) follow-up interviews with end users in targeted markets identified in Task 2.1.c.
  - b. Evaluate distribution and marketing program alternatives (assuming direct distribution, 3rd party distribution, and hybrid distribution). Describe and compare these three (3) alternatives for distribution and marketing program management. Include consultation from communications specialists for future branding efforts.
- 2. Training – Included within SA1.
- 3. Staffing review: Staffing review will be completed as part of business case analyses and will be important for future budgeting for the County. Will rely on consultation with SherAI to complete this effort.

**Service Area 7: Other Services**

- 1. Site visits:
  - a. International site visit
    - i. Attended by Program Manager, SA2 Sr. Engineer, and another Sr. Engineer.
    - ii. One-week duration, including travel (Sunday to Saturday).
    - iii. HDR will make all travel plans/itineraries as well as secure ground transportation and hotel reservations.
    - iv. Arlington County will book airline travel for County staff.
  - b. Local Visit 1 – Location to be determined by County/HDR discussion
    - i. Attended by Program Manager, SA2 Sr. Engineer, Engineer and Engineer in Training.
    - ii. Three-day duration, including travel.
    - iii. HDR will make all travel plans/itineraries as well as secure ground transportation and hotel reservations.
  - c. Local Visit 2 – Location to be determined by County/HDR discussion
    - i. Attended by Program Manager, SA2 Sr. Engineer, Engineer and Engineer in Training.
    - ii. Two-day duration, including travel.
    - iii. HDR will make all travel plans/itineraries as well as secure ground transportation and hotel reservations.
  - d. Gas Technology Visits 1 and 2 – Location to be determined by County/HDR discussion

- i. Attended by Program Manager, SA2 Sr. Engineer, Sr. Engineer and Engineer in Training.
      - ii. One three-day duration and one two-day duration trip, including travel.
      - iii. HDR will make all travel plans/itineraries as well as secure ground transportation and hotel reservations.
      - iv. Arlington County will book airline travel (as applicable) for County staff.
    - e. Should airline or international travel be precluded due to Public Health concerns, efforts will be made to coordinate “virtual visits” that may include, but not be limited to:
      - i. Live or pre-recorded Video facility tours
      - ii. Presentations of facility photographs with annotation
      - iii. Presentations, trip reports or descriptions from prior site visits led by SA2 Sr. Engineer
2. Coordination of pilot work
  - a. Review and provide comments, schedule regular calls with Virginia Tech to review data, provide recommendations on testing to be done and evaluation of data.
3. Other technologies – Hours included for SA2 Sr. Engineer, Engineer, and Engineer in Training to monitor and investigate additional technologies. Up to 60 hours total is budgeted for this work.
4. Carbon footprint:
  - a. Assume carbon impact assessment considerations: direct methane emissions from biological treatment of solids, onsite fuel combustion, electricity consumption accounting for projected changes to grid GHG intensity, and transportation emissions for movement of materials onsite/offsite.
  - b. Develop baseline Carbon Footprint
    - i. This work will be completed in conjunction with SA2 Task 2 – Existing Facilities Condition Assessment.
    - ii. One-day site visit to document existing solids processes equipment operation practices.
    - iii. Desktop review of existing solids handling equipment, motors, and chemical demand.
    - iv. Complete calculations to determine baseline carbon footprint of existing solids handling processes.
  - c. Document new Carbon Footprint
    - i. As part of the SA2 work and Facilities Plan, develop preliminary motor lists and estimated chemical consumption.
    - ii. Complete calculations for carbon footprint for new solids handling facilities.
  - d. GHG emission reduction estimates will be quantified for one beneficial reuse alternative (once selected): pipeline injection for CNG vehicles; onsite natural gas replacement at WWTP; and onsite electricity generation.
  - e. GHG emission reduction estimates will only need to be calculated for the selected biogas use. Calculations are limited to these activities.
  - f. Calculated GHG impacts for the selected alternative will also be analyzed in the context of the County Energy Plan.
  - g. Pipeline injection and sale of RIN credits, if applicable, may impact claims related to downstream GHG emission reductions. Life Cycle Analyses (LCAs) for construction or process materials not included under Phase 1 Services but will be included under Phase 2 Services.
5. Envision silver: Workshop is covered in SA1 to complete checklist. Checklist will be reviewed with the group as part of Workshop No. 6. The project will utilize Envision v3, following Pathway A, with post-design and post-construction reviews. Although no documentation will be submitted

during Phase 1, the team will begin collecting or recording relevant documentation, as it becomes known or available during the evaluation and facility planning process.

- a. Complete Initial Checklist
    - i. Fill out initial project online scorecard – The project record will be updated based on results of the Envision workshop to show the pursued credits, estimated levels of achievement and potential overall rating.
  - b. Facilitate Envision Process
    - i. Prepare an overall Envision Workplan and schedule – A workplan will be created to provide an overview and timeline of activities needed to submit the project for Envision verification under Envision v3 Pathway A, as well as initial roles and responsibilities. Pathway A includes a design submission at or after 95% design completion and a post-construction review of pending credits at or after 95% construction completion.
    - ii. Communicate with project team and Envision team as key decisions are made that impact the initial baseline.
      1. Assume bi-monthly conference calls for the duration of Phase 1.
  - c. Integrate Envision Sustainability Criteria into Procurement Documents
    - i. Include Envision in RFQ/RFP language – language will be developed to assist in selecting a design team that can proactively support the ongoing Envision effort through design and construction phases.
    - ii. Include Envision in Design Phase Contract, ensuring the Envision requirements are clearly stipulated in the Design Phase Contract and that the design team will provide the required support for the ongoing Envision effort through design and construction phases.
  - d. Deliverables
    - i. Documentation showing the project has been registered with ISI
    - ii. Copy of initial Envision scorecard from ISI website
    - iii. Envision Workplan and schedule
    - iv. Recommended RFQ/RFP language
6. Geotech evaluation and report: Evaluate previous reports. Include \$30,000 for drilling subcontractor if required.
  7. Geotech recommendations: In concert with 6.
  8. BIM best practices. Scope to be developed, as necessary. Include 80 hours for Sr. Engineer and 80 hours for Sr. BIM.
  9. Additional communications meetings or deliverables. Scope to be developed, as necessary. Include 160 hours for Communications Specialist and 160 hours for Graphics Designer.
  10. Dashboards. Scope to be developed, as necessary. Include 20 hours for Technical Specialist and 80 hours for Sr. Engineer.
  11. Unscoped items. Scope to be developed, as necessary. Include various hours for technical team.
  12. APWA best practices: No assumptions.

ARLINGTON WATER POLLUTION CONTROL PLANT (WPCP)  
 CONTRACT NUMBER 19-261  
 EXHIBIT F  
 ENGINEERING PROGRAM MANAGEMENT CONSULTING  
 PHASE 1 FEE ESTIMATE - SUMMARY

Cost Break Down by Service Area	Total Hours	Total \$
<b>Service Area 1: Ongoing Services Total Cost</b>	<b>7,146</b>	<b>\$ 1,484,522</b>
1.1 Program Management Administration	746	212,530
1.2 First 60 days	77	13,768
1.3 First 120 days	86	20,456
1.4 Program Work Plan	503	111,140
1.5 On-going Program Management Activities	2,561	557,470
1.6 Communications Program	1,918	303,506
1.7 Permitting	262	58,184
1.8 Cost Estimating	754	155,710
1.9 e-Builder	176	38,060
1.10 Sustainability Goals	63	13,698
<b>Service Area 2: Scope Development Total Cost</b>	<b>7,032</b>	<b>\$ 1,300,291</b>
2.1 Confirm Path Forward	317	63,850
2.1.a Review Previous Findings	72	13,872
2.1.b Technology Improvements	100	19,480
2.1.c Biosolids Product Market	145	30,498
2.2 Existing Facilities Condition Assessment	419	86,822
2.3 Process Characterization	443	86,212
2.4 Process Specific Evaluations	2,704	464,671
2.4.a Thickening	205	33,944
2.4.b Screening and Pre-Dewatering	450	75,470
2.4.d Digestion and Digester Mixing	361	67,232
2.4.e Cooling Systems	325	58,090
2.4.f Plant Effluent Water Systems	198	30,752
2.4.g Plant Drain Systems	79	12,715
2.4.h Final Dewatering	253	42,880
2.4.i Recycle Management and Sidestream Treatment	277	48,722
2.4.j Odor Control	355	61,474
2.4.k FOG	201	33,392
2.5 Develop Gas Utilization Plan	1,208	242,558
2.6 Emissions Analysis	577	106,532
2.7 Site Plan	252	44,078
2.8 Facilities Plan	1,112	205,568
<b>Service Area 3: Project Delivery and Procurement Total Cost</b>	<b>4,391</b>	<b>\$ 1,016,463</b>
3.1 Package Identification and Delivery Method Selection	461	98,936
3.2 THP Pre-selection	886	174,779
3.3 Procurement of Package Delivery Teams	3,044	742,748
3.3.a.-d. Program Coordination	258	65,674
3.3.e.-o. Project 1 - Early Work	985	203,140
3.3.e.-o. Project 2 - THP and Digestion	1,075	284,599
3.3.e.-o. Project 3 - Gas Systems	726	189,335
<b>Service Area 6: Operations and Maintenance Total Cost</b>	<b>242</b>	<b>\$ 53,368</b>
6.1 Biosolids Marketing Assessment	218	47,728
6.2 Validate Staffing Requirements	24	5,640
<b>TOTAL LABOR BREAKDOWN</b>	<b>18,811</b>	<b>\$ 3,854,644</b>
<b>EXPENSES BREAKDOWN</b>		
SherAI		80,000
Travel Costs (Workshops)		23,979
Travel Costs (Other Services)		15,869
Strategic Communications Direct Expenses		29,715
Printing and Reports Costs		7,225
<b>TOTAL EXPENSES BREAKDOWN</b>		<b>156,787</b>

**GRAND TOTAL LABOR & EXPENSES** **\$ 4,011,431**  
**GRAND TOTAL LABOR & EXPENSES with Service Area 7 (below)** **\$ 4,542,837**

