

# **TOWN OF SIMSBURY**

**WATER POLLUTION CONTROL  
36 DRAKE HILL ROAD  
SIMSBURY, CT 06070**

## **INVITATION TO BID**

### **FOR**

### **WASTEWATER SCREENINGS CONDITIONER WATER POLLUTION CONTROL FACILITY, SIMSBURY**

The Town of Simsbury, Water Pollution Control is soliciting bids for a wastewater screenings conditioner for the influent building at the Water Pollution Control Facility in the Town of Simsbury. The scope of work is to include furnishing all labor, materials, equipment necessary for the work as specified.

Sealed proposals will be accepted by Joe Mancini, Director of Finance, 933 Hopmeadow Street (Rt. 10/202), Simsbury, CT until 10:00 a.m., Thursday, July 16, 2015.

Specifications and bidding documents may be obtained electronically via the Town's web site at the following link: [www.simsbury-ct.gov/finance/pages/public-bids-and-rfp](http://www.simsbury-ct.gov/finance/pages/public-bids-and-rfp). Bid documents will not be mailed or faxed.

**STANDARD INSTRUCTIONS TO BIDDERS  
WASTEWATER SCREENINGS CONDITIONER  
WATER POLLUTION CONTROL FACILITY, SIMSBURY**

**1. Project Overview:**

The Town of Simsbury is soliciting bids for wastewater screenings conditioner for the influent building at the Water Pollution Control Facility.

The scope of work for this project includes furnishing all labor, materials and equipment required to provide the equipment to the Town as specified.

**2. Key Event Dates:**

Invitation to Bid Issued	6/4/15
Mandatory Site Visit	none
Bid Opening	7/16/15

**3. Bid Submission Instructions:**

- A. One (1) original and one (1) copy of all bids must be submitted in a sealed envelope with the bidder's name on the outside of the envelope and clearly marked "Mechanically Cleaned Bar Screen for Water Pollution Control". If forwarded by mail or courier, the sealed envelope must be addressed to "Joe Mancini, Director of Finance, 933 Hopmeadow Street (Rt. 10/202), Simsbury, CT 06070". Bids must be at the office of the Director of Finance prior to 10 a.m., Thursday, July 16, 2015. Postmarks are NOT an acceptable waiver of this policy. Once the first bid is opened, all bids are deemed final and no corrections or alterations may be made.
- B. Ditto marks or words such as "SAME" must not be used for the bid to be considered.
- C. All information must be submitted in blue ink or typewritten. Errors, alterations or corrections must be shown on both the original and all required copies and each must be initialed by the person signing the bid.
- D. Bids are considered valid for ninety (90) days after bids are opened. Bidders may not withdraw, cancel or modify their bid during this ninety (90) day period after bids are opened.
- E. An authorized person representing the legal entity of the bidder must sign bids.

- F. The inability to meet any specified requirement(s) must be stated in writing and attached to the bid form, or written on the bid form. If no exceptions are noted, it shall be assumed that the terms of the Invitation to Bid have been accepted.
- G. The Town of Simsbury reserves the right to waive any minor informality in a bid when such a waiver is in the best interest of the Town.

#### **4. Questions:**

Any questions about this project should be directed to: Mr. Anthony Piazza, Superintendent, Water Pollution Control by fax (860) 658-6809, or by mail Water Pollution Control 36 Drake Hill Road, Simsbury, CT 06070. To receive consideration, such questions must be received at least four (4) business days before the established date for receipt of bids. No oral interpretations shall be made to any respondent as to the meaning of any of the bid documents. Every request for an interpretation shall be made in writing.

The Town will respond to all appropriate questions received via an addendum available to all prospective bidders. Such addenda will become part of this Invitation to Bid and the resulting contract. At least two (2) days prior to the receipt of bids, the Town will post a copy of any addenda to its website, located at: [www.simsbury-ct.gov/finance/pages/public-bids-and-rfp](http://www.simsbury-ct.gov/finance/pages/public-bids-and-rfp). It shall be the responsibility of each bidder to determine whether addenda have been issued, and if so, to download copies directly from the Town's website.

