**Addendum No. 1**
**to the Bidding Documents**

**WPCF Upgrade – Cloth Media Filtration System Equipment Pre-Selection**
**Town of Vernon, Connecticut**
**Vernon Water Pollution Control Facility**

**Issued November 29, 2017**

Under the provisions of Article 7 of Section 00200, Instructions to Bidders, Bidders are informed that the Bidding Documents for the above mentioned Project are modified, corrected, and/or supplemented as follows. Addendum No. 1 becomes part of the Bidding Documents and Contract Documents.

Acknowledge receipt of this addendum by inserting its number on Page 00410-3, Article 5.2 of the Bid form. Failure to acknowledge receipt of the Addendum may subject the Bidder to disqualification.

## Project Manual Changes

**Item 1-1 Section 00410 – Bid Form**

**Delete** Section 00410 in its entirety and **replace** it with the attached Section 00410.

***Clarification:*** *Modifications to the bid form include modifying note 1 to the table in paragraph 5.3B to allow dry or emulsion polymers, clarify maturation time, and deleting the second sentence in paragraph 7.1C.*

**Item 1-2 Section 00520 – Agreement**

**Replace** all uses of the word "Seller" with the word, "Bidder" except in the last sentence of paragraph 1.2.

**Item 1-3 Section 00520 – Agreement**

**Add** the following sentence to the end of paragraph 1.2:

"When the Bidder executes its sub-contract with the Buyer (general contractor), the Bidder will become the Seller."

**Item 1-4 Section 11365 – Cloth Media Filtration System**

**Delete** paragraph 1.4D.1.a in its entirety and **replace** it with the following:

"a. This requirement will be met if the average of all 24-hour composite samples collected during Routine Testing as described in paragraph 3.4D.3 is below the specified limit."

***Clarification:*** *Grab samples will be used for monitoring and control only and will not be used for compliance.*

**Item 1-5 Section 11365 – Cloth Media Filtration System**

**Delete** paragraph 1.4D.2.a in its entirety and **replace** it with the following:

"a. This requirement will be met if all 24-hour composite samples collected during Routine Testing and Stress Testing as described in paragraph 3.4D.3 are below the specified limit."

***Clarification:*** *Grab samples will be used for monitoring and control only and will not be used for compliance.*

**Item 1-6 Section 11365 – Cloth Media Filtration System**

**Delete** paragraph 1.4E in its entirety and **replace** it with the following:

"If the soluble non-reactive phosphorus concentration (defined as soluble total phosphorus minus soluble orthophosphate-phosphorus, as measured in the system effluent) is greater than 0.02 mg/l, then the "Long Term" average effluent total phosphorus concentration will be allowed to exceed the applicable limit specified above by the same amount (e.g., if the soluble non-reactive phosphorus concentration is 0.03 mg/l, then the "Long Term" average effluent total phosphorus concentration shall not exceed 0.08 + (0.03 - 0.02) = 0.09 mg/l during performance testing)."

**Item 1-7 Section 11365 – Cloth Media Filtration System**

**Delete** paragraph 1.5C in its entirety and **replace** it with the following:

"C. The maximum value of the penalties assessed under this guarantee shall not exceed 100 percent of the price of Seller's Goods and Special Services including all items and options selected by the Owner and included in the Construction Contractor's bid price."

**Item 1-8 Section 11365 – Cloth Media Filtration System**

**Add** the following sentence to the end of paragraph 2.3B:

"As an alternative, greater than ½" thick stainless steel flange rings with ANSI B16.5 hole pattern may be used."

**Item 1-9 Section 11365 – Cloth Media Filtration System**

**Delete** paragraph 2.4B in its entirety and **replace** it with the following:

"B. Each Cloth Media Filter shall be designed and fabricated to be installed in ia field constructed concrete basin and provided with 304 SS or 316 SS mounting brackets and hardware for attaching the filter components to the inside of a concrete basin. Hardware that gets embedded into concrete shall be 316 SS. Note: Buyer shall provide 316 SS concrete anchor bolts.

