

PROFESSIONAL ENGINEERING SERVICES

WWA PROJECT No. 219044.00



PROJECT MANUAL

WATER TREATMENT PLANT IMPROVEMENTS

TOWN OF CULPEPER, VIRGINIA

BID SET

7/09/2021

Prepared by:



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Section 01100
Advertisement for Bids

Re: Town of Culpeper, Virginia
Water Treatment Plant Improvements

Sealed bids on the referenced project will be received by the Director of Public Services at the Public Works Building, 15038 Service Lane, Culpeper, VA 22701 until 2:00 P.M., local prevailing time, August 25, 2021, and then publicly opened.

Bids may be withdrawn using the procedure set forth in Virginia Code § 2.2-4330(B)(2).

The project will consist of the following work:

- Installation of new, Owner furnished, annular filter flume, inlet siphons, and vacuum tank
- Removal of platform, walkways, and handrails to accommodate filter system replacement
- Partial demolition of interior CMU wall section sufficient for removal and replacement/reinstallation of platforms and filter system
- Platform/walkway reinstallation and construction of new CMU wall segment at conclusion of filter system replacement
- Incidental electrical work related to filter system replacement

The Town will award the contract on a lump sum base bid.

Bid documents consisting of project manual and drawings are open to the public for inspection at the following locations:

- Owner: Town of Culpeper, Public Works Building, 15038 Service Lane, Culpeper, VA 22701
- Engineer: WW Associates, Inc., 968 Olympia Drive, Suite 1, Charlottesville, VA 22911, Telephone: 434-984-2700
- WW Associates, Inc., 110 Vista Centre Drive, Suite 1, Forest, VA 24551
- Valley Construction News, 426 West Campbell Avenue, Roanoke, VA 24016
- Builders Exchange of Richmond, VA, Inc., 3207 Hermitage Road, Richmond, VA 23227

A pre-bid conference will be held by conference call at 10:00 A.M. on August 2, 2021. Call in number: 888-273-3658, access code: 4074513#.

Bid documents in PDF format may be obtained from WW Associates, Inc., P.O. Box 4119, Lynchburg, VA 24502 upon receipt of a nonrefundable payment of \$50.00. Faxed checks are not acceptable. Bidder must include complete street address with zip code for use by express delivery agencies, complete mailing address with zip code, telephone and fax numbers with area code, and email address to avoid delay in receiving transmittals.

Bid Security: Bids shall be accompanied by a certified check or an acceptable bid bond in the amount of 5 percent of the base bid.

Bidders must be licensed as contractors in the Commonwealth of Virginia in accordance with Title 54.1, Chapter 11 of the Code of Virginia (1950) as amended.

The Owner reserves the right to reject any Bid for failure to comply with all requirements of this Notice or any of the Contract Documents; however, it may waive any minor defects or informalities at its sole and unfettered discretion. The Owner further reserves the right to reject any and all Bids or to Award the contract which in its judgment is in the best interest of the Owner.

End of Advertisement

Section 01200
Instructions to Bidders

- 1 General: To be valid for consideration, bids must be completed and submitted in accordance with these instructions to bidders.
- 2 Qualification of Bidders: Each bidder must be prepared to submit within 5 calendar days of the Owner's request written evidence of his qualifications for the project, including financial data, previous experience, and evidence of authority to conduct business in the jurisdiction where the project is located.
 - 2.1 The prime Contractor for this project shall represent experience in at least five (5) municipal water treatment plants of similar design to the satisfaction of the Engineer to be considered qualified to construct this project. The Contractor shall submit, with the bid, a list of similar installations with references, to be considered a qualified bidder.
 - 2.2 In addition to the experience qualifications listed above, each bidder must be prepared to submit, within 5 calendar days of the Owner's request, written evidence of his other qualifications for the project, including financial data, and evidence of authority to conduct business in the jurisdiction where the project is located.
- 3 Examination of Bid Documents and Site
 - 3.1 Before submitting bids, each bidder must examine bid documents thoroughly; familiarize himself with federal, state and local laws, ordinances, rules, and regulations affecting the work; and correlate his observations with the requirements of the bid documents.
 - 3.2 Bidders are requested and expected to visit the site of the project to alert themselves to local and special conditions, which may be encountered during construction of the project. Failure to make such investigations shall not relieve the successful bidder from performing and completing the work in accordance with the contract documents.
- 4 Interpretations
 - 4.1 **All questions concerning this project shall be directed to WW Associates, Inc., Telephone: (434) 316-6080, Fax: (434) 316-6081, and E-Mail: hwhite@wwassociates.net. Herbert F. White, III, P.E. is the point of contact.** No oral interpretations of the bid documents will be made to any bidder. To be given consideration, requests for interpretations must be received in time to allow preparation of written response at least 5 days prior for receipt of bids. Interpretations will be written in the form of written addenda to the bid documents and mailed to all parties recorded by WW Associates, Inc. as having received bid documents, prior to scheduled receipt of bids. Only interpretations by formal written addenda will be binding.

5 Bid Submission

5.1 Submit one copy of the bid using forms furnished by WW Associates, Inc. and fill in all blank spaces on the form. Repeat notation "Contractor's Current Virginia License No. _____" on outside of inner envelope containing bid and bid security, and place this envelope within another envelope addressed to:

5.1.1 Mr. James E. Hoy, P.E.
Director of Public Services
Town of Culpeper
Public Works Building
15038 Service Lane
Culpeper, Virginia 22701

5.2 The inner envelope shall have noted thereon:

5.2.1 "Bid for Construction of Town of Culpeper, Virginia, Water Treatment Plant Improvements."

5.3 Bid security, bidding documents, receipt deadline for bids, and pre-bid conferences shall be as specified herein.

5.3.1 No bidder shall withdraw, modify, or cancel any part of his bid for 90 days following bid opening.

5.4 Modifications and withdrawal of bids: Bids may be modified or withdrawn by appropriate document duly executed (in the manner that a bid must be executed) and delivered to the place where the bids are to be submitted at any time prior to the receipt of bids.

5.5 Withdrawal of bids after date for submission: In accordance with the procedure set forth in Virginia Code § 2.2-4330B.2, the bidder will have 2 business days after the opening of bids within which to claim in writing any mistake as defined in said section and withdraw his bid, provided such mistake be proved from the Contractor's work papers. Failure to submit Contractor's work papers will be considered as a waiver of any right of withdrawal of bids after the date for submission.

5.6 Bid documents in PDF format may be obtained from WW Associates, Inc., P.O. Box 4119, Lynchburg, VA 24502 upon receipt of a nonrefundable payment of \$50.00. Faxed checks are not acceptable. Bidder must include complete street address with zip code for use by express delivery agencies, complete mailing address with zip code, telephone and fax numbers with area code, and e-mail address to avoid delay in receiving transmittals.

5.7 Bid Security: Bids shall be accompanied by a certified check or an acceptable bid bond in the amount of 5 percent of the base bid.

- 5.8 All Base Bid Items must be completed in their entirety; failure by the Contractor to fully complete the bid form will be considered a non-responsive bid.
- 6 Agreement, insurance certificate, and bonds shall be drawn on forms identical to those bound within this project manual.
 - 6.1 Bonds shall be with a surety company acceptable to the Owner.
 - 6.2 A Performance Bond and a Payment Bond will be required in the amount of 100 percent of the bid.
- 7 Award of Contract
 - 7.1 The award of the contract will be as specified in Section 01300 – Bid Form.
 - 7.2 Should the responsive bid from the lowest responsible bidder exceed available funds, the Owner may negotiate with the lowest responsible bidder in accordance with Section 2.2-4318 of the Virginia Public Procurement Act to obtain a contract price within available funds.
 - 7.3 The Owner reserves the right to reject any and all bids and waive any and all informalities and the right to disregard all nonconforming or conditional bids or counterproposals.
 - 7.4 Submission of post-bid information shall be in accordance with the contract documents.

End of Section

Contractor _____ Date _____

VA License No. _____

Section 01300
Bid Form

Gentlemen:

The undersigned, having visited and examined the site and having carefully studied the drawings and project manual for the Town of Culpeper, Virginia, Water Treatment Plant Improvements, hereby proposes to furnish all plant, labor, equipment, materials, and services and to perform all operations necessary to execute and complete the work required for the project, in strict accordance with the drawings and technical specifications prepared by WW Associates, Engineers • Surveyors • Planners, dated July 9, 2021, together with addenda numbered _____, issued during bidding period and hereby acknowledged, subject to the terms and conditions of the agreement as follows:

Base Bid is defined as all work associated with this project, complete and in accordance with the drawings and specifications, for the sum of:

_____ **dollars**

(\$ _____).

Notes:

- a) The basis of award for determining the low bidder shall be the sum of the Base Bid.
- b) The Base Bid Items are founded upon furnishing equipment and materials of specified manufacturers.

It is understood and agreed that the Owner, in protecting his best interest, reserves the right to:

Reject any or all bids,

Accept any bid item at the base bid price, or any combination of the base bid items, whereupon the Contractor shall furnish equipment and materials as specified.

We are properly equipped to execute work as defined in the contract documents and so covered by this bid and will enter into agreement for the execution and completion of the work in accordance with the drawings, project manual, and this bid. We further agree that if awarded the contract, we will commence the work on the date stated in the "Notice to Contractor to Proceed," and will prosecute the work and shall be substantially complete as defined in the General Conditions within 180 calendar days, and complete all obligations within 210 calendar days.

The Owner and Contractor recognize that time is of the essence with this agreement and that the Owner will suffer financial loss if the work is not completed within 180 calendar days. They also recognize the delays, expense, and difficulties involved in proving the actual loss suffered by the Owner if the work is not completed on time. Accordingly,

Contractor _____ Date _____

VA License No. _____

instead of requiring any such proof, the Owner and Contractor therefore agree that, as liquidated damages for delay (but not as a penalty), the Contractor shall pay the Owner One Thousand Dollars (\$1,000.00) for each day that expires after the time specified for substantial completion of this project. Contractor is advised that the "Notice to Proceed" will commence following the receipt of the owner furnished equipment by the Town of Culpeper, Virginia.

Enclosed herewith is the following security, offered as evidence that the undersigned will enter into agreement for the execution and completion of the work in accordance with the drawings and project manual:

Certified check for the sum of _____

Name of bank _____

Bidder's bond in amount of _____

Bond issued by _____

The undersigned further agrees that in case of failure on his part to execute the said agreement within 10 consecutive calendar days after written notice being given on the award of the contract, the monies payable by the securities accompanying this bid shall be paid to the Town of Culpeper, Virginia as liquidated damages for such failure; otherwise, the securities accompanying this bid shall be returned to the undersigned.

This bid is subject to acceptance within a period of 90 days from bid submission date.

Contractor _____ Date _____

VA License No. _____

SUBMITTED on _____, 20_____.

Contractor's Current Virginia Contractor License No. _____.

If Bidder is:

An Individual

Name (typed or printed): _____

By: _____ (SEAL)
(Individual's Signature)

Doing business as: _____

Business address: _____

Phone No.: _____ Fax No.: _____

A Partnership

Partnership Name: _____ (SEAL)

By: _____
(Signature of general partner -- attach evidence of authority to sign)

Name (typed or printed): _____

Business address: _____

Phone No.: _____ Fax No.: _____

A Corporation

Corporation Name: _____ (SEAL)

State of Incorporation: _____

Type (General Business, Professional Service, Limited Liability): _____

By: _____
(Signature -- attach evidence of authority to sign)

Name (typed or printed): _____

Title: _____ (CORPORATE SEAL)

Attest _____
(Signature of Corporate Secretary)

Business address: _____

Phone No.: _____ Fax No.: _____

Contractor _____ Date _____

VA License No. _____

A Joint Venture

Joint Venturer Name: _____ (SEAL)

By: _____

(Signature of joint venture partner -- attach evidence of authority to sign)

Name (typed or printed): _____

Title: _____

Business Address: _____

Phone No.: _____ Fax No.: _____

Joint Venturer Name: _____ (SEAL)

By: _____

(Signature -- attach evidence of authority to sign)

Name (typed or printed): _____

Title: _____

Business Address: _____

Phone No.: _____ Fax No.: _____

Phone and Fax Number, and Address for receipt of official communications:

(Each joint venture must sign. The manner of signing for each individual, partnership, and corporation that is a party to the joint venture should be in the manner indicated above.)

Section 01400
General Requirements

1 GENERAL

1.1 Summary of Work

- 1.1.1 The work covered under this contract comprises the furnishing of all labor, materials, equipment, tools and services and the installation and construction of all items, and the performance of all work necessary to complete the work shown or called for on the drawings and/or this project manual.
- 1.1.2 All units under this Contract shall be operable, shall be installed as designed, and shall conform to the manufacturer's specifications for the particular application.
- 1.1.3 The term "proposed" used throughout the contract documents shall be synonymous with "new" and shall indicate work or equipment that is to be furnished and installed by the Contractor, unless otherwise noted.

1.2 Contractor Use of Premises

- 1.2.1 The Contractor shall assume full responsibility for protection and safekeeping of products stored on or off premises.
- 1.2.2 The Contractor shall coordinate use of premises with the Owner and Engineer, and remove stored products that interfere with the operations of the Owner or other contractors.
- 1.2.3 The Contractor shall obtain and pay for all additional storage or work areas needed for operations under this Contract. These areas shall be subject to the same conditions as described for the Owner's property.

1.3 Construction and Scheduling Sequence

- 1.3.1 Phases of the construction which involve the temporary interruption of essential services and demolition of existing items shall be scheduled in consultation with the Owner or his representative, shall not be of longer duration than essential to accomplish the purpose for such interruptions, and shall be coordinated to give the Owner the ability to maintain water service. Liaison with the Owner in these matters is a salient feature of this contract.
- 1.3.2 Provide a written construction schedule and plan which describes in detail each major task and operation which will interfere with any existing system, equipment, or operation. The plan shall describe the sequence and proposed method of accomplishing each task and the proposed schedule for interruptions.

1.3.3 The following is a list of constraints and scheduling requirements relative to construction of this project. All outages shall be coordinated with and approved by the Town of Culpeper.

1.3.3.1 Bypass and Replacement of Annular Flume

1.3.3.1.1 The water treatment facilities shall stay in operation for the entire construction period with the treatment capacity reduced to 2 MGD to allow the annular flume to be bypassed.

1.3.3.1.2 Using the new stop plate and bypass valves installed in the inlet trough (previously built by others), the 2 MGD flow will pass directly into the two filter basins closest to the inlet trough while the annular flume is being replaced.

1.3.3.2 New Vacuum Pump Assembly

1.3.3.2.1 The two filter basins will be at full operational capacity, including periodic backwashing requiring use of the Vacuum Pump Assembly, during construction. As such, replacement of the Vacuum Pump Assembly and all associated piping must be completed in a 36-hour time frame. Nighttime work is expected to accomplish this task.

1.3.4 Contractor shall create a pre-construction video of the entire project area to demonstrate pre-construction conditions. The Contractor shall provide the Owner with a DVD of the pre-construction video as a submittal.

1.3.5 The Owner and its operators shall have full access to equipment and structures under construction at all times to allow them to maintain operation of the water treatment plant.

1.4 Work Restrictions

1.4.1 Occupancy: If the Owner elects to operate any of the improvements included with this project under partial utilization, prior to the project's final acceptance, neither WW Associates, Inc. nor the Contractor shall be held responsible for the safety or well being of those occupants beyond the normal care and practice of the construction industry.

1.4.2 Normal working hours for the Contractor shall be 8:00 A.M. to 5:00 P.M., Monday through Friday, excluding state and federal holidays, unless otherwise approved by the Owner and WW Associates, Inc.