<b>Service Area 7: Other Services Total Cost</b>	<b>2,293</b>	<b>\$ 531,406</b>
7.1 Site Visits	484	113,220
Travel Costs, International Site Visit		25,271
Travel Costs, Domestic Site Visits		15,963
<i>Total for 7.1</i>		154,454
7.2 Coordinate On-Going Pilot Work	161	36,282
7.3 Technology Monitoring	60	10,814
7.4 Carbon Footprint Analysis	186	29,684
7.5 Envision	174	35,198
<i>Total for 7.5</i>		35,198
7.6 Geotechnical	182	34,054
Geotechnical Services		30,000
<i>Total for 7.6</i>		64,054
7.7 Geotechnical Design Criteria	48	10,660
7.8 BIM Best Practices	160	32,800
7.9 Additional Communications Meetings or Deliverables	328	46,592
7.10 Develop e-Builder KPIs	100	24,768
7.11 Other unscoped items	410	86,100



ARLINGTON WATER POLLUTION CONTROL PLANT (WPCP)  
CONTRACT NUMBER 19-261  
EXHIBIT F  
ENGINEERING PROGRAM MANAGEMENT CONSULTING  
PHASE 1 FEE ESTIMATE - LABOR

Task No.	Task	Program Principal	Program Manager	Technical Specialist	Quality Control	Principal Engineer	Sr. Engineer	Engineer	Engineer-in-Training	Comm. Specialist	Sr. BIM/CAD	BIM/CAD	Graphics Designer	Sr. Architect	Architect	Sr. Ops. Specialist	Ops. Specialist	Sr. Scheduler	Project Controls	Cost Estimator	Admin	Hours	Cost	
Fully Burdened Rates		\$305.00	\$320.00	\$307.00	\$264.00	\$270.00	\$235.00	\$185.00	\$126.00	\$175.00	\$175.00	\$128.00	\$103.00	\$180.00	\$130.00	\$248.00	\$185.00	\$159.00	\$159.00	\$180.00	\$90.00			
Hours per Week		2	24	15	3	3	47	37	35	12	6	5	10	0	0	-	-	1	1	5	6			
<b>New Project Hours &amp; Total Project Cost</b>		<b>230</b>	<b>2,383</b>	<b>1,475</b>	<b>280</b>	<b>312</b>	<b>4,718</b>	<b>3,667</b>	<b>3,527</b>	<b>1,180</b>	<b>568</b>	<b>524</b>	<b>982</b>	<b>34</b>	<b>20</b>			<b>52</b>	<b>52</b>	<b>458</b>	<b>642</b>	<b>21,104</b>	<b>\$4,314,816.00</b>	
Old		288	2,490	1,648	297		5,265	5,012	3,734	1,400	744	524	1,046	34	20				120	458	702	23,782	\$5,081,182.00	
<b>Service Area 1: Ongoing Services</b>		<b>138</b>	<b>1,136</b>	<b>171</b>	<b>48</b>	<b>42</b>	<b>2,017</b>	<b>438</b>	<b>624</b>	<b>984</b>	<b>-</b>	<b>-</b>	<b>786</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>32</b>	<b>52</b>	<b>458</b>	<b>220</b>	<b>7,146</b>	<b>\$1,484,522.00</b>	
1.1	Program Management Administration	46	400				300															746	\$212,530.00	
1.1.a	General Program Management	46	400				300															746	\$212,530.00	
1.2	First 60 days		5				24												32		16	77	\$13,768.00	
1.2.a	Kickoff Meeting	<i>Counted into the Workshops Tab</i>																						
1.2.b	Kickoff Meeting Deliverables	<i>Counted into the Workshops Tab</i>																						
1.2.c	Draft Schedule						8															10	\$2,520.00	
1.2.d	Billing Process		2				4												16			22	\$4,124.00	
1.2.e	Schedule and Resource Tracking						8												16		16	40	\$5,864.00	
1.2.f	Program Management Work Plan Outline		1				4															5	\$1,260.00	
1.3	First 120 days		14	4			52	8					4						4			86	\$20,456.00	
1.3.a	Road map		8				32						4									44	\$10,492.00	
1.3.b	Program Schedule		2				4	8														14	\$3,060.00	
1.3.c	Staffing Plan		4	4			16												4			28	\$6,904.00	
1.4	Program Work Plan	2	83	28	18		188	62		8									32	16	66	503	\$111,140.00	
1.4.a	Develop Program Work Plan, review of overall document		4				4															40	\$5,820.00	
1.4.a	Program Goals		4				8			8												20	\$4,560.00	
1.4.b	PgM & PM Procedures, w/ Conflict Resolution, Decision Tools		2		4		24															30	\$7,336.00	
1.4.c	Overall Program Schedule & Resource Management Plan w/ cost control		4				4												32			40	\$7,308.00	
1.4.d	Program Information System Plan, (Review & Overall Coord), see SA1.9		1				4															5	\$1,260.00	
1.4.e	Program Communication Plan, (Review & Overall Coord), see SA1.6		1				4															5	\$1,260.00	
1.4.f	Financial Management Plan (external and internal, CIP forecast review)		24	4	4		24															62	\$16,558.00	
1.4.g	Delivery Team Management Plan, outline		1				4															5	\$1,260.00	
1.4.h	Program Manager Billing Plan		1				4															11	\$2,214.00	
1.4.i	PgM Cost Controls Management Plan & Change Management Procedures		4				12															20	\$4,736.00	
1.4.j	PgM Monthly Progress Reports Plan		1				4															5	\$1,260.00	
1.4.k	Program Risk Management Plan (risk register & matrix)		12	8	2		20															8	50	\$12,244.00
1.4.l	Program Safety Plan for PgM's Services		1				8															4	13	\$2,560.00
1.4.m	Safety Requirements for Delivery Teams		1				4															4	9	\$1,620.00
1.4.n	Coordination with other Projects Plan		2				4	4														10	\$2,320.00	
1.4.o	Program Sustainability Goals		2				12	16														30	\$6,420.00	
1.4.p	Operations and Maintenance Performance and Integration Goals		4	8	4		16															32	\$8,552.00	
1.4.q	Quality Assurance and Quality Control (QA/QC) Plan		4				12	30														46	\$9,650.00	
1.4.r	Construction Management Plan, outline		2				4	4														10	\$2,320.00	
	Start-Up and Commissioning Plan, outline		2	4			2															8	\$2,338.00	
	Plant-Wide Integration Plan, outline		2	4			2															8	\$2,338.00	
	Final Program Work Plan (incorporate County review comments & other updates)	2	4		4		8	8													10	36	\$7,206.00	
1.5	On-going Program Management Activities	90	412	103		14	1013	104	559	82										46	138	2561	\$557,470.00	
1.5.a	Meetings and Workshops	90	204	103		14	543	96	197	82												1329	\$312,668.00	
1.5.b	Document decisions and comment tracking						100		200													300	\$48,700.00	
1.5.c	Coordinate with Other Projects						16		24													40	\$6,784.00	
1.5.d	E-Builder	<i>Counted into the E-Builder Task 1.9</i>																						
1.5.e	Cost Control Reports						46		46													46	138	\$24,886.00
1.5.f	Monthly Reports						46															46	92	\$14,950.00
1.5.g	Contractor Coordination		8				16	8														32	\$7,800.00	
1.5.h	Bi-weekly Meetings		200				200															400	\$111,000.00	
1.5.i	Maintain Project Files						46		92													92	230	\$30,682.00

ARLINGTON WATER POLLUTION CONTROL PLANT (WPCP)  
 CONTRACT NUMBER 19-261  
 EXHIBIT F  
 ENGINEERING PROGRAM MANAGEMENT CONSULTING  
 PHASE 1 FEE ESTIMATE - LABOR

Task No.	Task	Program Principal	Program Manager	Technical Specialist	Quality Control	Principal Engineer	Sr. Engineer	Engineer	Engineer-in-Training	Comm. Specialist	Sr. BIM/CAD	BIM/CAD	Graphics Designer	Sr. Architect	Architect	Sr. Ops. Specialist	Ops. Specialist	Sr. Scheduler	Project Controls	Cost Estimator	Admin	Hours	Cost		
Fully Burdened Rates		\$305.00	\$320.00	\$307.00	\$264.00	\$270.00	\$235.00	\$185.00	\$126.00	\$175.00	\$175.00	\$128.00	\$103.00	\$180.00	\$130.00	\$248.00	\$185.00	\$159.00	\$159.00	\$180.00	\$90.00				
Hours per Week		2	24	15	3	3	47	37	35	12	6	5	10	0	0	-	-	1	1	5	6				
<b>New Project Hours &amp; Total Project Cost</b>		<b>230</b>	<b>2,383</b>	<b>1,475</b>	<b>280</b>	<b>312</b>	<b>4,718</b>	<b>3,667</b>	<b>3,527</b>	<b>1,180</b>	<b>568</b>	<b>524</b>	<b>982</b>	<b>34</b>	<b>20</b>			<b>52</b>	<b>52</b>	<b>458</b>	<b>642</b>	<b>21,104</b>	<b>\$4,314,816.00</b>		
<b>1.6</b>	<b>Communications Program</b>		<b>110</b>		<b>10</b>		<b>122</b>			<b>894</b>			<b>782</b>									<b>1918</b>	<b>\$303,506.00</b>		
1.6.a	Communications Plan																								
	Communications Workshop 1	<i>Counted into the Workshops Tab</i>																					64	\$6,592.00	
	Communications Workshop 2	<i>Counted into the Workshops Tab</i>																						72	\$7,416.00
	Communications Workshop 3	<i>Counted into the Workshops Tab</i>																						120	\$12,360.00
	Develop Communications Plan				4		4			80													100	\$17,232.00	
	Final Communications Plan						2			20													28	\$4,588.00	
	Develop Branding Book				2					8													90	\$10,168.00	
	Final Branding Book									6													30	\$3,522.00	
1.6.b	Public Meetings																								
	General Public Meetings (2)		8							80				40									128	\$20,680.00	
	Online Meetings (2)		8							40				40									88	\$13,680.00	
	Stakeholder Group Meetings (4)		16							160				40									216	\$37,240.00	
	Community Pop-up Events (3)		18							36				18									72	\$13,914.00	
1.6.c	Written Communications																								
	Newsletters (3)		3				6			24				24									57	\$9,042.00	
	Infographic Brochure (3)		3				6			24				24									57	\$9,042.00	
	Educational Videos (2)		2							120				60									182	\$27,820.00	
	Social Media									32													32	\$5,600.00	
	Program Website																								
	Development		2		4		6			56				120									188	\$25,266.00	
	Rollout																								
1.6.d	Internal Communications																								
	Small Group Staff Trainings (4)		16				64							8									88	\$20,984.00	
	Lunch and Learn (3)		6				30							6									42	\$9,588.00	
	All Hands Meeting (4)		8																				8	\$2,560.00	
	Other internal communications		12							12				12									36	\$7,176.00	
1.6.e	Leadership Meetings (2)		8				4			12				12									36	\$6,836.00	
1.6.f	Comment Management and Tracking									184													184	\$32,200.00	
<b>1.7</b>	<b>Permitting</b>		<b>42</b>	<b>20</b>		<b>28</b>	<b>60</b>	<b>48</b>	<b>64</b>													<b>262</b>	<b>\$58,184.00</b>		
1.7.a	Meetings with VDEQ (2)		16	4		8	8	8															44	\$11,868.00	
1.7.b	Meetings with Arlington County Permit Office (4)		8				16		24														48	\$9,344.00	
1.7.c	Permit Tracking Log		2				16		40														58	\$9,440.00	
1.7.d	Outside Utilities							20															20	\$3,700.00	
	Washington Gas		8	8		10	10	10															46	\$11,916.00	
	Dominion Power		8	8		10	10	10															46	\$11,916.00	
<b>1.8</b>	<b>Cost Estimating</b>		<b>48</b>	<b>10</b>	<b>20</b>		<b>180</b>	<b>84</b>													<b>412</b>	<b>754</b>	<b>\$155,710.00</b>		
1.8.a	Guidelines			2			8																42	\$8,254.00	
1.8.b	CIP Coordination		40				80																120	\$31,600.00	
1.8.c	Cost Estimating Parameters						20	40															20	\$15,700.00	
1.8.d	Base Cost Estimate		8	8	20		32																360	\$82,616.00	
1.8.g	Grant Funding						40	44															84	\$17,540.00	
<b>1.9</b>	<b>e-Builder</b>		<b>20</b>				<b>56</b>	<b>100</b>															<b>176</b>	<b>\$38,060.00</b>	
1.9.a	Exploratory Meeting		4				4	4															12	\$2,960.00	
1.9.b	Discovery		8				16	16															40	\$9,280.00	
1.9.c	Recommendations/Implementation						20	40															60	\$12,100.00	
1.9.d	Training		8				16	40															64	\$13,720.00	
<b>1.10</b>	<b>Sustainability Goals</b>		<b>2</b>	<b>6</b>			<b>22</b>	<b>32</b>	<b>1</b>														<b>63</b>	<b>\$13,698.00</b>	
1.10.a	County Energy Plan Alignment			2			8	16															26	\$5,454.00	
1.10.b	AIRE Engagement and Communication			2			4	4															10	\$2,294.00	
1.10.c	Envision Workshop																								
	Workshop preparation	<i>Counted into the Workshops Tab</i>																							
	Workshop participation (included in	<i>Counted into the Workshops Tab</i>																							
	Workshop Summary Report		2	2			10	12	1														27	\$5,950.00	

