NOTICE & INVITATION TO BID
SOUTH GLENS FALLS GRANULAR ACTIVATED CARBON (GAC) MEDIA
CONTRACT No.1FX 2023
VILLAGE OF SOUTH GLENS FALLS
SARATOGA COUNTY, NEW YORK

NOTICE IS HEREBY GIVEN that sealed bids will be received at the Village of South Glens Falls Village Hall, Attention: Village Clerk, 46 Saratoga Avenue, South Glens Falls, NY 12803 until 12:00 pm local time of March 7th, 2023 and then at said office publicly opened and read aloud for work that shall include but is not limited to:

Contract No. 1FX 2023: South Glens Falls Granular Activated Carbon (GAC) Media
Project scope shall include: GAC MEDIA

PART 1 - GENERAL

1.1 SUMMARY

A. The carbon media will be virgin Filtrasorb 400, or equal.

B. Carbon is for two (2) 12’ diameter adsorber vessels requiring a total of 80,000 lbs of media.

1.2 QUALITY ASSURANCE

A. The equipment furnished shall be designed, constructed, and installed in accordance with the best practices and methods and shall operate satisfactorily when installed as shown on the contract drawings and operated per manufacturer's recommendations.

1.3 SHIPPING AND DELIVERY

A. The specified material shall be delivered by the manufacturer FOB DESTINATION and thereby the manufacturer shall hold the full responsibility for the condition and completeness of the material upon its delivery.

B. The Engineer shall hold the right to inspect the equipment prior to unloading and setting so as to assure the quality and condition of the equipment is in no way deficient.

C. If in the view of the Engineer or Engineer’s inspector, the equipment is deficient when delivered, delivery shall be refused.

1.4 MANUFACTURER'S WARRANTY

A. The warranty is the sole responsibility of the manufacturer and that manufacturer's warranty shall be provided in written form, being placed in both the Submittal documents covering the specified equipment and the O&M manuals provided with that equipment.

B. It is required the warranty provide the Owner with a single source responsibility for all components specified herein and the system as a whole. That single source shall be none

other than the manufacturer. Third party suppliers, service contractors, “Pass-through” warranties and service by the representative are not acceptable.

PART 2 - PRODUCTS AND COMPONENTS

2.1 GENERAL

A. Granular Activated Carbon: Virgin Filtrasorb 400, or equal

B. Specifications

	Min	Max
IODINE NUMBER, mg/g	1000	-
MOISTURE (AS PACKAGED), wt%	-	2
ABRASION NUMBER	75	-
EFFECTIVE SIZE, mm	0.55	0.75
UNIFORMITY COEFFICIENT	-	1.9
12 US MESH [1.70 mm], wt%	-	5
< 40 US MESH [0.425 mm] (PAN), wt%	-	4

2.2 Typical Properties:

A. This product complies with ANSI/AWWA B604 (2005) – Granular Activated Carbon.

B. This product complies with the requirements for activated carbon as defined by the Food Chemicals Codex (FCC) (8th Edition) published by the U.S. Pharmacopeia.

C. This product is produced under supervision of the Islamic Food and Nutrition Council of America (IFANCA).

D. This product is prepared under the supervision of the Kashruth Division of the Orthodox Union and is Kosher.

E. Only products bearing the NSF Mark are Certified to NSF/ANSI/CAN 61 - Drinking Water System Components - Health Effects standard. Certified Products will bear the NSF Mark on packing or documentation shipped with the product.

PART 3 - EXECUTION

3.1 FILTER MEDIA

A. Provide and install Carbon Adsorption System media per manufacturer’s specification. The following guidelines are taken from the Calgon Carbon Corporation Model 8 Granular Carbon Adsorption System Operation and Maintenance Manual.

B. The trailer driver connects the necessary hoses and operates all the valves on the trailer. A plant operator, or the Engineer, should be available to operate the valves on the adsorber system.

C. After all the carbon is transferred from the trailer, the driver disconnects the hoses and closes the valves on the trailer. The plant operator, or Engineer, closes the valves in the vent and carbon fill lines on the adsorber.