1.4.3 Comply with Owner security policies and procedures for the duration of the project.

1.5 Contract Modification Procedures

1.5.1 Change Orders: No amount, in part or in whole, of a change order shall be included in a requisition for payment by the Contractor until the change order has been executed and copies of the change order have been distributed to the Owner and Contractor.

1.5.2 Work Orders: A work order is a device which enables the Owner to promptly order changes in the work which may involve changes in cost or contract time, or both pending preparation and execution of a formal change order.

1.5.3 Request for Change Order Proposal: The Owner may request the Contractor to submit a change order proposal for changes in contract work. The Contractor shall submit the proposal in accordance with contract requirements within 3 days of a request by the Engineer or Owner. The Owner may issue to the Contractor a work order authorizing the required changes for an additional amount not to exceed, or a deduction of not less than the amount shown in the work order. If the Contractor is not in agreement with the amount stipulated in the work order, he shall, within a reasonable time after the issue date of the order, submit to WW Associates, Inc. an equitable proposal and develop with the Owner a mutually acceptable price for the required change in work.

1.5.4 The Contractor may initiate changes by submitting a written notice to the Engineer containing:

1.5.4.1 Description of the proposed changes.

1.5.4.2 Statement of the reason for making the changes.

1.5.4.3 Statement of the effect on the Contract Sum and the Contract Time.

1.5.4.4 Statement of the effect on the Work of separate Contractors.

1.5.4.5 Documentation supporting any change in Contract Sum or Contract Time, as appropriate.

1.6 Payment Procedures

1.6.1 Applications and Certificates for Payment: The form of each application for payment shall be EJCDC Document C-620 entitled, "Application and Certificate for Payment" accompanied by "Continuation Sheet," and "Stored Material Summary." Each application for payment by the Contractor, excluding the first, shall be accompanied by a "Contractor's Affidavit of

Payment of Debts and Claims,” AIA Document G706, and “Contractor’s Affidavit of Release of Liens,” AIA Document G706A. Each application shall be submitted on these forms. Payment for stored material delivered but not incorporated in the work will be the invoiced amount only. Submit invoices with application for payment.

1.6.2 Upon recommendation by WW Associates, Inc. of the Contractor’s request for partial payment, the Owner shall pay to the Contractor 95 percent of the total amount due and the Owner shall retain 5 percent of the amount due until final completion and acceptance of all work covered by the contract.

1.6.3 Schedule of Values: Submit complete schedule of values at least 10 days prior to first application for payment.

1.7 Project Meetings

1.7.1 Preconstruction conferences with the Contractor will be held after the effective date of the agreement.

1.7.2 Progress Meetings: Each month, the Contractor, Engineer, and the Owner shall hold a progress meeting to review progress to date and to resolve all questions for the upcoming month.

1.8 Progress Schedules: Submit a detailed construction schedule prior to the preconstruction conference. Revise the schedule prior to each progress meeting. Construction schedule shall be in a form that will clearly show the proposed degree of completeness of each aspect of the construction throughout the life of the contract. Bar graphs and/or PERT diagrams are acceptable forms.

1.9 Submittal Procedures

1.9.1 Shop Drawings, Product Data, and Samples: Prior to the preconstruction conference, prepare a submittal schedule satisfactory to WW Associates, Inc. fixing the dates for submission of shop drawings, product data, samples, and the like and update this schedule at each progress meeting to reflect the status of each submittal item.

1.9.1.1 Submit an Adobe Acrobat format (pdf) electronic file of all shop drawings.

1.9.1.2 An Adobe Acrobat format (pdf) electronic file of approved shop drawings will be returned to the Contractor.

1.9.1.3 Submit shop drawings, product data, samples, and the like as required by applicable specification sections.

1.9.1.4 Identify each item submitted using applicable specification section number and paragraph reference or drawing reference.

- 1.9.1.5 Shop drawings shall be approved by the Contractor and those subcontractors whose work is associated with the subject equipment as being in accordance with the contract documents prior to submission.
- 1.9.1.6 Failure to comply with these requirements will result in the submittal being returned unprocessed.
- 1.9.2 The Engineer's approval of Contractor's shop drawings will be general and shall not relieve the Contractor from the responsibility for adherence to the Contract, nor shall it relieve him of the responsibility for any errors that may exist. Where such errors or omissions are discovered later, they shall be rectified by the Contractor, irrespective of any approval by the Engineer.
- 1.9.3 Equipment/Material Shop Drawings for any piece of equipment or item will be reviewed a maximum of two times by the Engineer. Subsequent reviews will be paid for by the General Contractor to the Engineer at the rate of \$140.00 per hour and paid to the Engineer by the Owner from a deduct from the Contractor's monthly pay request. Contractors are cautioned to select equipment that meets the requirements specified in the contract documents and to require their suppliers to provide detailed and accurate information in their Submittal packages which can readily be approved.

1.10 Quality Control

- 1.10.1 Testing Laboratory Services: The Contractor will employ and pay for the services of an independent testing laboratory to perform testing specified to be done by an independent testing laboratory, unless specifically stated otherwise in other sections of the specifications. Employment of the laboratory shall in no way relieve the Contractor's obligations to perform the work of the contract.

1.11 Temporary Utilities

- 1.11.1 Temporary Electricity: The Contractor shall make all necessary arrangements for obtaining temporary electric power for construction purposes. No separate payment for electric power for construction purposes or testing other than the payment included in the contract lump sum or unit prices will be allowed. Fees charged by the power company for permanent electrical service will be paid by the Owner.
- 1.11.2 Temporary Water: The Contractor shall make all necessary arrangements for securing water for construction purposes at his own cost and expense. No separate payment, other than that included in the contract lump sum or unit prices, will be allowed for water so used. The Contractor may use the Town's potable water at the water treatment plant site during construction.

1.11.3 Temporary Sanitary Facilities: Contractor shall provide and maintain in a neat and sanitary condition such accommodations for the use of his employees as will comply with laws and regulations.

1.12 Temporary Controls

1.12.1 Construction Cleaning: The Contractor shall clean daily all areas under construction to ensure minimum interference with roads, streets, sidewalks, and access of adjacent property owners.

1.12.2 Erosion and Sediment Control: These controls shall be in coordination with the appropriate drawings and any requirements of the local authority as required.

1.12.3 Dust Control: Contractor shall ensure that dust is held to a minimum throughout the length of the project through the application of moisture where applicable.

1.13 Vehicular Access and Parking

1.13.1 Parking and Laydown Areas: The location of Contractor parking and laydown areas shall be as agreed upon by the Owner and the Engineer.

1.14 E-Mail Address: The Contractor shall provide an e-mail address to allow the Owner and the Engineer to correspond with the Contractor's project manager during the construction period.

1.15 Product Requirements

1.15.1 Quality of Material and Equipment Incorporated into the Work:

1.15.1.1 Design, fabricate and assemble in accordance with the best engineering and shop practices.

1.15.1.2 Manufacture like parts of duplicate units to standard sizes and gauges, to be interchangeable.

1.15.1.3 Two or more items of the same kind shall be identical, by the same manufacturer.

1.15.1.4 Products shall be suitable for services conditions.

1.15.1.5 Equipment capacities, sizes, and dimensions shown or specified shall be adhered to unless variations are specifically approved in writing.

1.15.2 Except as specifically indicated or specified, materials and equipment removed from the existing structure shall not be used in the completed work.

1.15.3 For material and equipment specifically indicated or specified to be reused in the work:

1.15.3.1 Use special care in removal, handling, storage, and reinstallation to assure proper function in the completed work.

1.15.3.2 Arrange for transportation, storage, and handling of products, which require off-site storage, restoration, or renovation. Pay all costs for such work.

1.15.4 Manufacturer's Instructions

1.15.4.1 When contract documents require that installation of work shall comply with manufacturer's printed instructions, obtain and distribute copies of such instructions to parties involved in the installation, including two copies to WW Associates, Inc.

1.15.4.2 Maintain one set of complete instructions at the job site during installation and until completion.

1.15.4.3 Handle, install, connect, clean, condition, and adjust products in accordance with such instructions and in conformity with specified requirements.

1.15.5 Transportation and Handling of Materials

1.15.5.1 Arrange deliveries of products in accordance with construction schedules. Coordinate to avoid conflict with work and conditions at the site.

1.15.5.2 Deliver products in undamaged condition, in manufacturer's original containers or packaging, with identifying labels intact and legible.

1.15.5.3 Immediately on delivery, inspect shipments to assure compliance with requirements of contract documents and approved submittals, and that products are properly protected and undamaged.

1.15.6 Storage and Protection

1.15.6.1 Store products in accordance with manufacturer's instructions, with seals and labels intact and legible.

1.15.6.2 Store products subject to damage by the elements in weathertight enclosures.

1.15.6.3 Maintain temperature and humidity within the ranges required by manufacturer's instructions.

1.15.6.4 Exterior Storage

1.15.6.4.1 Store fabricated products above the ground, on blocking or skids; prevent soiling or staining; cover products, which are subject to deterioration with impervious sheet coverings; and provide adequate ventilation to avoid condensation.

1.15.6.4.2 Store loose granular materials in a well-drained area on solid surfaces to prevent mixing with foreign matter.

1.15.6.4.3 Protection after Installation: Provide substantial coverings as necessary to protect installed products from damage from traffic and subsequent construction operations. Remove when no longer needed.

1.16 Starting of Systems

1.16.1 The Contractor shall initially start up and place all equipment installed by the Contractor into successful operation according to manufacturers' written instructions and as instructed by manufacturers' representatives.

1.16.2 Provide all materials, labor, tools, equipment and expendables required.

1.16.3 Coordinate schedule for start-up of various equipment and systems. Notify the Engineer at least seven days prior to start-up of each item. The Owner's operator and the Engineer will be present during start-up.

1.16.4 Execute start-up under supervision of responsible manufacturer's representative in accordance with manufacturer's instructions.

1.16.5 When required in individual Specification Sections, the manufacturer shall provide an authorized representative to be present at the site to inspect, check, and approve equipment or system installation, and to supervise placing equipment or system into operation.

1.16.6 Submit a written report that equipment or system has been properly installed and is functioning correctly.

1.16.7 General activities include the following:

1.16.7.1 Cleaning.

1.16.7.2 Removing temporary protective coverings.

1.16.7.3 Check and correct, if necessary, leveling plates, grout, bearing plates, anchor bolts, fasteners, and alignment of piping which may put stress on equipment connected to it.

1.16.7.4 Test all equipment and systems at normal operating conditions and through the normal operating range.

1.16.7.5 Make all adjustments and balances required.

1.16.8 Minimum Start-Up Procedures.

1.16.8.1 Valves: Inspect all valves, clean bonnets and stems. Inspect packing glands to assure no leakage, and tighten or replace as necessary. Verify that control valve seats are free from foreign material and are properly positioned for service.

1.16.8.2 Pipe Joints: Inspect all joints for leakage, and tighten, remake, or replace as necessary.

1.16.8.3 Pipe Supports: Inspect all piping supports to assure adequate restraint to prevent displacement, vibration, or failure of piping and fittings, while allowing for expansion and contraction. Modify and adjust as necessary.

1.16.8.4 Electrical Circuits: Check each electrical control circuit to assure operations complies with specifications and requirements to provide desired performance.

1.16.8.5 Instruments: Test, adjust, and calibrate as required.

1.17 Demonstration and Instructions

1.17.1 Prior to final inspection, demonstrate operation of each system to the Engineer and the Owner.

1.17.2 Instruct the Owner's personnel in operation, adjustment, and maintenance of equipment and systems, using the operation and maintenance manuals as a basis for instruction. Review the contents of all manuals with the Owner's personnel in detail to explain all aspects of operation and maintenance.

1.18 Acceptance for Operation

1.18.1 As soon as the unit, equipment, or system has been properly prepared for operation and it is necessary to be placed into service, bring it on-line; then make an on-line performance test by operating it under approximately normal conditions for a period of 14 consecutive days to demonstrate that all materials and components are in proper working order and free from defects. During this time, the Owner will receive specified instruction on the unit or system by qualified personnel, and be furnished all appropriate operation and maintenance manuals. In event of failure to demonstrate successful performance on the first or any subsequent attempt, make all alternations, adjustments, repairs, and replacements that may be needed; and, if it

becomes necessary to shut down the unit or system, or any portion thereof before the on-line test is satisfactorily completed, provide all appropriate measures to resume water treatment operations without the unit or system. When the unit or system is again ready for operation, bring it on-line and start a new on-line test. This procedure shall be repeated as often as necessary until the unit or system shall have operated continuously to the satisfaction of the Owner, for a test period duration of 14 consecutive days. The Owner will furnish all operating personnel (other than vendor's or subcontractor's service engineers) needed to operate equipment during the on-line test period; however, said personnel will perform their duties under the Contractor's direction and supervision. Until performance tests are completed and units and systems are accepted by the Owner for operation, the Contractor shall be fully responsible for supervising their operation.

- 1.18.2 When the on-line test has been completed, the Owner will notify the Contractor to this effect in writing and will then take over the unit or system for purpose of operation. Neither this notice nor the act of taking over any item for operation shall relieve the Contractor from his obligations to complete the facility or perform any other obligations or responsibilities, which extend beyond the completion of the on-line tests.
- 1.18.3 The Contractor shall maintain full responsibility for the maintenance of all units and systems placed on-line until they have been determined substantially complete. No warranties shall begin prior to the date of substantial completion.
- 1.18.4 Acceptance Requirements: All equipment shall pass the specified performance testing prior to substantial completion certifications. Partial acceptance of equipment will not be allowed.

1.19 Cleaning

- 1.19.1 Periodically clean premises of accumulated construction debris.
- 1.19.2 Prior to final completion, thoroughly remove from premises any debris remaining from construction activities, and properly dispose. Leave premises in a clean, neat, orderly and safe condition.

1.20 Contract Closeout Procedures

- 1.20.1 Punch List: Correct all punch list items.
- 1.20.2 Operations and Maintenance Data: Obtain, assemble, and submit to WW Associates, Inc. three manuals containing comprehensive operating and maintenance instructions and parts lists. Each manual shall be self-contained and include information for efficient servicing of equipment supplied and installed under the contract.

- 1.20.2.1 Operating instructions shall explain maintenance procedures, methods of checking the systems for safe and normal operation, and recommended procedure for safely stopping and starting the equipment and systems.
- 1.20.2.2 These requirements shall be fulfilled before any guarantee periods become effective so as to limit the possibility of claims arising from the absence of pertinent information.
- 1.20.3 Guarantees, Warranties, and Bonds: Submit all required guarantees, warranties and bonds.
- 1.20.4 Project Record Documents
 - 1.20.4.1 Provide one complete set of drawings and project manual recording all changes to work to indicate actual installation. Changes shall be noted in legible red letters at least 1/8-inch high. These changes shall include, but are not limited to, the following:
 - 1.20.4.1.1 Size, depth or position of foundations
 - 1.20.4.1.2 Exact location and elevation of all underground utility services
 - 1.20.4.1.3 Changes in general construction, mechanical, or electrical work above or below ground.
 - 1.20.4.2 These records are a specific contract requirement, and final payment will not be made until these drawings and project manual have been submitted in an acceptable form.
- 1.20.5 Spare parts and maintenance materials required by these contract documents shall be delivered to the Owner as directed by the Owner.
- 1.20.6 List of Manufacturers and Suppliers: At the conclusion of the project, the Contractor shall furnish WW Associates, Inc. with a complete list of subcontractors, manufacturers, and suppliers who participated in the construction or who furnished materials or equipment. The address of each firm shall be included, together with types of materials or work performed.
- 1.20.7 Affidavit of Payment of Debts and Claims
- 1.20.8 Affidavit of Release of Liens

End of Section

Section 01500
Supplementary Conditions

1 Supplements

- 1.1 These supplementary conditions amend or supplement the Standard General Conditions of the Construction Contract, EJCDC Document C-700, 2007 edition, and other provisions of the contract documents to the extent indicated. All provisions that are not so amended or supplemented remain in full force and effect.

