



CITY OF TORRINGTON
INVITATION TO BID

BID # PGW-030-042607 PRIMARY SLUDGE GRIT WASHER

Date of bid opening: **April 26, 2007** Time: **10:00AM** Location: Room 109A, City Hall

Bid Bond or Certified Check required with bid: **5%**

Performance Bond required if awarded bid: See "Instructions to Bidders"

Submit an original bid and a duplicate copy.

The City of Torrington reserves the right to accept or reject any or all bids or any portion thereof, to waive technicalities, and to award the contract as will best serve the public interest.

Omit State and Federal Taxes.

All prices must be F.O.B.: Destination (Torrington) unless otherwise requested.

Dated in Torrington: 3/29/07 Purchasing Agent _____
Charlene R. Antonelli, CPPB

Item	PRICE
FURNISH & INSTALL PRIMARY SLUDGE GRIT WASHER PER SPECIFICATIONS	\$ _____

The Purchasing Agent is authorized to offer City based bidders that exceed the lowest bid by up to 6%, the opportunity to match the lowest bid. A City based bidder within the 6% differential who agrees to accept the amount of the lowest bid will be awarded the bid. When multiple City based bidders agree to accept the amount of the low bid then the City based bidders will be invited to submit a new bid, not to exceed the low bid. The bid will then be awarded to the lowest responsive, responsible bidder.

Bid Submitted By: _____

Name of Company _____
Address _____

Phone _____ Fax _____

Delivery Date _____

E-mail address _____

Comments: _____

Signature

Title

Date

Web Page

INSTRUCTIONS TO BIDDERS

Sealed bids will be received by the Purchasing Agent, Room 109A, 140 Main St., Torrington, CT until the time and date specified on the cover sheet and opened thereafter in the Purchasing Department, Room 109A. Bids received later than the time specified will not be accepted. Amendments to or withdrawal of any section of the submitted bid received later than the time & date set for the bid opening will not be considered. Bid proposals must remain in effect for a minimum of 30 days unless otherwise noted elsewhere in the bid specifications.

BID DOCUMENTS: are available over the Internet on the City's web page, under "open bids", www.torrington-CT.org. Businesses without internet access may contact the Purchasing Department at 860-489-2224 for the bid documents. Any alleged oral agreement made by a bidder or contractor with any agency or employee of the City of Torrington will be disregarded.

FREIGHT: Prices quoted shall be net delivery **F.O.B. Torrington, CT**. All bid prices must include prepaid delivery, assembly, and/or installation (ready for operation and/or use) of all equipment and/ or materials to the individual locations(s) as designated by the Purchasing Agent. All bid prices are to be submitted on the sheets provided on this bid. Quantities and pricing are to be listed in accordance with these sheets.

EXPARTE COMMUNICATION: Please note that to insure the proper and fair evaluation of a bid, the City of Torrington prohibits exparte communication (i.e., unsolicited) initiated by the Bidder to a City Official or Employee evaluating or considering the bids prior to the time a bid decision has been made. Communication between Bidder and the City will be directed in writing to the Purchasing Agent only. The Purchasing Agent will obtain the information or clarification needed. Exparte communication may be grounds for disqualifying the offending Bidder from consideration or award of the bid and repeat offenders may be disqualified from future bids.

QUESTIONS: Request for interpretation of any portion of the bid shall be made to the Purchasing Agent at (860) 489-2225. All replies will be given verbally and a copy of any such inquiry and advice (if deemed vital to the bid by the Purchasing Agent) will be made available to each prospective bidder. Bidders should check the web site for addendums/updates 48 hours prior to the bid opening.

In the event of receipt of identical bids as to offerings, delivery, service, content, price, etc., the bid will be awarded in accordance with the information contained in the bid document, based on first received as to date and time of receipt of the bid.

NON-COLLUSION STATEMENTS: In order for bids to be considered, a non-collusive statement must be submitted with the bid. A sample non-collusive bid statement is attached. Bidders may elect to submit their own notarized non-collusion statement.

CONDITIONAL, QUALIFIED OR NON-RESPONSIVE BIDS/PROPOSALS: All bids/proposals shall be submitted in the form and manner as indicated by the bid documents and bid forms. Any proposal which is not submitted in the form and manner indicated by the bid documents or which contains information, statements, conditions, or qualifications which place conditions or qualifications on the proposal submittal for purposes of making an award, or which alter any proposal terms, conditions, specifications, or forms, which has not been previously approved by written addendum from the Purchasing Agent, or which does not meet legal requirements, shall be declared as a qualified, conditional, or non-responsive proposal and shall be rejected without further consideration. Any proposal response that does not fully respond to and comply with all detailed specifications or requests for information including execution of proposal forms, may be declared "non-responsive" and recommended for rejection. The City of Torrington shall not be responsible for any errors or omissions of the Offeror.

UNBALANCED BIDS AND/OR EXCESSIVE LINE ITEM PRICES: The City reserves the right to reject any bids in which unit prices, in the sole opinion of the City, are unbalanced. In addition, where the City has decided to make an award, it further reserves the right to non-utilize a particular line item that in the sole opinion of the City is excessively priced, and reserves the right to obtain that item from another source.