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PHASE 1 FEE ESTIMATE - LABOR

Task No.	Task	Program Principal	Program Manager	Technical Specialist	Quality Control	Principal Engineer	Sr. Engineer	Engineer	Engineer-in- Training	Comm. Specialist	Sr. BIM/CAD	BIM/CAD	Graphics Designer	Sr. Architect	Architect	Sr. Ops. Specialist	Ops. Specialist	Sr. Scheduler	Project Controls	Cost Estimator	Admin	Hours	Cost		
Fully Burdened Rates		\$305.00	\$320.00	\$307.00	\$264.00	\$270.00	\$235.00	\$185.00	\$126.00	\$175.00	\$175.00	\$128.00	\$103.00	\$180.00	\$130.00	\$248.00	\$185.00	\$159.00	\$159.00	\$180.00	\$90.00				
Hours per Week		2	24	15	3	3	47	37	35	12	6	5	10	0	0	-	-	1	1	5	6				
<b>New Project Hours &amp; Total Project Cost</b>		<b>230</b>	<b>2,383</b>	<b>1,475</b>	<b>280</b>	<b>312</b>	<b>4,718</b>	<b>3,667</b>	<b>3,527</b>	<b>1,180</b>	<b>568</b>	<b>524</b>	<b>982</b>	<b>34</b>	<b>20</b>			<b>52</b>	<b>52</b>	<b>458</b>	<b>642</b>	<b>21,104</b>	<b>\$4,314,816.00</b>		
<b>Service Area 2: Scope Development</b>		<b>36</b>	<b>293</b>	<b>287</b>	<b>105</b>	<b>212</b>	<b>1,358</b>	<b>1,714</b>	<b>2,093</b>	-	<b>216</b>	<b>428</b>	-	<b>34</b>	<b>20</b>						<b>236</b>	<b>7,032</b>	<b>\$1,300,291.00</b>		
<b>2.1 Confirm Path Forward</b>			<b>17</b>	<b>8</b>	<b>4</b>	<b>38</b>	<b>70</b>	<b>108</b>	<b>48</b>													<b>24</b>	<b>317</b>	<b>\$63,850.00</b>	
<b>2.1.a Review Previous Findings</b>			<b>4</b>	<b>4</b>		<b>4</b>	<b>12</b>	<b>24</b>	<b>24</b>														<b>72</b>	<b>\$13,872.00</b>	
			4	4		4	12	24	24														72	\$13,872.00	
<b>2.1.b Technology Improvements</b>			<b>6</b>	<b>4</b>	<b>2</b>	<b>8</b>	<b>28</b>	<b>16</b>	<b>24</b>													<b>12</b>	<b>100</b>	<b>\$19,480.00</b>	
			4	2		4	12	12	12														46	\$9,526.00	
			2	2	2	4	12	4	8													8	42	\$8,150.00	
							4		4														12	\$1,804.00	
<b>2.1.c Biosolids Product Market</b>			<b>7</b>		<b>2</b>	<b>26</b>	<b>30</b>	<b>68</b>														<b>12</b>	<b>145</b>	<b>\$30,498.00</b>	
			4			20	20	50															94	\$20,630.00	
			2		2	6	6	12															36	\$7,138.00	
			1			4	4	6															15	\$2,730.00	
<b>2.2 Existing Facilities Condition Assessment</b>			<b>19</b>	<b>36</b>	<b>4</b>	<b>30</b>	<b>114</b>	<b>96</b>	<b>84</b>					<b>24</b>								<b>12</b>	<b>419</b>	<b>\$86,822.00</b>	
<b>2.2.a Two-day walkthrough</b>			<b>16</b>	<b>24</b>		<b>24</b>	<b>72</b>	<b>24</b>	<b>20</b>					<b>24</b>									<b>204</b>	<b>\$47,168.00</b>	
<b>2.2.b Validate Sizing and Condition of Existing Assets</b>							<b>12</b>	<b>16</b>	<b>24</b>														<b>52</b>	<b>\$8,804.00</b>	
<b>2.2.d Develop TM</b>			<b>2</b>	<b>8</b>	<b>4</b>	<b>6</b>	<b>26</b>	<b>48</b>	<b>32</b>													<b>8</b>	<b>134</b>	<b>\$25,514.00</b>	
			1	4		4	8	8	8														4	29	\$5,336.00
<b>2.3 Process Characterization</b>			<b>9</b>	<b>14</b>	<b>10</b>		<b>118</b>	<b>208</b>	<b>56</b>			<b>16</b>										<b>12</b>	<b>443</b>	<b>\$86,212.00</b>	
<b>2.3.a Historical Data Review</b>							<b>12</b>	<b>20</b>	<b>16</b>														<b>48</b>	<b>\$8,536.00</b>	
<b>2.3.b Solids Process Modeling and Process Calculations</b>				<b>4</b>	<b>4</b>		<b>30</b>	<b>74</b>															<b>112</b>	<b>\$23,024.00</b>	
<b>2.3.c Update Solids Model Based on Pilot Testing</b>				<b>4</b>			<b>14</b>	<b>18</b>															<b>36</b>	<b>\$7,848.00</b>	
<b>2.3.c Develop Solids Mass Balance</b>			<b>2</b>	<b>4</b>	<b>4</b>		<b>24</b>	<b>40</b>				<b>16</b>											<b>90</b>	<b>\$18,012.00</b>	
<b>2.3.e Coordinate with Liquid Process Consultant</b>			<b>2</b>				<b>12</b>	<b>28</b>															<b>42</b>	<b>\$8,640.00</b>	
<b>2.3.f Develop TM</b>			<b>4</b>	<b>2</b>	<b>2</b>		<b>24</b>	<b>24</b>	<b>32</b>													<b>8</b>	<b>96</b>	<b>\$17,254.00</b>	
			1			2	4	8															4	19	\$2,898.00
<b>2.4 Process Specific Evaluations</b>			<b>82</b>	<b>97</b>	<b>29</b>		<b>414</b>	<b>762</b>	<b>1060</b>			<b>152</b>										<b>108</b>	<b>2704</b>	<b>\$464,671.00</b>	
<b>2.4.a Thickening</b>			<b>6</b>	<b>2</b>	<b>3</b>		<b>30</b>	<b>56</b>	<b>80</b>			<b>16</b>										<b>12</b>	<b>205</b>	<b>\$33,944.00</b>	
			2				8	20	24														54	\$9,244.00	
			1				4	6	8														19	\$3,378.00	
					<b>1</b>		<b>4</b>	<b>6</b>	<b>8</b>														19	\$3,322.00	
			2	2	2		12	20	32			<b>12</b>										<b>8</b>	<b>90</b>	<b>\$14,590.00</b>	
			1				2	4	8			<b>4</b>										<b>4</b>	<b>23</b>	<b>\$3,410.00</b>	
<b>2.4.b Screening and Pre-Dewatering</b>			<b>12</b>	<b>6</b>	<b>4</b>		<b>72</b>	<b>132</b>	<b>184</b>			<b>16</b>										<b>24</b>	<b>450</b>	<b>\$75,470.00</b>	
			2				8	20	32														62	\$10,252.00	
					<b>2</b>		<b>4</b>	<b>6</b>	<b>8</b>														<b>8</b>	<b>26</b>	<b>\$3,778.00</b>
			2		<b>2</b>		<b>20</b>	<b>36</b>	<b>40</b>													<b>4</b>	<b>104</b>	<b>\$17,928.00</b>	
			2	<b>4</b>			<b>12</b>	<b>20</b>	<b>24</b>														62	\$11,412.00	
			1				4	6	8														19	\$3,378.00	
							4	6	8														18	\$3,058.00	
			2				6	14	24														46	\$7,664.00	
			2	2	2		12	20	32			<b>12</b>										<b>8</b>	<b>90</b>	<b>\$14,590.00</b>	
			1				2	4	8			<b>4</b>										<b>4</b>	<b>23</b>	<b>\$3,410.00</b>	
<b>2.4.d Digestion and Digester Mixing</b>			<b>17</b>	<b>18</b>	<b>4</b>		<b>86</b>	<b>96</b>	<b>112</b>			<b>16</b>										<b>12</b>	<b>361</b>	<b>\$67,232.00</b>	
			8	<b>8</b>			<b>20</b>	<b>12</b>															<b>48</b>	<b>\$11,936.00</b>	
			2				28	28	32														90	\$16,432.00	
			2				12	12	16														42	\$7,696.00	
			2	<b>8</b>			12	20	24														66	\$12,640.00	
			2	2	4		12	20	32			<b>12</b>										<b>8</b>	<b>92</b>	<b>\$15,118.00</b>	
			1				2	4	8			<b>4</b>										<b>4</b>	<b>23</b>	<b>\$3,410.00</b>	
<b>2.4.e Cooling Systems</b>			<b>11</b>	<b>18</b>	<b>4</b>		<b>62</b>	<b>82</b>	<b>120</b>			<b>16</b>										<b>12</b>	<b>325</b>	<b>\$58,090.00</b>	
			8	<b>16</b>			<b>32</b>	<b>32</b>	<b>40</b>														<b>128</b>	<b>\$25,952.00</b>	
							12	20	32														64	\$10,552.00	
						<b>2</b>	<b>4</b>	<b>6</b>	<b>8</b>														<b>20</b>	<b>\$3,586.00</b>	
			2	2	2		12	20	32			<b>12</b>										<b>8</b>	<b>90</b>	<b>\$14,590.00</b>	
			1				2	4	8			<b>4</b>										<b>4</b>	<b>23</b>	<b>\$3,410.00</b>	
<b>2.4.f Plant Effluent Water Systems</b>			<b>4</b>	<b>2</b>	<b>2</b>		<b>14</b>	<b>48</b>	<b>112</b>			<b>16</b>											<b>198</b>	<b>\$30,752.00</b>	
							2	4	8														14	\$2,218.00	
			4	2			2	4	16														28	\$5,120.00	
							2	4	8														14	\$2,218.00	
					<b>2</b>		2	16	40			<b>8</b>											68	\$10,022.00	
							2	4	8														14	\$2,218.00	
							2	8	16														26	\$3,966.00	
							2	8	16			<b>8</b>											34	\$4,990.00	
<b>2.4.g Plant Drain Systems</b>				<b>1</b>	<b>2</b>		<b>8</b>	<b>24</b>	<b>36</b>			<b>8</b>											<b>79</b>	<b>\$12,715.00</b>	
					<b>2</b>		<b>4</b>	<b>16</b>	<b>20</b>			<b>4</b>											<b>46</b>	<b>\$7,460.00</b>	
				<b>1</b>			<b>4</b>	<b>8</b>	<b>16</b>			<b>4</b>											<b>33</b>	<b>\$5,255.00</b>	

