



Invitation for Bid
to Furnish One Grit Classifier
#B2023-SWR-12

Town of Seabrook, New Hampshire
Wastewater Department



INVITATION FOR BID # B2023-SWR-12

You are cordially invited to submit a Bid to Furnish one (1) Grit Classifier in agreement with the attached specifications, drawings, terms and conditions. Prospective respondents are advised to read this information over carefully before submitting a proposal.

Three (3) copies of the Bid must be submitted in a sealed envelope, plainly marked:

***IFB# B2023-SWR-12
Grit Classifier
Town of Seabrook
C/o Shaylia Wood
Chief Procurement Officer
99 Lafayette Road
Seabrook, NH 03874***

All proposals/bids must be received by October 5th, 2023 at 2:00 p.m. EST and will be opened publicly at such time



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PURPOSE OF PROPOSAL

The purpose of this Invitation to Bid and accompanying specifications are to furnish one (1) Grit Classifier in accordance with the specifications and drawings. The Grit Classifier shall be complete with the following equipment: secondary grit concentrator, grit screw conveyor, local controls, and auxiliary equipment as specified herein. All wetted parts shall be constructed of 304 stainless steel or better.

PROPOSAL TERMS

The Town of Seabrook reserves the right to accept or reject any and all proposals in whole or in part received as a result of this IFB. If a proposal is selected, it will be the most advantageous regarding price, quality of service, the contractor's qualifications and capabilities to provide a particular service. The Town reserves the right to consider proposals for modifications at any time before a contract is awarded, and negotiations would be undertaken with that contractor whose proposal is deemed to meet the Town's specifications and needs best. There will be no reimbursement to any candidate if the selection process is terminated. The Town of Seabrook reserves the right to waive defects and informalities of the proposals.

All bids must be received no later than 2:00 pm EST on October 5, 2023. The submittal package shall include three (3) copies of the proposal. No telephone, email, or facsimile proposals will be accepted. All proposals received after the deadline will not be accepted and will be returned unopened.

INTENTION TO BID / ADDENDA

Bidders that want to participate in the IFB are urged to submit an intention to bid form to receive addendums and possibly additional information. Intention to Bid forms can be found on the town website at www.Seabrooknh.info/procurement. Completed Intention to Bid forms and questions may be emailed to the Chief Procurement Officer at Swood@seabrooknh.org. All questions shall be submitted in writing to only the Chief Procurement Officer at the above address by September 28, 2023, at 2:00 pm EST. The Chief Procurement Officer will then forward both the question and the Town's response to questions to all prospective bidders. In the event it becomes necessary to revise any part of the IFB, addenda will be provided by email and on the Town website at www.Seabrooknh.info/procurement. Deadlines for submission of IFB's may be adjusted to allow for revisions. To be considered, original proposals with amended proposals must be submitted before the date and time specified.



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PRODUCT SPECIFICATIONS

GRIT CONCENTRATOR – 250 GPM

- A. The second stage, 250 GPM Grit Concentrator, shall be provided as shown on the drawings for secondary treatment of organics and secondary grit dewatering. The 250 GPM Grit Concentrator shall operate on the constant rate vortex principle. The design shall be such that a small volume of water and the grit will discharge at the bottom for final dewatering and ultimate disposal of the grit.
- B. At a minimum, 93 to 94 percent of the water pumped to the Grit Concentrator and 95 to 96 percent of the residual organic material shall flow out the top and be returned to the inlet channel to the Grit Chamber. The unit shall be capable of intermittent operation with minimal variation in removal efficiency. There shall be less than 5% putrescible material in the recovered grit from the underflow.
- C. The 2-piece 250 GPM Grit Concentrator shall be constructed of a Ni-Hard top section, with a minimum thickness of 1/2" in high wear areas, and a bottom cone constructed of the same material, with a minimum thickness of 3/4" and which shall be readily replaceable. Inlet and outlet connections shall be as shown in the drawings. The 250 GPM Grit Concentrator shall be provided by the Manufacturer of the Grit Chamber for installation. The operating range shall be compatible with the total grit removal system as described herein.

GRIT SCREW CONVEYOR WITH PARALLEL PLATE SEPARATOR

- A. The Grit Screw Conveyor shall be constructed of 304SS or better with an inlet hopper to receive the mixture of water and grit. The hopper shall be equipped with an energy dissipation zone to prevent turbulence in the remaining portion of the hopper. The hopper shall have parallel plates located in the settling zone to improve the retention of the fine grit. A double-sided overflow weir trough shall be provided to return the water to the system. The conveyor shall be freestanding with support legs to hold the conveyor at an angle of approximately 22°. The discharge shall be 8" diameter, plain-end pipe. The drive assembly shall be located at the discharge end.
- B. The Grit Screw Conveyor shall have an open, 3/16" steel U-trough. The screw shall be 9" in diameter. The conveyor shall be 13' in length, with overall dimensions as shown in the drawing. The hopper shall have a 4" full-length outlet weir trough to minimize the overflow rate and carryover of the fine grit. The projected separator plate settling area shall be a minimum of 15.1 square feet.
- C. The screw shall run on anti-friction bearings at the outlet end and a bronze bushing at the inlet end. The inlet end shaft bushing shall be capable of being greased. The inlet end shall have two 2" drains. Clearance between the legs and the discharge outlet shall be as shown in the drawing.