CONTRACT: A response to an Invitation To Bid is an offer to contract with the City of Torrington based upon the terms, conditions, and specifications contained in the City's ITB. Bids do not become contracts unless and until executed by the City, eliminating a formal signing of a separate contract. For that reason, all of the terms and conditions of the contract are contained in the ITB, unless any of the terms and conditions are modified by an ITB Amendment, a Contract Amendment, or by mutually agreed terms and conditions in the contract documents.

TAXES: Omit all State and Federal taxes from the bid. The City of Torrington is exempt from the payment of taxes imposed by Federal government and/or the State of Connecticut.

OWNERSHIP OF DOCUMENTS: All documents, including drawings, plans, specifications, videotapes, or other documents or maps prepared by a contractor pursuant to any agreement arising from this bid shall become the property of the City of Torrington upon completion of the project or any termination of the project prior to the completion of the project.

LEGALITY: All bid offers for commodities, work, materials, or equipment hereunder shall comply in every respect with the laws, specifications and requirements of the State of Connecticut and the Federal government. Contractor will comply with the provisions of the Connecticut Fair Employment Practices Law.

LANGUAGE DISPUTES: Any disputes over the interpretation and/or meaning of any individual terms, conditions, and/or language within this Request for Bid/Proposal document shall be resolved by and at the sole discretion of the City Purchasing Agent in a manner that is in the best interest of, and best advantage to, the City of Torrington, provided any such interpretation shall be reasonable. In the event that an individual term, condition, and/or language/wording is determined at any time, including after award, by the City Purchasing Agent to be "not applicable at all" to his contract, then the term, condition, and/or language/wording may be disregarded, even though an addendum is not issued. However, if the Purchasing Agent determines that the term, condition, and/or language/wording "is applicable in part", then the term, condition, and/or language/wording will apply to the degree applicable, even though an addendum is not issued.

RESPONSIBILITY: The Contractor shall save the City of Torrington, its agents or employees, harmless from liability of any kind for all claims of labor payments and materials furnished for this work, and for use of any copyrighted or uncopyrighted composition, secret process patented or unpatented invention, article or application furnished or used in the performance of the contract of which the Contractor is not the patentee, assignee, or licensee. The successful bidder agrees to indemnify and hold harmless the City of Torrington, its agents and employees from any and all liability arising out of the successful bidders' operations, functions and/or supplied items.

The successful bidder, vendor, and/or contractor must protect all property of the City of Torrington (i.e. all floors, furniture, grass, land, etc.) from injury or other damage. Any damage so caused must be repaired by contractor/vendor at his/her own expense. At the completion of work, the vendor and/or contractor must remove from the premises all surplus materials and all debris created by same. The premises must be left in a broom-clean and finished condition acceptable to the owner or its agents. Successful bidder will furnish adequate protection from damage for all work and to repair damage of any kind; for which he or his workers are responsible, to the premises or equipment to his own work or to the work of other contractors.

DEFAULT: It shall be understood that a bidder supplying equipment and/or supplies will be considered to be in default if/when they have not delivered the item(s) within the time constraints listed in this document or subsequent purchase orders and/or contract. Bidders providing a service and/or construction will be considered to be in default if/when they have failed to meet the completion date set forth in this document or its subsequent contract and/ or purchase orders and/ or they have ceased work on the project for a period of fifteen (15) working days, cumulative or consecutive.

SUSPENSION AND DEBARMENT: The Purchasing Agent may suspend or debar the right of a vendor to be included on the vendor list and has the authority to reject any bid or response from any suspended or debarred vendors.

Suspension: A vendor may be suspended based on the following:

- 1) A vendor defaults or fails to fully comply with the conditions, specifications, or terms of a Bid, Quotation, Proposal or Contract with the City of Torrington.
- 2) A vendor commits any fraud or misrepresentation in connection with a Bid, Quotation, Proposal, or Contract with the City of Torrington.
- 3) A vendor is charged by a court with the commission of a criminal offense as incident to obtaining or attempting to obtain a public or private contract or sub-contract, or in the performance of such contract or sub-contract
- 4) A vendor is charged by a court with the following: embezzlement, theft, forgery, bribery, falsification or destruction of records, receiving stolen property, or any other offense indicating a lack of business integrity or business honesty which currently, seriously, and directly affects responsibility as a City contractor. If charges are dismissed or the vendor is found not guilty, the suspension shall be lifted automatically upon written notification and proof of final court disposition provided by the vendor to the City of Torrington.
- 5) A vendor becomes insolvent, has proceedings in bankruptcy instituted against it or, compounds its debts or assigns over its estate or effects for payment thereof, or has a receiver or trustee appointed over its property.
- 6) A vendor's commission of any act or omission to perform act is grounds for debarment.
- 7) A vendor violates the ethical standards set forth in local, state, or federal law.
- 8) Any other cause the Purchasing Agent determines to be so serious and compelling as to materially and adversely affect responsibility of a vendor as a City contractor, including but not limited to suspension by another government entity

Debarment: A vendor may be permanently debarred for the following:

- 1) Default or failure to fully comply with the conditions, specifications, drawings, or terms of a bid, proposal, or contract with the City of Torrington twice in any three-year period.
- 2) Conviction of or judgment obtained in a court for commission of those offenses in connection with the vendor's commercial enterprise stated sections 3) or 4) of suspension section listed above. If the conviction is reversed through the appellate process, the debarment shall be removed upon written notification and proof of final Court disposition from the vendor to the City of Torrington.