#### **5. Presumption of Bidder Being Fully Informed:**

At the time the first bid is opened, each bidder is presumed to have read and is thoroughly familiar with all bidding documents as well as all contract documents for this project. Failure or omission of the bidder to receive or examine any documentation or information concerning this bid shall in no way relieve any bidder from obligations with respect to their bid.

#### **6. Mandatory Site Visit:**

None, bidders may visit and inspect the installation area at the Water Pollution Control facility after scheduling an appointment.

#### **7. Interpretation of Acceptable Work:**

The specifications, bidding and contract documents are to be interpreted as meaning those acceptable to the Town of Simsbury. The Town will issue any substantive changes or interpretations in writing as an addendum.

#### **8. Tax Exemptions:**

The bidder shall be aware that the Town of Simsbury is exempt from Federal Excise Taxes and Connecticut Sales and Use Taxes. Appropriate tax exempt forms will be provided to the successful bidder(s) as part of the contract award process.

## 9. Insurance Requirements:

The Contractor must carry insurance under which the Town is named as an assured, as follows:

Such insurance must be by insurance companies licensed to write such insurance in Connecticut against the following risks with the following minimum amounts and minimum durations.

A. Workman's Compensation, as required by Connecticut State Statute.

B. Public Liability, Bodily Injury Liability and Property Damage Liability as follows:

Injury or death of one person:	\$1,000,000
Injury to more than one person in a single accident:	\$1,000,000
Property damage in one accident:	\$1,000,000
Property damage in all accidents:	\$1,000,000

C. Automobile and Truck (Vehicular) Public Liability, Bodily Injury Liability and Property Damage Liability as follows:

Injury or death of one person:	\$1,000,000
Injury to more than one person in a single accident:	\$1,000,000
Property damage in one accident:	\$1,000,000
Property damage in all accidents:	\$1,000,000

D. Builders Risk including Fire and Extended coverage:

In an amount equal to the value of construction completed plus materials delivered to the site. Insurance under B, C, D above must provide for a 30 day notice to the Town of cancellation/or restrictive amendment.

Insurance under B and C above must be for the whole duration of the contract and for twelve (12) months after acceptance of the project by the Town.

Insurance under D above must be carried for the whole duration of the project and until acceptance by the Town.

Subcontractors must carry A, B, C in the same amounts as above for the duration of the project and until acceptance by the Town.

Certificates of insurance must be submitted to the Superintendent Water Pollution Control prior to the signing of the contract and within ten days of notification of award of contract. Should any insurance expire or be terminated during the period in which the same is required by this contract, the Superintendent Water Pollution Control shall be notified and such expired or terminated

insurance must be replaced with new insurance and a new certificate furnished to the Superintendent Water Pollution Control.

Failure to provide the required insurance and certificates may, at the option of the Town, be held to be a willful and substantial breach of this contract.

#### **10. Substitution for Name Brands:**

Should brand name items appear in this bid, the bidder must attach specifications for any substitutions and explain how the substitution compares with the specifications of the named brand. The decision on whether to use the substitution or the named brand rests solely with the Town of Simsbury.

#### **11. Awarding the Bid:**

The Town reserves the right to accept any bid or any part of bids, to reject any, all, or any part of bids, and to waive formalities and informalities in the bidding process. The Town at its discretion will award the bid to the lowest responsible bidder. That bidder is the person or firm who is qualified and competent to do the work, whose past performance is satisfactory to the Town and whose bid documents comply with the procedural requirements stated herein.

#### **13. Rejection and/or Cancellation of Bids:**

The Town reserves the right to reject or cancel any and all bids, or any part of any or all bids, if such action is deemed to be in the best interest of the Town.