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- D. The drive to the conveyor shall be a direct-driven, shaft-mounted helical gear reducer. The motor shall be 1 HP, TEFC, 3-phase, 60 cycle, 460 volt. The screw speed shall be 9 RPM. The drive shall be mounted on a plate at the discharge end and the plate shall be bolted to the flanges on the trough.
- E. A solid 304SS or better, cover shall be provided over the hopper and trough openings.
- F. All carbon steel surfaces shall be cleaned and coated with 6-8 mils dry film thickness of Versapox epoxy coating or equivalent, Factory-applied, prior to shipment.

PUMP IMPELLER (Add Alternate)

- A. A grit pump impeller (S&L Part# 60D250-72) shall be provided with the grit classifier.

CONTROLS

- B. A NEMA 7 Hand-Off-Automatic selector switch and E-stop button shall be provided for the grit screw classifier.
- C. Zero speed switch and NEMA 4 zero speed switch isolator to be provided for mounting next to the existing main control panel. 24VDC Power to be supplied by existing main control panel.
- D. 1HP (460V) Motor starter to be provided from existing main control panel.

CORROSION PROTECTION

- A. All structural carbon steel surfaces shall be Factory-blasted with steel grit to remove rust, mill scale, weld slag, etc. All weld spatter and surface roughness shall be removed by grinding. Surface preparation shall comply with SSPC-SP6 specifications. Immediately following cleaning, a single 3-mil (0.08 mm) dry film thickness of red oxide primer shall be Factory-applied prior to shipment.
- B. Stainless steel, aluminum, and other corrosion-resistant surfaces shall not be coated. Carbon steel surfaces, not otherwise protected, shall be coated with a suitable non-hardening rust-preventative compound. Auxiliary components, such as the grit pump, gear motor, etc., shall be furnished with the original Manufacturer's coating.

STARTUP

- A. The Manufacturer shall provide the services of a Factory-trained representative for a maximum period of two (2) days in one (1) trip on-site to assist with the initial startup and to instruct the Owner's operating personnel in the operation and maintenance of the equipment.



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WITHDRAWAL OF BID PROPOSAL

A bidder will be permitted to withdraw his/her proposal unopened after it has been deposited if such request is received in writing prior to the time specified for opening the proposals.

CONSIDERATION OF PROPOSALS

Bids will be made public at the time of opening and may be reviewed only after they have been properly recorded. In the case of discrepancy between prices written in words and those written in figures, the prices written in words shall govern. In the event of a discrepancy between the total shown in the proposal and that obtained by adding the products of the quantities of items and bid prices, the latter shall govern.

AWARD OF CONTRACT

The successful bidder will be notified, by mail to the address on his/her proposal, that his/her bid has been accepted and that he/she has been awarded the contract.

CANCELLATION OF AWARD

The Town reserves the right to cancel the award of any contract at any time before the execution of such contract by all parties without any liability against the Town.

EXTRAS

Except as otherwise herein provided, no charge for any extra work or material will be allowed unless the Town Manager has ordered the same, in writing.

*The Town of Seabrook is a Tax-Exempt Organization.

WARRANTY

The Manufacturer of the equipment shall provide a guarantee for one (1) year from the date of startup, not to exceed eighteen (18) months from the date of shipment, that all equipment he provides will be free from defects in material and workmanship.

In the event a component fails to perform as specified or is proven defective in service during the warranty period, the Manufacturer shall repair or replace such defective part. The cost of labor and all other expenses resulting from the replacement or replacement of parts is not included.



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The repair or replacement of those items normally consumed in service, such as seals, grease, light bulbs, etc., shall be considered as part of routine maintenance and upkeep.