TRADE NAME REFERENCES: Any and all references to trade names, types, styles, model numbers, stock numbers or catalogs are intended to be descriptive only and not restrictive. The intention is to indicate to bidders the type and quality of the articles and or materials that will be satisfactory. When reviewing the information, it is the responsibility of the prospective bidder to inform the City of Torrington of any discrepancy that is found (i.e. number listed does not fit item description) Bids received on other makes or models with reference to other catalogs will be considered. The bidder is to clearly state in his bid exactly what he intends to furnish and to furnish with his bid a cut or illustration or other descriptive matter that will clearly indicate and give specification as to the product he/she proposes to furnish. Where a bid is offered on an item other than the trade standard used in the specification the item should be identified on the bid form by entering the MAKE, TRADE NAME AND MODEL NUMBER. It is understood that any substitute and/or alternate that might be offered are guaranteed by the bidder to be of equal or better quality than is referenced in the bid. The item(s) must be equivalent as to function, basic design, type and quality of material, method of construction and any required dimensions. It shall be further understood that during original as well as subsequent shipments spot checks will be performed to insure that the items received are in fact the items offered in the bid. When received, should items/materials prove to be different from what was bid in any way, the bidder agrees to the return of the items and agrees to supply correct items (per bid specifications) at the bidders expense. In the event this return action is required, it is understood the bidder may be subject to removal from the city's approved bidder's list. Bidders are cautioned that surplus, seconds, factory rejects, floor samples, close outs or distressed items are not acceptable and shipments of substitutions, defective or shop-worn equipment will be returned for a full refund at the vendor's expense.

QUANTITY: The quantities and/or materials listed in the specifications/bid sheets may be increased or decreased by the City of Torrington or its designated representative based on actual need at the time the purchase orders are placed.

QUALITY: The City of Torrington reserves the right to reject any proposal in whole or in part offering equipment and/or materials and/or services that in its or its agents opinion does not meet the quality standards desired. Such decision is final and not subject to further recourse by the bidder.

SAMPLES: forwarded by the bidder will be returned to the bidder at his request and expense. Requests for return of samples must be submitted in writing at the time the sample is given to the City of Torrington or its representative. Samples not returned to the bidder will be disposed of at the discretion of the City of Torrington or its designated representative. Large pieces of equipment submitted for evaluation and

inspection are to be picked up by the bidder within 30 days of the bid opening date. Items remaining with the City of Torrington after 30 days will be discarded.

AWARD: It is the intent to award this bid in its entirety to one bidder, however, the City reserves the right to award the bid line item by line item if it is deemed in its best interest to do so. In addition, bidders are advised that should budgetary constraints dictate, part, and/or all the items in this bid may be rejected. This decision shall be considered final and not subject to recourse by the bidder.

In determining the lowest or highest responsible bidder, the City reserves the right to consider, in addition to price, the compatibility, quality, cost of maintenance and availability of parts, experience and/or past performance of the bidder, sufficiency of the financial resources of the bidder as relates to the offerings as well as the ability of the bidder to provide future maintenance and service.

Documents previously submitted to the city of Torrington will not be considered as satisfying submission requirements for this bid.

No bidder can claim any contract rights by virtue of bidding alone. Awarding of the contract means actual written notice by letter and a properly executed purchase order to the bidder or bidders to whom the bid has been awarded.

OPTION TO RENEW: This contract may be extended for four (4) additional one (1) year periods, provided all terms and conditions remain in full force and effect except for the contract period being extended. This option, if exercised, is to be executed in the form of a letter of agreement, to be issued no later than 60 days prior to the expiration of the then current contract period. This option to renew requires the mutual agreement of both parties. Refusal by either party to exercise this option to extend, will cause this contract to expire on the original or mutually agreed upon date. The total period of this contract, including all extensions as a result of exercising this option, will not exceed a maximum combined period of five (5) years.

BONDS:

Performance Bond: The Contractor, when awarded the Bid, must submit within 10 days of the bid award, and before beginning the work or signing a contract, a Performance Bond amounting to one hundred percent (100%) of the total amount of the bid. Said performance bond must be in favor of the City of Torrington and executed by a surety company authorized to do business in the State of Connecticut. The City of Torrington reserves the right to retain the Bid Bond or Certified Check on bids below \$25,000.00 as a Performance Bond. On bids of \$25,000.00 or more the Performance Bond may be furnished in the following manner: Performance Bond, Surety Bond, Certified Check, Bank Check, Savings Account in both the City & Vendor's name or Letter of Credit

Maintenance Bond: The contractor, upon signing a contract and before beginning the work, must submit to the Purchasing Agent a Maintenance Bond to guarantee that if defects in either labor or materials becomes evident within one year after completion and acceptance of work will be fixed at no cost to the City of Torrington. The maintenance bond may be included as a portion of the Performance bond or as a separate bond. If it is issued as a separate bond said maintenance bond must be in favor of the City of Torrington and issued by a surety company licensed and authorized to do business in the State of Connecticut.