**Item 1-10 Section 11365 – Cloth Media Filtration System**

**Delete** paragraph 2.4D.1 in its entirety and **replace** it with the following:

"1. The center drum shall be a water tight, one piece, structural welded, AISI 304 stainless steel fabrication, open at one end and have openings to the filter discs. If the center drum design includes lubricated bearings, the bearings must be

externally accessible for routine lubrication. Center drum shall be adequately sized to avoid filter bypass at effluent flows up to the peak hour flow rate."

**Item 1-11 Section 11365 – Cloth Media Filtration System**

**Delete** the words, "plus one standby tank for 100% redundancy" in paragraph 2.6A.2.a.

**Item 1-12 Section 11365 – Cloth Media Filtration System**

**Delete** the last two sentences in paragraph 2.6C.3.

**Item 1-13 Section 11365 – Cloth Media Filtration System**

**Delete** the last sentence in paragraph 2.6C.5.

**Item 1-14 Section 11365 – Cloth Media Filtration System**

**Add** the words, "for a period of up to 1 hour per day" to the end of paragraph 3.4D.2.b.

**Item 1-15 Section 11365 – Cloth Media Filtration System**

**Delete** the last sentence of paragraph 3.4D.2.f.

**Item 1-16 Section 11365 – Cloth Media Filtration System**

**Delete** paragraph 2.9E.11 in its entirety and **replace** it with the following:

"11. Provide 4-20mA signals for each sample stream to the FBCP (three outputs total). Each CMFCP shall obtain the influent and effluent orthophosphate analyzer signals digitally (via plant network) from the FBCP."

**Item 1-17 Section 11365 – Cloth Media Filtration System**

**Add** the following after paragraph 3.4D.2.f:

"g. During Stress Testing, 24-hour time based composite samples will be required."

**Item 1-18 Section 11365 – Cloth Media Filtration System**

**Delete** paragraph 3.4D.3 in its entirety and **replace** it with the following:

"a. During Routine Testing, operate one filter at a time, during which all plant flow will be pumped to the filter. If WPCF flow rate exceeds the equivalent Maximum Day Flow Rate, then the Owner will adjust the Intermediate Pump Station pump controls to cap the pump flow rate.

"b. During Routine Testing, 24-hour time based composite samples will be required, as well as a minimum of 3 grab samples per day for process control."

***Clarification:*** *Filters will not be returned to normal configuration (two duty filters) outside of normal business hours unless flows are anticipated to exceed maximum*

*month flow rate. 24 hour composite samples will continue to be taken during all times.*

## Bidding Period Questions & Responses

The following responses/clarifications are based on questions raised during the bidding period.

1. In addition to the penalty of $10,000 or 1% of the bid price for unsuccessful validation testing, will the bidder's Bid Deposit (Bid Bond) also be used as a penalty for unsuccessful validation testing or will it be returned to the bidder?
   *No, the bid bond will not be invoked as a penalty for unsuccessful validation testing as long as the penalty has been paid (Town successfully cashes the check required pursuant to Section 00520 Article 7.1.).*

2. Regarding Section 11000 paragraph 3.3C: is the equipment manufacturer responsible for Engineer and/or Owner expenses associated with off-site inspections?
   *No, the seller is not responsible for Engineer and/or Owner expenses associated with off-site inspections.*

3. Regarding Section 11365 paragraph 1.1A.4: what provisions for facilitating chemical cleaning are required for a system that does not require routine cleaning?
   *Please refer to Section 11365 paragraph 2.7A.1 for minimum provisions for chemically cleaning the filter.*

4. Regarding Section 11365 paragraph 2.4E.3: can the required maximum nominal effective pore size be reduced from 10 microns to 5 microns?
   *The maximum effective pore size is 10 microns, but a smaller effective pore size is acceptable if it reduces the guaranteed chemical usage without creating other operational problems.*

5. Is the signing of the Agreement (00520) applicable?
   *Signing of the Agreement is applicable. The Agreement has been written to establish the relationship between the Owner and the Bidder until the construction contract is awarded to the Buyer.*

6. Will the Seller be held to the terms and conditions of these Contract Documents, or will there be the opportunity to negotiate contract terms and conditions with the selected contractor (Buyer)?
   *The provisions contained in this Cloth Media Filtration System Equipment Pre-Selection Document apply. However, contract terms not addressed herein may be negotiated between the Bidder (Cloth Media Filter manufacturer) and the Buyer (general contractor). The entire pre-selection package along with the Successful Bidder's bid price will be given to general contractors to develop their bids. When the Bidder executes its sub-contract with the Buyer (general contractor), the Bidder will become the Seller.*