2 Definitions

- 2.1 The terms used in these supplementary conditions that are defined in the Standard General Conditions of the Construction Contract (EJCDC Document C-700, 2007 edition) have the meanings assigned to them in the general conditions.
- 2.2 The terms “Town” and “Town of Culpeper” refer to the Owner.

3 Preliminary Matters

- 3.1 Delete Paragraph 2.01 and substitute the following revised Paragraph 2.01 in its place:

“Conditions Precedent to Formation:

Before any Contract between the Owner and the Contractor is effective, the following conditions precedent must be satisfied. Satisfaction of these conditions is the responsibility of the Contractor. If, after performance under the Contract, the Owner learns that a condition precedent has not been met, the Owner may, if permitted by law, ratify the Contract by affirmative recorded vote or may disclaim it, in its sole discretion.

1. Insurance: If insurance is required under the Contract, the Contractor must provide proof of insurance in the amounts required by the Contract with an insurance company licensed to do business in the Commonwealth of Virginia.
 2. Bonds: If payment and/or performance bonds are required under the Contract, then bonds with surety satisfactory to the attorney for the Owner shall be submitted to the Owner for approval.
 3. Permits and licenses: The Contractor shall obtain all licenses and permits required to perform the Work under the Contract.
 4. Payment of Debts: The Contractor must pay all amounts shown as due to the Owner on the Owner’s accounts, even if a dispute exists as to the debt’s validity or enforceability.”
- 3.2 The Copies of Documents: Modify Article 2.02 as follows: For construction purposes the Contractor will be issued, free of charge, the following documents:

A PDF of the “Issued for Construction” documents.

4 Bonds

4.1 Add the following to Article 5, Paragraph 5.01.

“The Contractor shall secure and provide all bonds, called for in the General Conditions and Instructions to Bidders. All bonds shall be written by sureties or insurance companies licensed to do business in the Commonwealth of Virginia.”

5 Insurance: The Contractor shall purchase and maintain the insurance, required by Article 5 of the General Conditions, in at least the following coverage amounts. A sample Certificate of Insurance is included at the end of this Section for use as a template by your agent.

Workers Compensation	Statutory
Employer’s Liability-	
Each Accident:	\$100,000
Disease, Each Employee:	\$100,000
Disease, Policy Limit:	\$500,000
General Liability-	
Each Occurrence:	\$1,000,000
Personal & Advertising Injury:	\$1,000,000
Products Completed Operations Aggregate:	\$2,000,000
General Aggregate:	\$2,000,000
Excess or Umbrella Liability-	
Each Occurrence:	\$2,000,000
General Aggregate:	\$2,000,000
Automobile Liability-	
Combined Single Limit	
Each Accident:	\$1,000,000
Installation Floater:	Coverage Equal to Value of Materials

5.1 Contractor’s workers compensation insurance as required by Federal, State, and Municipal laws for the protection of all Contractors’ employees working on or in connection with the project, including broad form all states and voluntary compensation coverages and employers’ liability coverage.

5.2 Contractor’s general liability insurance shall include the following coverages: premises and operations, explosion, collapse and underground, products completed operations, contractual liability, and personal and advertising injury.

- 5.3 The Automobile Liability Insurance shall include coverage for owned, non-owned and hired autos.
- 5.4 All insurance shall be written by insurance companies licensed to do business in the Commonwealth of Virginia.
- 5.5 The Town of Culpeper and WW Associates, Inc. shall be listed as an additional insured on all policies except workers compensation.
- 5.6 A waiver of subrogation shall apply in favor of the Town of Culpeper and WW Associates, Inc. on all policies as permitted by law.
- 5.7 Certificate Holder: Town of Culpeper
 400 South Main Street
 Culpeper, VA 22701

6 Contractor's Responsibilities

- 6.1 Labor, Materials, and Equipment: Add the following to Paragraph 6.03

“All material incorporated in the work of this contract shall be free of asbestos and other hazardous materials.”

- 6.2 Delete Subparagraph 6.06(B) and substitute the following revised Subparagraph 6.06(B) in its place:

“Contractor may not subcontract any of the work under this Contract without the prior, written approval of the Town, which will not be unreasonably withheld. The Contractor will, as soon as practicable after award of the Contract, give the Town a written list of each proposed subcontractor and the work to be done by that subcontractor. The Town shall, after reasonable investigation, promptly inform the Contractor if it objects to a particular subcontractor. If the Town objects, the Contractor will not use that subcontractor for any part of the work and will promptly submit in writing for the Town's approval the name of another subcontractor (or propose to use the Contractor's own forces) to perform those portions of the work. The Contractor will not change a subcontractor without giving the Town written notice of the proposed new Subcontractor and receiving the Town's approval after reasonable investigation. If the Town objects, the Contractor will either retain the existing subcontractor or propose a different subcontractor to the Town for approval. It is the Contractor's responsibility to obtain subcontractors whom the Town approves, and no delay due to the Town's objection to a subcontractor will authorize any change in the time required to perform the work. No acceptance by Owner of any such subcontractor, whether initially or as a replacement, shall constitute a waiver of any right of Owner or Engineer to reject defective Work.”

6.3 Add new Subparagraph 6.06(H) as follows:

- “1. Within seven days after receipt of amounts paid to the Contractor by the Owner for satisfactorily completed performance, the prime contractor agrees to:
 - a. Pay the subcontractor for the proportionate share of the total payment received from the Owner attributable to the work performed by the subcontractor under that contract; or
 - b. Notify the Owner and subcontractor, in writing, of his intention to withhold all or a part of the subcontractor’s payment with the reason for nonpayment.
2. If the Contractor after having received payment for the Owner fails to pay each subcontractor its proportionate share of the total payment, the Contractor shall be obligated to pay interest to each subcontractor on all amounts that remain unpaid after the seven days following receipt by the Contractor of payment from the Owner. Under no circumstances will the Town pay or reimburse this interest payment.
3. Unless otherwise provided under the terms of this Contract or by statute, interest shall accrue at a rate of one percent per month against the Contractor on any unpaid amounts owed to each subcontractor.
4. The Contractor shall include in each of its subcontracts 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.”

6.4 Delete Subparagraph 6.07(B).

6.5 Laws and Regulations: Add the following to Subparagraph 6.09 D.:

“The Contractor shall be licensed in the Commonwealth of Virginia in accordance with Title 54.1, Chapter 11, Code of Virginia (1950) as Amended.”

6.6 Permits

- 6.6.1 The Contractor shall obtain all required permits for this project at no additional cost to the Owner. The Contractor shall pay any associated fees and post any associated sureties for required permits. Required permits shall include, but not be limited to, the following:

6.6.1.1 Town of Culpeper Business License: Contact the Town Clerk’s office for additional information. Telephone: (540) 829-8240, Fax: (540) 829-8249, Email: kallen@culpeperva.gov.

6.6.1.2 Culpeper County Building Permit: The Contractor shall apply for and obtain the building permit. Comply with all County requirements and provide all required Special Inspections for building construction. Contact the County Building Department

for additional information. Telephone: (540) 727-3405, Fax: (540) 727-3461, Email: kkendall@culpepercounty.gov.

6.7 OSHA Requirements: The Contractor shall be responsible for all safety at the job site and shall comply with OSHA Regulations for all work associates with this project.

6.8 Delete Subparagraph 6.20(A) and substitute the following revised Subparagraph 6.20(A) in its place:

- “1. To the fullest extent permitted by law, the Contractor shall indemnify, defend, and hold harmless the Town and its officers, agents, employees, community representatives, volunteers or others working on behalf of the Town, including the Engineer, from any and all claims, judgments, suits, losses, damages, payments, costs, fines and/or fees levied against the Owner and expenses of every nature and description, including attorney’s fees, arising out of, connected or associated with or resulting from the lack of performance or the negligent performance of work as described in this Contract, Contract Documents or any agreement that results from this Contract. Further, if the Contractor subcontracts for work, it will require in its subcontracts that each subcontractor indemnify, defend, and hold harmless the Town and its officers, agents, employees and community representatives, from any and all claims and losses accruing or resulting from the negligent performance of work as described in any agreement that results from this Contract.
2. To the fullest extent permitted by law, the Contractor shall also indemnify, defend, and hold harmless the Town and its officers, agents, employees, community representatives, volunteers or others working on behalf of the Town, including the Engineer, against all costs, including reasonable attorney’s fees, arising from liens encumbering the Town’s Property filed by subcontractors, sub-subcontractors, material suppliers, and all other persons and entities acting for and under the Contractor, and the Contractor shall immediately discharge or bond such liens off.
3. Virginia is a Dillon Rule state. Unless specifically permitted by statute, indemnification or any attempt to have the Town hold others harmless is invalid and unenforceable as an impermissible waiver of the Town’s sovereign immunity which may create potential future debt in violation of Virginia Constitutional and statutory requirements. The Town cannot waive its sovereign immunity. Subparagraph 4.06(g) is hereby deleted.”

7 Project Representative

7.1 Add the following to Paragraph 8.01:

“B. The Town Manager will designate a person to serve as the Contract Administrator. The initial Contract Administrator is WW Associates, Inc., but

the Town Manager may designate a new Contract Administrator by notice to the Contractor.”

- 7.2 Revise the first sentence in Paragraph 9.03(A) as follows: “As requested by Owner, Engineer or Owner will furnish a Resident Project Representative to assist Engineer in providing more extensive observation of the Work.”

In addition, add the following to Paragraph 9.03:

- “B. The Resident Project Representative will serve as the Engineer’s liaison with the Contractor, working principally through the Contractor’s superintendent to assist him in understanding the intent of the Contract Documents.

- C. The Resident Project Representative shall conduct on-site observations of the work in progress to confirm that the work is proceeding in accordance with the Contract Documents. He will verify that tests, equipment and systems start-ups and operating and maintenance instructions are conducted as required by the Contract Documents. He will have the authority to disapprove or reject defective work in accordance with Article 13.”

- 7.3. Add the following to Paragraph 9.09:

- “F. Except upon written instructions of the Engineer, the Resident Project Representative:
 - 1. Shall not authorize any deviation from the Contract Documents or approve any substitute materials or equipment.
 - 2. Shall not exceed limitations of Engineer’s authority as set forth in the Contract Documents.
 - 3. Shall not undertake any of the responsibilities of Contractor, Subcontractors, or Contractor’s superintendent, or expedite the Work.
 - 4. Shall not advise on or issue directions related to any aspect of the means, methods, techniques, sequences or procedures of construction unless such is specifically called for in the Contract.
 - 5. Shall not advise on or issue directions as to safety precautions and programs in connection with the Work.”

8 Change in Contract Times

- 8.1 Add new Subparagraph 12.02(C) as follows:

“This Contract may be extended as provided in the Solicitation or by Change Order or amendment. If this is a fixed price contract, however, no extension may increase the price by more than twenty-five percent of the amount of the Contract or

\$50,000, whichever is greater, without a recorded affirmative vote of the Town Council. The Town may extend the term of this contract for services to allow completion of work undertaken but not completed under its original term.”

8.2. Add new Subparagraph 12.03(F) as follows:

“Time shall be of the essence to this Contract.

1. If the Contractor at any time finds that the schedule will not be met for any reason, the Contractor shall so notify the Town in writing.
2. Where Contractor is prevented from completing any part of the Work within the Contract Period due to abnormal weather conditions the Contract Period will be extended in an amount calculated as stated in Paragraph 12.03 F.4. below if a Claim is made therefor in writing and provided to the Town within the time frame and in the manner prescribed and if the performance of the Work is not, was not, or would not have been delayed by any other cause for which the Contractor is not entitled to an extension of the Contract Period under the Contract Documents.
3. Contractor acknowledges and agrees that adjustments in the Contract Period will be permitted for a delay only to the extent such delay (i) is not caused, or could not have been anticipated, by Contractor; (ii) could not be limited or avoided by the Contractor's timely notice to the Town of the delay or reasonable likelihood that a delay will occur; and (iii) is of a duration not less than one day. Such an adjustment of time shall be Contractor's sole and exclusive remedy for the delays described in this Section. Any time extensions for changes in the work will depend upon the extent, if any, by which the changes cause delay in the completion of the various elements of this Contract. The change order granting the time extension may provide that the completion date will be extended only for those specific elements so delayed and that the remaining completion dates for all other portions of the work will not be altered and may further provide for an equitable readjustment of liquidated damages under the new completion schedule.
4. Actual adverse weather delay days must prevent work on critical activities outdoors for fifty percent (50%) or more of Contractor's scheduled workday in order to be counted. The number of actual adverse weather delay days shall include days impacted by actual adverse weather (even if adverse weather occurred in a previous month), be calculated chronologically from the first to the last day of each month, and be recorded as full days. Where Contractor is prevented from completing any part of the Work within the Contract Period due to abnormal weather conditions, the Contract Period will be extended in an amount equal to the time lost due to such delay if a Claim is made therefore as provided herein. Abnormal weather conditions occur only if the total number of actual adverse weather days exceeds the standard for that month as shown in the following table:

<u>Month</u>	<u>Number of Days</u>
January	7
February	7
March	8
April	7
May	8
June	7
July	8
August	8
September	6
October	6
November	6
December	6

5. Upon commencement of on-site activities and continuing throughout construction, Contractor shall record daily the occurrence of adverse weather and resultant impact to normally scheduled work and within 30 days of the last day of any month (hereinafter referred to as the "Reporting Month"), Contractor shall submit a written adverse weather report, including copies of Contractor's daily weather reports and applicable climatological data from the National Oceanic and Atmospheric Administration (NOAA) or similar data for the project location, unless the Town allows, in writing, an additional period of time for the submission of said report. Notwithstanding any other provisions, failure to submit the required written report within the time specified above shall be deemed to be and shall constitute a waiver by Contractor of any and all claims for delay due to adverse weather conditions occurring during said Reporting Month.
6. The Town shall not be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of Engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.
7. Contractor shall not be entitled to an adjustment in Contract Price or Contract Period for delays within the control of Contractor. Delays attributable to and within the control of a Subcontractor or Supplier shall be deemed to be delays within the control of Contractor."

9 Payments to Contractor

- 9.1 Add to end of Subparagraph 14.02(D)(1)(c) the following: ", including, but not limited to , the Town may offset any payment due to Contractor by any debt shown on the Town's accounts, even if a dispute exists as to the debt's validity or enforceability;"
- 9.2 Delete Subparagraph 14.02(C) and substitute the following revised Subparagraph 14.02(C) in its place:

“Thirty (30) days after presentation of the Application of Payment to Owner with Engineer’s recommendation, the amount recommended will (subject to the provisions of Subparagraph 14.02(D) and to Subparagraph 15.03(B) relating to ‘Non-appropriation of Funds’) become due, and when due will be paid by Owner to Contractor.”

10 Suspension of Work and Termination

10.1 Delete Paragraph 15.03 and substitute the following revised Paragraph 15.03 in its place:

A. Termination for Convenience

1. The Town may terminate this Contract or any work or delivery required hereunder from time-to-time either in whole or in part, whenever the Contract Administrator, with the concurrence of the Town Manager, determines that such termination in the best interest of the Town.
2. Termination may occur in whole or as to any discrete part of the Contract. A partial termination shall set forth the portions of the Contract which are terminated.
3. The effective date of the termination shall be three days after issuance of a Notice of Termination signed by the Contract Administrator and Town Manager and its mailing or delivery to the Contractor, or any later date specifically set forth in the Notice of Termination.