Labor and Material Bonds: Per Section 49-41 of the Conn. General Statutes, on Public Works project where the estimate is in excess of \$25,000.00, a labor (payment) and material bond must be furnished to the City. Said bonds must be filed with the Purchasing Agent prior to the commencement of work.

Consent for Release of Final Payment: AIA Document G707 & G706, or equivalent, must be signed and returned by the Surety Company before final payment will be released to the contractor.

INSURANCE:

Certificate of Insurance: All insurers must have an AM Best rating of A-V11 or better and admitted to do business in the State of Connecticut. All insurance policies must include a Waiver of Subrogation whereby the insured waives its right to subrogate against the City, its subsidiaries, employees, volunteers, directors and officers. Proof of proper insurance coverage, Workers Compensation Insurance, Liability and Property damage, and Vehicle Insurance shall be filed with the City of Torrington Purchasing Agent within 10 days after the award of the bid. The Certificate of Insurance must name the City of Torrington, 140 Main St., Torrington, CT, its subsidiaries, employees, volunteers, directors & officers as the additional insured and filed with the Purchasing Agent ten (10) prior to commencement of work. Renewal Certificates of Insurance must be mailed to the Purchasing Agent 10 days prior to the expiration of the required coverage.

Workman's Compensation Insurance: The Contractor shall take out and maintain during the life of the contract adequate Workman's compensation Insurance for all the employees employed on said work. In case any class of employees or subcontractors is engaged in hazardous work under the contract at the site of the work is not protected under the Workman's Compensation statute, the contractor shall provide Workman's Compensation Insurance for the protection of employees not otherwise protected.

Liability Insurance: The Contractor shall take out and maintain for the life of the contract, adequate public liability insurance insuring against liability to persons not employed by him in an amount of not less than \$1,000,000.00 for injuries, wrongful death to any one person and subject to the limit for each person in an amount of not less than \$2,000,000.00 on account of one accident and property damage insurance in an amount of not less than \$1,000,000.00.

Vehicle Insurance: The Contractor shall take out and maintain for the life of the contract, adequate automotive/truck or other vehicle insurance with minimum coverage of \$1,000,000.00 each for both liability and under insured and uninsured motorist as well as any other coverage required by the State of Connecticut or requested by an official of the City of Torrington as relates to the contract.

Additional Security: The City of Torrington reserves the right to require successful bidders to enter into and such security arrangements as are deemed necessary to protect the City of Torrington, its property and goods.

PERMITS: The successful bidder agrees to obtain all work/building permits as might be required. The cost of obtaining such permits is the responsibility of the bidder. The City of Torrington reserves the right to waive local permit fees. In addition, it shall be understood that where property lines are to be considered, bidders are to verify said lines and measurements with proper City Officials prior to commencement of work.

It is to be understood that any/all specifications and/or plans or drawings contained in or developed as a result of the bid process are and shall be presented subject to the approval of the City of Torrington planning, zoning and building officials and that awards made prior to said approval are subject to cancellation.

PREVAILING WAGE: When the State of Connecticut Prevailing Wage Rate is applicable to the bid, the successful bidder must submit a Certified Payroll Record prior to any request and/or invoice for payment.

CITIZENSHIP: Each employee of the Contractor shall be a citizen of the United States or an alien who has been lawfully admitted for permanent residence as evidenced by an Alien Registration Receipt Card. The Contractor agrees not to employ any person undergoing sentence of imprisonment except as provided by Public Law 89-176, September 10, 1965, (18 USC 4082)(c)(2).

SAFETY:

Machine and/or Equipment Hazard Assessment and Safety Training: Upon delivery of machines and/or equipment, suppliers are required to provide to the end-user employees, at no additional charge, a training session that will emphasize hazard awareness and assessment and the safe use of such machinery/equipment.

Occupational Safety and Health Act of 1970: Seller shall warrant that the machinery, equipment or other materials covered hereby shall upon delivery to the City of Torrington, be in compliance with the standards required by said Act and any updates as pertain to or reference said Act as well as the standards required by comparable State and local laws, if any, for such machinery, equipment or other materials in effect at the time of delivery.

Machines and/or Equipment Lockout/Tagout: In an effort to comply with OSHA's final rule on the control of hazardous energy sources, vendors must warrant that any and all machines and/or equipment as is covered under this bid will be supplied and/or installed equipped with lockout/tagout devices as prescribed by OSHA.

Toxic Substance Control Act (PL94-469): Seller warrants that each and every chemical substance constituting or contained in the products sold or otherwise transferred to the City of Torrington under this bid and subsequent purchase orders is not on the list of prohibited chemical substances compiled and published by the Administrator of the Environmental Protection Agency pursuant to Act PL94-469 and are otherwise in compliance with said Act.

Hazardous Materials: Any materials required by this bid and subsequent purchase orders that are hazardous under federal, state, or local statute, ordinance, regulation, or agency order will be packaged, labeled, marked and shipped by the seller to comply with all federal, state and local regulations then in effect including but limited to the provisions of the Hazardous Materials Transportation Act and Regulations promulgated thereunder and will further comply with any special requirements and any policies and procedures of the City of Torrington relating to the purchase of hazardous materials as might be noted on subsequent purchase orders or otherwise communicated to seller in writing.