#### **14. Delivery Arrangements:** Not applicable

#### **15. Bid Bond:** Not applicable

#### **16. Performance Bond:** Not applicable

#### **17. W-9 Form**

The successful bidder must provide the Town of Simsbury with a completed W-9 Form prior to commencing work.

#### **18. Submittals:**

The Bidder shall, as soon as practicable, but not exceed fifteen (30) calendar days, after notification of selection of the award of the bid, furnish to the Owner, in writing the following:

- A. Designation of the Work to be performed by the Contractor's own forces
- B. Names of the manufacturers, products and suppliers of the principal items of materials proposed for the work
- C. Project work schedule

#### **19. Agreement Documents:**

The Agreement Documents are defined as:

- The Standard Instructions to Bidders
- The Agreement as executed
- The General Specifications
- Any Addenda, if issued

**END OF STANDARD INSTRUCTION TO BIDDERS  
BID FORM  
WASTEWATER SCREENINGS CONDITIONER**

Pursuant to and in compliance with the "Invitation to Bid" and Standard Instructions to Bidders relating thereto, the undersigned, having visited the sites and carefully examined all Bidding Documents and complete General Specifications together with all Addenda issued and received prior to the scheduled closing time for receipt of Bids, hereby offers and agrees as follows:

- To provide all labor, materials, and anything else reasonably necessary to complete all work per the attached specifications.
- If awarded this Contract, we will execute a Contract with the Town of Simsbury, Owner of the properties.

In submitting this BID, the BIDDER acknowledges that:

1. Each lump sum price includes all labor, materials, transportation, hauling, overhead, fees and insurances, profit, and all other costs to cover the finished work called for regarding the specified section of Town as stated in the Contract Documents. No additional payment of any kind in the form of a surcharge will be made for work accomplished under the lump sum prices, as bid.
2. No representation of warranty has been made by the OWNER that the estimated quantities used for comparison of BIDS will even approximate the actual quantities required to satisfactorily complete the WORK required under this CONTRACT.
3. Upon receipt of written notice of acceptance of this BID by the OWNER, the BIDDER shall execute the CONTRACT attached to these documents within ten (10) calendar days and other documents as required in these documents.
4. In regard to all conditions affecting the WORK to be done and the labor and materials to be furnished, this BID is based solely on the BIDDER'S investigations and findings and neither the OWNER nor its officers, employees or agents shall be held responsible for the accuracy of, or be bound by any information contained in these Contract Documents.

**Submitted By:** \_\_\_\_\_  
*Company*
*Phone*

*Street*

*City*

*Zip*

**Authorized Signature:** \_\_\_\_\_  
*Signature* *Printed Name*

**IF A SOLELY OWNED COMPANY:**

Company Name \_\_\_\_\_  
Address \_\_\_\_\_  
Town \_\_\_\_\_  
By \_\_\_\_\_  
(Authorized Signature)  
Title \_\_\_\_\_ Date \_\_\_\_\_

**IF A CORPORATION OR LIMITED LIABILITY COMPANY:**

A corporation or limited liability company organized under the laws of

\_\_\_\_\_, composed of officers as follows:

_____ President	_____ Secretary
_____ Vice President	_____ Treasurer

**IF A PARTNERSHIP:**

A partnership doing business under the firm name and style of

\_\_\_\_\_, composed of partners as follows:

_____ Name & Title (if any)	_____ Name & Title (if any)
_____ Name & Title (if any)	_____ Name & Title (if any)

This Bill must bear the written signature of the BIDDER. If the BIDDER is a partnership, the Bid must be signed by a partner. If the BIDDER is a corporation or limited liability company, the Bid must be signed by a duly authorized officer of such corporation or Limited Liability Company.



## BIDDER'S QUALIFICATIONS STATEMENT

The BIDDER shall answer all of the following questions, as part of the Bid, so that the OWNER can judge the BIDDER's ability, experience and facilities for performing the proposed work.