B. Termination for Non-Appropriation

1. If funds are not appropriated for purposes of this Contract for any succeeding fiscal year subsequent to the one in which this Contract is entered into, then the Town may terminate this Contract upon thirty (30) days written notice to the Contractor. The notice shall set forth the grounds for termination and its effective date.
2. If the Town terminates for non-appropriation, the Town shall be liable only for payments due through the effective date of termination.
3. Until the effective date of the termination, the Contractor shall continue to perform its duties under the Contract and is not excused from any portion of the Contract.

C. Claims Upon Termination

1. Upon receipt of a Notice of Termination, the Contractor shall:
 - a. Cease any further deliveries or work due under this Contract, on the date, and to the extent, which may be specified in the Notice;

- b. Place no further orders with any subcontractors except as may be necessary to perform any portion of the Contract not subject to the Notice (in the case of partial termination);
 - c. Terminate all subcontractors except to the extent necessary to complete work which was not subject to the Notice (in the case of partial termination);
 - d. Settle all outstanding liabilities and claims which may arise out of such termination, with the ratification of the Contract Administrator; and
 - e. Use its best efforts to mitigate any damages which may be sustained by the Contractor or any of its subcontractors as a consequence of termination under this clause.
2. After complying with the foregoing provisions, the Contractor shall submit a termination claim within thirty days unless an extension is granted by the Contract Administrator. This termination claim shall document all amounts due under this provision.
- a. Upon receipt of the Contractor's termination claim, the Town, with the approval of the Town Manager, shall pay from the Using Department's budget the reasonable costs of termination, including a reasonable amount for profit on services delivered or completed. In no event shall this amount be greater than the original contract price, reduced by any payments made prior to Notice of Termination, and further reduced by the price of the goods or services not delivered, or those goods or services not provided. The calculation of the amount to be paid the Contractor shall be documented and made a part of the Contract file.
 - b. If the parties cannot agree on the whole amount to be paid to the Contractor by reason of termination under this clause, the Town shall pay the Contractor from the Using Department's budget the amounts determined as follows, without duplicating any amount which may have already been paid under the preceding paragraph of this clause:
 - i. With respect to all Contract performance prior to the effective date of Notice of Termination, the total of:
 - Cost of the goods delivered or work performed; and
 - The cost of settling and paying any reasonable claims as provided above; and
 - A sum as profit on work performed determined by the Town Procurement Officer to be fair and reasonable.
 - ii. The total sum to be paid shall not exceed the Contract price, as reduced by the amount of payments otherwise made, and as further reduced by the Contract price of goods or services not terminated.

c. If the Contractor is not satisfied with any payments which the Contract Administrator determines to be due under this provision, the Contractor may appeal any claim accordance with the provisions of Paragraph 10.05 and Article 16, Dispute Resolution.

3. The Contractor shall include similar provisions for termination in any subcontractors and shall require subcontractors to make reasonable efforts to mitigate damages if the Contract is terminated. Failure to include such provisions shall bar the Contractor from any recovery from the Town whatsoever for loss or damage sustained by a subcontractor as a consequence of termination.”

10.2 In Subparagraph 15.04(A), the seven (7) days written notice to Owner and Engineer is changed to ten (10) business days written notice to Owner and Engineer.

11 Dispute Resolution

11.1 Add the following new Subparagraph 16.01(D):

“Before the Contractor may exercise any legal remedy it may have in relation to rights arising out of this Contract, it must comply fully and strictly with each of the applicable conditions below. Failure to comply fully and strictly with an applicable condition precedent bars the Contractor from exercising any legal remedies it may otherwise have in relation to this Contract until it complies with the condition precedent or the Town knowingly and intentionally waives the condition precedent.

1. Submission of Disputes: A Contractor must submit any dispute arising out of this Contract to the Town for adjustment. In doing so, it shall provide all relevant evidence that bears on the Town’s liability for the amount claimed or responsibility to grant any non-monetary relief requested.
2. Disputes by the Contractor with respect to this Contract shall be decided within fifteen (15) days from submission by the Town Manager’s designee, who shall reduce his/her decision to writing, and mail or otherwise furnish a copy thereof to the Contractor. This decision shall be final and binding unless within five (5) days from the date of such decision the Contractor mails or otherwise furnishes the Town Manager a written appeal addressed to the Town Council. The Town Council shall consider the appeal and render its written decision within forty (40) days. The decision of the Town Council shall be final and binding unless set aside by a court of competent jurisdiction as fraudulent, capricious, arbitrary, or so grossly erroneous as necessarily to imply bad faith, or as not supported by any evidence. Pending a final determination of a properly appealed decision of the Town Manager’s designee, the Contractor shall proceed diligently with the performance of the Contract in accordance with that decision.”

11.2 Add the following new Subparagraph 16.01(E):

“Any action brought under this Contract must be brought in the state courts for the County of Culpeper and may not be removed to the Federal Court system.”

11.3 Add the following new Subparagraph 16.01(F):

“Any action brought under this Contract, except an action for breach of warranty, shall be brought within the shorter of the statutory limitations period and the period of three years from the date of final payment without any tolling of this statutory limitations period for any reason whatsoever.”

11.4 Add the following new Subparagraph 16.01(G):

“In any action brought under this Contract, the parties expressly waive their right to trial by jury and agree to submit all questions of fact to the judge as trier of fact.”

12 Miscellaneous

12.1 Delete Paragraph 17.05 and substitute the following revised Paragraph 17.05 in its place:

“This Contract is governed by the law of the Commonwealth of Virginia, including but not limited to the Virginia Public Procurement Act (VPPA), Sections 2.2-4300 et seq. of the Code of Virginia (1950), as amended. This Contract is also governed by the applicable Town Policies.”

12.2 Add the following new Paragraph 17.07:

“In all contracts, regardless of contract amount, the Contractor will abide by the provisions of the Americans with Disabilities Act, and will require each subcontractor to do so. If this Contract is for a consideration in excess of Ten Thousand Dollars (\$10,000.00), then during the performance of this Contract, the Contractor agrees as follows:

- a. The Contractor will not discriminate against any employee or applicant for employment because of race, religion, color, sex, national origin, age, disability, or other basis prohibited by state law relating to discrimination in employment, except where there is a bona fide occupational qualification reasonably necessary to the normal operation of the Contractor. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this non-discrimination clause.
- b. The Contractor, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, will state that such Contractor is an equal opportunity employer.
- c. Notices, advertisements, and solicitations placed in accordance with Federal law, rule, or regulation shall be deemed sufficient for the purpose of meeting the requirements of this paragraph.

- d. The Contractor will include the provisions of this Contract paragraph in every subcontract or purchase order over \$10,000, so that the provisions will be binding upon each subcontractor or vendor.”

12.3 Add the following new Paragraph 17.08:

“The provisions contained in Chapter 43, Article 6, Sections 2.2-4367 through 2.2-4377 of the Virginia Public Procurement Act, as set forth in the 1950 Code of Virginia, as amended, apply to this contract. The provisions of Article 6 of Chapter 43 supplement, but do not supersede, other provisions of law including, but not limited to, the Virginia Conflict of Interest Act (§ 2.2-3100 et seq.), the Virginia Governmental Frauds Act (§ 18.2-498.1 et seq.) and Articles 2 and 3 of Chapter 10 of Title 18.2. The provisions apply notwithstanding the fact that the conduct described may not constitute a violation of the Virginia Conflict of Interests Act.”

12.4 Add the following new Paragraph 17.09:

“During the performance of this contract, the Contractor agrees to:

1. Provide a drug-free workplace for the Contractor’s employees.
2. 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 violations of such prohibition.
3. State in all solicitations or advertisement for employees placed by or on behalf of the contractor that the contractor maintains a drug-free workplace.
4. Include the provisions of the foregoing clauses in every subcontract or purchase order of over \$10,000.00, or so that the provisions will be binding upon each subcontractor or vendor.”

12.5 Add the following new Paragraph 17.10:

“The Town of Culpeper in procuring goods and services, or in making disbursements pursuant to this section, shall not discriminate against a faith-based organization on the basis of the organization’s religious character or impose conditions that restrict the religious character of the faith-based organization, except funds provided for expenditure pursuant to contracts with public bodies shall not be spent on religious worship, instruction, or proselytizing, or impair, diminish, or discourage the exercise of religious freedom by the recipients of such goods, services, or disbursement.”

12.6 Add the following new Paragraph 17.11:

“Foreign and Domestic Businesses Authorized to Transact Business in the Commonwealth:

1. A Contractor organized as a stock or nonstock corporation, limited liability company, business trust, or limited partnership or registered as a registered limited liability partnership shall be authorized to transact business in the Commonwealth as a domestic or foreign business entity if so required by Title 13.1 or Title 50 or as otherwise required by law.
2. A Contractor organized as a stock or nonstock corporation, limited liability company, business trust, or limited partnership or registered as a registered limited liability partnership shall not allow its existence to lapse or its certificate of authority or registration to transact business in the Commonwealth, if so required under Title 13.1 or Title 50, to be revoked or cancelled at any time during the term of this contract. The Town may void any contract with a business entity if the business entity fails to remain in compliance with this provision.”

12.7 Add the following new Paragraph 17.12:

- “A. The Contractor agrees that the Town or any duly authorized representative of the Town may have access to and the right to examine and copy any directly pertinent books, documents, papers, and records of the Contractor involving transactions related to this Contract. This right shall expire on the third anniversary of the issuance of final payment under this Contract.
- B. The Contractor further agrees to include in any subcontract for more than \$10,000 entered into as a result of this Contract, a provision to the effect that the subcontractor agrees that the Town or any duly authorized representative may have access to and the right to examine and copy any directly pertinent books, documents, papers, and records of such subcontractor involved in transactions related to such subcontract, or this Contract. The term subcontract as used herein shall exclude subcontracts or purchase orders for public utility services at rates established for uniform applicability to the general public. This right expires on the third anniversary of the issuance of final payment to the subcontractor.”

12.8 Add the following new Paragraph 17.13:

“The Contractor shall not be excused from performance under this Contract by failure to agree to a Change Order, and it is the express purpose of this provision to permit unilateral changes in the Contract by the Owner subject to the conditions and limitation herein. No claim for changes made by Change Order shall be considered if made after final payment in accordance with the Contract.”

12.9 Add the following new Paragraph 17.14:

“This Contract, including its incorporated documents, contains the whole agreement between the parties as to its subject, and no prior or contemporaneous

communications, representations, or agreements, written or verbal, may alter, add to, or contradict any provision in it. There are no promises, terms, conditions, or obligations related to the subject of this Contract other than those contained herein. All modifications and changes to the Contract shall be in writing and signed by the party to be charged, or its authorized representative.”

12.10 Add the following new Article 4.03B to the Agreement between the Owner and Contractor:

“Alternatively, if performance is so delayed, the Town may terminate this Contract in whole or in part under the Default clause in this Contract and in that event, the Contractor shall be liable for fixed, agreed and liquidated damages accruing until the time the Town may reasonably obtain performance of similar services. The liquidated damages shall be in addition to any increased costs occasioned the Town in completing the work.”

End of Section

Section 01600
Standard Contract Forms

The following Engineers Joint Contract Documents Committee (EJCDC) and American Institute of Architects (AIA) documents will be incorporated in this project manual. All forms shall be utilized in accordance with applicable EJCDC and AIA regulations and modified as needed for this particular Project:

Agreement

Completed EJCDC document C-520 (2013) “Suggested Form of Agreement Between Owner and Contractor for Construction Contract”, will be a part of this contract.

Performance Bond, and Labor and Material Payment Bond

Completed EJCDC C-610, (2013) and EJCDC C-615 (2013), will be a part of this contract.

Supplemental Attachment for Accord Certificate of Insurance

Completed AIA document G715, (1991), will be a part of this contract.

Application and Certificate for Payment and Continuation Sheet

Completed EJCDC C- 620, (2013), will be a part of this contract.

Affidavit of Payment of Debts and Claims, and Affidavit of Release of Liens

Completed AIA documents G706 and G706A, (1994), will be part of this contract.

Standard General Conditions of the Construction Contract

EJCDC document C-700 (2013) “Standard General Conditions of the Construction Contract”, modified as needed, will be a part of this contract.

EJCDC documents are available from the EJCDC online store at www.ejcdc.com.

AIA documents are available at www.AIA.org.

End of Section

Section 02050
Demolition

1 GENERAL

1.1 Description: This section specifies removal and offsite disposal of equipment and debris from incidental demolition work as shown on the plans. This section also applies to the removal and reinstallation of platforms as well as interior wall removal and replacement.

1.2 Definitions

1.2.1 Demolish: Remove and legally dispose of items except those indicated to be reinstalled, salvaged, or to remain the Owner's property. Terminate electrical wiring and conduit to power and control sources in accordance with the National Electric Code.

1.2.2 Salvage: Items indicated to be salvaged remain the Owner's property. Remove, clean and pack or crate items to protect against damage. Identify contents of containers and deliver to the Owner's designated storage area.

1.2.3 Remove and Reinstall Platforms: Remove items indicated; clean, service and otherwise prepare them for reuse; store and protect against damage. Reinstall items in locations indicated

1.2.4 Existing to Remain: Protect construction indicated to remain against damage and soiling during demolition. When permitted by WW Associates, Inc. items may be removed to a suitable, protected storage location during demolition and then cleaned and reinstalled in their original location.

1.3 Materials Ownership

1.3.1 Except for items or materials indicated to be reused, salvaged, or otherwise indicated to remain the Owner's property, demolished materials shall become the Contractor's property and shall be removed from the site and be disposed of by the Contractor.

1.4 Quality Assurance

1.4.1 Regulatory Requirements: Comply with governing Environmental Protection Agency (EPA) notification regulations before starting demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.

1.5 Project Conditions

1.5.1 The Owner assumes no responsibility for actual condition of structures to be demolished.

1.5.2 Storage or sale of removed items or materials on-site will not be permitted.

1.5.3 Asbestos: It is not expected that asbestos will be encountered in the course of this contract. If any materials suspected of containing asbestos are encountered, do not disturb the materials. Immediately notify WW Associates, Inc. and the Owner.

1.5.4 The following equipment items shall be salvaged as part of this project:

1.5.4.1 Items requested by the Owner.

1.6 Scheduling

1.6.1 Arrange demolition schedule so as not to interfere with the Owner's on-site operations.

2 PRODUCTS: Not Used

3 EXECUTION

3.1 General

3.1.1 Work shall be performed in such manner as not to endanger the safety of the workmen or the public or cause damage to nearby structures.

3.1.2 Provide all barriers and precautionary measures in accordance with the Owner's requirements and other authorities having jurisdiction.

3.1.3 Prior to the execution of the work, the Contractor, Owner, and Engineer shall jointly survey the condition of the adjoining and/or nearby structures. Photographs and records shall be made of any prior settlement or cracking of structures, pavements, and the like, that may become the subject of possible damage claims.

3.1.4 Provide masking to prevent demolition and construction material from damaging equipment or compromising water quality.

3.2 Disposal of Material

3.2.1 All debris resulting from the demolition and removal work shall be disposed of by the Contractor as part of the work of this contract. Material designated by the Engineer to be salvaged shall be stored on the construction site as directed. All other material shall be disposed of off site by the Contractor at his expense in accordance with all federal, state, and local regulations.