Material Safety Data Sheets: Shall be provided by the Seller upon delivery to the City of Torrington of any goods having constituents listed in the following references - OSHA 1910, ACHIG Current Threshold Values, DOT HazMat Table 49, IARC Carcinogen List, National Toxicology Program Carcinogen List, and/or Radioactive Materials. These Material Safety Data Sheets must be consistent with and include information required by the OSHA Hazard Communication Standard published as 29 CFR 1910.1200, as the same may be amended or supplemented from time to time.

Asbestos: Bidders are advised that asbestos-containing material may be located in the boiler rooms, pipe tunnels, storage areas and various portions of City buildings. Before proceeding on any contractual work on City buildings or their interiors, it is mandatory that bidders familiarize themselves with the asbestos-containing material and that said material be considered as a health hazard and all precautionary measures according to the Ahera Rules & Regulations be observed. It is the bidder's responsibility to notify all employees and/or subcontractors of this notification.

SUBCONTRACTORS: The successful bidder shall not employ any subcontractor to fulfill any of the duties herein specified without express, prior written approval of the City of Torrington or its designated agent.

EEO: The successful bidder shall provide any/all additionally required, affirmative action statements, fair employment plans and non-discrimination programs and statement as might be required by the City of Torrington. In connection with the execution of this bid, subsequent purchase orders and/or contracts, the seller shall not discriminate against any employee or applicant for employment because of age, race, religion, color, sex or national origin. Bidders must comply with all rules & regulations of the Department of Labor with regard to Equal Employment Opportunities as pertain to municipalities.

TERMINATION OF CONTRACT: Any contract entered into by the City and the successful bidder shall provide that the City may terminate the contract upon thirty (30) days notice to the bidder.

The City of Torrington reserves the right to award or reject any or all bids, or any portion thereof, to waive technicalities, and to award the bid and/or contracts to one or more bidders submitting essentially identical proposals and, that in the city's judgment, will best serve the public interest.

The terms and conditions of these "Instructions To Bidders" are made a part this bid.

SAMPLE FORM

Bid # _____

NON-COLLUSION AFFIDAVIT

STATE OF _____ COUNTY OF _____

I, _____, being first duly sworn, deposes and says that:

- 1. I am _____ of _____, the bidder that has submitted the attached request for proposal for _____;
- 2. I am fully informed respecting the preparation and contents of the attached RFP and of all pertinent circumstances respecting such bid;
- 3. Such Bid is genuine and is not a collusive or sham Bid;
- 4. Neither the Bidder nor any of its officers, partners, owners, agents, representatives, employees or parties of interest, including this affiant, has in any way colluded, conspired, connived or agreed directly or indirectly with any other Bidder, firm or person to submit a collusive or sham Bid in connection with the work for which the attached Bid has been submitted nor has it in any manner, directly or indirectly, sought by agreement or collusion or communication or conference with any other Bidder, firm or person to fix the price or prices in the attached Bid or of any other Bidder, or to fix any overhead, profit or cost element of the Bid price or the price of any Bidder, or to secure through any collusion, conspiracy, connivance or unlawful agreement any advantage against the City of Torrington or any person interested in the proposed Bid; and
- 5. The price or prices quoted in the attached Bid are fair and proper and are not tainted by any collusion, conspiracy, connivance or unlawful agreement on the part of the Bidder or any of it agents, representatives, owners, employees, or parties in interest, including this affiant.

Signed _____

Title _____

Subscribed and sworn to before this _____ day of _____, 20____.

Notary Public

My commission expires _____

SAMPLE FORM

BID # _____

**CONSENT OF SURETY COMPANY
TO RELEASE FINAL PAYMENT**

City
Architect
Contractor
Surety
Other

PROJECT/BID NUMBER :

TO: City of Torrington
 Attn: Purchasing Agent
 140 Main Street
 Torrington, CT 06790

CONTRACTOR: _____

In accordance with the provisions of the Contract between the City of Torrington and the Contractor as indicated above, the (insert name & address of Surety Co.)

_____, SURETY
COMPANY on bond of (insert name & address of
Contractor) _____

_____, CONTRACTOR,
hereby approves of the final payment to the Contractor, and agrees that final payment to the Contractor shall not
relieve the Surety Company of any of its obligations to the CITY OF TORRINGTON as set forth in the Surety
Company's bond.

Subscribed and sworn to before this
____ day of _____, 20__.