BID SUBMISSIONS

- A. Any unnamed manufacturer shall be required to provide Submittals shall include at least the following:
1. Complete catalog information, descriptive literature, specifications, and complete parts list with identification of construction materials.
 2. Installation instructions (assembly, alignment, and adjustment procedures).
 3. Total weight of the equipment, including the weight of the single largest item for each equipment assembly
 4. Certified structural, mechanical, and electrical drawings showing important construction details, equipment dimensions, size, anchor bolt locations, and locations of external utility piping and electrical connections and requirements.
 5. Motor data including material of construction, dimensions, rpm at full load, frequency, voltage, full load current, code and design letter, efficiency, horsepower, number of phases, time rating, temperature rise, service factor, and bearing life rating. Include motor manufacturer's recommended lubrication requirements.
 6. Power and control wiring diagrams, including terminals and numbers.
 7. Factory test report of the inspection.
 8. Special shipping, storage and protection, and handling instructions.
 9. A list of Manufacturer's recommended replacement parts required to maintain the equipment for a period of one year, with current price information.
 10. A list of special tools, materials, and supplies furnished with the equipment for use prior to and during startup and for future maintenance.
- B. Submit Operation and Maintenance Manuals.
- C. Submit an Equipment Warranty and Certification



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Bids must be signed by an official authorized to bind the contractor to its provisions for at least a period of 90 days. Failure of the successful bidder to accept the obligation of the contract may result in the cancellation of any award.

“The undersigned certifies under penalties of perjury that this bid is in all respects bona fide, fair and made without collusion or fraud with any other person. As used in this section, the word "person" means any natural person, joint venture, partnership, corporation, or other business or legal entity.”

(Authorized Signature)

(Date)

(Company) & (Title)

CONTRACT TERMS

The Town of Seabrook will negotiate contract terms upon selection. All contracts are subject to review by Town of Seabrook legal counsel and will be awarded upon signing of a commitment or contract, which outlines terms, scope, budget, and other necessary items.

Approved by:

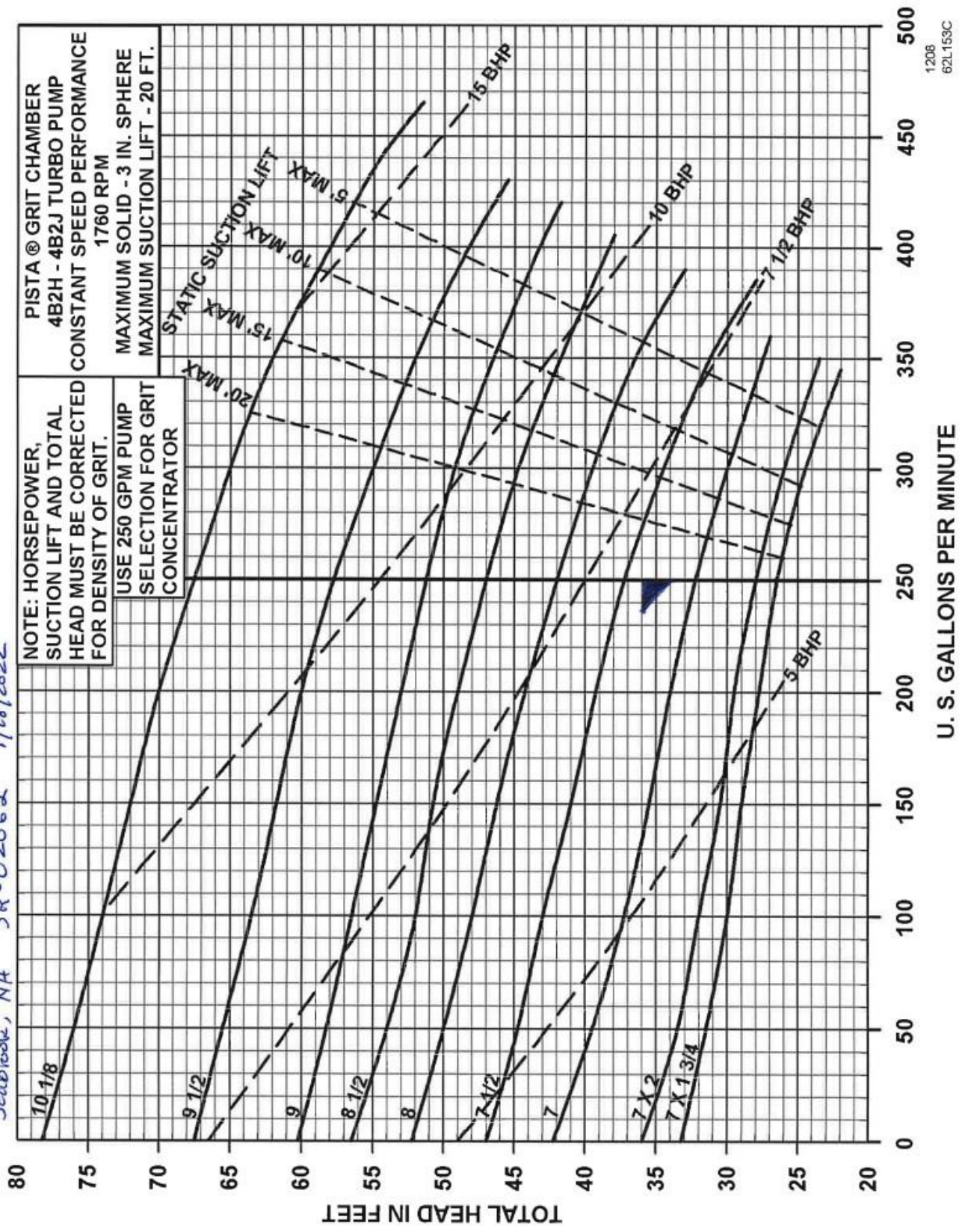
William M. Manzi III
Town Manager

8/30/23



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Seabrook, NH 3R-02062 1/18/2022



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62L153C



Invitation for Bid to Furnish One Grit Classifier #B2023-SWR-12

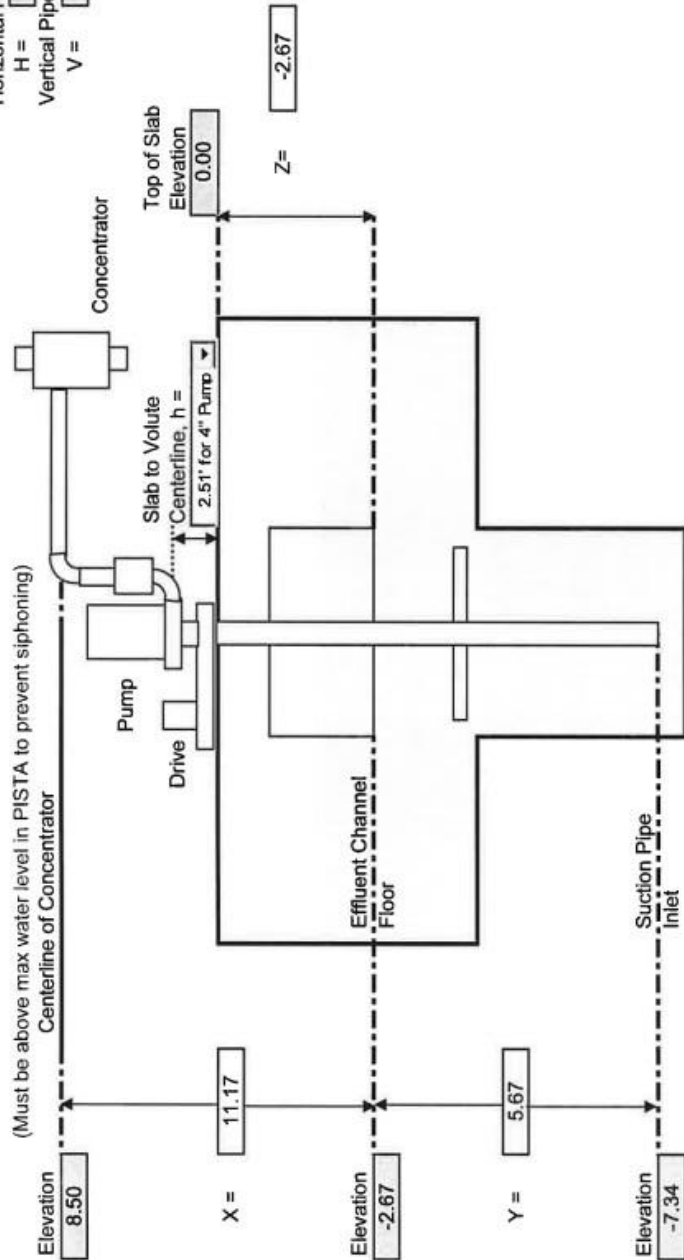
PISTA Pump TDH Calculations

Top Mounted Pump

Inquiry Number
 Job Location

Date

Horizontal Pipe Length
 H =
 Vertical Pipe Length
 V =



Formula Constants Dependent on Design of Plant:
 Grit Piping Friction Factor f =
 Concentrator Inlet Pressure C =

Static Head A =
 (X) (1.4) =
 Suction Head B =
 (Y) (0.4) =
 Friction Head F =
 (EPL) (f) (1.4) =
 Pump P =
 Concentrator C =

To Calculate Equivalent Pipe Length:
 $EPL = H + V + (\text{Qty elbow} \cdot EPL \text{ elbow}) =$
 Qty elbows EPL
 2 11' for 4" piping
 90 deg elbow 7' for 4" piping
 90 deg long radius 5' for 4" piping
 45 deg elbows

TDH = $A + B + F + P + C =$
 Suction Lift (MSL) = $(Z + h)(1.4) + (Y)(0.4) =$
 Pump Pick
 RPM BHP from curve
 (BHP from curve)(1.3) = HP draw at design

1/18/2022