ARLINGTON WATER POLLUTION CONTROL PLANT (WPCP)  
 CONTRACT NUMBER 19-261  
 EXHIBIT F  
 ENGINEERING PROGRAM MANAGEMENT CONSULTING  
 PHASE 1 FEE ESTIMATE - LABOR

Task No.	Task	Program Principal	Program Manager	Technical Specialist	Quality Control	Principal Engineer	Sr. Engineer	Engineer	Engineer-in-Training	Comm. Specialist	Sr. BIM/CAD	BIM/CAD	Graphics Designer	Sr. Architect	Architect	Sr. Ops. Specialist	Ops. Specialist	Sr. Scheduler	Project Controls	Cost Estimator	Admin	Hours	Cost	
	Fully Burdened Rates	\$305.00	\$320.00	\$307.00	\$264.00	\$270.00	\$235.00	\$185.00	\$126.00	\$175.00	\$175.00	\$128.00	\$103.00	\$180.00	\$130.00	\$248.00	\$185.00	\$159.00	\$159.00	\$180.00	\$90.00			
	Hours per Week	2	24	15	3	3	47	37	35	12	6	5	10	0	0	-	-	1	1	5	6			
<b>New Project Hours &amp; Total Project Cost</b>		<b>230</b>	<b>2,383</b>	<b>1,475</b>	<b>280</b>	<b>312</b>	<b>4,718</b>	<b>3,667</b>	<b>3,527</b>	<b>1,180</b>	<b>568</b>	<b>524</b>	<b>982</b>	<b>34</b>	<b>20</b>			<b>52</b>	<b>52</b>	<b>458</b>	<b>642</b>	<b>21,104</b>	<b>\$4,314,816.00</b>	
<b>2.4.h Final Dewatering</b>			7	4	2		44	72	96			16									12	253	\$42,880.00	
	Evaluate and select post-dewatering technology and location		2	2			20	28	32													84	\$15,166.00	
	Establish appropriate redundancy		1				6	14	16													37	\$6,336.00	
	Polymer system evaluation		1				4	6	8													19	\$3,378.00	
	Develop TM		2	2	2		12	20	32			12										8	\$14,590.00	
	Final TM		1				2	4	8			4										4	\$3,410.00	
<b>2.4.i Recycle Management and Sidestream Treatment</b>			7	6	4		64	72	96			16									12	277	\$48,722.00	
	Establish recycle loads						2	8	16													26	\$3,966.00	
	Evaluate sidestream processes			4			24	24	24													76	\$14,332.00	
	Select appropriate technology and location		4		2		20	20	16													62	\$12,224.00	
	Develop TM		2	2	2		16	16	32			12										8	\$14,790.00	
	Final TM		1				2	4	8			4										4	\$3,410.00	
<b>2.4.j Odor Control</b>			15	38	2			120	152			16									12	355	\$61,474.00	
	Quantify odor sources		2	4				20	20													46	\$8,088.00	
	Screening, Pre-Dewatering and loadout		2	8				16	24													50	\$9,080.00	
	Thickening		2	4				8	4													18	\$3,852.00	
	Final dewatering and loadout		2	8				16	24													50	\$9,080.00	
	Evaluate odor control technologies		2	8				24	32													66	\$11,568.00	
	Odor Control system design criteria		2	2				8	8													20	\$3,742.00	
	Develop TM		2	2	2			24	32			12										8	\$12,510.00	
	Final TM		1	2				4	8			4										4	\$3,554.00	
<b>2.4.k FOG</b>			3	2	2		34	60	72			16									12	201	\$33,392.00	
	Evaluations						24	32	32													88	\$15,592.00	
	Develop TM		2	2	2		8	24	32			12										8	\$14,390.00	
	Final TM		1				2	4	8			4										4	\$3,410.00	
<b>2.5 Develop Gas Utilization Plan</b>		20	56	88	22	132	196	294	332			44									24	1208	\$242,558.00	
2.5.a	Identify gas production rates					2	2	8	8													20	\$3,498.00	
2.5.b	Identify CHP and CNG gas utilization options		8	8		8	16	16	32													88	\$17,928.00	
2.5.c	Coordinate with Energy Plan Requirements		2			4	4	8	8													26	\$5,148.00	
2.5.d	Identify Customer Base																							
	Market Analysis	4	4	48	4	20	30	30	32													172	\$40,324.00	
	Washington Gas Meetings	4	4	4		8	8	8	12													48	\$10,760.00	
	WMATA Meetings	4	4	4		8	8	8	12													48	\$10,760.00	
	ART Meetings	4	4	4		8	8	8	12													48	\$10,760.00	
2.5.e	Assess RIN Market			2		20	40	40														102	\$22,814.00	
2.5.f	Define Steam Requirements and Overall Heat and Energy Balance		4	6	6	10	20	30	60													136	\$25,216.00	
2.5.g	Evaluate systems and layouts		12	6	6	30	30	92	68													244	\$48,004.00	
2.5.i	Develop TM	2	8	4	4	8	16	24	48			24										12	150	\$26,014.00
	Pre-final TM	2	4	2	2	6	12	18	32			12										8	98	\$17,090.00
	Final TM		2				2	4	8			8										4	28	\$4,242.00
<b>2.6 Emissions Analysis</b>		12	34	18	16		180		317													577	\$106,532.00	
2.6.a	Define Emission Requirements								14													34	\$5,810.00	
2.6.b	Determine Emission Quantities								14													94	\$13,370.00	
	VDEQ Meetings (2)	8	16						32													56	\$15,080.00	
2.6.c	Model Emissions Impacts				4				12				80									96	\$13,956.00	
2.6.d	Develop Conceptual Level of Emissions Controls				4			36				60										100	\$17,076.00	
2.6.e	Coordinate permitting issues		4					4				4										12	\$2,724.00	
2.6.f	Develop Emissions Study Report	2	8	12	4		28		25													79	\$17,640.00	
2.6.g	Pre-final Report	2	4	4	4		16		30													60	\$11,714.00	
	Final Report		2	2			24		18													46	\$9,162.00	
<b>2.7 Site Plan</b>			6	6	4		24	28			104	80										252	\$44,078.00	
2.7.a	Develop Options		2	2	2		14	16			40	40										116	\$20,152.00	
	Final Site Plan		2	2	2		6	8			24	16										60	\$10,920.00	
2.7.b	Renderings		2	2			4	4			40	24										76	\$13,006.00	
<b>2.8 Facilities Plan</b>		4	70	20	16	12	242	218	196		112	136		10	20						56	1112	\$205,568.00	
2.8.a	Develop Facilities Plan																							
	Temporary Facilities		2	2			24	16														44	\$9,854.00	
	MOPO/Startup and Integration		16			8	72	80	80													256	\$49,080.00	
	Electrical, Controls, and Standby Power			2		4	36	40														82	\$17,554.00	
	Site/Civil/Stormwater						8	12	32													52	\$8,132.00	
2.8.b	Model existing facilities										80	80										160	\$24,240.00	
2.8.c	Draft Facilities Plan	4	40	16	16		82	50	64		24	40		8	16						40	400	\$76,180.00	
2.8.d	Final Facilities Plan		12				20	20	20		8	16		2	4							16	118	\$20,528.00