1. Name of BIDDER: \_\_\_\_\_
2. Bidder's Tax Identification Number: \_\_\_\_\_
3. What year was company organized/formed? \_\_\_\_\_
4. How many years has the BIDDER been engaged in business under the present firm or trade name? \_\_\_\_\_
5. What is the general character or type of work you perform? \_\_\_\_\_  
\_\_\_\_\_
6. Has a claim ever been brought in court or to arbitration against the BIDDER for failure to complete any contracted work or default on a contract? \_\_\_\_\_

If yes, explain with whom and why: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

7. For other similar projects you have under contract at the present time: Attach list with description of work; the name of the client/owner with telephone number; and the approximate value of the work to be performed.

**NOTE:** The BIDDER is required to have completed a minimum of five (5) similar projects as a demonstration of competency and experience for the project proposed herein. Such projects are to be listed below.

8. Attach a list of all projects that your present organization has completed within the past ten years or is presently working on, including name of project, owner and name and telephone number of the owner's representative. Indicate here how many additional pages attached: \_\_\_\_\_pages.
9. Attach a list of the names, addresses and the background/experience of all principal or key members of the BIDDERS organization, including its officers:

Indicate the number of pages attached: \_\_\_\_\_pages

**NOTE:** If requested, the BIDDER agrees to furnish the OWNER with a detailed financial statement and other relevant information that may be required by the Town of Simsbury to properly evaluate the qualifications of the BIDDER.

## PROPOSED SUBCONTRACTORS

BIDDER intends to utilize the following subcontractors on this project:

If none, write "None" here: \_\_\_\_\_

NAME AND ADDRESS  
OF SUBCONTRACTOR

DESCRIPTION OF WORK:

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_

## NON-COLLUSION AFFIDAVIT OF BIDDER

State of \_\_\_\_\_, County of \_\_\_\_\_, being first  
duly sworn, disposes and says that:

1. He is the owner, officer, representative or agent of: \_\_\_\_\_ the  
BIDDER that has submitted the attached BID;
2. The attached BID is genuine; it is not a collusive or sham BID.
3. He is fully informed respecting the preparation, and contents of, and knowledgeable of all  
pertinent circumstances respecting the attached BID.
4. Neither BIDDER nor any of its officers, partners, owners, agents, representatives, employees, or  
parties in 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 AGREEMENT for which the attached BID has been submitted or to refrain  
from bidding in connection with any contract, or has in any manner, directly or indirectly, sought  
by agreement, collusion, 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 prices or the bid price of any other bidder, or to secure through  
collusion, conspiracy, connivance or unlawful agreement any advantage against the Town of  
Simsbury or any other person interested in the proposed AGREEMENT.
5. The price(s) 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 its agents,  
representatives, owners, employees, or parties in interest, including this affiant; and
6. That no elected or appointed official or other officer or employee of the Town of Simsbury, who  
is directly or indirectly interested in this BID, or in the supplies, materials, equipment, work or  
labor to which it relates, or in any of the profits thereof.

(Signed)\_\_\_\_\_

(Name of Bidder)

Subscribed and sworn to before me this  
\_\_\_\_\_ day of \_\_\_\_\_, 2015

\_\_\_\_\_  
Title

My Commission expires \_\_\_\_\_, 20\_\_

**STATEMENT OF BIDDERS COMPLIANCE WITH  
EQUAL EMPLOYMENT OPPORTUNITY LAW AND  
REGULATION INCLUDING EXECUTIVE ORDER NO. 3**

This statement must be completed by the Bidder and shall accompany his bid for this project.