7. Is Professional Engineer review, calculations, and stamp required only for the anchorage of the stainless steel tank and not for the other components of the filter equipment?
   *As specified in Section 11365 paragraph 1.6F, Professional Engineer stamped structural design calculations including seismic restraint design are only required for anchorage of the filter tank for the stainless steel tank option.*

8. Regarding Section 11365 paragraphs 1.1A.5, 1.2D.4.d, and 1.6B.1 as they pertain to Bidder's review and design guidance of related systems, please confirm that the Bidder is

only required to review and comment on the Engineer's design to confirm that system requirements related to the filter performance are properly conveyed in the Construction Contractor's bid documents. The suppliers of those components shall be responsible for meeting the applicable contract requirements.
*Confirmed.*

9. Regarding Section 11365 paragraph 2.3A, please confirm that normal downtime for maintaining and servicing the equipment is acceptable.
*Confirmed.*

10. Please add STAMO Mixing Solutions to the list of acceptable manufacturers in Section 11365 paragraph 2.6E.
*The specifications already name several manufacturers. Other manufacturers that provide an "or equal" to the listed manufacturers and comply with the specifications will be considered and may be submitted.*

11. Regarding Section 11365 paragraph 2.8H.10, confirm that the CMFCP will be installed indoors in an environment controlled building.
*CMFCPs will be installed in the upper level of the existing Filter Building, which is not air conditioned and will be ventilated to keep the room temperature below 90 degrees. The room will be kept above 45 degrees.*

12. Are vacuum gauges required?
*Refer to Section 11365 paragraph 2.9A.1 and 2.9A.2 for minimum instrumentation requirements. Vacuum gauges are only required if required for proper functioning of the System.*

13. Confirm the Bidder is to be onsite during all 20 days of Performance Testing.
*Confirmed as specified in Section 11365 paragraph 3.4A.1.*

END OF ADDENDUM NO. 1

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SECTION 00410

FORM FOR BID

PROJECT IDENTIFICATION:

Vernon CT Water Pollution Control Facility Upgrade Project
Cloth Media Filtration System Preselection

TABLE OF ARTICLES



ARTICLE 1 - BID RECIPIENT

1.1 This Bid is submitted to:

Town of Vernon Office of the Town Administrator
14 Park Place
Vernon, CT 06066

1.2 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents. This agreement will stipulate that the Bidder's Goods and Special Services as specified or indicated in the Bidding Documents will be furnished at the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents and the upcoming upgrade project.

ARTICLE 2 - BIDDER'S ACKNOWLEDGEMENTS

2.1 Bidder accepts all of the terms and conditions of the Advertisement for Bids and Instructions to Bidders, including without limitation, those dealing with the disposition of Bid deposit. The Bid will remain subject to acceptance until October 1, 2019, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

ARTICLE 3 - BIDDER'S REPRESENTATIONS

3.1 In submitting this Bid, Bidder represents, as set forth in the Agreement, that:

A. Bidder has examined and carefully studied the Bidding Documents, and any data and reference items identified in the Bidding Documents and hereby acknowledges the receipt of all Addenda.

B. Bidder has visited the Point of Destination and site where the Goods are to be installed or Special Services will be provided and become familiar with and satisfied as to the observable local conditions that may affect cost, progress, and furnishing of Goods and Special Services, if required to do so by the Bidding Documents, or if, in Bidder's judgement, any local condition may affect cost, progress, or the furnishing of Goods and Special Services.

C. Bidder is familiar with and has satisfied itself as to all federal, state and local Laws and Regulations that may affect cost, progress and furnishing of Goods and Special Services.

D. Bidder has carefully studied, considered, and correlated the information known to Bidder; information commonly known to sellers of similar goods doing business in the locality of the Point of Destination and the site where the Goods will be installed or where Special Services will be provided; information and observations obtained from Bidder's visits, if any, to the Point of Destination and the site where the Goods will be installed or Special Services will be provided; and any reports and drawings identified in the Bidding Documents regarding the Point of Destination and the site where the Goods will be installed or where Special Services will be provided, with respect to the effect of such information, observations, and documents on the cost, progress, and performance of Seller's obligations under the Bidding Documents.

E. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Goods and Special Services that are to be furnished as indicated in the Bidding Documents.

F. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and confirms that the written resolution thereof by Engineer is acceptable to Bidder.

G. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for furnishing the Goods and Special Services for which this Bid is submitted.

H. The submission of this Bid constitutes an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article, and that without exception the Bid and all prices in the Bid are premised upon furnishing the Goods and Special Services required by the Bidding Documents.

## ARTICLE 4 - BIDDER'S CERTIFICATION

4.1 Bidder certifies that this Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation.

4.2 Bidder certifies that Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid.

4.3 Bidder certifies that Bidder has not solicited or induced any individual or entity to refrain from bidding.

4.4 Bidder certifies that Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph:

A. "corrupt practice" means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process;

B. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of the Owner, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;

C. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels; and

D. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process.

ARTICLE 5 - BASIS OF BID

5.1 Bidder proposes to furnish all Goods and Special Services required for construction of the Cloth Media Filtration System Equipment for the Vernon CT Water Pollution Control Facility Upgrade Project in accordance with the accompanying Bidding Documents prepared by Tighe & Bond, Inc., for the Contract Prices specified in Article 5 Paragraph 5.3A at the guaranteed operation and maintenance values and costs specified in Article 5 Paragraph 5.3B, with additional supporting equipment information, documentation and bidder qualifications as described in Article 5 Paragraphs 5.4, 5.5, and 5.6, all according to the terms of the Bidding Documents.

A. A Bid that does not include a price for both Items 1A and 1B will be considered non-responsive.

5.2 This Bid includes Addenda numbered _____

5.3 The proposed Contract Prices and Guaranteed Operation and Maintenance Costs are provided in Paragraphs 5.3.A and 5.3.B below:

A. CAPITAL COST

| Item No. | Unit of Measure | Description | Total Price Dollar Figure<br>Total Price Written Words |
|---|---|---|---|
| 1A | L.S. | Supply the Cloth Media Filtration System equipment with Stainless Steel Tank as specified herein including all ancillary equipment, spare parts, tools, and Special Services not included in Items 2, 3, 4, and 5 below. | $ |
| 1B | L.S. | Supply the Cloth Media Filtration System for installation in a Concrete Tank constructed by others as specified herein including all ancillary equipment, spare parts, tools, and Special Services not included in Items 2, 3, 4, and 5 below. | $ |
| 2 | L.S. | Validation Testing Services – Provide validation testing services to demonstrate proposed system's ability to meet performance guarantees and to optimize design as specified in Section 11365, Paragraph 1.3. | $ |
| 3 | L.S. | Spare Parts – The cost for spare parts specified in Section 11365, Paragraph 1.9. | $ |
| 4 | L.S. | Extended Warrantee for Equipment– The added cost to meet the warrantee requirements specified in Section 11365, Paragraph 1.8 to the extent that they are beyond the manufacturer's standard warrantee. | $ |
| 5 | L.S. | Seller's Service Agreement – Two year service agreement as specified in Section 11365, Paragraph 1.12. | $ |
| **TOTAL CLOTH MEDIA FILTRATION SYSTEM BID PRICE (Stainless Steel Construction) CAPITAL COST Sum of Items 1A, 2, 3, 4 and 5 Above** | | | $ |
| **TOTAL CLOTH MEDIA FILTRATION SYSTEM BID PRICE (Concrete Construction) CAPITAL COST Sum of Items 1B, 2, 3, 4 and 5 Above** | | | $ |

B. OPERATION AND MAINTENANCE GUARANTEE

1. Coagulant Consumption

| Item No. | Item Description | Units | Guaranteed Value/ Cost | |
|---|---|---|---|---|
| | | | Current Average Flow 2.95 MGD[2] | Design Average Flow 4.8 MGD[2] |
| 6 | Cost of **Coagulant** | $ / Gallon | TBD by Engineer | |
| 7 (a,b) | Average **Ferric Chloride (40% solution $FeCl_3$ by Weight)** dosage required under specified Conditions (not less than 57 ppmvp) | ppmvp[1] | | |
| 8 (a,b) | Average **Alum Sulfate (48% solution $Al_2(SO_4))_3$*14 $H_20$ by weight that is 8.0 to 8.3% $Al_2O_3$ by weight)** dosage required under specified Conditions (not less than 80 ppmvp) | ppmvp[1] | | |