Notary Public

My commission expires _____

Surety Company

Authorized Representative's Signature

Title

**SPECIFICATIONS:
BID # PGW-030-042607
PRIMARY SLUDGE GRIT WASHER**

PART 1 – GENERAL

- A) The City of Torrington is seeking sealed bids for one (1) 250 GPM Grit Washer. For procedural questions please contact the Purchasing Agent: Charlene Antonelli (860) 489-2225. For technical questions please contact WPCA Administrator: Ray Drew (860) 485-9166.
- B) The vendor shall furnish and install one Grit Washer as detailed in the technical specifications below. The scope of the work includes the removal and storage of the currently installed grit washer, and the furnishing of all labor and materials required to install the new grit washer.
- 1) If vendors unit fails to perform as specified vendor shall be responsible for removal of unit and reinstallation of existing unit.
- C) Due to the nature of the City of Torrington Water Pollution Control Facility operations, the total amount of time allowed for the removal of the existing grit washer, installation and startup of the vendors unit shall not exceed two (2) calendar days.
- 1) Liquidated damages of \$1000.00 per day shall be assessed beginning on the third (3rd) day.
- D) Due to the nature of the grit treated, only the type of grit washer described herein shall be acceptable.
- E) Reference Standards
- 1) American Society of Testing and Materials (ASTM)
 - a) ASTM A36 – Standard specification for Carbon Structural Steel.
 - b) ASTM A48 – Standard specification for Gray Iron Castings.
 - c) ASTM A532 – Standard Specification for Abrasion-Resistant Cast Irons.
 - 2) American National Standards Institute (ANSI)
 - a) ANSI 9 – Load Ratings and Fatigue Life for Ball Bearings.
 - b) ANSI 11 – Load Ratings and Fatigue Life for Roller Bearings.
 - 3) American Institute of Steel Construction (AISC)
 - a) Specification for the Design Fabrication and Erection of Structural Steel for Buildings.
 - 4) American Welding Society (AWS)
 - 5) The Society for Protective Coatings (SSPC)
 - 6) National Electrical Manufacturers Association (NEMA)

- 7) Underwriters Laboratories (UL)
- 8) American Iron and Steel Institute (AISI)
- 9) Where reference is made to one of the above standards, the revision in effect at the time of bid opening shall apply.

F) Submittals

- 1) Reference list with at least ten (10) operating installations of the unit specified and in the same service as specified that have been in service for not less than five (5) years. Contact names and phone numbers shall be included for each site. Copies of manufacturers latest ISO 9001 and 14001 certifications.
- 2) Three (4) sets of shop and erection drawings of equipment.
 - a) One (1) set shall be in electronic format (i.e. autocad).
- 3) Shop drawing data for accessory items.
- 4) Manufacturers literature as needed to supplement certified data.
- 5) Three (4) sets of Operating and Maintenance instructions and spare parts list.
 - a) One (1) set shall be in electronic format (i.e. autocad).
- 6) Gear drive data including service factor, efficiency, torque rating and materials.
- 7) List of recommended spare parts other than those specified.
- 8) Recommendations for short and long term storage.
- 9) Qualifications of field service engineer.
- 10) One (1) set of special tools required for maintenance and erection.
- 11) Lifting point and equipment weight specifications.
- 12) Manufacturers product data and specifications for shop painting.
- 13) Manufacturers testing curves showing capture rates as a function of the flow through the grit washer for the sand particle size of 200 micron. An officer of the manufacturer shall sign these test curves.
- 14) Failure to provide all required information will result in rejection of the Bid with no further review.
 - a) Exceptions
 - (i) Item 2 – Two Sets may be submitted upon delivery of unit.
 - (ii) Item 5 - Two Sets may be submitted upon delivery of unit.
 - (iii) Item 10 - Submitted upon delivery of unit.

G) Quality Assurance

- 1) Grit Washer manufacturer shall have a certified quality management system in accordance with ISO 9001.
- 2) Grit Washer shall be manufactured in an ISO 14001 certified facility.
- 3) Grit Washer shall be manufacturers standard catalogued product and modified to provide compliance with the drawings, specifications and the service conditions as specified.
- 4) Welding shall be in accordance with AWS Code D 1.1 or equivalent.
- 5) Equipment shall be passivated after its fabrication by full immersion in a pickling bath, to protect the stainless steel against corrosion. Other finishing methods shall not be acceptable.
- 6) Unit shall be shop tested prior to installation to ensure proper operation.

- 7) Grit Washer manufacturer shall provide grit washer unit, motors, gear reducers, controls and control panels, lifting attachments and all other necessary equipment as a complete integrated package to insure proper coordination, compatibility and operation of the system.
- 8) Field Performance Testing: Field Performance test as specified below.
- 9) Start-up and operator training as specified below.

PART 2 – DESCRIPTION

The grit washer includes a grit washer tank, a central inlet vortex chamber and coanda tulip for directing inflowing grit slurry in a radial direction to circumferential overflow weir, a conical stratification tank with cover, a stirring device with gear motor, a fluidized grit bed at the bottom of the stratification tank for intensive grit washing and separation of particles dependent on their specific gravity difference, a grit conveying and dewatering screw, controls and appurtenances.

Primary Sludge containing grit from the primary settling tanks shall be introduced through a vortex chamber creating a rotating flow pattern and through the Coanda tulip into the grit washer tank. The water flow is directed by the Coanda from an axial flow to a radial flow towards the overflow weir that is provided at the circumference of the grit washer tank. The change of the flow direction leads to effective sedimentation of the grit towards the bottom of the grit washer tank.

A fluidized grit bed shall be maintained in the bottom portion of the grit washer tank. Within this fluidized bed, the grit shall be intensively washed and organic material effectively removed from the inorganic particles. Wash water shall be introduced into the bottom of the grit washer and dispersed through a perforated diaphragm to generate the fluidized bed. The wash water shall effectively flush the organic materials out of the fluidized bed towards the overflow weir. Wash water shall be plant effluent water.