IT IS HEREBY CERTIFIED THAT:

NAME OF BIDDER: \_\_\_\_\_

BUSINESS ADDRESS: \_\_\_\_\_

\_\_\_\_\_

To the extent required by law, the Bidder has complied on past Contracts and will fully comply on this project with all applicable laws and regulation regarding equal employment opportunities for minorities and women, and;

Has \_\_\_\_\_ has not \_\_\_\_\_ previously performed work under the conditions of the Governor's Executive Order No. 3 of the State of Connecticut, or any preceding similar Executive Order with regards to Non-Discrimination.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Title

Subscribed and sworn to before me this  
\_\_\_\_\_ day of \_\_\_\_\_, 2015

\_\_\_\_\_  
Title

My Commission expires \_\_\_\_\_, 20\_\_

**IMPORTANT:** THIS STATEMENT MUST BE SUBMITTED WITH BID

**END OF SECTION**

## WASTEWATER SCREENING CONDITIONER

This Wastewater Screening Conditioner Agreement (the "Agreement") is entered into the \_\_\_\_\_ day of \_\_\_\_\_, 2015 ("Effective Date") by and between the Town of Simsbury, a political subdivision of the State of Connecticut (the "Town") and \_\_\_\_\_, a \_\_\_\_\_ located at \_\_\_\_\_, \_\_\_\_\_ (the "Contractor").

WHEREAS, the Town has issued an Invitation for Bid (the "IFB") for Wastewater Screenings Conditioner for the Town of Simsbury, Water Pollution Control; and

WHEREAS, Contractor submitted its Bid to the Town on (date) \_\_\_\_\_, for the Work in accordance with the requirements and specifications of the IFB; and

WHEREAS, the Town has selected Contractor and the Town and the Contractor desire to enter into a formal Agreement for the performance of the Work;

THEREFORE, in consideration of the recitals set forth above and the mutual promises by the parties below, the parties agree as follows:

1. General. The Contractor agrees to provide the Equipment in accordance with this Agreement, Standard Instructions to Bidders and the General Specifications (collectively the "Contract Documents"). The Contract Documents represent the entire and integrated agreement between the Town and the Contractor and supersede all prior negotiations, representations or agreements, whether written or oral.
2. Duties. Contractor shall provide the Equipment described in the Contract Documents except for any work that is specifically prescribed in the Contract Documents to be the responsibility of another vendor or the Town. Contractor shall furnish all labor, equipment, trucks, materials, facilities, supplies, transport, and any other things necessary to carry out the terms of the Agreement Documents.
3. Permits and Standards. Contractor shall, at its own expense, obtain all required permits and agreements from the Town, federal, state or other governmental authority for performance of the Work in accordance with the standards prescribed by the federal Environmental Protection Agency, the Occupational Safety and Health Administration, NIOSH, the Department of Energy & Environmental Protection of the State of Connecticut and any other federal, state or local government laws and regulations. In the event of a conflict or overlap of any such laws or regulations, the most stringent provisions shall be applicable.
4. Compliance with Laws. Contractor shall comply with all federal, state and local laws and regulations governing the Work whether or not such laws and regulations are fully and properly reflected in the IFB.
5. Term. The term of this Agreement shall commence on the Effective Date of this Agreement and be in effect until completion, which shall be not later than (date) \_\_\_\_\_. The contractor shall not start the Work prior to having received a notification to proceed from the Town.

6. Payment. The Town will pay the Contractor the sum of \_\_\_\_\_ Dollars (\$ ) upon the completion by the Contractor of all Work required to be performed under the terms of the Contract Documents and acceptance of the Work by the Town.

7. Insurance. The Contractor shall carry and keep in force during the term of this Agreement insurance as more specifically described in Section 10 of the Standard Instructions to Bidders, by a company or companies authorized to do business in Connecticut. The Company shall provide certificates of insurance specifying such coverage and naming the Town as additional insured prior to the start of the work and shall provide a complete copy of the Owners, Contractors Protective Liability policy.

8. Liability. The Contractor agrees to assume full responsibility and liability for damage or injury to persons or real or tangible personal property caused directly or indirectly by the negligent or tortuous actions or inactions of the Contractor, its agents, employees or subcontractors with respect to the Work. The Contractor further agrees to assume full responsibility and liability for the Contractor's failure to comply with any applicable federal, state or local law or regulation in the performance of Contractor's duties pursuant to the Contract Documents.