D. Filling an Adsorber with Carbon: After the system has been checked, the adsorbers are ready to be filled with granular activated carbon. The carbon is transferred to the adsorbers as a water slurry from Carbon trailers. Typical utility and piping requirements to connect to the adsorber and trailer are as follows:

1. Adsorber
    a. Plant Air Line: 3/4" Universal air connection 100 scfm at 30 psig min. (Attaches to 3/4" flush connection on carbon fill line above carbon inlet valve)
    b. Plant Water Line: 100 gpm (max) at 30 psig min. (Attach at drain connection using a 2" female Kamlock, or through backwash inlet using an 8" 150 lb. flanged connection).
2. Trailer
    a. Plant Air Line: 3/4" Universal air connection (for both industrial and food grade trailer) 100 scfm regulated to 15 psig max.
    b. Plant Water Line: 4" Kamlock connection (female for industrial trailer, male for food grade trailer) 100 gpm regulated to 15 psig max. (Connect to Trailer Carbon Fill or Discharge Line)

E. Spent Carbon Transfer: Transfer from the adsorber to the trailer is accomplished by pressurizing the adsorber with plant air. When the transfer is complete, the spent carbon in the trailer is drained of water. Prior to disconnecting any lines, the air supply must be shut off, and the adsorber and all transfer lines must be vented. The process steps are as follows:

1. Prepare for Spent Carbon Transfer
    a. Close all adsorber valves.
    b. Connect the adsorber carbon outlet line to the trailer carbon fill line using 4" flexible hose.
    c. Open the center manway of the trailer or trailer vent valve for venting.
    d. Open valve in the trailer carbon fill line.
    e. Check that the adsorber is full of water.
    f. To aid the initial phase of transferring spent carbon, fill the transfer line with water. To do this, use a 3/4" water hose to fill the transfer line with water at the adsorber carbon outlet valve's flush-out connection.
2. Transfer Spent Carbon
    a. Open the 3/4" air line valve slowly and pressurize the adsorber to 25 to 30 psig.
    b. Open the 4" adsorber carbon outlet valve and transfer the spent carbon to the trailer.
    c. As the trailer starts to fill with carbon slurry, open the trailer septa valves to drain off excess motive water.
    d. The transfer should take 20 to 30 minutes. The transfer will end with a loss of pressure in the adsorber and the sound of air in the transfer line. A small heel of carbon may remain in the adsorber. This material will have to be removed. Close the carbon outlet valve on the adsorber and add plant water to the adsorber for 2-3 minutes (through the drain connection or backwash inlet). Leave the 3/4" air line open. When the adsorber pressure reaches 25 psig, open the adsorber carbon outlet valve and transfer the remaining amount of carbon into the trailer.

3. End Transfer
    a. Close the plant air line valve.
    b. Vent the tank and lines through the trailer vent valve.
    c. Open the adsorber vent valve to further aid the venting.
    d. Close the adsorber carbon outlet valve.
    e. Using a 3/4" water hose at the adsorber carbon discharge line flush-out connection, flush out the transfer line for a few minutes to remove all traces of carbon. Bleed the water hose and remove it.

F. Drain Water From Trailer:

1. Prepare for Draining Water
    a. Close all valves on the trailer. Close the trailer manway.
    b. Connect the plant air line to the 3/4" connection on trailer carbon fill line using the air line hose.
    c. Connect the trailer carbon discharge/drain line to the drain line in the trench by means of a 4" flexible hose.
2. Draining Trailer
    a. Pressurize the trailer to 15 psig by slowly opening plant air line valve on the trailer.
    b. Open trailer septa valves.
    c. By pressurizing the trailer, water will be drained in less time than if drained by gravity.
3. End Draining
    a. When the carbon is completely drained, close the air line on the trailer.
    b. Vent trailer slowly through trailer vent valve.
    c. When venting is complete, close all valves on the trailer and disconnect all hoses.
    d. The trailer is now full of drained spent carbon and is ready for return to Calgon Carbon for reactivation.