3.2.2 Burning of any debris resulting from demolition activities will not be permitted at the site.

3.3 Utility Services

- 3.3.1 Maintain existing utilities indicated to remain in service and protect them against damage during demolition operations.
 - 3.3.1.1 Do not interrupt existing utilities serving occupied or operating facilities, except when authorized in writing by authorities having jurisdiction. Provide temporary services during interruptions to existing utilities, as acceptable to governing authorities.
- 3.4 Explosives: Explosives shall not be used for demolition activities.
- 3.5 Pollution Controls
 - 3.5.1 Use water mist, temporary enclosures, and other suitable methods to limit the spread of dust and dirt. Comply with governing environmental protection regulations.
 - 3.5.1.1 Do not use water when it may create hazardous or objectionable conditions, such as ice, flooding, or pollution.
 - 3.5.2 Clean adjacent buildings and improvements of dust, dirt, and debris caused by demolition operations. Return adjacent areas to the condition existing before the start of demolition activities.
 - 3.5.3 Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas. Keep pavement and area adjacent to the site clean and free of mud, dirt, and debris at all times.
 - 3.5.4 Clean adjacent buildings and improvements of dust, dirt, and debris caused by demolition operations. Return adjacent areas to the condition existing before the start of demolition activities.
- 3.6 Building and Structure Demolition: Coordinate with the Owner prior to starting demolition activities at the existing water treatment plant. Demolish structures as indicated on the drawings. Use such methods required to complete work within limitations of governing regulations and as follows:
 - 3.6.1 Dispose of demolished items and materials promptly. On-site storage or sale of removed items will be prohibited.
 - 3.6.2 Where parts of existing structures shall remain in service, demolish the portions to be removed, repair damage, and leave the structure in proper condition for the intended use. Remove concrete and masonry to the lines designated by drilling, chipping, sawing, grinding, or other suitable methods. Leave the resulting surfaces reasonably true and even, with sharp straight corners that will result in neat joints with new construction and be satisfactory for the purpose intended. Where existing reinforcing rods are to extend into new construction, remove the concrete so that the reinforcing is

clean and undamaged. Cut off other reinforcing ½-inch below the surface and fill with epoxy resin binder flush with the surface.

3.6.2.1 Partial demolition of interior CMU wall includes removing as much of the wall as will be required for all indicated equipment to be removed and replaced. Determine whether extent of demolition will include window. If window will be removed, store carefully to allow for reinstallation when wall section is rebuilt. Wall section will be rebuilt with new CMU block and materials.

3.6.3 Promptly patch and repair holes and damaged surfaces caused to adjacent construction by demolition operations.

3.6.4 Return elements of construction and surfaces to remain to condition existing before the start of demolition operations.

3.7 Platform Removal and Reinstallation: Dismantle access platforms and walkways as indicated in such a manner as to permit their reinstallation when work is complete.

3.7.1 Verify measurements in field for work fabricated to fit job conditions.

3.7.2 Examine adjoining work on which miscellaneous metal work is dependent before starting work.

3.7.3 During reinstallation, provide anchorage devices and fasteners where necessary for securing miscellaneous metal items to in-place construction including threaded fasteners for concrete and masonry inserts, toggle bolts, through-bolts, lag bolts, and other connectors as required.

3.7.3.1 Furnish inserts and anchoring devices which must be set in concrete or built into masonry for installation of miscellaneous metal work. Provide setting drawings, templates, instructions and directions for installation of anchorage devices. Coordinate delivery with other work to avoid delay.

3.7.3.2 Replacement fasteners and anchors shall be hot-dipped galvanized.

3.7.3.3 All hardware shall be suitable for pedestrian access in accordance with Occupational Safety and Health Administration requirements.

3.7.3.4 No vibrations will be permitted after reinstallation of walkways and platforms.

3.7.4 Perform cutting, drilling and fitting required for installation of miscellaneous metal items. Set work accurately in location, alignment and elevation, plumb, level, true and free of rack, measured from established lines and levels.

- 3.7.5 Fit exposed connections accurately together to form tight hairline joints. Weld connections which are not to be left as exposed joints, but cannot be shop welded because of shipping size limitations. Grind joints smooth and touch-up shop paint coat. Do not weld, cut or abrade surfaces of exterior units which have been hot dip galvanized after fabrication, and are intended for bolted or screwed field connections.
- 3.7.6 Field Welding
 - 3.7.6.1 Comply with AWS code for procedures of manual shielded metalarc welding, appearance and quality of welds made, and methods used in correcting welding work.
- 3.7.7 Setting Bearing Plates
 - 3.7.7.1 Clean concrete and masonry bearing surfaces of bond-reducing materials, and roughen to improve bond to surfaces. Clean bottom surface of plates.
 - 3.7.7.2 Set bearing plates on wedges, shims, or leveling nuts. After bearing members have been positioned and plumped, tighten anchor rods. Do not remove wedges or shims but, if protruding, cut off flush with edge of bearing plate before packing with grout.
- 3.7.8 Installation of Manufactured Items
 - 3.7.8.1 Install manufactured items in accordance with manufacturer's written installation instructions.
- 3.8 Filling Below Grade Areas: Completely fill below grade areas and voids resulting from demolition of structures, buildings, retaining walls, and pavements with soil materials in accordance with Section 02200 – Earthwork. Fill material shall be completely free of debris and rubbish.
 - 3.8.1 Prior to placement of fill materials, ensure that areas to be filled are free of standing water, frost, frozen material, trash, and debris.
 - 3.8.2 After fill placement and compaction, grade surface to meet adjacent contours and to provide flow to surface drainage structures.
- 3.9 Pavement Removal: Saw cut and remove existing asphalt and concrete pavement for pipe and or foundation installation.
- 3.10 Damages: Promptly repair damages to adjacent utilities or equipment caused by demolition activities.
- 3.11 Cleanup

- 3.11.1 Promptly dispose of demolished materials. Do not allow demolished materials to accumulate on-site. If the Contractor fails to remove excess debris promptly, the Owner reserves the right to remove it at the Contractor's expense.
- 3.11.2 Remove promptly salvageable material that becomes property of the Contractor and is not to be reused in construction. Sale of material on the site will be prohibited.
- 3.11.3 Remove all tools, equipment, and materials from the demolition site, and all rubbish upon completion of the work.
- 3.11.4 Leave the site clean, neat, orderly, and in condition to begin new construction.

End of Section

Section 04100
Mortar and Grout

1 GENERAL

1.1 Related Documents:

1.1.1 The General Conditions of the Construction Contract and Division 1, General Requirements are a part of this Section.

1.2 Related Work in Other Sections:

1.2.1 Unit Masonry: Section 04200.

1.3 Submittals:

1.3.1 Product Data: Submit mix designs of mortar and grout types.

1.4 Handling and Storage:

1.4.1 Deliver all materials in usable condition.

1.4.2 Store off the ground in a dry location and covered with tarpaulins or polyethylene sheets to prevent wetting by capillary action, rain and snow.

2 PRODUCTS

2.1 Materials:

2.1.1 Portland Cement: ASTM C150 Type I, non-staining without air entrainment and of natural color or white to produce the required mortar color.

2.1.1.1 Use Type III when temperatures drop below 40°F or when high early strength is desired.

2.1.1.2 The use of prepackaged masonry cement is not permitted.

2.1.2 Hydrated Lime: ASTM C207, Type S.

2.1.3 Aggregate: ASTM C144 natural or manufactured sand.

2.1.3.1 For joints less than ¼-inch use aggregate graded with 100 percent passing a No. 16 sieve.

2.1.3.2 For all other joints grading shall comply with the following limits:

<u>Sieve Size</u>	<u>Percent Passing</u>
No. 4 (4.76 mm)	100
No. 8 (2.38 mm)	95 to 100

No. 16 (1.19 mm)	60 to 100
No. 30 (595 um)	35 to 70
No. 50 (297 um)	15 to 35
No. 100 (149 um)	2 to 15
No. 200 (74 um)	0 to 2

2.1.4 Water: Clean, fresh, potable, and free of deleterious amounts of acids, alkalis, salts or organic materials.

2.1.5 The use of anti-freeze admixtures is prohibited.

2.2 Mortar Uses and Color:

2.2.1 Mortar - ASTM C270:

2.2.1.1 Exposed masonry above grade and interior walls and partitions below grade: Type N.

2.2.1.2 Walls below grade and in contact with earth: Type M.

2.2.1.3 Colored mortar: Mortar exposed to view in the finished state shall be the color produced by the colored mortar, for standard color specified.

2.2.1.4 All other mortar may be natural color.

2.2.2 Grout: ASTM C476.

2.2.2.1 For reinforced masonry. Minimum strength 2000 PSI at 28 days.

2.2.2.2 For grout where indicated or required for stiffening, sound deadening, or filling of hidden voids. Use fine aggregate only in spaces less than 4 inches in one direction.

2.3 Mortar Types and Proportions:

2.3.1 Type M: Not more than $\frac{1}{4}$ part lime per part of Portland cement.

2.3.2 Type S: Not more than $\frac{1}{2}$ part lime per part of Portland cement.

2.3.3 Type N: Not more than 1 part lime per part of Portland cement.

2.3.4 For all mortar types, aggregate (when measured in a damp loose condition) shall be not less than $2 \frac{1}{4}$ or more than 3 times the sum of the volumes of the cement and lime used.

2.4 Accessories:

- 2.4.1 Mortar Net: High density polyethylene (nylon) material designed for placement into masonry cavity walls keep weep holes open and flashing free of mortar droppings by catching and permanently suspending mortar droppings above the level of the top of the weep holes. The material shall be 90% open weave allowing moisture/water continuous routes through the material to flashing and weep holes. The material shall have a continuous bottom strip of 3" or taller and be installed continuous at locations indicated above windows, doors, other masonry openings, and bottom of masonry wall at flashings.
 - 2.4.1.1 Mortar net material shall not rot, support mold or fungus, nor react with common building materials, including masonry materials, mortar, or cement.
 - 2.4.1.2 Mortar net shall be minimum 10" H x thickness as required by the cavity for full width coverage, and have 3" H continuous "base" below a pyramid, or dovetail shaped configuration.
 - 2.4.1.3 Store materials received at jobsite in strict accordance with manufacturer's recommendations.
 - 2.4.1.4 Installation details shall be submitted as part of the shop drawing process. Field installation shall be in strict accordance with manufacturer's written instructions and details.

3 EXECUTION

3.1 General Requirements:

- 3.1.1 Mix cementitious materials and aggregate in a mechanical batch mixer for a minimum of 7 minutes with the maximum amounts of water to produce a workable consistency.
- 3.1.2 Mortars that have stiffened because of evaporation of water may be tempered by adding water as frequently as needed to restore the required consistency. Mortars shall be used and placed in final position within 2 hours after mixing. Retempering of mortar by remixing with new batches will not be permitted.

3.2 Cold Weather Requirements:

- 3.2.1 Air Temperature 40°F to 32°F: sand or mixing water shall be heated to produce mortar temperatures between 40°F and 120°F.
- 3.2.2 Air Temperature 32°F to 25°F: Sand and mixing water shall be heated to product mortar temperatures between 40°F and 120°F. Maintain temperatures of mortar on boards above freezing. See Section 04200 – Unit Masonry.
- 3.2.3 Air Temperature 25°F to 20°F: Sand and mixing water shall be heated to produce mortar temperatures between 40°F and 120°F. Maintain mortar temperatures on boards above freezing. Salamanders or other sources of heat

shall be used on both sides of walls under construction. Windbreaks shall be employed when wind is in excess of 15 mph. See Section 04200 – Unit Masonry.

3.2.4 Air Temperature 20°F and Below: Sand and mixing water shall be heated to provide mortar temperatures between 40° F and 120°F. Enclosure and auxiliary heat shall be provided to maintain air temperature above 32°F. Temperature of units when laid shall be not less than 20°F. See Section 04200 – Unit Masonry.

3.2.5 The use of anti-freezing agents is prohibited.

3.3 For Hot Weather Requirements See Masonry Council Recommendations.

End of Section

Section 04200
Unit Masonry

1 GENERAL

1.1 Related Documents:

1.1.1 The General Conditions of the Contract and Division 1, General Requirements are a part of this section.

1.2 Related Work in Other Sections:

1.2.1 Mortar: Section 04100.

1.3 Quality Assurance:

1.3.1 Fire Performance Characteristics: Where fire-resistance ratings are indicated for unit masonry work, provide materials and construction which are identical to those of assemblies whose fire endurance has been determined by testing in compliance with ASTM E119 by a recognized testing and inspecting organization or by another means, as acceptable to authority having jurisdiction.

1.4 Coordination:

1.4.1 Cooperate with other trades in setting built-in items in masonry walls.

1.5 Submittals:

1.5.1 Product Data: Submit manufacturer's product data for each type of masonry unit, accessory, and other manufactured products.

1.5.2 Certificate of Compliance: Submit for each type of masonry and reinforcement.

1.5.3 Provide temporary shoring plan for temporary opening in CMU wall. Shoring plan shall be certified by a Commonwealth of Virginia Professional Engineer.

1.6 Product Delivery, storage and Handling:

1.6.1 Deliver and stack unit masonry on wood pallet platforms. Cover with tarpaulins which are not vapor retarders and store in manner to provide protection from contact with soil. Exercise care in handling masonry units to avoid chipping, breakage.

2 PRODUCTS

2.1 Concrete Masonry Units (CMU):

2.1.1 CMU: Provide CMU fabricated from lightweight concrete aggregate, complying with ASTM C331, free of combustible matter and organic impurities that would cause rusting, staining, pop-out to walls.

2.1.2 CMU Types:

2.1.2.1 75 percent solid and solid load-bearing units: ASTM C145 Grade N-1.

2.1.2.2 Hollow load bearing units: ASTM C90 Grade N-1.

2.1.2.3 Hollow non-load bearing units: ASTM C129 Type I.

2.1.2.4 UL Classification C-3: Units for fire resistant partitions shall have fire resistance ratings as indicated and in compliance with the requirements established by the American Insurance Association and other governing authorities. Units shall be the rated product of a manufacturer listed in the current building material list published by the Underwriters' Laboratories, Inc. in lieu of the above, units may be furnished on the basis of examination and certified report by a recognized testing laboratory indicating that the units are equivalent in fire resistance to those furnished by UL listed producers. Examination shall cover width, height and length of block, shell web thickness, maximum equivalent thickness, compressive strength and type of aggregate.

2.1.2.5 Provide sash type units at all control joints.

2.1.3 Curing Method:

2.1.3.1 Cure units in a moisture-controlled atmosphere or in an autoclave at normal pressure and temperature to comply with ASTM C90, Type I.

2.1.3.1.1 Limit moisture absorption during delivery and until time of installation to the maximum percentage specified for Type I units for the average annual relative humidity as reported by the U.S. Weather Bureau station nearest the project site.

2.1.4 Acceptable Manufacturers:

2.1.4.1 Solite; PO Box 27211, Richmond, VA 23261 (T. 804-329-8135).

2.1.4.2 Adams Products Company; PO Box 2655, Durham, NC 27705 (T. 800-922-6330).

2.1.4.3 Smithtown Concrete Products Corporation; PO Box 612, Middle Country Road and Arthur Drive, Smithtown, NY 11787 (T. 631-265-1815).