9. Hold Harmless. The Contractor agrees to indemnify and save harmless the Town of Simsbury, its agents and employees, from and against all loss or expense, (including costs and attorneys' fees), arising out of or resulting from the performance of the Work by the Contractor by reason or liability imposed upon the Town of Simsbury, its agents and employees, for damages because of bodily injury, including death at any time resulting there from, sustained by any person or persons, (including employees of the Contractor), or on account of damage to property, including loss of use thereof, if such injuries or damages are caused by the negligence or breach of Agreement documents of the Contractor, its' agents and employees or otherwise. The existence of insurance shall in no way limit the scope of this indemnification. The indemnification provision shall be separate and distinct from issuance of a Certificate of Insurance.

10. Assignment. This Assignment shall be binding upon each of the Parties, their successors, executors, administrators and assigns. The Contractor shall not assign, sublet, contract, or otherwise transfer its interest, in whole or in part, in this Agreement without the express written consent of the Town. None of the work or services covered by this Agreement shall be subcontracted without the prior written approval of Town.

11. Termination. If the Contractor fails to perform the work under the Contract Documents in accordance with its terms, the Town shall have the right, in addition to all other remedies it may have, to declare the Agreement in default and, therefore, terminated and to resubmit the Agreement for further bid. In that event, the Contractor shall pay the Town, as liquidated damages, the amount of any excess of the new Agreement Price over the Agreement Price herein provided for, both pro-rated to the period of time covered by the unexpired term of the Agreement at the time of default, plus any legal or other costs incurred by the Town in terminating the Agreement and securing a new contractor.

12. Contract Documents. The Contract Documents include, without limitation, the following:

- (i) This Agreement; and

(ii) The IFB, including the Standard Instructions to Bidders, General Specifications and Insurance Coverage and;

(iii) Any addenda issued prior to the execution of this Agreement or modifications issued after the execution of this Agreement;

13. Change Orders, Price Modifications, and Other Amendments. The Town shall have the right to require the Contractor to make alterations of, additions to and deductions from the Scope of Work. All such changes to the Scope of Work shall be made by a written change order written by the Town. The Contractor shall compute the cost of the work under change order upon the Agreement price, subject to review and acceptance by the Town. Any other changes or amendments to the terms of this Agreement and the other Contract Documents may be made only by a written document referencing this Agreement and executed by both parties.

14. Governing Law/Venue: The laws of the State of Connecticut shall govern the formation, interpretation, and performance of this Agreement. No lawsuit pertaining to any matter under or growing out of this Agreement shall be instituted in any state other than Connecticut. The Parties agree that the venue for any legal proceeding in respect to this Agreement shall be Connecticut Superior Court, Judicial District of Hartford at Hartford. Venue for mediation shall be Hartford County.

15. Independent Contractor: Contractor's personnel shall be and remain an independent consultant with respect to all services performed hereunder and agrees to and does hereby accept full and exclusive liability for payment of any and all contributions or taxes for social security, unemployment insurances, or old age retirement benefits, pensions, or annuities now or hereafter imposed under any local, state or federal law which are measured by the wages, salaries, or other remuneration paid to persons employed by Contractor for work performed under the terms of this Agreement. Contractor further agrees to obey all lawful rules and regulations and to meet all lawful requirements which are now or hereafter may be issued or promulgated under said respective laws by and duly authorized by state or federal officials. Contractor also agrees to indemnify and hold harmless Simsbury from contributions or taxes or liability.

16. Payment of Subconsultants: Contractor shall well, truly and promptly pay or satisfy the just and equitable claims of all persons who have performed labor or furnished materials or equipment for Contractor in the execution of this Agreement, and all bills, costs or claims of whatever kind which might in law or equity become a lien upon said work.

17. Amendment: Any changes to the terms and conditions as outlined herein must be mutually agreed upon by and between the Parties shall be incorporated in written amendments hereto, executed with the same formalities as this Agreement. No amendment or modification of this Agreement shall be effective until executed by the Parties.