1. ppmvp = parts per million as volumetric product, or gallons of neat chemical (neat concentration should be as specified for each item above) per million gallons of wastewater treated. To convert to mg/l of Coagulant (as a complex- not a metal), multiply by (8.34*0.4536* S.G * %Complex / 3.785) where S.G is the specific gravity of the bulk solution provided by the manufacturer and %Complex is the percentage by weight of the chemical complex in the solution.
2. The flows specified above represent plant influent flows. Actual flows entering the filters will be higher because they will include recycle flow from the filter backwash.

2. Polymer Consumption

| Item No. | Item Description | Units | Guaranteed Value/ Cost | |
|---|---|---|---|---|
| | | | Current Average Flow 2.95 MGD[3] | Design Average Flow 4.8 MGD[3] |
| 9 | Required Polymer[1] | NA | | |
| 10 | Cost of Polymer | $ / Gallon | Seller to Provide Quote from Supplier for delivery of a 30 day minimum supply to the point of destination | |
| 11 (a,b) | Average Polymer addition required under specified Conditions | ppmvp[2] | | |
| 12 | Polymer Solid's Content (%Sol) | lb polymer / lb polymer solution | | |
| 13 | Polymer Specific Gravity (S.G) | NA | | |

1. Emulsion or dry polymers will be considered. List polymer type, recommended supplier product number, and polymer aging time.
2. ppmvp = parts per million as volumetric product, or gallons of neat chemical per million gallons of wastewater treated. To convert to mg/l of Polymer, multiply by (8.34 * 0.4536 * S.G * %Sol / 3.785)
3. The flows specified above represent plant influent flows. Actual flows entering the filters will be higher because they will include recycle flow from the filter backwash.

C. The Bidder acknowledges that this Bid will be evaluated using the Guaranteed Operational and Maintenance Values and Costs included in Paragraph 5.3B in the following manner:

1. Due to the uncertainty in the long term chemical choice, the cost of coagulants used for in each operational scenario (current flow, design flow) will be based the bidders guaranteed values weighted as follows:

   a. Ferric Chloride – 50%

   b. Alum – 50%

2. The annual operating costs will be based on 213 days of operation and the following weights assigned to the guaranteed costs/values:

   a. Current average daily flow of 2.95 mgd - 75%

   b. Design average daily flow of 4.8 mgd - 25%

3. The Bidder acknowledges the Guaranteed Operational and Maintenance Values and Costs included in Paragraph 5.3B must be guaranteed for the time periods described in Article 18 of the Instructions for Bidders (Section 00200).

5.4 A summary of the proposed equipment (and equipment required to be provided by the Buyer), a detailed breakdown of the operational and maintenance values used to back up the values in Paragraph 5.3.B, and delivery schedule to be provided is as follows:

A. General Equipment

| | | Proposed Value |
|---|---|---|
| 1. | Total Number of Filter Trains Proposed (#) | 3 |
| 2. | Number of Filter Trains On-Line at the Design Peak Hourly Flow Rate (#) | 2 |
| 3. | Number of discs per filter(#) | |
| 4. | Total Area of each Disc filter (ft^2) | |
| 5. | Effective Submerged Area of each disc filter (ft^2) | |
| 6. | Proposed Filter Loading[1,6] at Peak Hour Flow Rate and Maximum TSS Load (25 mg/l) (lbs solids/ ft^2/day) | |
| 7. | Backwash Pumps per filter (#) | |
| 8. | Backwash Pump Motor Size (HP)[2] | |
| 9. | Backwash Pump Flow Rate (GPM) | |
| 10. | Maximum Instantaneous Backwash Flow Rate (GPM per filter) | |
| 11. | Filter Media Drive Drum Motor Size (HP)[2] | |
| 12. | Peak Capacity of Buyer-provided Coagulant Feed Pump used for filters (gph)[3] | |
| 13. | Number of Buyer-provided Rapid Mix Tanks required[4] prior to the Flocculation Tanks (#) | 2 |
| 14. | Size of Buyer-provided Rapid Mix Tanks required[4] prior to the Flocculation Tanks (gallons) | |
| 15. | Rapid Mix Tank Mixer Size (HP)[2] | |
| 16. | Total number of Buyer-provided Flocculation Tanks required[4] (#, must be even number for two reaction tank trains) | |
| 17. | Size of Buyer-provided Flocculation Tanks[4] required prior to the Filter (gallons each) | |
| 18. | Flocculation Tank Mixer Sizes (HP each)[2] | |
| 19. | Annual Equipment Maintenance Cost[5] | |
| 20. | Anticipated average backwash flow rate[6] at Current Average Daily Flow Rate (2.95 mgd) and at a secondary | |