2.1.4.4 Approved equal.

3 EXECUTION

3.1 General Requirements:

- 3.1.1 Do not erect masonry when air temperature is below or expected to go below 40°F except when permitted by Project Engineer. When masonry work is authorized during temperatures below 40°F, make provisions for heating, drying materials. Protect completed work in accordance with BIA Technical Notes, Volume 1, No. 1. Do not build upon frozen work. Do not lay masonry units having water film or frost on its surface.
- 3.1.2 Build in required items as erection of masonry progresses.
- 3.1.3 Erect masonry within the following construction tolerances:
 - 3.1.3.1 Variation from plumb: For lines and surfaces of columns, walls and arisises do not exceed ¼ in. in 10 ft., or 3/8 in. in a story height or 20 ft. maximum, nor ½ in. in 40 ft. or more.
 - 3.1.3.2 Variation from level: For lines of exposed sills, lintels, sills, parapets, horizontal grooves, and other conspicuous lines, do not exceed ¼ in. in any bay or 20 ft. maximum, nor ¾ in. in 40 ft. or more.
 - 3.1.3.3 Variation of linear building line: For position indicated in plan and related portion of columns, walls and partitions, do not exceed ½ in. in any bay or 20 ft. maximum, nor ¾ in. in 40 ft. or more.
 - 3.1.3.4 Variation in cross-sectional dimensions: For columns and thickness of walls, from dimensions indicated, do not exceed minus ¼ in. nor plus ½ in.
- 3.1.4 In all masonry walls install mortar netting at the level of the weep holes and flashing.

3.2 Masonry Protections:

- 3.2.1 Protect masonry materials during storage and construction from wetting by rain, snow or ground water and from soilage or intermixture with earth or other materials.
- 3.2.2 In exposed work, do not use masonry units with chips, cracks, voids, discolorations or other defects which might be visible or cause staining in the finished work.
- 3.2.3 Protect partially completed masonry against weather, when work is not in progress, by covering top of walls with strong, waterproof, non-staining membrane. Extend membrane at least 2 feet down both sides of walls and hold securely in place.
- 3.2.4 Protect masonry surfaces not being worked on during construction work. At such time as rain or snow is imminent or work is discontinued, protect work

with waterproof membrane, well secured. When work is resumed, clean top surfaces of loose mortar and wet brick as required. Remove all masonry determined to be damaged by freezing conditions.

3.3 Preparation:

3.3.1 Wetting of Masonry Units.

3.3.1.1 Lay concrete masonry units dry. Do not wet concrete masonry units.

3.4 General Installation Requirements:

3.4.1 Thickness: Build walls, floors and other masonry construction to the full thickness indicated. Build single-wythe walls (if any) to the actual thickness of the masonry units, using units of nominal thickness shown or specified.

3.4.2 Build chases and recesses as shown or required for the work of other trades. Provide not less than 8 inches of masonry between chase or recess and jamb of openings, and between adjacent chases and recesses.

3.4.3 Leave openings for equipment to be installed before completion of masonry work. After installation of equipment, complete masonry work to match work immediately adjacent to the opening.

3.4.4 Cut masonry units using motor-driven saws to provide clean, sharp, unchipped edges. Cut units as required to provide pattern shown and to get adjoining work neatly. Use full-size units without cutting wherever possible.

3.5 CMU Types:

3.5.1 Hollow non-load bearing units for interior non-load bearing walls and furring.

3.6 Bond and Coursing:

3.6.1 CMU:

3.6.1.1 Erect CMU in running bond.

3.6.1.2 Vertical coursing for CMU shall be one course in 8 in. Horizontal coursing shall be as required to produce joints 3/8 in. wide.

3.6.1.3 Lay out horizontal coursing so that no exposed CMU is less than 4 in. (nominal) in length.

3.7 Laying Masonry Walls: (General)

3.7.1 Mortar types shall be as specified in Section 04100 – Mortar.

3.7.2 Layout walls in advance for accurate spacing of surface bond patterns with uniform joint widths and to properly locate openings, movement-type joints,

returns and offsets. Avoid the use of less than half-size units at corners, jambs and wherever possible at other locations.

- 3.7.3 Lay-up walls plumb and true to comply with specified tolerances, with courses level, accurately spaced, and coordinated with other work.
- 3.7.4 Remove masonry units disturbed after laying; clean and reset in fresh mortar. Do not pound corners at jambs to fit stretcher units which have been set in position. If adjustments are required, remove units, clean off mortar and reset in fresh mortar.

3.8 CMU Installation:

- 3.8.1 Erect CMU walls, partitions in location indicated. Bed each course solidly in specified mortar with vertical joints breaking halfway over course below. Butter vertical joints entire height of units. Bond each course at corners, intersections. Either bond into or anchor to adjacent construction with reinforcing.
- 3.8.2 Lay hollow concrete masonry units with full mortar coverage on horizontal and vertical face shells. Bed webs in mortar in starting course on footing and foundations walls and in all courses of piers, columns and pilasters, and where adjacent to cells or cavities to be reinforced to filled with grout.
- 3.8.3 Extend indicated interior CMU walls and partitions up solidly against underside of structure above. Pack all voids solidly with mortar.
- 3.8.4 Cut joints flush for masonry walls which will be concealed or covered by other materials. Tool exposed joints slightly concave.

3.9 Additional Masonry Requirements:

3.9.1 Collar Joints:

3.9.1.1 Fill the vertical longitudinal joint between wythes solidly with mortar by parging the in place wythe and shoving units into the parging, for the following masonry work:

3.9.1.1.1 Exterior walls, except cavity walls.

3.9.1.1.2 Load-bearing interior walls and partitions where metal ties or horizontal reinforcing are specified for structural bonding.

3.9.2 Stopping and Resuming Work:

3.9.2.1 Rack back 1/2-CMU length in each course; do not tooth. Clean exposed surfaces of set masonry, wet units lightly (if required) and remove loose masonry units and mortar prior to laying fresh masonry.

3.9.3 Built-In Work:

3.9.3.1 As the work progresses, build-in items specified under this and other Sections of these Specifications. Fill in solidly with masonry around built-in items.

3.9.3.1.1 Fill space between hollow metal frames and masonry solidly with mortar.

3.9.3.1.2 Where built-in items are to be embedded in cores of hollow masonry units, place a layer of metal lath in the joint below and red mortar or grout into core.

3.9.4 Non-Bearing Interior Partitions: Build full height of story to underside of structure above, unless otherwise shown.

3.9.4.1 Wedge non-bearing partitions against structure above with small pieces of tile, slate or metal and fill joint with mortar. Delay wedging and grouting until dead load deflection of structure above approaches final position.

3.9.5 Lintels:

3.9.5.1 Provide masonry lintels where shown and wherever openings of more than 12 inches are shown without structural steel or other supporting lintels. Provide precast or formed-in-place masonry lintels. Thoroughly cure precast lintels before handling and installation. Temporarily support formed-in-place lintels.

3.9.5.2 Unless otherwise shown, provide one horizontal reinforcing bar-top and bottom for each 4 inches or less of wall thickness, of size-number not less than the number of feet of opening width.

3.9.5.3 For hollow masonry unit walls, use specially formed U-shaped lintel units with reinforcing bars placed as shown, filled with Type M mortar or concrete grout.

3.9.5.4 Provide 8 inch min. bearing each end.

3.10 Cleaning:

3.10.1 Progress work in as clean a manner as possible - remove excess materials, mortar droppings daily. Remove mortar droppings on connecting or adjoining work before final set. Keep edge of scaffolding boards 2 in. min. away from face of wall.

3.10.2 Remove and replace masonry units which are loose, chipped, broken, stained, or otherwise damaged or if units do not match adjoining units as intended. Provide new units to match adjoining units and install in fresh mortar or grout,

pointed to eliminate evidence of replacement.

- 3.10.3 Pointing: During the tooling of joints, enlarge any voids or holes, except weep holes, and completely fill with mortar.
- 3.10.4 Point-up all joints at corners, openings and adjacent work to provide a neat, uniform appearance, properly prepared for application of caulking or sealant compounds.
- 3.10.5 Final Cleaning: After mortar is thoroughly set and cured, clean sample wall area of approximately 20 sq. ft. as follows. Obtain Project Engineer's acceptance of sample cleaning before proceeding to clean rest of masonry work.
- 3.10.6 Dry clean to remove large particles of mortar using wood paddles and scrappers. Use chisel or wire brush if required.
- 3.10.7 Presoak wall by saturating with water and flush off loose mortar and dirt.
- 3.10.8 Scrub down wall with stiff fiber brush and a detergent as specified.
- 3.10.9 Rinse walls, using clean, pressurized water, to neutralize cleaning solution and remove loose material.
- 3.10.10 Acid cleaning of masonry will not be permitted.

End of Section

Section 09900
Painting

1 GENERAL

1.1. Related Documents

1.1.1. The General Conditions of the Construction Contract and Division 1, General Requirements are a part of this section.

1.2. Description of Work

1.2.1. The extent of painting work is as indicated on the drawings and schedules, and includes painting the portion of the interior CMU wall that must be removed and replaced during the course of work.

1.2.2. Paint color will be selected to match adjacent similar materials or areas. Colors will be approved by the Owner Representative from standard colors available for the materials systems specified. Proprietary names used to designate colors or materials are not intended to imply that products of the manufacturers are required to the exclusion of equivalent products of other manufacturers.

1.3. Product Handling

1.3.1. Deliver all materials to the job site in original, new and unopened packages and containers bearing manufacturer's name and label.

1.3.2. Store materials in location approved by the Owner Representative.

1.3.3. Provide paint manufacturers printed label on each container with the following information:

1.3.3.1. Name or title of material.

1.3.3.2. CSI Spec. number, if applicable.

1.3.3.3. Manufacturer's stock number.

1.3.3.4. Manufacturer's name.

1.3.3.5. Analysis of major pigment and vehicle constituents.

1.3.3.6. Thinning instructions.

1.3.3.7. Application instructions.

1.3.3.8. Color name and number.

1.3.3.9. Manufacturers recommended wet and dry film thickness in mils.

1.4. Job Conditions

- 1.4.1. Do not apply paint when the temperature of surfaces to be painted and the surrounding air temperatures are below 50 degrees F. or above 90 degrees F., unless otherwise permitted by the paint manufacturer's printed instructions.
- 1.4.2. Do not apply paint in snow, rain, fog or mist; or when the relative humidity exceeds 85 percent; or to damp or wet surfaces. Painting may be continued during inclement weather only if the areas and surfaces to be painted are enclosed and heated within the temperature limits specified by the paint manufacturer during application and drying periods.

1.5. Paint Coordination

- 1.5.1. Provide finish coats which are compatible with prime paints used. Review other Sections of the Specifications in which prime coats are specified to ensure compatibility of total coatings system. Upon request, furnish information on characteristics of specified finish materials, to ensure compatible prime coats are used. Provide barrier coats over incompatible primers or remove and reprime as required.

2 PRODUCTS

2.1. Materials

- 2.1.1. Provide the best quality grade of the scheduled types of coatings regularly manufactured by the acceptable paint manufacturers. Materials not displaying the manufacturer's identification as a standard, best grade product will not be acceptable.
- 2.1.2. Provide undercoat paint produced by the same manufacturer as the finish coats. Use only thinners approved by the paint manufacturer, and use only within recommended limits.
- 2.1.3. Provide paints of durable and washable quality. Use paint materials which will withstand normal washing as required to remove pencil marks, ink, ordinary soil, without showing discoloration, loss of gloss, staining, or other damage.
- 2.1.4. Products produced by the following manufacturers are acceptable alternates.
 - 2.1.4.1. Pittsburgh Paints.
 - 2.1.4.2. Carboline Company.
 - 2.1.4.3. Sherwin-Williams Co.

2.1.4.4. Tnemec Company, Inc.

2.1.4.5. Porter Paints

2.1.4.6. Approved equal.

3 EXECUTION

3.1. Inspection

3.1.1. Examine the areas and conditions under which painting work is to be performed. Notify the Contractor in writing of conditions detrimental to the proper and timely completion of the work. Do not proceed with the work until unsatisfactory conditions have been corrected.

3.1.2. Starting of painting work will be construed as acceptance of the surfaces within any particular area.

3.1.3. Do not paint over dirt, rust, scale, grease, moisture, scuffed surfaces, or conditions otherwise detrimental to the formation of a durable paint film.

3.2. Surface Preparation

3.2.1. General

3.2.1.1. Perform all preparation and cleaning procedures in strict accordance with the manufacturer's instructions and as herein specified, for each particular substrate condition.

3.2.1.2. Remove all hardware, hardware accessories, machined surfaces, plates, lighting fixtures, and similar items in place and not to be finish painted, or provide surface-applied protection prior to surface preparation and painting operations. Remove, if necessary, for the complete painting of the items and adjacent surfaces. Following completion of painting of each space or area, reinstall the removed items.

3.2.1.3. Clean surfaces to be painted before applying paint or surface treatments. Remove oil and grease prior to mechanical cleaning. Program the cleaning and painting so that dust and other contaminants from the cleaning process will not fall in wet, newly painted surfaces.

3.3. Materials Preparation

3.3.1. Mix and prepare painting materials in accordance with manufacturer's directions.

3.3.2. Store materials not in actual use in tightly covered containers. Maintain

containers used in storage, mixing and application of paint in a clean condition, free of foreign materials and residue.

- 3.3.3. Stir materials before application to produce a mixture of uniform density, and stir as required during the application of the materials. Do not stir surface film into the material. Remove the film and if necessary, strain the material before using.

3.4. Application

3.4.1. General

- 3.4.1.1. Apply paint by brush, roller or spray in accordance with the manufacturer's directions. Use brushes best suited for the type of material being applied. Use rollers of carpet, velvet back, or high pile sheep's wool as recommended by the paint manufacturer for material and texture required. Spray paint uniformly with suitable equipment.
- 3.4.1.2. Provide a non-slip skid resistant surface on all floors.
- 3.4.1.3. The number of coats and paint film thickness required is the same regardless of the application method. Do not apply succeeding coats until the previous coat has completely dried. Sand between coat applications with fine sandpaper, or rub surfaces with pumice stone where required to produce an even, smooth surface in accordance with the coating manufacturer's directions.
- 3.4.1.4. Apply additional coats when undercoats, stains, or other conditions show through the final coat of paint, until the paint film is of uniform finish, color and appearance.
- 3.4.1.5. "Exposed surfaces" shall mean areas visible when permanent or built-in fixtures, convector covers, grilles, and other items are in place in areas scheduled to be painted.
- 3.4.1.6. Paint surfaces behind movable equipment and furniture the same as similar exposed surfaces. Paint surfaces behind permanently-fixed equipment or furniture with prime coat only.
- 3.4.1.7. Paint the back sides of access panels, removable, or hinged covers to match the exposed surfaces.
- 3.4.1.8. Finish doors on tops, bottoms, and side edges the same as the faces.
- 3.4.1.9. Sand lightly between each succeeding enamel or varnish coat.
- 3.4.1.10. Omit the first coat (primer) on metal surfaces which have been shop-primed and touch-up painted.

3.4.2. Completed Work

- 3.4.2.1. Match approved samples for color, texture and coverage. Remove, refinish, or repaint work not in compliance with specified requirements.

3.4.3. Protection

- 3.4.3.1. Protect work of other trades, whether to be painted or not, against damage by the painting and finishing work. Leave all such work undamaged. Correct any damaged by cleaning, repairing or replacing, and repainting, as acceptable to the Project Engineer.
- 3.4.3.2. Provide "Wet Paint" signs as required to protect newly painted finishes. Remove temporary protective wrappings provided by others for protection of their work after completion of painting operations.

3.4.4. Clean-up

- 3.4.4.1. During the progress of the work, remove from the site all discarded paint materials, rubbish, cans and rags at the end of each work day.
- 3.4.4.2. Upon completion of painting work, clean window glass and other paint-spattered surfaces. Remove spattered paint by proper methods of washing and scraping, using care not to scratch or otherwise damage finished surfaces.
- 3.4.4.3. At the completion of work of other trades, touch-up and restore all damaged or defaced painted surfaces.