G. Transfer Carbon To Adsorber:

1. Prepare for Transfer
    a. Place about 1500 gallons of water in the adsorber. This water cushion helps to protect the underdrain system and vessel lining.
    b. Connect the adsorber fill line to the trailer carbon discharge/drain line using 4" flexible hose.
    c. Connect the 3/4" plant air line to the trailer carbon fill line using the air line hose.
    d. Close all valves on the adsorber.
    e. Open the adsorber vent valve.
    f. To aid the initial phase of transferring fresh carbon, fill the transfer line with water. To do this, use a 3/4" water hose to fill the transfer line with water, at the carbon inlet valve's flush-out connection.
2. Transfer Fresh Carbon
    a. Pressurize the trailer to 15 psig by slowly opening the plant air line valve and then slowly opening valve T4 in the trailer carbon fill line.
    b. Open the adsorber fill line valve.
    c. The Calgon Carbon trailer driver will open the trailer carbon outlet valves to empty the respective hoppers.

d. If a water cushion is utilized, open an adsorber drain valve shortly after starting the transfer. This is done to reduce the amount of water that overflows at the end of the transfer.
e. The disposal of the excess motive water is provided by the customer.

3. End Transfer
   a. Close the plant air valve and vent the trailer through the adsorber vent valve.
   b. Close the adsorber drain valve if it was utilized during the transfer.
   c. Slowly open trailer vent valve for additional venting.
   d. When completely vented, close the adsorber fill line valve, disconnect the hoses, and close the trailer valves.
   e. Proceed to wet and backwash/backflush the adsorber.
   f. After the adsorber has been backwashed/backflushed, shut off the plant water and close the vent valve on the adsorber.

H. Fresh Carbon Transfer from Trailer: Fresh carbon is transferred in a slurry using plant air pressure. The trailer is first filled with water to create the slurry. The carbon slurry hose on the trailer is connected to the adsorber fill line and the trailer carbon discharge line. After putting a water cushion in the adsorber, the trailer is pressurized and the carbon slurry is transferred to the empty adsorber. Prior to disconnecting any lines, the air supply must be shut off, and the trailer and all transfer lines must be vented.

I. Fill The Trailer With Water: If the carbon is wetted prior to delivery, about 4000 gallons of water will be required. If the carbon is dry, about 5000 gallons of water will be required. The trailer may be filled either upflow or downflow.

1. Filling Operation
   a. Connect water line to the trailer (carbon fill line if filling downflow, carbon discharge line if filling upflow) using a 4" flexible hose.
   b. Open one top manway to vent trailer during filling.
   c. Open trailer vent line valve.
   d. Open trailer water line valve
   e. Open plant water line valve slowly and fill the trailer.
2. End Filling Operation
   a. Close plant water line valve.
   b. Close trailer water line valve, manways, and trailer vent valve.
   c. Disconnect hose.

J. Wetting (Deaerating the carbon):

1. In a typical bed of virgin carbon, the pore volume is approximately 40% of the bed volume. Carbon which is shipped dry will contain air in these pores. Therefore, the carbon must be properly wetted prior to being placed on stream. If this is not done, the air within these pores will displace into the void spaces between the carbon particles during operation and cause high pressure drop and channeling in the adsorbers. These problems can cause premature breakthrough of contaminants. Air will not migrate out of the bed during normal downflow operation.

2. The time required for wetting is a function of liquid temperature and viscosity. Generally, a minimum wetting period of 24 hours is required using water at ambient temperatures, although a period of up to 72 hours is preferred for complete wetting. After wetting, backwashable adsorbers should be backwashed to remove air and segregate the carbon by size.