ARLINGTON WATER POLLUTION CONTROL PLANT (WPCP)  
 CONTRACT NUMBER 19-261  
 EXHIBIT F  
 ENGINEERING PROGRAM MANAGEMENT CONSULTING  
 PHASE 1 FEE ESTIMATE - LABOR

Task No.	Task	Program Principal	Program Manager	Technical Specialist	Quality Control	Principal Engineer	Sr. Engineer	Engineer	Engineer-in-Training	Comm. Specialist	Sr. BIM/CAD	BIM/CAD	Graphics Designer	Sr. Architect	Architect	Sr. Ops. Specialist	Ops. Specialist	Sr. Scheduler	Project Controls	Cost Estimator	Admin	Hours	Cost	
Fully Burdened Rates		\$305.00	\$320.00	\$307.00	\$264.00	\$270.00	\$235.00	\$185.00	\$126.00	\$175.00	\$175.00	\$128.00	\$103.00	\$180.00	\$130.00	\$248.00	\$185.00	\$159.00	\$159.00	\$180.00	\$90.00			
Hours per Week		2	24	15	3	3	47	37	35	12	6	5	10	0	0	-	-	1	1	5	6			
<b>New Project Hours &amp; Total Project Cost</b>		<b>230</b>	<b>2,383</b>	<b>1,475</b>	<b>280</b>	<b>312</b>	<b>4,718</b>	<b>3,667</b>	<b>3,527</b>	<b>1,180</b>	<b>568</b>	<b>524</b>	<b>982</b>	<b>34</b>	<b>20</b>			<b>52</b>	<b>52</b>	<b>458</b>	<b>642</b>	<b>21,104</b>	<b>\$4,314,816.00</b>	
<b>Service Area 3: Project Delivery and Procurement</b>		<b>56</b>	<b>734</b>	<b>907</b>	<b>80</b>	<b>-</b>	<b>633</b>	<b>1,019</b>	<b>504</b>	<b>24</b>	<b>192</b>	<b>76</b>	<b>24</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>20</b>	<b>-</b>	<b>-</b>	<b>122</b>	<b>4,391</b>	<b>\$1,016,463.00</b>	
<b>3.1 Package Identification and Delivery Method Selection</b>		<b>12</b>	<b>56</b>	<b>90</b>	<b>6</b>			<b>176</b>	<b>92</b>									<b>20</b>			<b>9</b>	<b>461</b>	<b>\$98,936.00</b>	
3.1.a	Overall conceptualization	4	12	20				20														56	\$14,900.00	
3.1.b	Review delivery methods		12	20				40														72	\$17,380.00	
3.1.c	Develop qualitative and quantitative assessments	4	20	30				56	56													166	\$34,246.00	
3.1.d	Review specific topics																							
	Project delivery risk analysis																							
	Project delivery drivers																							
	Project delivery options review																							
	Market assessment																							
	Project packaging																							
	Market outreach																							
3.1.e	Develop TM	2	2	4	4			40	20												4	76	\$13,814.00	
3.1.g	Final TM			4				12	12													30	\$5,140.00	
3.1.h	Develop Written Determination	2	4	6	2			8													2	24	\$5,920.00	
3.1.j	Final Written Determination		2	2					4												1	9	\$1,848.00	
3.1.k	Update Project Schedule		4	4														20				28	\$5,688.00	
<b>3.2 THP Pre-selection</b>		<b>4</b>	<b>64</b>	<b>61</b>	<b>13</b>		<b>334</b>	<b>30</b>	<b>272</b>			<b>76</b>									<b>32</b>	<b>886</b>	<b>\$174,779.00</b>	
<b>3.2.a Analysis of THP Market</b>																								
	Evaluations		4				30	20	60													114	\$19,590.00	
	Develop TM		4	2	2		20	10	40												4	82	\$14,372.00	
	Final TM		2				8		12												2	24	\$4,212.00	
<b>3.2.b Request for Proposals</b>												76												
	Develop Drawings and Specifications			4	4		40		56													180	\$28,468.00	
	Evaluation Criteria		2	2			16															20	\$5,014.00	
	Develop Draft Agreement		10	6	4		40														8	68	\$16,218.00	
	Final Agreement		2	4			16															2	24	\$5,808.00
	Develop Draft RFP		4	2	2		24		40												8	80	\$13,822.00	
	Final RFP		2	2			8		16												2	30	\$5,330.00	
	Review Proposals		12	12			48		48													120	\$24,852.00	
	Make Recommendation		2	1	1		12															16	\$4,031.00	
	Provide Negotiation Assistance with Selected Vendor	4	16	24			60														4	108	\$28,168.00	
	Finalize Agreement with Selected Vendor		4	2			12														2	20	\$4,894.00	
<b>3.3 Procurement of Package Delivery Teams</b>		<b>40</b>	<b>614</b>	<b>756</b>	<b>61</b>		<b>299</b>	<b>813</b>	<b>140</b>	<b>24</b>	<b>192</b>		<b>24</b>								<b>81</b>	<b>3044</b>	<b>\$742,748.00</b>	
<b>3.3.a-d. Program Coordination</b>		<b>4</b>	<b>64</b>	<b>82</b>				<b>88</b>	<b>20</b>													<b>258</b>	<b>\$65,674.00</b>	
3.3.a	Coordinate Scope Between Programs	4	12	30				60														106	\$25,370.00	
3.3.b	Coordinate Procedures		4	4				8														16	\$3,988.00	
3.3.c	Contract Template Review		40	40																		80	\$25,080.00	
3.3.d	Bidder Outreach		8	8				20	20													56	\$11,236.00	
<b>3.3.e-o. Project 1 - Early Work</b>		<b>7</b>	<b>119</b>		<b>19</b>		<b>299</b>	<b>206</b>	<b>120</b>	<b>8</b>	<b>168</b>		<b>8</b>								<b>31</b>	<b>985</b>	<b>\$203,140.00</b>	
	Develop RFQ		8		4		40	40														8	100	\$21,136.00
	Final RFQ		2				10	10														2	24	\$5,020.00
	Issue RFQ																							
	Addenda		4		2		6	12													2	26	\$5,618.00	
	Qualifications Due and Qualifications Review		12				36															48	\$12,300.00	
	Facilitate Rankings		4				12															16	\$4,100.00	
	Develop RFP		12		8		52	100	100		120										8	400	\$70,992.00	
	Final RFP		4				12	20	20		24										4	84	\$14,880.00	
	Issue RFP																							
	Addenda		6		3		15	24			24										2	74	\$15,057.00	
	Proposals Due																							
	Proposal Review	3	12				48															63	\$16,035.00	
	Interviews		14				14															28	\$7,770.00	
	Facilitate Rankings		4				12															16	\$4,100.00	
	Develop Recommendation Memo		2		2		6														2	12	\$2,758.00	
	Final Recommendation Memo		1				2														1	4	\$880.00	
	Negotiations	4	30				30															64	\$17,870.00	
	County Board Presentation		4				4			8			8								2	26	\$4,624.00	
	Agreement with Delivery Team 1																							

ARLINGTON WATER POLLUTION CONTROL PLANT (WPCP)  
 CONTRACT NUMBER 19-261  
 EXHIBIT F  
 ENGINEERING PROGRAM MANAGEMENT CONSULTING  
 PHASE 1 FEE ESTIMATE - LABOR

Task No.	Task	Program Principal	Program Manager	Technical Specialist	Quality Control	Principal Engineer	Sr. Engineer	Engineer	Engineer-in-Training	Comm. Specialist	Sr. BIM/CAD	BIM/CAD	Graphics Designer	Sr. Architect	Architect	Sr. Ops. Specialist	Ops. Specialist	Sr. Scheduler	Project Controls	Cost Estimator	Admin	Hours	Cost
	Fully Burdened Rates	\$305.00	\$320.00	\$307.00	\$264.00	\$270.00	\$235.00	\$185.00	\$126.00	\$175.00	\$175.00	\$128.00	\$103.00	\$180.00	\$130.00	\$248.00	\$185.00	\$159.00	\$159.00	\$180.00	\$90.00		
	Hours per Week	2	24	15	3	3	47	37	35	12	6	5	10	0	0	-	-	1	1	5	6		
	<b>New Project Hours &amp; Total Project Cost</b>	<b>230</b>	<b>2,383</b>	<b>1,475</b>	<b>280</b>	<b>312</b>	<b>4,718</b>	<b>3,667</b>	<b>3,527</b>	<b>1,180</b>	<b>568</b>	<b>524</b>	<b>982</b>	<b>34</b>	<b>20</b>			<b>52</b>	<b>52</b>	<b>458</b>	<b>642</b>	<b>21,104</b>	<b>\$4,314,816.00</b>
3.3.e.-o.	<b>Project 2 - THP and Digestion</b>	<b>18</b>	<b>259</b>	<b>408</b>	<b>26</b>			<b>311</b>		<b>8</b>	<b>12</b>		<b>8</b>								<b>25</b>	<b>1075</b>	<b>\$284,599.00</b>
	Develop RFQ		12	44	4			60													8	128	\$30,224.00
	Final RFQ		2	12				12													2	26	\$6,544.00
	Issue RFQ																					2	\$180.00
	Addenda		6	10	2			16														34	\$8,478.00
	Qualifications Due and Qualifications Review		24	24																	8	56	\$15,768.00
	Facilitate Rankings		6	6				12														24	\$5,982.00
	Develop RFP		20	68	12			60													4	164	\$41,904.00
	Final RFP		8	16				24														48	\$11,912.00
	Issue RFP																						
	Addenda and Confidential Meetings		42	48	6			24			12											132	\$36,300.00
	Proposals Due																						
	Proposal Review	6	24	60				15														105	\$30,705.00
	Interviews		20	20																		40	\$12,540.00
	Facilitate Rankings		6	12				12														30	\$7,824.00
	Develop Recommendation Memo		4	6	2			8													2	22	\$5,310.00
	Final Recommendation Memo		1	2				4													1	8	\$1,764.00
	Negotiations	12	80	80				60														232	\$64,920.00
	County Board Presentation		4					4		8			8									24	\$4,244.00
	Agreement with Delivery Team 2																						
3.3.e.-o.	<b>Project 3 - Gas Systems</b>	<b>11</b>	<b>172</b>	<b>266</b>	<b>16</b>			<b>208</b>		<b>8</b>	<b>12</b>		<b>8</b>								<b>25</b>	<b>726</b>	<b>\$189,335.00</b>
	Develop RFQ		6	20	4			30													8	68	\$15,386.00
	Final RFQ		1	6				6														13	\$3,272.00
	Issue RFQ																					2	\$180.00
	Addenda		6	12				16														34	\$8,564.00
	Qualifications Due and Qualifications Review																				8	8	\$720.00
	Facilitate Rankings																						
	Develop RFP		16	36	4			30													4	90	\$23,138.00
	Final RFP		8	16				24														48	\$11,912.00
	Issue RFP																						
	Addenda and Confidential Meetings		42	48	6			24			12											132	\$36,300.00
	Proposals Due																						
	Proposal Review	3	10	40				10														63	\$18,245.00
	Interviews		18	18																		36	\$11,286.00
	Facilitate Rankings		6	12				12														30	\$7,824.00
	Develop Recommendation Memo		4	6	2			8													2	22	\$5,310.00
	Final Recommendation Memo		1	2				4													1	8	\$1,764.00
	Negotiations	8	50	50				40														148	\$41,190.00
	County Board Presentation		4					4		8			8									24	\$4,244.00
	Agreement with Delivery Team 3																						