3.5. Painting Schedule – Interior Surfaces

3.5.1. Masonry and Concrete Walls

- 3.5.1.1. First Coat Apply one full coat Tnemec Series 130 EnviroFill at a rate of 75-85 square feet per gallon.
- 3.5.1.2. Second Coat: Apply one full coat Tnemec Series 113 H.B. Tneme-Tufcoat at a dry film thickness of 4.0 to 6.0 mils.
- 3.5.1.3. Third Coat: Apply one full coat Tnemec Series 113 H.B. Tneme-Tufcoat at a dry film thickness of 4.0 to 6.0 mils.

End of Section

APPENDIX A

SUEZ PROPOSAL FOR OWNER FURNISHED EQUIPMENT

Greenleaf® Filter



RICHMOND SERVICES PROPOSAL

PROPOSAL NUMBER: 384763.1

DATE: May 24, 2021

SUBMITTED BY REGIONAL OFFICE:

SUEZ WTS SERVICES USA, INC.

4880 Cox Road, Suite 101

Glen Allen, VA 23030

Tel: 804-756-7670

Email: robert.lake@suez.com

Corporate Office

SUEZ WTS SERVICES USA, INC.

4545 Patent Road

Norfolk, VA 23502-5604



treatment solutions | North America

May 24, 2021

Attn: Culpepper WTP
Culpepper, VA

Subject: Greenleaf® Filter Proposal
Greenleaf Rehabilitation
SUEZ WTS SERVICES USA, INC. Proposal 384763.1


To Whom It May Concern:

Suez is pleased to submit our Greenleaf® Filter proposal for miscellaneous replacement parts noted herein. The existing unit was provided by SUEZ (INFILCO) in 1993 under our contract 93-028.

We have endeavored to provide complete information here, but if you have any questions or require any additional information please do not hesitate to contact me at 804.756.7670 at your convenience. We look forward to further discussions with you concerning this project.

Purchase orders are to be addressed to our corporate address.

Sincerely,



Robert Lake
Technical Direction and Business Development
SUEZ WTS SERVICES USA, INC.
Tel: 1-804-756-7670

Proposal and Contract

To: City of Culpepper WTP
Culpepper, VA

Proposal No: 384763.1

Date: May 24, 2021

For: WTP
Greenleaf Filter Rehabilitation

(hereinafter referred to as "Purchaser")

SUEZ WTS SERVICES, USA, INC. (SUEZ) offers to furnish the following described materials and equipment ("Products") and/or services at the prices ("Purchase Price") stated herein and in accordance with the Conditions of Sale and other provisions contained or referenced herein. This Proposal shall remain in effect for 30 days from the date hereof. After such date, pricing is subject to the Producer Price Index, calculated from the original proposal/bid date. The Purchase Price is based upon only the Conditions of Sale and other provisions specifically contained or referenced herein. Purchaser's acceptance of this Purchase Price, whether by issuance of a purchase order or otherwise, or acceptance of delivery of the Products and/or services furnished hereunder, shall be considered acceptance by the Purchaser of all the Conditions of Sale and other provisions contained or referenced herein, notwithstanding any statement in Purchaser's acceptance or order to the contrary. SUEZ hereby objects to and rejects any proposal by Purchaser to modify, amend, limit, add to or delete any of the Conditions of Sale or other provisions contained or referenced herein unless expressly accepted in writing by SUEZ.

This Proposal and any resulting contract shall be referred to hereinafter as "this Contract".

One (1) B4 Greenleaf® Filter Control to be rehabilitated in existing structure with miscellaneous parts, provided as described herein.

SUEZ Sales Representative

Mr. Jon Casarotti
Sherwood Logan & Associates, Inc.
9710 Farrar Court, Suite O
North Chesterfield, VA 23236
Cell: 804-357-2292
Email: jcasarotti@sherwoodlogan.com

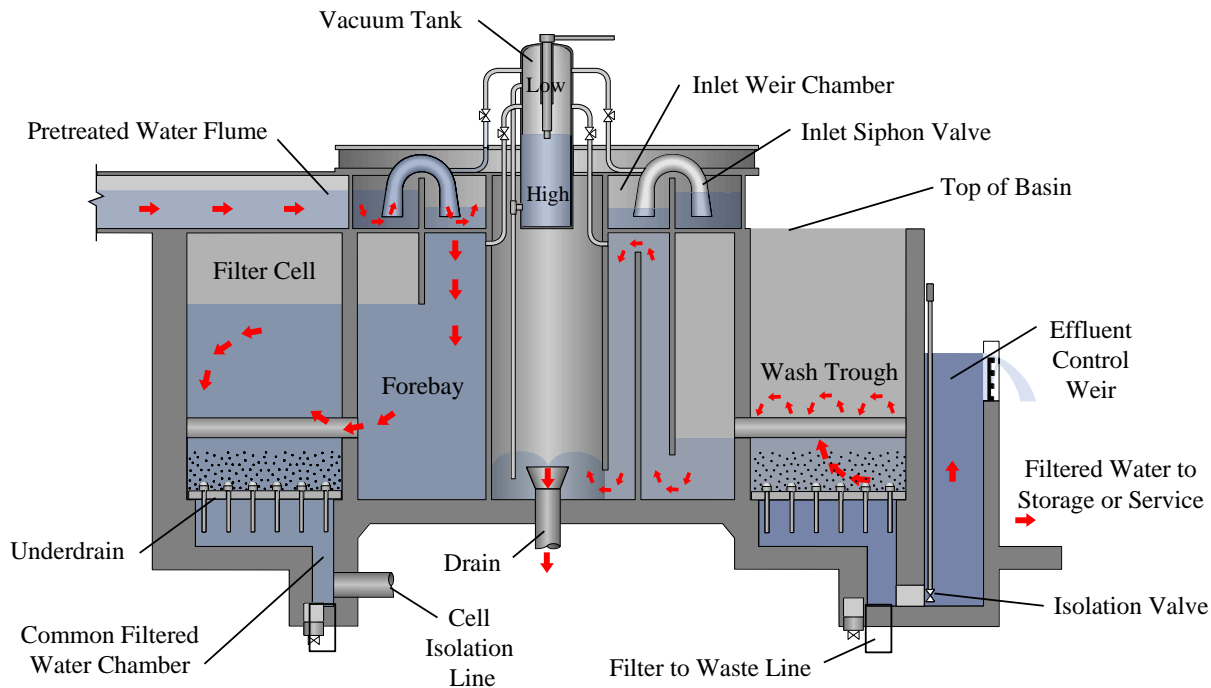
SUEZ Sales

Greg Mahan
Suez WTS SERVICES USA, INC.
4880 Cox Road, Suite 101
Glen Allen, VA 23030
Tel: 804-219-3996
Email: greg.mahan@suez.com

GREENLEAF® FILTER PROCESS DESCRIPTION

Flow is equally and automatically divided among the filters in operation. Rectangular weirs, with free fall at each filter cell, equally divided the inflow. When one filter cell is being backwashed, its inlet siphon valve is vented, and the total flow is equally and simultaneously divided among the remaining filter cells.

Simplicity of operation. All functions are controlled in a centrally located control center. The operator can easily select and control any individual filter cell from the central control location and all controls are visible.



Backwash water is provided by water from the filtering cells. Filters are designed to provide the specified capacity. A filter cell is backwashed with the filtered effluent from the remaining operational filter cells without depleting the clearwell capacity. This eliminates the need for pumping of backwash water from the contact tank.

Siphon valves contribute to efficient operation. Siphon valves control the filtering and backwashing cycles and are extremely simple in operation. These valves are connected to a vacuum system by individual actuating valves, and by their operation they initiate and stop the flow of water during both the filtering and backwashing cycles.

Impossible to shock or surge the filter. With the Greenleaf® Filter Control provides gradual increase or decrease in flow due to increase and decreasing head concept. Also, the backwash flow will not fluctuate because the flow is provided by gravity source (effluent chamber).

GREENLEAF® FILTER DESIGN BRIEF

UNIT CRITERIA

Model Type.....B4
Number of Units 1
Original Unit Supply..... IDI Contract No. 93-028
Total Max. Design Flow 4 MGD

*Estimates are based on previously executed projects or preliminary data and are provided as a courtesy and are for estimating purposes only. Actual quantities may vary. SUEZ is not responsible for any additional materials or labor associated with additional field welding or painting requirements which may or may not exceed these estimates.

SUEZ SCOPE OF SUPPLY

SUEZ proposes to furnish the following components for the Greenleaf Filter.

1. ANNULAR FLUME

- A. One (1) annular flume designed to receive the flow of inlet water and discharge it equally through the inlet siphons to each filter cell. Construction of the annular flume shall be 3/16" thick 304L stainless steel. Flume shall be fabricated in 5 sections to be brought into building through an existing double door having the inside dimensions of 4'11" wide by 6'7" high. The installation contractor shall field weld the sections together to provide a watertight assembly. Overall flume size is approximately 16' long by 13'8" wide by 19" deep. Two angles at each siphon location are provided as part of the annular flume for the inlet siphons to mount.

2. SIPHONS

- A. Four (4) inlet siphons designed to receive the flow of inlet water and discharge it equally to each filter cell. Construction of the inlet siphons shall be 3/16" thick 304L stainless steel. The siphons shall be shipped loose for field assembly. Each inlet siphon is approximately 3' by 2'6" by 2'6" tall. (Piping from the vacuum tank to the inlet siphons is not included.)

3. REPLACEMENT VACUUM TANK AND LIQUID LEVEL GAUGE

- A. One (1) 304 Stainless steel vacuum tank. (Piping from vacuum tank to backwash siphons; piping from vacuum tank to vacuum pumps, and piping from the vacuum tank to the center core is not included.) Existing vacuum tank level controller is to be reused. The vacuum tank and support legs are approximately 5'6" by 2'6" and 7' tall.
- B. One (1) Liquid level sight gauge, bronze with 36" centers.

4. REPLACEMENT VACUUM PUMPS

- A. Two (2) liquid ring vacuum pumps with 3 HP motor, complete on base, each with inlet isolation valve, inlet check valve, seal line isolation valve, seal line strainer, and solenoid valve. Each vacuum pump skid is approximately 48" by 10" by 27" high.

SCOPE BY OTHERS

1. Demolition and Installation of any kind, unloading & placement of equipment from delivering carrier
2. Field service for construction inspection, start-up, performance testing unless specifically mentioned in proposal
3. Temporally removal of the existing platform for improved access (allowing for proper demolition and installation).
4. All required bypass pumping, flow metering and protection of operating filter bays during the time of the work
5. Required sanitation of items after installation and any required sanitation of filters themselves.
6. Any required concrete repair or regrouting.
7. All surface preparation, prime or finish painting, and field welding
8. All embedded wall fittings and pipe flanges unless specified
9. Spare Parts, unless specifically mentioned in proposal.
10. All anchor bolts and mounting hardware not specified herein
11. All piping & piping supports not specified herein
12. Lubricants, except where noted
13. Calculations/PE Stamps
14. Seismic, Wind or vibration analysis
15. Materials, engineering, field modifications and/or field labor for testing and/or adjusting
16. Supply and installation of all electrical power and control wiring and conduit to the equipment served plus interconnections between the SUEZ equipment as required, including wire, cable, junction boxes, fittings, conduit, cable trays, safety disconnect switches, circuit breakers, etc.
17. Install and provide all motor control centers, motor starters, VFD's, panels, field wiring, wire ways, supports and transformers.
18. Building or cover or any type of freeze protection.
19. All required instrumentation, unless specified
20. All other necessary equipment and services not otherwise listed as specifically supplied by SUEZ

NOTES AND CLARIFICATIONS

- A. The equipment described in this proposal will be of manufacturer's standard design and where shipping tolerances require, will be shipped knocked-down for installation in the field by others. This proposal does not include any expense for unloading, storage, erection, unless otherwise specified herein.
- B. The equipment to be furnished by SUEZ will include only those major equipment items normally manufactured or supplied by SUEZ as specifically listed in the equipment section of this proposal. Other items required to complete the installation such as wiring, controls, conduit, starters, drain valves, pipe and fittings external to the major equipment components, will be done by others unless otherwise specified herein
- C. All mechanical equipment shall be supplied with the Manufacturer's standard paint/finish unless otherwise specified herein
- D. Both design and furnishing of all concrete slabs and/or load-bearing structures is not by SUEZ.
- E. Pricing is EXCLUSIVE of ALL taxes, tariffs/duties, bonds. Applicable taxes, tariffs and duties must be added by the Contractor.
- F. Proposal based on existing room suitable for accommodating new component pieces
- G. All fabricated carbon steel plates, shapes, members and piping will be delivered to site as bare steel. Installing Contractor shall blast and paint as required by the specifications. Stainless steel and FRP shall not be painted.
- H. Any needed / required repairs to concrete tank is by others and not part of Suez scope of supply
- I. **On March 8, 2018, for National Security reasons, the President of the United States of America announced the eminent application of tariffs on most, if not all, aluminum and steel imports under section 232 of the Trade Expansion Act of 1962, as amended (19 U.S.C. 1862) and Section 604 of the Trade Act of 1974, as amended (19 U.S.C. 2483). As such, the imposition and application of these tariffs may cause short-term market volatility, fluctuations, price adjustments, delays, and other unforeseen impacts on industries, such as ours, that substantially rely on the use of these commodities to varying degrees.**

SUEZ is currently monitoring the situation as it develops and constantly adjusting our current pricing and bidding to be reflective of market conditions as of the day of price or bid submission. However, to the degree the application and implementation of the aforementioned tariffs cause material impact, further market disruption, delay or price escalation, SUEZ reserves the right to adjust our pricing and bid submissions accordingly.

Please rest assured that SUEZ will continue to make every effort to be as accurate as possible in our pricing estimates and we will continue to keep all of our customers, clients, and partners apprised of any changes as they occur.

SUEZ CONDITIONS OF SALE

NTIRE AGREEMENT. The Terms and Conditions of Sale set forth herein, and any supplements which may be attached hereto, constitute the full and final expression of the contract (the "Contract") for the sale of equipment or services (hereinafter referred to as "Equipment") Purchaser, and supersedes the terms and conditions of any request for proposal or request for quotations, specifications, quotations, purchase orders, correspondence or communications whether written or oral between the Purchaser and SUEZ. No amendment or modification hereto nor any statement, representation or warranty not contained herein shall be binding on SUEZ unless made in writing and signed by an authorized representative of SUEZ. Prior dealings, usage of the trade or a course of performance shall not be relevant to determine the meaning of this Contract.

2. TAXES. The Purchase Price does not include any state or local sales or use taxes.

3. PAYMENT. Payment shall be net thirty (30) days in accordance with SUEZ's proposal.

4. RISK OF LOSS. Risk of loss or damage to the Equipment, or any part thereof, shall pass to Purchaser upon delivery of the Equipment or part to Purchaser at the delivery point stated in SUEZ's proposal.

5. EXCUSABLE DELAY. SUEZ shall not be liable for any delay in performance or failure to perform due to any cause beyond SUEZ's reasonable control including, fire, flood, or any other act of God, strike or other labor difficulty, any act, instructions, directions or omission to act of any civil or military authority or of the Purchaser, Owner, or Engineer, change in laws, acts of war, any insurrection, riot, embargo, unavailability or delays in transportation or car shortages. In the event SUEZ's performance is delayed by any of the foregoing causes, SUEZ's schedule for performance shall be extended accordingly without penalty. If Purchaser's, Owner's, or Engineer's actions delay SUEZ's performance, Purchaser shall pay SUEZ any additional costs incurred by SUEZ resulting from such delay and shall also pay SUEZ's invoice for any stored Equipment, or any part thereof, as if they had been delivered in accordance with the milestone schedule.