clarifier effluent TSS of 10 mg/l: _____

21. Anticipated average backwash flow rate[6] at Peak Hour Flow Rate (22.0 mgd) and at a secondary clarifier effluent TSS of 25 mg/l (gpm): _____

22. Can the Cloth Media Filtration System be started up and operated (but not performance tested) while the Zimpro PACT-WAR system is still in operation and the incoming TSS includes residual powdered activated carbon without significantly reducing the performance of the filter? (Yes or No)[7] _____

Notes:

1. Calculate Loading Rates using Effective Submerged Filter Area including anticipated influent TSS due to coagulant addition for phosphorus removal plus TSS from Secondary Clarifier effluent.
2. Provide horsepower as motor rated horsepower for the equipment proposed.
3. Base on whichever of the coagulants listed in 5.3.B requires the largest pump.
4. Rapid mix and flocculation tanks shall be sized based on two trains, both online at peak flow conditions, with no redundancy required.
5. Include the cost (and provide with the bid a list) of replacement equipment and consumables for which unit costs are not specifically listed in the bid form. This shall include, but not be limited to, other chemicals or substances such as cleaning solutions, components requiring routine replacement, all spare parts listed in Section 11365 paragraph 1.9, and other components of the equipment with a useful life of less than 20 years. Include annualized unit costs based on past experience. If the system has a pump that is expected to wear out in 12 years and the current replacement cost is $12,000, include an annualized maintenance equipment cost of $1,000 per year. Note that this does not obligate the Owner to purchase these items through the Seller.
6. Assume both duty filters online.
7. If no, attach a description of the effect so that the added cost to the construction contract can be estimated by the Owner during the bid evaluation process.

B. Headlosses

| | Value | |
|---|---|---|
| | Steel Tank@ Peak Hour Flow (22.0 mgd) | Concrete Tank@ Peak Hour Flow (22.0 mgd) |
| 1 Total Headloss through the two duty Cloth Media Filters while filtering (Maximum inlet channel water elevation approaching filter (weir if applicable) less | _____ | _____ |

| | | | |
|---|---|---|---|
| | the maximum recommended effluent channel water elevation leaving filter (after effluent weir) (ft) | _____ | _____ |
| 2. | Total Headloss through the two duty Cloth Media Filters while bypassing (Maximum inlet channel water elevation approaching filter (weir if applicable) less the maximum recommended effluent channel water elevation leaving filter (after effluent weir) (ft) | _____ | _____ |

C. Delivery Schedule

| | | Duration |
|---|---|---|
| 1. | Preliminary Shop Drawings (weeks from Owner's request, maximum of 8) | _____ |
| 2. | Validation Testing (weeks from Owner's request, maximum of 8) | _____ |
| 3. | Shop Drawings (weeks from execution of purchase order with the Buyer, maximum of 10) | _____ |
| 4. | Delivery of Goods (weeks from Shop Drawing approval, maximum of 22) | _____ |

5.5 The following supplementary information is provided with the Bid:

A. Written description and Seller's literature of the proposed system.

B. Dimensioned plans and sections of the proposed system process equipment including field instruments, control panels, and all other major system components. Specify recommended areas for spare equipment storage. Provide sample control panel designed from projects of similar size and scope.

C. Dimensioned plans and sections of the proposed system layout including required number of trains, chemical mix/flow split tank, tanks in each train, required maintenance clearances from provided equipment, channel/tank widths, lengths, depths, relative water surface elevations, bypass weir and channel/pipe locations, and minimum relative elevations of all equipment to be supplied.