Effective stratification of various components dependent on specific density shall be achieved within the conical portion of the grit washer tank. A connection with an automatically operated valve shall be provided for removal of organic material out of the conical section of the tank and into the drain line back to primary settling tanks. A stirrer shall be provided which shall move the organic material toward this connection.

Washed grit shall be removed through a central tube at the bottom of the grit washer. The stirrer shall move washed grit toward the central tube. The washed grit shall drop into an inclined auger. The auger shall dewater and convey the grit above the level of the overflow weir. The washed and dewatered grit shall be discharged at the upper end of the auger into a one (1) cubic yard container.

A Control panel shall be provided that will provide local and remote control of the complete system and shall be capable of being integrated into the plant SCADA system.

Unit shall be designed to operate from signal input from grit slurry pumps.

PART 3 - PRODUCT

A) Manufacturers

- 1) The Primary Sludge Grit Washer shall be a Model RoSF4 as manufactured by HUBER Technology, Inc. Huntersville, North Carolina or Equivalent. Note: It is the bidder's

responsibility to provide sufficient evidence with its bid proposal for the City of Torrington to determine that its proposed brand or model is “equivalent to or better than” the above referenced product

B) Design and Performance

- | | |
|---|----------------|
| 1) Number of Units: | One (1) |
| 2) Design flow of grit slurry: | 250 GPM |
| 3) Maximum flow of grit slurry: | 380 GPM |
| 4) Grit processing capacity: | One (1) ton/hr |
| 5) Maximum water content in washed grit: | 10% |
| 6) Maximum volatile solids content in dried grit: | 5 % |
| 7) Minimum capture rate of 200 micron grit particles: | 95% |

C) Materials of Construction

- 1) All structural components with the exception of motors, gears shall be constructed of stainless steel SS 304 unless otherwise noted. Material thickness shall be minimum of 1/8” (3 mm) unless otherwise noted.
- 2) All components, after fabrication shall be passivated (pickled) by submergence in an acid bath.

D) Grit Washer

- 1) All parts of the grit washer shall be designed and appropriate for the service specified and shall be designed for continuous operation.
- 2) All components of the unit shall be installed in the Primary Process building and shall allow sufficient room for inspection, repair and adjustment as needed.
- 3) A 6-inch diameter grit slurry feed pipe shall be installed and or modified to connect to the grit washers feed connection.
- 4) A ½ inch wash water feed connection shall be provide for connection to the plant water system and potable water system with appropriate valves and connections.
- 5) A 6-inch diameter drain line shall be connected from the grit washer drain connection to plant drain system.
- 6) A 4-inch diameter organic slurry removal line shall be installed from the grit washer’s organic removal valve to drain.
- 7) An inclined grit conveyor screw (auger) shall be provided. Grit conveying screw shall be capable of operating in Forward and Reverse directions. Its inlet hopper shall be a flanged connection to the grit discharge tube. The auger shall discharge at a height of 94 inches above the floor. The inlet hopper shall be provided with a 3-inch diameter drain connection with a ball valve shut off. The drain connection shall be provided with a 1 inch flushing connection with ball valve.
- 8) The conveyor screw trough shall be constructed of a minimum of 10/64-inch thick stainless steel.
- 9) The screw shall be shafted and constructed of stainless steel. A shaftless screw is not acceptable. A maintenance free ceramic bearing shall support the lower end of the screw shaft. Wear strips are not acceptable.
- 10) A screw drive shall be provided at the upper end of the auger. The motor shall be continuous duty rated and shall be selected to match the duty of the particular grit conveying screw. The drive unit shall be directly coupled to the grit conveying screw drive shaft.

- 11) Sampling ports shall be provided on the inlet slurry feed line and the organic return line.
- 12) A hinged observation lid shall be installed on the top of the unit.

E) Motors

- 1) Maximum motor speed shall be 1800 RPM
- 2) Motors shall have minimum service factor of 1.00
- 3) Torque must be sufficient to start and operate grit washer components without exceeding nameplate ratings for current and power.
- 4) Rating shall be 230/460V, 3-Phase, 60 Hz
- 5) Motors shall be Class 1, Division 2. Suitable for intended environment.
- 6) Nominal power, screw drive motor: 1.5 Hp
- 7) Nominal power, stirrer motor: 0.75Hp
- 8) All conduits shall be rigid stainless steel.

F) Controls

- 1) A pressure sensor shall be used to control grit discharge
- 2) A flow meter shall be used to control wash water.
- 3) An overflow sensor shall be installed to shut down slurry feed.
- 4) Control Panel
 - a) A 460 Volt primary control panel shall be provided in a NEMA 4X rated enclosure. The enclosure shall be suitable for wall mounting, shall have a hinged cover(s) which shall open horizontally and shall be held closed with mechanical spring loaded fasteners, and shall include the following:
 - (i) Main Power Disconnect Switch
 - (ii) Control Power Transformer
 - (iii) Surge Arrestor
 - (iv) Hand-Off-Auto (HOA) Switches for
 - (a) Stirrer
 - (b) Wash water
 - (c) Grit Screw
 - (d) Organic return valve
 - (v) Grit Conveying Screw Forward-Off-Reverse Switch
 - (vi) Organic Valve Closed-Off-Open Switch
 - (vii) Over-Current sensors for screw drive motor and stirrer motor.
 - (viii) Unit shall utilize an Allen Bradley or GE Fanuc Programmable Logic Controller (PLC).
 - (ix) Totalizing run time meters shall be installed for the overall unit operation and for grit conveying screw operation.
 - (x) Operating and Warning lights for the following:
 - (a) Power On
 - (b) Grit Washer Running
 - (c) Over Current Indication
 - (d) Stirrer Running/Stirrer Fault
 - (e) Organic Valve Running/Organic Valve Fault
 - (f) Grit Conveying Screw Running/Grit Conveying Screw Fault
 - (xi) Emergency Stop Button
 - (xii) Lamp Test Button