6. PROPRIETARY INFORMATION. All information, plans, drawings, tracings, specifications, programs, reports, models, mock-ups, designs, calculations, schedules, technical information, data, manuals, proposals, CADD documents and other materials, including those in electronic form (collectively the "Instruments of Service") prepared and furnished by SUEZ for use solely with respect to this Project. SUEZ shall be deemed the author and owner of these Instruments of Service and shall retain all common law, statutory and other reserved rights, including copyrights. The Purchaser, Engineer, or Owner shall not use these Instruments of Service for future additions or alterations to this Project or for other projects, without the prior written agreement by SUEZ. The Instruments of Service furnished by SUEZ are proprietary to SUEZ, submitted in strict confidence and shall not be reproduced, transmitted, disclosed or used in any other manner without SUEZ's written authorization.

7. INSPECTION BY PURCHASER. Purchaser may inspect the Equipment at the point of manufacture, provided that such inspection is arranged and conducted so as not to unreasonably interfere with SUEZ's or the manufacturer's operations.

8. WARRANTY OF TITLE. SUEZ warrants and guarantees that upon payment title to all Equipment covered by any invoice submitted to Purchaser will pass to Purchaser free and clear of all liens.

9. WARRANTY. SUEZ warrants that its Equipment shall conform to the description contained in SUEZ's proposal and be free from defects in material and workmanship for a period of one (1) year from date its Equipment is initially placed in operation or eighteen (18) months from date its Equipment is shipped, whichever occurs first. Upon SUEZ's receipt of written notice within thirty (30) days of discovery of any defect, and a determination by SUEZ that such defect is covered under the foregoing warranty, SUEZ shall, at its option, repair or replace the defective part or parts, f.o.b. factory. This warranty does not cover failure or damage due to storage, installation, operation or maintenance not in conformance with SUEZ's written instructions and requirements or due to accident, misuse, abuse, neglect or corrosion. This warranty does not cover reimbursement for labor, gaining access, removal, installation, temporary power or any other expenses that may be incurred with repair or replacement. SUEZ shall have no responsibility for the condition of primed or finish painted surfaces after the Equipment leaves its point of manufacture. Field touch-up of shop primed or painted surfaces are normal and shall be at Purchaser's or Owner's expense. Unless otherwise specifically provided for herein, SUEZ provides no other guarantee of product performance or process results. Correction of non-conformities in the manner and for the period of time provided above shall constitute SUEZ's sole liability and purchaser's exclusive remedy for failure of SUEZ to meet its warranty obligations, whether claims of purchaser are based in contract, tort (including

negligence or strict liability), or otherwise. THE FOREGOING WARRANTIES ARE EXCLUSIVE, AND IN LIEU OF ALL OTHER WARRANTIES OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

10. **BACKCHARGES.** SUEZ shall not be liable for any charges incurred by Purchaser for work, repairs, replacements or alterations to the Equipment, without SUEZ's prior written authorization, and any adverse consequences resulting from such unauthorized work shall be Purchaser's full responsibility.

11. **LIQUIDATED DAMAGES.** Any liquidated damages clauses for failure to meet shipping or job completion promises are not acceptable or binding upon SUEZ, unless such clauses are specifically accepted in writing by an authorized representative of SUEZ at its headquarters office.

12. **LIMITATION OF LIABILITY.** Neither party shall be liable to the other party for any special, indirect, incidental, consequential or punitive damages arising from their obligations under this Contract, whether such damages are based upon breach of contract, breach of warranty, tort, strict liability or otherwise. In no event shall either party's liability to the other party exceed the purchase price of the Equipment or parts of the Equipment on which such liability is based.

13. **CANCELLATION BY PURCHASER.** If Purchaser cancels this Contract or refuses to accept delivery of the Equipment, Purchaser shall be liable to SUEZ for reasonable costs incurred by SUEZ including, cancellation charges, administrative costs, and commissions to sales representatives for all work performed or in process up to the time of cancellation or refusal to accept delivery.

14. **DEFAULT BY PURCHASER.** In the event Purchaser should breach its obligations under this Contract, SUEZ may, without prejudice to any other right or remedy it may have at law or equity, terminate this Contract or suspend performance if Purchaser fails to cure such breach within thirty (30) days of written notice. In such event, SUEZ shall be paid for all work performed prior to termination/suspension, including all costs related to the termination/suspension. If payments are not made in accordance with the terms contained herein, a service charge may, without prejudice to the right of SUEZ to immediate payment, be added in an amount equal to the lower of 1.5% per month or fraction thereof or the highest legal rate on the unpaid balance. Purchaser shall reimburse SUEZ for all attorney's fees and costs related to collection of past due amounts.

15. **DEFAULT BY SELLER.** In the event of any default by SUEZ and prior to Purchaser terminating the work for default, Purchaser shall give written notice of default to SUEZ. SUEZ shall remedy the default to the reasonable satisfaction of the Purchaser within thirty (30) days of receipt of such written notice or, if such default cannot reasonably be remedied within such thirty (30) day period, SUEZ shall promptly begin to remedy the default within the thirty (30) day period and thereafter diligently prosecute to conclusion all acts necessary to remedy the default, in which event such default shall be deemed to be remedied.

16. **PATENT AND COPYRIGHT INFRINGEMENT.** SUEZ shall defend any action or proceeding brought against Purchaser based on any claim that the Equipment infringes any United States patent or copyright, provided the Equipment is used in the manner specified and is not modified, altered, or combined with any other equipment without SUEZ's prior written permission. Purchaser shall give prompt written notice to SUEZ of any such action or proceeding and will reasonably provide authority, information and assistance (at Purchaser's expense) in the defense of same. If Purchaser is enjoined from the operation or use of the Equipment, SUEZ shall take reasonable steps to procure the right to operate or use the Equipment. If SUEZ cannot so procure such right within a reasonable time, SUEZ shall promptly, at SUEZ's option and expense, (i) modify the Equipment so as to avoid infringement of any such patent or copyright, (ii) replace said Equipment with equipment that does not infringe or violate any such patent or copyright, or (iii) as a last resort, remove the Equipment and refund the purchase price.

17. **INDEMNITY.** To the extent and proportion of its negligence, SUEZ will indemnify and hold Purchaser harmless for any claims, damages, suits, or losses by third parties for death or bodily injury or damage to tangible property (other than to the Equipment itself) directly caused by SUEZ's performance under this Contract.

18. **GOVERNING LAW/JURISDICTION.** This Contract shall be governed by the laws of the Commonwealth of Virginia, without regard to any conflicts of law principles thereof. Any dispute that cannot be resolved amicably by the Parties shall be referred to the federal or state courts having jurisdiction over Henrico County, Virginia. The Parties irrevocably waive the right to request trial by jury.

19. **NOTICES.** Unless otherwise provided, any notices to be given hereunder shall be given in writing at the

address and to the representatives mentioned in the Contract Documents and shall be deemed effectively given (i) upon personal delivery to the party to be notified, (ii) on confirmation of receipt by fax by the party to be notified, (iii) one business day after deposit with a reputable overnight courier, prepaid for overnight delivery and addressed as set forth herein, or (iv) three days after deposit with the U.S Post Office, postage prepaid, registered or certified, with return receipt requested.

20. **ASSIGNMENT/SUCCESSORSHIP.** Neither SUEZ nor Purchaser may assign this Contract without the prior written consent of the other party, which consent shall not be unreasonably withheld or delayed, except that SUEZ may assign this Contract to an affiliate without consent. Any prohibited assignment shall be null and void. SUEZ and Purchaser intend that the provisions of this Contract are binding upon the parties, their employees, agents, heirs, successors and assigns.

21. **SEVERABILITY.** If any term, condition or provision of this Contract or the application thereof to any party or circumstance shall at any time or to any extent be invalid or unenforceable, then the remainder of this Contract, or the application of such term, condition or provision to parties or circumstances other than those which it is held invalid or unenforceable, shall not be affected thereby, and each term, condition and provision of this Contract shall be valid and enforceable to the fullest extent permitted by law.

22. **NO WAIVER.** The failure of either party to insist upon or enforce strict performance by the other party of any provision of this Contract or to exercise any right under this Contract shall not be construed as a waiver or relinquishment to any extent of such party's right to assert or rely upon any such provision or right in that or any other instance; rather, the same shall be and remain in full force and effect.

23. SUEZ would like to note that under the current exceptional circumstances under the COVID 19 Pandemic situation, SUEZ may not be in a position to guarantee and comply with the planned schedule for project delivery or performance and that should there be any new measures taken by any governmental authority which may impede or delay the said schedule or performance, SUEZ reserves the right to modify the schedule / contract accordingly. SUEZ will promptly inform you of any changes which may impact the contract or the project.

CONDITIONS OF FIELD SERVICE

If this Contract does not include Field Service or if Purchaser requires such service in addition to that included in this Contract, Purchaser may purchase from SUEZ such Field Service or technical advice during installation or start-up of the Products, in which case Purchaser agrees to pay SUEZ for Work Time, Travel Time and Standby Time based on (1) SUEZ's "per diem" rates in effect at the time the service is performed; (2) the expenses of each SUEZ employee so furnished; and (3) the terms and conditions under which such service is performed.

"PER DIEM" CHARGES FOR SERVICE

The following rates are currently in effect. They are subject to change by SUEZ and are based on the definitions below. These rates are for domestic service only. Rates for service outside the Continental United States will be quoted upon request.

Classification of Serviceman	Straight Time Rate		
Standard Service	\$1,500	Per	day
XXXXX			

TIME DEFINITIONS

(a) Work Time - shall include all hours that SUEZ service personnel are on Purchaser's job site, either working or ready for work, and shall be payable at the applicable specified rates.

(b) Travel Time - shall include the time spent by SUEZ service personnel in traveling between their customary headquarters and Purchaser's job site and in returning (including travel occurring on Saturdays, Sundays and holidays) up to a maximum of eight (8) hours chargeable time for any given one-way trip. Travel Time shall be paid for at the applicable Straight Time Rate and shall not be cumulative with Work Time in determining Overtime.

(c) Standby Time - shall include all time (excluding Work Time) that SUEZ service personnel are available for work at Purchaser's job site, whether on the job site or not, up to a maximum of eight (8) hours per day, between the hours of 7:00 a.m. and 6:00 p.m., Sunday through Saturday, including holidays if availability has been requested by Purchaser. Standby Time shall be paid for at the applicable Straight Time Rate; however, Standby Time preceded and/or followed by Work Time is cumulative in determining Overtime.

RATE DEFINITIONS

(a) Straight Time Rate - This rate shall be paid for Work Time, Standby Time or Travel Time on a regular schedule of eight (8) hours per day, Monday through Friday.

(b) Time and One-Half Rate - The rate of one and half (1-1/2) times the Straight Time Rate shall be paid for any Work Time or Standby Time in excess of eight (8) hours, but not exceeding sixteen (16) hours, per day, Monday through Friday, and for any Work Time or Standby Time on Saturdays, not to exceed sixteen (16) hours.

(c) Double Time Rate - The rate of twice the Straight Time rates shall be paid for time worked in excess of sixteen (16) hours per day, without a six (6) hour break, Monday through Saturday, and for all time worked on Sundays and holidays. Holidays shall be those observed in the locality where the work is to be performed

CHARGES FOR EXPENSES

In addition to the "Per Diem" charges above, Purchaser shall pay SUEZ for all the traveling and living expenses and all other expenses of each SUEZ employee incidental to the work.

TERMS AND CONDITIONS

(1) Notification - Purchaser shall give SUEZ at least two (2) weeks advance notice when ordering Field Service.

(2) Terms of Payment - Purchaser shall pay SUEZ immediately upon receipt of invoices covering the time and expenses of SUEZ's employees furnished for such services. OVERDUE PAYMENTS NOT RECEIVED BY SUEZ WITHIN THIRTY (30) DAYS FROM DATE OF INVOICE SHALL BE SUBJECT TO FINANCE CHARGES AT THE RATE OF ONE AND ONE-HALF PERCENT (1-1/2%) PER MONTH.

(3) Time Sheets - SUEZ employees shall present Purchaser at the end of each week or at the completion of the job if less than one (1) week, appropriate documents on which shall be indicated the number of hours spent and the estimated expense incurred on this work. Purchaser shall sign these documents in the place indicated, thus signifying approval of the time spent and estimated expense incurred on this work.

(4) Delays - If the work of an SUEZ employee is postponed or suspended by Purchaser, or is delayed or does not proceed with reasonable dispatch, due to no fault of SUEZ, SUEZ may withdraw such employee and return a serviceman to the job when needed and available; and any additional costs (including Travel Time and expenses) incurred by SUEZ because of this shall be an additional charge to Purchaser.

(5) Limitation of Liability - SUEZ in providing any Field Service hereunder, shall do so in an advisory capacity only and shall not be held responsible in any way for the acts, workmanship or omissions of the employees, contractors, sub-contractors or agents of Purchaser. SUEZ SHALL NOT BE LIABLE IN ANY EVENT FOR SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGE

PURCHASE PRICE, FREIGHT, PAYMENT & SCHEDULE

PURCHASE PRICE: \$ 137,200.00

(Exclusive of taxes per Condition 5 of SUEZ Conditions of Sale)

FOB Shipping Point, Freight Allowed Via Common Carrier

TERMS OF PAYMENT (as follows, subject to Condition 2 of SUEZ Conditions of Sale):

20% Net Cash, Payable in thirty(30) days from date of submittal of initial drawings for approval;
75% Net Cash, Payable in progress payments thirty (30) days from dates of respective shipments of the Products;
5% Net Cash, Payable in thirty (30) days from Product installation and acceptance or Ninety (90) days after date of final Product delivery, whichever occurs first.


SERVICE: Field Service included in this Contract shall be provided for a period not to exceed **(0)** eight-hour man-days provided in not more than **(0)** trips to check the completed installation by Purchaser, to place the Products in operation and to instruct Purchaser in their operation. Purchaser agrees to pay SUEZ for any additional service days and/or trips in accordance with SUEZ's standard service rates and conditions in effect at the time the service is performed.

◆ A minimum of one (1) full day of service will be charged for each trip.

* Number of service days and trips described in Suez Scope of Supply

SCHEDULE: Approval drawings and data shall be submitted approximately **(6-8)** weeks after agreement to all terms, as evidenced by SUEZ's receipt of this proposal, fully executed; or, in the event that Purchaser issues a Purchase Order, SUEZ's receipt of fully executed letter agreement. SUEZ estimates that shipment of the Products can be made in approximately **(13-15)** weeks after SUEZ has received from Purchaser final approval of all submittal drawings and data.

PURCHASER'S ACCEPTANCE: BY ITS SIGNATURE BELOW OR ISSUANCE OF ANY PURCHASE ORDER OR OTHER DOCUMENT, NOTWITHSTANDING ANY STATEMENT OR PROVISION CONTAINED THEREIN TO THE CONTRARY, PURCHASER AGREES TO ALL THE CONDITIONS AND PROVISIONS OF THIS PROPOSAL AND CONTRACT. NO OFFER BY PURCHASER TO ALTER, AMEND, LIMIT OR DELETE ANY CONDITION OR PROVISION OF THIS PROPOSAL AND CONTRACT SHALL BE BINDING UPON SUEZ UNLESS EXPRESSLY ACCEPTED IN WRITING BY SUEZ.

PURCHASER'S ACCEPTANCE	SELLER
Company:	SUEZ WTS SERVICES USA, INC.
By: (Name, title)	By: Robert Lake Technical Direction and Business Development
Signature	Signature: 
Date	Date: May 24, 2021