3. As an alternative, the Carbon Service trailer containing fresh carbon may be filled with water and allowed to stand for several hours. When the fresh carbon is transferred to the adsorber, the adsorber should be backwashed to eliminate any remaining air.
4. After the carbon has been wetted, the adsorber should be drained and then backfilled until water flows out the system vent line. The adsorber should be filled up-flow at 2 gpm/ft2 maximum.
5. If the unit must be placed on-stream before the carbon has been wetted, the adsorbers should be drained and backfilled when the pressure drop becomes prohibitive or after two days of operation, whichever occurs first.
6. For process applications, the same procedure is required.

END OF SECTION

Delivery and Installation shall be within three months of the purchase order, or sooner.

Any questions should be directed to Anthony Mantas, P.E., Delaware Engineering at amantas@delawareengineering.com.

Bids should exclude sales and compensating use taxes on materials incorporated into the work. The Contractor must ensure that employees and applicants for employment are not discriminated against because of their race, creed, color, religion, sex or national origin. New York State and Federal Prevailing Wage Requirements shall apply to this project.

No bids will be received or considered after the time stated above. One original and one copy of the bid forms must be submitted in a sealed envelope bearing the name and address of the bidder and clearly marked "VILLAGE OF SOUTH GLENS FALLS – SOUTH GLENS FALLS GRANULAR ACTIVATED CARBON (GAC) MEDIA CONTRACT No.1FX 2023

Digital copies of the Contract Documents may be obtained online as a download from the website: www.sgfny.com under “Village News”" Complete hardcopy sets of bidding documents may be obtained from 46 Saratoga Avenue South Glens Falls, NY 12803. Any Bidder requiring documents to be shipped shall make arrangements with the Village Clerk's Office and pay for all packaging and shipping costs.

INVITATION TO BID
Village of South Glens Falls Carbon Media Bid

Specifications will be available for viewing at the Village of South Glens Falls Village Hall, 46 Saratoga Avenue, South Glens Falls, NY 12803 between the hours of 9:00am and 2:00pm, Monday through Friday.

The Owner reserves the right to waive any informalities or irregularities in the Bids received, or to reject any or all Bids without explanation.

_____

Nicholas Bodkin, Mayor
Village of South Glens Falls

Bid Form

CONTRACT No. 1FX 2023
BID FORM

Date: _____

Bid of ***(company name)***_____

_____to provide all Work in accordance with the Contract Documents titled: "South Glens Falls Virgin Granular Activated Carbon (GAC) Media – Contract No. 1FX 2023" for the Village of South Glens Falls, Saratoga County, New York 12803.

ARTICLE 1 – BID RECIPIENT

1.01 This Bid is submitted to:

A. VILLAGE OF SOUTH GLENS FALLS, 46 SARATOGA AVENUE, SOUTH GLENS FALLS, NY 12803

1.02 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 to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid.

ARTICLE 2 – BIDDER'S ACKNOWLEDGEMENTS

2.01 This Bid will remain subject to acceptance for 45 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

ARTICLE 3 – BIDDER'S REPRESENTATIONS

3.01 In submitting this Bid, Bidder represents 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 receipt of the following Addenda:

Addendum No.	**Addendum, Date**

B. Bidder has submitted all necessary Requests For Information (RFIs) to provide a complete and final bid price prior to the bid opening date.

C. 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.

D. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance and furnishing of the Work.

E. 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 performing and furnishing the Work required by the Bidding Documents.

ARTICLE 4 – BIDDER'S CERTIFICATION

4.01 Bidder certifies that:

A. 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;

B. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;

C. Bidder has not solicited or induced any individual or entity to refrain from bidding; and

D. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 4.01.D:

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

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

3. "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

"coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the e execution of the Contract.

ARTICLE 5 – BASIS OF BID

5.01 Bidder will complete the Work in accordance with the Contract Documents for the price(s) in the below schedule.

5.02 Bid schedule:

CONTRACT No. 1FX 2023

BID TOTAL	$

ARTICLE 6 – TIME OF COMPLETION

6.01 Bidder agrees that the Work will be completed per the following milestones:

A. 2) Delivery and Installation shall be within three months of the purchase order, or sooner.

ARTICLE 7 – 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: _____

Tax ID: _____