18. Execution. This Agreement may be executed in one or more counterparts, each of which shall be considered an original instrument, but all of which shall be considered one and the same agreement, and shall become binding when one or more counterparts have been signed by each of the parties hereto and delivered (including delivery by facsimile) to each of the parties.

IN WITNESS WHEREOF, the Parties have executed this Agreement as of the day and year first written above.

TOWN OF SIMSBURY

CONTRACTOR

BY \_\_\_\_\_

BY \_\_\_\_\_

Its  
Duly Authorized

Its  
Duly Authorized



## **SIMSBURY, CT –WPC INFLUENT WASTEWATER SCREENING CONDITIONER**

### **INTENT OF SPECIFICATIONS**

To purchase one waste water screenings conditioner. The unit shall be designed to receive screenings by gravity from the discharge of a mechanical bar screen. The unit shall process the screening by shredding, washing to remove the organic material and finally compact and dewater the product for disposal.

### **EQUIPMENT SPECIFICATION**

The unit shall incorporate a heavy-duty shredder and wash-press housed in a stainless steel tank-enclosure, automatic spray wash system, and control system. The unit shall process the screening by shredding, washing to remove the organic material and finally compact and dewater the product for disposal. The equipment will be located in the Town's influent building. The equipment is required to be fabricated in with "explosion proof" components in accordance with electrical and NFPA standards. The base bid specification includes a control panel in a dust proof NEMA enclosure (non-explosion proof) to be mounted by the town in a remote location. The bidder shall also furnish a bid option price to furnish the control panel with an explosion proof rating on the control panel allowing it to be mounted in close proximity to the equipment.

The basis of design is a SPIRALIFT Model SC, Screenings Conditioner, manufactured by Franklin Miller, Inc. of Livingston, New Jersey, or an approved equal. The Town shall be sole judge in determining the acceptability of any equipment submitted under this bid specification.

#### Dimensional / Site Requirements:

The equipment discharge chute shall be high enough to discharge the processed screenings into a 48" minimum height receptacle. Unit will be constructed with heavy duty casters/wheels to assist in moving the unit for maintenance.

The equipment components shall conform to the following requirements:

#### 1. INFEED HOPPER:

The unit shall be provided with a stainless steel in-feed hopper adequate to transfer screenings discharged from the bar screen directly into the shredder inlet.

The hopper shall be supplied with a spray wash manifold to pre-wash the screenings.

#### 2. SHREDDER:

The shredder/grinder portion of the equipment shall be a twin shaft shredder to reduce the particle size of the incoming screenings for efficient processing by the wash press.

The shredder shafts shall be constructed of 2" minimum hexagonal through-hardened 4140 alloy steel having a minimum tensile strength rating of 135,000 psi.

Cutters:

The cutters shall be a monolithic cutter cartridge type comprising multiple courses of 7-tooth cam shaped cutter elements. The cartridges shall be designed to eliminate individual cutter and spacer disks for improved strength and transmission of power from the shaft. Units using numerous individual cutters and spacers shall not be accepted.

- 1 No cutter stack re-tightening shall be required with this system.
- 2 The cutter profile shall be a 7-tooth cam design. To maintain particle size, the height of the tooth shall not exceed 1/2-inch (13-mm) above the root diameter. Cutter to cutter root diameter overlap shall not be less than 1/16-inch (1.6-mm) or greater than 1/4-inch (6.0-mm) to maintain the best possible cutting efficiency.

**Shredder Motor:**

1. The unit shall be driven by a cycloidal speed reducer with a ratio of approximately 29:1. A 5hp, 460V, 60 Hz, 3 phase Explosion Proof motor.
2. A flexible coupling shall be used to segregate the reducer from the grinder.
3. The counter-rotating driven shaft shall be driven by two heavy-duty hardened gears.

3. **AUGER TANK:**

The tank shall be constructed of a minimum 10 ga. thick 304 stainless steel.