D. General arrangement drawings show the proposed equipment within the Owner's existing structures as they are illustrated on Figures 5 and 6 included in Appendix A. These layouts shall demonstrate compliance with all dimensional limitations and shall be based on the AutoCAD .dwg files that were made available by the Engineer as described in Section 00200, Article 3.

E. Description of the level of factory assembly prior to factory system testing and a description of the factory system testing conducted at this level for each proposed equipment option (concrete or steel tank).

F. Detailed description of field assembly requirements for each proposed equipment option. The description shall include estimates of the number of personnel and the

hours required by those personnel required for each step of the installation. The supplier shall also provide at least two contractor references from past projects installing equipment of similar type that can confirm the installation steps, manpower, and duration estimates.

G. Documentation including quotes and anticipated service life of equipment to support the Annual Equipment Maintenance Costs in Paragraph 5.4A.19.

H. Written description of any specific equipment requirements such as the need for equipment to be protected from weather and the elements. Provide an explanation.

I. Details of any special tools or equipment required for operation and maintenance of the proposed system.

J. Details of operation of the system (labor requirements to operate and maintain equipment) including weekly and monthly maintenance schedule. Include a listing and the cost of replacement equipment and consumables for which unit costs are not listed in the bid form. This shall include, but not be limited to, other chemicals or substances, compressed air, components requiring routine replacement, or other components of the equipment with a useful life of less than 20 years.

K. Details of power and control systems (control panel layouts and wiring schematics).

L. Details demonstrating the ability of the proposed system to hydraulically pass the range of flows as required to meet the design average day and peak hour flow rate.

M. Proposed Validation Testing plan and procedures.

N. Detailed explanation if answer to item 5.4A.22 is no.

5.6 The Seller represents to the Owner the following as evidence of Seller's qualifications to supply the equipment and provide services specified herein:

A. Number of years Seller has been in business under the name in which these Goods and Special Services will be furnished.

B. Number of installations in the United States and worldwide with equipment functionally similar to that proposed. Include installation dates for each.

C. A list and description of projects in the United States where the Seller's proposed equipment has been installed. The projects listed shall provide suitable detail for evaluating the Bidder's qualifications and experience, which are non-monetary criteria discussed in Article 13 of the Instruction to Bidders (Section 00200). Provide the following information for each installation:

1. Name of wastewater treatment facility

2. Name, Address, and telephone number of system owner's or operator 's contact person who can address the performance and maintenance of the Seller's equipment

3. Design flow rates including average annual, maximum month, maximum day, and peak hour

4. Date system was placed into operation

5. Operation of the system in conjunction with related treatment systems

6. Permitted effluent phosphorus limit and the actual operating discharge phosphorus concentration.

7. Chemical Coagulant, and Polymer type and dosage

8. Method of level control

ARTICLE 6 - TIME OF COMPLETION

6.1 Bidder agrees that the furnishing of Goods and Special Services will conform to the schedule set forth in Article 5 of the Agreement.

6.2 Bidder accepts the provisions of the Agreement as to liquidated damages.

ARTICLE 7 - ATTACHMENTS TO THIS BID

7.1 The following documents are attached to and made a condition of this Bid:

A. Bid deposit in the amount of _____ dollars ($_____ _____), consisting of a bid bond in the amount of five percent of the total amount of Bid provided in paragraph 5.3.A of this section.

B. A letter from surety indicating that the Bidder currently qualifies for the performance bond required as detailed in these documents

C. Evidence of Bidder's qualifications in accordance with Article 5 of this Bid as well as Supplementary Information Specified in Article 5.

D. Evidence of authority to sign.

ARTICLE 8 - BID SUBMITTAL

BIDDER: *[Indicate correct name of bidding entity]*

_____

By:
*[Signature]* _____

*[Printed name]* _____
*(If Bidder is a corporation, a limited liability company, a partnership, or a joint venture, attach evidence of authority to sign.)*

Attest:
*[Signature]* _____

*[Printed name]* _____

Title: _____

Submittal Date: _____

Address for giving notices:

_____

_____

_____

Telephone Number: _____

Fax Number: _____

Contact Name and e-mail address: _____

_____

Bidder's License No.: _____
*(where applicable)*

END OF SECTION

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