ARLINGTON WATER POLLUTION CONTROL PLANT (WPCP)  
 CONTRACT NUMBER 19-261  
 EXHIBIT F  
 ENGINEERING PROGRAM MANAGEMENT CONSULTING  
 PHASE 1 FEE ESTIMATE - LABOR

Task No.	Task	Program Principal	Program Manager	Technical Specialist	Quality Control	Principal Engineer	Sr. Engineer	Engineer	Engineer-in-Training	Comm. Specialist	Sr. BIM/CAD	BIM/CAD	Graphics Designer	Sr. Architect	Architect	Sr. Ops. Specialist	Ops. Specialist	Sr. Scheduler	Project Controls	Cost Estimator	Admin	Hours	Cost	
	Fully Burdened Rates	\$305.00	\$320.00	\$307.00	\$264.00	\$270.00	\$235.00	\$185.00	\$126.00	\$175.00	\$175.00	\$128.00	\$103.00	\$180.00	\$130.00	\$248.00	\$185.00	\$159.00	\$159.00	\$180.00	\$90.00			
	Hours per Week	2	24	15	3	3	47	37	35	12	6	5	10	0	0	-	-	1	1	5	6			
	<b>New Project Hours &amp; Total Project Cost</b>	<b>230</b>	<b>2,383</b>	<b>1,475</b>	<b>280</b>	<b>312</b>	<b>4,718</b>	<b>3,667</b>	<b>3,527</b>	<b>1,180</b>	<b>568</b>	<b>524</b>	<b>982</b>	<b>34</b>	<b>20</b>			<b>52</b>	<b>52</b>	<b>458</b>	<b>642</b>	<b>21,104</b>	<b>\$4,314,816.00</b>	
	<b>Service Area 6: Operations and Maintenance</b>		<b>22</b>	<b>2</b>	<b>2</b>	<b>38</b>	<b>62</b>	<b>92</b>		<b>12</b>			<b>12</b>									<b>242</b>	<b>\$53,368.00</b>	
6.1	<b>Biosolids Marketing Assessment</b>		<b>22</b>	<b>2</b>	<b>2</b>	<b>38</b>	<b>38</b>	<b>92</b>		<b>12</b>			<b>12</b>									<b>218</b>	<b>\$47,728.00</b>	
	Update market analysis for final Class A biosolids product(s)		4			12	12	40														68	\$14,740.00	
	Evaluate dist & marketing program alts (direct, 3rd party, hybrid)		4			4	4	8														20	\$4,780.00	
	Develop prelim trial/demonstration plan for higher-value use(s)																							
	Evaluate regulatory/permitting requirements																							
	Develop branding/communications program framework		8			6	6	4		12			12									48	\$9,666.00	
	Develop TM		4	2	2	12	12	32														64	\$14,402.00	
	Final TM		2			4	4	8														18	\$4,140.00	
6.2	<b>Validate Staffing Requirements</b>						<b>24</b>															<b>24</b>	<b>\$5,640.00</b>	
	<b>Service Area 7: Other Services</b>		<b>198</b>	<b>108</b>	<b>45</b>	<b>20</b>	<b>648</b>	<b>404</b>	<b>306</b>	<b>160</b>	<b>160</b>	<b>20</b>	<b>160</b>								<b>64</b>	<b>2,293</b>	<b>\$460,172.00</b>	
7.1	<b>Site Visits</b>		<b>120</b>				<b>244</b>	<b>40</b>	<b>80</b>													<b>484</b>	<b>\$113,220.00</b>	
	Europe		40				92															132	\$34,420.00	
	Local Visit 1		24				32	24	24													104	\$22,664.00	
	Local Visit 2		16				24	16	16													72	\$15,736.00	
	Gas Technology Visit 1		24				56		24													104	\$23,864.00	
	Gas Technology Visit 2		16				40		16													72	\$16,536.00	
7.2	<b>Coordinate On-Going Pilot Work</b>		<b>28</b>		<b>3</b>		<b>80</b>	<b>34</b>														<b>161</b>	<b>\$36,282.00</b>	
7.3	<b>Technology Monitoring</b>			<b>2</b>	<b>2</b>		<b>24</b>		<b>32</b>													<b>60</b>	<b>\$10,814.00</b>	
7.4	<b>Carbon Footprint Analysis</b>		<b>2</b>	<b>4</b>	<b>4</b>		<b>24</b>	<b>48</b>	<b>80</b>													<b>186</b>	<b>\$29,684.00</b>	
	Document baseline Carbon Footprint		1	2	2		8	24	40													16	\$14,262.00	
	Document new Carbon Footprint		1	2	2		16	24	40													8	\$15,422.00	
7.5	<b>Envision</b>		<b>8</b>	<b>8</b>	<b>2</b>		<b>56</b>	<b>66</b>	<b>34</b>													<b>174</b>	<b>\$35,198.00</b>	
	Complete Initial Checklist																							
	Fill out initial project online scorecard (based on Envision workshop)		2	2			8	16	16													44	\$8,110.00	
	Document Envision Silver (Facilitate Envision Process)																							
	Prepare an overall Envision Workplan and schedule			2	2		16	16														36	\$7,862.00	
	Communicate with project team and Envision team		4	2			24	18	18													66	\$13,132.00	
	Integrate Envision Sustainability Criteria into Procurement Documents																							
	Include Envision in RFQ/RFP		1	1			4	8														14	\$3,047.00	
	Include Envision in design contract		1	1			4	8														14	\$3,047.00	
7.6	<b>Geotechnical</b>			<b>26</b>	<b>8</b>			<b>104</b>				<b>20</b>										<b>24</b>	<b>182</b>	<b>\$34,054.00</b>
	Evaluate previous work			2	2				8														12	\$2,622.00
	Develop geotechnical plan			4	2				16														22	\$4,716.00
	Borings								16														16	\$2,960.00
	Test pits								16														16	\$2,960.00
	Develop Geotechnical Report			12	4				32			20										16	84	\$14,660.00
	Final Geotechnical Report			8					16													8	32	\$6,136.00
7.7	<b>Geotechnical Design Criteria</b>			<b>12</b>	<b>4</b>			<b>32</b>														<b>48</b>	<b>\$10,660.00</b>	
7.8	<b>BIM Best Practices</b>						<b>80</b>				<b>80</b>											<b>160</b>	<b>\$32,800.00</b>	
7.9	<b>Additional Communications Meetings or Deliverables</b>				<b>8</b>					<b>160</b>			<b>160</b>										<b>328</b>	<b>\$46,592.00</b>
7.10	<b>Develop e-Builder KPIs</b>			<b>16</b>	<b>4</b>			<b>80</b>															<b>100</b>	<b>\$24,768.00</b>
7.11	<b>Other unscoped items</b>		<b>40</b>	<b>40</b>	<b>10</b>	<b>20</b>	<b>60</b>	<b>80</b>	<b>80</b>		<b>80</b>											<b>410</b>	<b>\$86,100.00</b>	

ARLINGTON WATER POLLUTION CONTROL PLANT (WPCP)

CONTRACT NUMBER 19-261

EXHIBIT F

ENGINEERING PROGRAM MANAGEMENT CONSULTING

PHASE 1 FEE ESTIMATE - WORKSHOPS

Task No.	Workshop Title	Duration			Workshop Attendees																							No. Attendees	Total Hours									
		Workshop Duration (hours)	Workshop Preparation (hours)	Total Workshop Labor (hours)	Program Principal Doane	Program Manager Balchunas	Technical Specialist M'Coy	Technical Specialist Dunbar	Technical Specialist Easter	Principal Engineer Kochaba	Sr. Engineer Hoyle	Sr. Engineer Spalding	Sr. Engineer Cunningham	Sr. Engineer Maley	Sr. Engineer Moline	Engineer Sisson/Zirkle	Engineer Smoot	Engineer Kenel	Engineer-in-Training Weatherhead	Engineer-in-Training Billian/Sutton	Comm. Specialist Parks	Comm. Specialist O'Reilly	Comm. Specialist McClure	AI Cassel	Sr. Architect	Architect	Sr. Ops. Specialist			Ops. Specialist	Admin Smith							
1.2.a	Kickoff Meeting	12	6	18	1	1	1				1	1		1	1	1				1	1																10	180
1.5.a.1	Technical Workshop 1	8	6	14	1	1	0.4				1	1		0.5	0.5	0.5				1																6.9	97	
1.5.a.2	Technical Workshop 2	8	6	14		1	0.4				1	1		0.6	0.5		0.3			1																5.8	82	
1.5.a.3	Technical Workshop 3	8	6	14		1	0.4			0.5	1	1		0.6	0.5		0.3			1																6.3	89	
1.5.a.4	Technical Workshop 4	8	6	14	1	1	0.4			0.5	1	1		0.6	0.5					1															7	98		
1.5.a.5	Technical Workshop 5	8	6	14		1	0.4	0.5			1	1		0.6	0.5	0.4			0.3	1															6.7	94		
1.5.a.6	Technical Workshop 6	8	6	14		1					1	1		0.6		0.4	0.3	0.5	0.3	1															6.1	86		
1.5.a.7	Technical Workshop 7	8	6	14	1	1	0.4	0.5			1	0.6		0.6		0.4				1															6.5	91		
1.5.a.8	Technical Workshop 8	8	6	14		1	0.4	0.5	0.3		1	1	0.5	0.5			0.3			1															6.5	91		
1.5.a.9	Technical Workshop 9	8	6	14		1	0.4				1	1		0.5	0.5	0.5			0.3	1															6.2	87		
1.5.a.10	Technical Workshop 10	8	6	14	1	1	0.5				1	1		0.5	0.5	0.5			0.3	1															7.3	103		
1.5.a.11	Technical Workshop 11	8	6	14		1	0.5				1	0.5								1															4	56		
	Communications Workshop 1	4	4	8	1	1					1										1	1	1												6	48		
	Communications Workshop 2	4	4	8		1					1										1	1													4	32		
	Communications Workshop 3	4	4	8	1	1					1										1	1	1												6	48		
1.10.c	Envision Workshop	4	4	8		1					1	1					1	1		1															6	48		
	<b>Total Workshops</b>	16			7	16	5.2	1.5	0.3	1	16	12.1	0.5	6.6	4.5	3.7	2.2	1.5	1.2	13	4	3	2	0	0	0	0	0	0	0	0	0	0	0				
	<b>Workshop Hours</b>	116	88	204	90	204	77	21	5	14	204	168	7	97	67	56	25	15	17	180	42	24	16	0	0	0	0	0	0	0	0	0	0	0	1326	1329		
	<b>Total Workshop Attendance Hours</b>				90	204	77	21	5	14	204	168	7	97	67	56	25	15	17	180	42	24	16	0	0	0	0	0	0	0	0	0	0	0		1329		
	<b>Workshop Expenses</b>																																					
	Personal Vehicle Miles per Trip																																					
	Personal Vehicle Miles				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	Flights										12																									13		
	Airport Parking										10	10																								20		
	Lodging Nights										10	10																								20		
	Meals (days)										10	10																								20		
	Rental Car (days)										10	10																								20		