- (xiii) Laminated plastic nametags shall be provided for the name of the control panel and all disconnects, switches, lights and meters.
- b) Control panel shall be factory wired and tested.

PART 4 - EXECUTION

A) Installation:

- 1) Contractor shall install complete equipment in accordance with Manufacturers instructions and as indicated and specified.
- 2) Contractor shall be responsible for the removal and temporary storage of currently installed Grit Washer. Repair of damage to the Grit Washer during removal or storage shall be the sole responsibility of the contractor.

B) Field Touch-up Painting and Field Welds

- 1) After installation touch-up paint shall be applied to all scratched, abraded and damaged shop painted surfaces. Coating type and color shall match shop painting.
- 2) Contractor shall passivate all field wells with pickling acid.

C) Start-Up and Operator Training

- 1) Manufacturer's Service Engineer for the equipment specified herein shall be present at the jobsite for a minimum of three (3) man-days, for installation, functional testing, certify installation and to provide operator training.
- 2) Service Engineer shall have a minimum of five (5) years experience on the type and size of equipment specified.
- 3) Service Engineer shall inspect and certify location of anchor bolts, check setting, leveling, alignment and field erection of equipment specified.
- 4) Service Engineer shall calibrate and provide start-up of the equipment.
- 5) Service Engineer shall provide classroom and field training as needed to fully train WPCA employees in the operation of the equipment and safety procedures to prevent workplace injuries. See Safety section of "Instructions to Bidders"

D) Performance and Performance Testing

- 1) Contractor/Supplier shall perform performance testing on site. Performance testing shall be performed after successful start-up of unit and within a 30-day period. Testing shall be done by at least one Representative of the supplier together with at least one Representative of the owner. Sample analyzing shall be performed by owner's laboratory or by an independent lab of owner's choice. If the equipment does not pass the test, the contractor shall have the opportunity to make improvements to the unit at his sole expense. If the equipment does not pass the second test, the equipment supplied shall not be accepted and shall be removed, and the contractor/supplier shall reimburse Owner of all costs for removing the non-performing unit and re-install the original equipment.
- 2) Capture Rate

- a) At design flow, a minimum of 95% of mineral particles of the fraction between mesh 70 and 80 shall remain in the grit product. Less than 5% of this fraction shall be returned with the overflow.
- 3) Testing
 - a) The Grit Washer shall be operated at design flow, 500 lbs of sand of a size fraction between mesh 70 and 80 shall be fed into the feed line to the Grit Washer within a three (3) hour period.
 - b) Immediately after the sand feeding has started, a series of 36 grab samples, each having a volume of 1 liter shall be taken from the overflow line of the unit at intervals of every five (5) minutes. The grab samples shall be combined to a composite sample. The composite sample shall be vigorously agitated for five (5) minutes, will then settle for a one (1) hour period, then will be decanted. The remaining sediment shall be dried and weighed, and then incinerated and weighed again to determine the average dry solids concentration and the average mineral solids concentration in the overflow. The mineral solids shall be screened to determine the fraction between mesh 70 and 80.
 - c) The washed grit product that is produced during the same three (3) hour period shall be collected and weighed. There shall be collected 18 grab samples, each having a volume of 100 ml and shall be taken at intervals of ten (10) minutes and blended into a composite sample that shall be well mixed. A minimum of 100 g sample of the composite sample shall be dried and incinerated. The resulting mineral solids shall be screened to determine the fraction above 70 mesh, below 80 mesh, and between mesh 70 and 80. The capture rate of the sand fraction shall be calculated based on a mass balance of this fraction.
- 4) Quality
 - a) The washed grit product shall contain less than 10% moisture and less than 5% organics (volatiles)
 - b) The grit washer shall be normally operated with the design flow (without any addition of grit). During six (6) hours of continuous operation a composite sample of the washed grit product shall be made up of 12 grab samples taken at 30-minute intervals, each grab sample shall be 100 ml in volume. The samples shall be composited and well mixed. A 100 ml sample of composite material shall be weighed, dried and weighed again to determine the moisture content. The dried sample shall be incinerated and weighed again to determine its volatile solids content.

E) Warranty

- 1) A one-year Parts and Labor Warranty issued by the manufacturer on the Grit Washing System. This warranty must cover all parts, labor and related materials.

F) Exceptions to Specifications

- 1) If a bidder wishes to propose equipment that does not exactly match the specifications above, on a separate page(s) he shall provide a complete list of all deviations and an explanation of how the proposed product meets or exceeds each line of the above specifications.