ARLINGTON WATER POLLUTION CONTROL PLANT (WPCP)  
 CONTRACT NUMBER 19-261  
 EXHIBIT F  
 ENGINEERING PROGRAM MANAGEMENT CONSULTING  
 PHASE 1 FEE ESTIMATE - EXPENSES

Task Name	Sub Task Name	ITEM	UNIT	AMOUNT	\$/EACH	TOTAL	NOTES			
<b>Service Area 1: Ongoing Services</b>										
	<b>1.5</b>	<b>On-going Program Management Activities</b>								
	1.5.a	<b>Travel Costs (Workshops)</b>								
		Car Mileage	Miles	0	\$0.575	\$0.00				
		Flights	Trip	13	\$600.00	\$7,800.00				
		Airport Parking	Days	11	\$15.00	\$165.00				
		Hotel	Days	20	\$184.00	\$3,680.00				
		Meals	Days	20	\$76.00	\$1,520.00	Breakfast & dinner during travel			
		Meals, Lunch at Workshops	People	237	\$15.00	\$3,555.00	Total HDR Headcount + 10 Arlington * 16 Meetings			
		Meals, Snack & Coffee at Workshops	People	237	\$7.00	\$1,659.00	Total HDR Headcount + 10 Arlington * 16 Meetings			
		Uber per Trip	Days	20	\$30.00	\$600.00	Multiple Uber rides per trip			
		Video Equipment	Dollars	1	\$5,000.00	\$5,000.00	Video equipment for conference room to facilitate remote meetings			
		<b>Total Travel Costs (Workshops)</b>					<b>\$23,979.00</b>			
	1.5.b	<b>Other Services (not including Workshops), Existing Facility Walk-through and Emissions VDEQ Meetings (SA2, Task 2.6.c)</b>								
		Car Mileage								
		Richmond - Arlington	188	46		8,648	2 trips/month			
						8,648				
		Car Mileage Total	Miles	8,648	\$0.575	\$4,972.60				
		Flights	Trip	8	\$720.00	\$5,760.00				
		Airport Parking	Days	16	\$15.00	\$240.00				
		Hotel	Days	20	\$184.00	\$3,680.00				
		Meals	Days	16	\$76.00	\$1,216.00				
		<b>Total Travel Costs (Workshops)</b>					<b>\$15,868.60</b>			
	<b>1.6</b>	<b>Communications Program</b>								
		<b>Strategic Communications Direct Expenses</b>								
		Expense	Unit	Number	Price	Total				
		URL purchase		3.00	\$15.00	\$45.00				
		Advertising	Dollars	1.00	\$1,000.00	\$1,000.00				
		Smart screens	Dollars	4.00	\$1,500.00	\$6,000.00				
		Production	Dollars	1.00	\$20,000.00	\$20,000.00	Meeting materials, handouts, meeting boards, and direct mail			
		Meeting Refreshments	Dollars	6.00	\$45.00	\$270.00	Public and stakeholder meetings			
		Rental fees for public meeting venues	Dollars	6.00	\$100.00	\$600.00	Assumes, 6 total			
		Voiceovers	Dollars	4.00	\$450.00	\$1,800.00	Online meetings, educational videos			
		<b>Total Strategic Communications Direct Expenses</b>					<b>\$29,715.00</b>			

ARLINGTON WATER POLLUTION CONTROL PLANT (WPCP)  
 CONTRACT NUMBER 19-261  
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 ENGINEERING PROGRAM MANAGEMENT CONSULTING  
 PHASE 1 FEE ESTIMATE - EXPENSES

Task Name	Sub Task Name	ITEM	UNIT	AMOUNT	\$/EACH	TOTAL	NOTES				
<b>Service Area 7: Other Services</b>											
	<b>7.1</b>	<b>Site Visits</b>									
	7.1.a	<b>Travel Costs, International Site Visit</b>									
		Car Mileage	Miles	150	\$0.575	\$86.25					
		Flights	Trip	3	\$3,500.00	\$10,500.00					
		Airport Parking	Days	21	\$15.00	\$315.00					
		Lodging Nights	Days	18	\$250.00	\$4,500.00					
		Meals, per Diem HDR	Days	21	\$170.00	\$3,570.00					
		Rental Car	Days	21	\$250.00	\$5,250.00					
		Rental Fuel	Gallons	21	\$50.00	\$1,050.00					
		<b>Total Travel Cost (Site Visits)</b>				<b>\$25,271.25</b>					
	7.1.b-e	<b>Travel Costs, Domestic Site Visits</b>									
		Car Mileage	Miles	1,500	\$0.575	\$862.50					
		Airfare	Trip	4	\$600	\$2,400.00					
		Airport Parking	Days	8	\$15	\$120.00					
		Meals	Days	40	\$76	\$3,040.00					
		Hotel	Days	40	\$184	\$7,360.00					
		Rental Car	Days	40	\$30	\$1,200.00					
		Rental Fuel	Gallons	280	\$3.50	\$980.00	Assume 1/2 tank of gas per day of rental car				
		<b>Total Travel Cost (Site Visits)</b>				<b>\$15,962.50</b>					
	<b>7.6</b>	<b>Geotechnical</b>									
		Geotechnical Services				\$30,000.00					

ARLINGTON WATER POLLUTION CONTROL PLANT (WPCP)  
 CONTRACT NUMBER 19-261  
 EXHIBIT F  
 ENGINEERING PROGRAM MANAGEMENT CONSULTING  
 PHASE 1 FEE ESTIMATE - EXPENSES

Task Name	Sub Task Name	ITEM	UNIT	AMOUNT	\$/EACH	TOTAL	NOTES				
<b>Printing and Reports Costs</b>											
			<b>Half-Size Drawings</b>			<b>Reports</b>					
		<b>Item</b>	<b>No. Sheets</b>	<b>No. Copies</b>	<b>Total</b>	<b>No. Sheets</b>	<b>No. Copies</b>	<b>Total</b>			
		Program Work Plan	0	10	0	200	10	2,000			
		Technical Memoranda (Qty 18 - Draft, Final)	144	10	1,440	1,080	10	10,800			
		THP Procurement Documents (Draft, Final)	20	10	200	500	10	5,000			
		Gas Utilization Plan (Draft, Pre-final, Final)	0	10	0	300	10	3,000			
		Emissions Study Report (Draft, Pre-final, Final)	30	10	300	300	10	3,000			
		Draft Facilities Plan	30	10	300	1,200	10	12,000			
		Final Facilities Plan	30	10	300	1,200	10	12,000			
		Subtotal			2,540			47,800			
		Miscellaneous Internal Office Printing	35%		889			16,730			
		<b>Subtotal</b>			<b>3,429</b>			<b>64,530</b>			
		Area/Sheet (sf)			1.5						
		Total Area (sf)			5,144						
		Drawings (sf)	sf	5,144	\$ 0.15	\$ 771.53					
		Reports (page)	pages	64,530	\$ 0.10	\$ 6,453.00					
		<b>Total Printing and Reports Costs</b>				<b>\$ 7,224.53</b>					

**EXHIBIT G****NONDISCLOSURE AND DATA SECURITY AGREEMENT  
(CONTRACTOR)**

The undersigned, an authorized agent of the Contractor and on behalf of HDR Engineering, Inc. ("Contractor"), hereby agrees that the Contractor will hold County-provided information, documents, data, images, records and the like confidential and secure and protect them against loss, misuse, alteration, destruction or disclosure. This includes, but is not limited to, the information of the County, its employees, contractors, residents, clients, patients, taxpayers and property as well as information that the County shares with the Contractor for testing, support, conversion or other services provided under Arlington County Agreement No.19-261-RFP (the "Project" or "Main Agreement") or that may be accessed through other County-owned or -controlled databases (all of the above collectively referred to as "County Information" or "Information").

In addition to the DATA SECURITY obligations set in the County Agreement, the Contractor agrees that it will maintain the privacy and security of County Information, control and limit internal access and authorization for access to such Information and not divulge or allow or facilitate access to County Information for any purpose or by anyone unless expressly authorized. Any such information submitted by Disclosing Party to Receiving Party in tangible form shall be marked, stamped or tagged with the words "confidential" or "proprietary" or with such other heading, label, marking or cover document that reasonably puts Receiving Party on notice of the information's confidential nature. Information furnished verbally or visually and identified as confidential and/or as proprietary at the time of disclosure shall be confirmed as Confidential Information in a written statement that clearly identifies the information considered confidential within fifteen days after such disclosure. During that fifteen-day period the information shall be protected, but failure to provide such confirmation on a timely basis shall relieve Receiving Party thereafter of all obligations of protection with respect to such information.

Contractor also agrees that it will not directly or indirectly use or facilitate the use or dissemination of County information (whether intentionally or by inadvertence, negligence or omission and whether verbally, electronically, through paper transmission or otherwise) for any purpose other than that directly associated with its work under the Project. The Contractor acknowledges that any unauthorized use, dissemination or disclosure of County Information is prohibited and may also constitute a violation of Virginia or federal laws, subjecting it or its employees to civil and/or criminal penalties. It is hereby agreed that the following information is not considered to be confidential under this Agreement:

- a) Information already in the public domain;
- b) Information disclosed to Contractor by a third party who is not under a confidentiality obligation;
- c) Information developed by or in the custody of Contractor before entering into this Agreement;
- d) Information developed by Contractor through its work with other clients; and
- e) Information required to be disclosed by law or regulation, including, but not limited to, subpoena, court order or administrative order.

Contractor agrees that it will not divulge or otherwise facilitate the disclosure, dissemination or access to or by any unauthorized person, for any purpose, of any Information obtained directly, or indirectly, as a result of its work on the Project. The Contractor shall coordinate closely with the County Project Officer to ensure that its authorization to its employees or approved subcontractors is appropriate and tightly controlled and that such person/s also maintain the security and privacy of County Information and the integrity of County-networked resources.

Contractor agrees to take strict security measures to ensure that County Information is kept secure; is properly stored in accordance with industry best practices, and if stored is encrypted as appropriate; and is otherwise protected from retrieval or access by unauthorized persons or for unauthorized purposes. Any device or media on which County Information is stored, even temporarily, will have strict security and access control. Any County Information that is accessible will not leave Contractor's work site or the County's physical facility, if the Contractor is working onsite, without written authorization of the County Project Officer. If remote access or other media storage is authorized, the Contractor is responsible for the security of such storage device or paper files.

Contractor will ensure that any laptops, PDAs, netbooks, tablets, thumb drives or other media storage devices, as approved by the County and connected to the County network, are secure and free of all computer viruses, or running the latest version of an industry-standard virus protection program. The Contractor will ensure that all passwords used by its employees or subcontractors are robust, protected and not shared. The Contractor will not download any County Information except as agreed to by the parties and then only onto a County-approved device. The Contractor understands that downloading onto a personally owned device or service, such as personal e-mail, Dropbox, etc., is prohibited.

Contractor agrees that it will notify the County Project Officer immediately upon discovery or becoming aware or suspicious of any unauthorized disclosure of County Information, security breach, hacking or other breach of this agreement, the County's or Contractor's security policies, or any other breach of Project protocols concerning data security or County Information. The Contractor will fully cooperate with the County to regain possession of any Information and to prevent its further disclosure, use or dissemination. The Contractor also agrees to promptly notify others of a suspected or actual breach if requested.

The Contractor agrees that all duties and obligations enumerated in this Agreement also extend to its employees, agents or subcontractors who are given access to County information. Breach of any of the above conditions by Contractor's employees, agents or subcontractors shall be treated as a breach by the Contractor. The Contractor agrees that it shall take all reasonable measures to ensure that its employees, agents and subcontractors are aware of and abide by the terms and conditions of this agreement and related data security provisions in the Main Agreement.

It is the intent of this *NonDisclosure and Data Security Agreement* to ensure that the Contractor has the appropriate level of administrative safeguards, disaster recovery and best practices in place to ensure confidentiality, protection, privacy and security of County information and County-networked resources and to ensure compliance with all applicable local, state and federal laws or regulatory requirements. Therefore, to the extent that this *NonDisclosure and Data Security Agreement* conflicts with the Main Agreement or with any applicable local, state, or federal law, regulation or provision, the more stringent requirement, law, regulation or provision controls.

At the conclusion of the Project, the Contractor agrees to return all County Information to the County Project Officer. These obligations remain in full force and effect throughout the Project and shall survive any termination of the Main Agreement. Notwithstanding the foregoing, Contractor may retain a copy of information received, developed, or otherwise relating to this contract in order to prove compliance with its contractual obligations and applicable professional standards, provided that such information is kept confidential in accordance with the provisions of this Contract. Information stored on routine back-up media for the purpose of disaster recovery will be subject to destruction in due course in accordance with Contractor's data life governance policy and will not be within the requirement for the return or

destruction of records as contemplated by this paragraph. Latent data such as deleted files and other non-logical data types, such as memory dumps, swap files, temporary files, printer spool files and metadata that can customarily only be retrieved by computer forensics experts and are generally considered inaccessible without the use of specialized tools and techniques will not be within the requirement for the return or destruction of records as contemplated by this paragraph.

Authorized Signature: \_\_\_\_\_

Printed Name and Title: \_\_\_\_\_

Date: \_\_\_\_\_

**EXHIBIT H**

**NONDISCLOSURE AND DATA SECURITY AGREEMENT**  
**(INDIVIDUAL)**

I, the undersigned, agree that I will hold County-provided information, documents, data, images, records and the like confidential and secure and protect it against loss, misuse, alteration, destruction or disclosure. This includes, but is not limited to, the information of the County, its employees, contractors, residents, clients, patients, taxpayers, and property as well as information that the County shares with my employer or prime contractor for testing, support, conversion or the provision of other services under Arlington County Agreement No. 19-261-RFP (the "Project" or "Main Agreement") or which may be accessed through County-owned or -controlled databases (all of the above collectively referred to as "County Information" or "Information").

I agree that I will maintain the privacy and security of County Information, control and limit internal access and authorization for access to such Information and not divulge or allow or facilitate access to County Information for any purpose or by anyone unless expressly authorized. Any such information submitted by Disclosing Party to Receiving Party in tangible form shall be marked, stamped or tagged with the words "confidential" or "proprietary" or with such other heading, label, marking or cover document that reasonably puts Receiving Party on notice of the information's confidential nature. Information furnished verbally or visually and identified as confidential and/or as proprietary at the time of disclosure shall be confirmed as Confidential Information in a written statement that clearly identifies the information considered confidential within fifteen days after such disclosure. During that fifteen day period the information shall be protected, but failure to provide such confirmation on a timely basis shall relieve Receiving Party thereafter of all obligations of protection with respect to such information.

I agree that I will not directly or indirectly use or facilitate the use or dissemination of information (whether intentionally or by inadvertence, negligence or omission and whether verbally, electronically, through paper transmission or otherwise) for any purpose other than that directly authorized and associated with my designated duties on the Project. I understand and agree that any unauthorized use, dissemination or disclosure of County Information is prohibited and may also constitute a violation of Virginia or federal law/s, subjecting me and/or my employer to civil and/or criminal penalties. It is hereby agreed that the following information is not considered to be confidential under this Agreement:

- a) Information already in the public domain;
- b) Information disclosed to Contractor by a third party who is not under a confidentiality obligation;
- c) Information developed by or in the custody of Contractor before entering into this Agreement;
- d) Information developed by Contractor through its work with other clients; and
- e) Information required to be disclosed by law or regulation, including, but not limited to, subpoena, court order or administrative order.

I also agree that I will not divulge or otherwise facilitate the disclosure, dissemination or access to or by any unauthorized person for any purpose of the Information obtained directly, or indirectly, as a result of my work on the Project. I agree to view, retrieve or access County Information only to the extent concomitant with my assigned duties on the Project and only in accordance with the County's and my employer's access and security policies or protocols.

I agree that I will take strict security measures to ensure that County Information is kept secure; is properly stored in accordance with industry best practices, and if stored is encrypted as appropriate; and is

otherwise protected from retrieval or access by unauthorized persons or for unauthorized purposes. I will also ensure that any device or media on which County Information is stored, even temporarily, will have strict security and access control and that I will not remove, facilitate the removal of or cause any Information to be removed from my employer's worksite or the County's physical facility without written authorization of the County Project Officer. If so authorized, I understand that I am responsible for the security of the electronic equipment or paper files on which the Information is stored and agree to promptly return such Information upon request.

I will not use any devices, laptops, PDAs, netbooks, tablets, thumb drives or other media storage devices ("Device") during my work on the Project without pre-approval. I will ensure that any Device connected to the County network is free of all computer viruses or running the latest version of an industry-standard virus protection program. I will also ensure that my password, if any, is robust, protected and not shared. I will not download any County Information except as authorized by the County Project Officer and then only onto a County-approved Device. I understand that downloading onto a personally-owned Device or service, such as personal e-mail, Dropbox etc., is prohibited.

I agree that I will notify the County Project Officer immediately upon discovery or becoming aware or suspicious of any unauthorized disclosure of County Information, security breach, hacking or other breach of this agreement, the County's or Contractor's security policies, or any other breach of Project protocols concerning data security or County Information. I will fully cooperate with the County to help regain possession of any County Information and to prevent its further disclosure, use or dissemination.

It is the intent of this *NonDisclosure and Data Security Agreement* to ensure that the appropriate level of administrative safeguards and best practices are in place to ensure confidentiality, protection, privacy and security of County Information and County-networked resources and to ensure compliance with all applicable local, state and federal laws or regulatory requirements. Therefore, to the extent that this *Nondisclosure and Data Security Agreement* conflicts with the underlying Main Agreement or any local, state or federal law, regulation or provision, the more stringent requirement, law, regulation or provision controls.

Upon completion or termination of my work on the Project, I agree to return all County Information to the County Project Officer. I understand that this agreement remains in full force and effect throughout my work on the Project and shall survive my reassignment from the Project, termination of the above referenced Project or my departure from my current employer. Notwithstanding the foregoing, I may retain a copy of information received, developed, or otherwise relating to this contract in order to prove compliance with the contractual obligations and applicable professional standards, provided that such information is kept confidential in accordance with the provisions of this Contract. Information stored on routine back-up media for the purpose of disaster recovery will be subject to destruction in due course in accordance with Contractor's data life governance policy and will not be within the requirement for the return or destruction of records as contemplated by this paragraph. Latent data such as deleted files and other non-logical data types, such as memory dumps, swap files, temporary files, printer spool files and metadata that can customarily only be retrieved by computer forensics experts and are generally considered inaccessible without the use of specialized tools and techniques will not be within the requirement for the return or destruction of records as contemplated by this paragraph.

Signed: \_\_\_\_\_



Printed Name: \_\_\_\_\_

Date: \_\_\_\_\_

Witnessed:

Contractor's Project Manager: \_\_\_\_\_

Printed Name: \_\_\_\_\_

Date: \_\_\_\_\_

**TO BE COMPLETED PRIOR TO BEGINNING WORK ON THE PROJECT**