A 2" drain port shall be provided on the bottom of the tank.

The tank shall be designed with suitable supports to hold the Shredder.

4. **SPRAY WASH SYSTEM:**

A spray wash system shall be provided to rinse the organic material from the screenings back into the waste stream as follows:

The spray wash shall be supplied with 110V solenoid valve with a 1" NPT connection.

The wash system shall be integrated into the control system.

The spray wash system shall cover the upstream side of the perforated screen.

A spray wash manifold shall be supplied to backwash the press zone screen.

5. **SCREENING COMPACTOR MECHANISM:**

The unit shall include a wash press mechanism integrally installed with the shredder and shall include:

The auger screw shall be constructed of alloy carbon steel.

The wash press shall be fitted with a cylindrical screen basket constructed of stainless steel for discharge of wash water.

A straight, stainless steel transport pipe housing shall extend from the screen area to the press zone.

A shaft-mounted gear drive shall be employed to run at a maximum of 20 rpm.

A 2hp, 460V, 60 Hz, 3-phase Explosion Proof electric motor shall be direct coupled to the gear drive.

A pressure zone shall be located at the discharge end of the screw. The pressure zone shall be provided with a wedge-wire drain screen to optimize de-watering.

A drain line shall be provided from the press zone to return extracted water to the system.

A spray manifold shall be located behind the pressure zone screen to periodically backwash the screen openings.

The screening compactor housing shall be constructed of stainless steel.

The processed screenings discharge pipe shall be constructed of stainless steel and designed to deliver the screenings to the waste receptacle.

## 6. SYSTEM CONTROLS:

The equipment shall be provided with a single controller to coordinate the operation of the system components with **PLC-Based Controls** that shall include a PLC with Ethernet communications for SCADA controls. The base bid control panel shall be designed for indoor non explosion proof location.

The controller shall be supplied with fully oil-tight controls, PLC, motor overloads, through the door mounted circuit breaker and as follows:

- A     **SELECTOR SWITCH:** A three-position selector switch mounted in the front cover shall be configured as follows:
  - 1    **ON POSITION** - Auger and Shredder Run
  - 2    **OFF POSITION** - The unit shall be de-energized after an auger clearing and tank spray wash sequence
  - 3    **AUTO POSITION** - The system operation will be enabled by a 110 v control signal provided by the Town. It is the Town's intent to control the system on the same start stop control system currently controlling the existing barscreens. Upon loss of the control signal the system is to de-energize after the auger clearing and tank spray wash sequence is complete.
- B     **SOLENOID CONTACTS:** The control shall be provided with a contact to energize the spray wash solenoid while the auger motor is energized.
- C     **SHREDDER JAM SEQUENCE:** When a grinder jam condition occurs the unit shall reverse, pause and restart in the forward direction and continue this sequence until the jam condition is eliminated. If four jam cycles have occurred

within a 60-second period, a relay shall be activated and an alarm condition shall be visually indicated.

D SCREW JAM SEQUENCE: When a auger jam condition occurs the shredder will be shut down (preventing further overload of the screw), then the unit shall reverse, pause and restart in the forward direction and continue this sequence until the jam condition is eliminated. If two jam cycles have occurred within a 60-second period, a relay shall be activated and a spiral alarm condition shall be visually indicated. If the screw runs for 60-seconds without experiencing an overload, the shredder will be restarted.

E POWER FAILURE MODE: The control shall handle a power failure as follows:

If a power failure occurs while the system is functioning, the system will resume operation when power is restored.

If a power failure occurs while the system is in an alarm condition, the alarm indicator will be reactivated when power is restored.

F EMERGENCY STOP BUTTON: The equipment shall be furnished with an emergency stop button. Activation of the button will immediately de-energize all components of the equipment.

It is anticipated the non-explosion proof control panel will be mounted remote from the equipment therefore the emergency stop button must be mounted on the equipment.

Under the explosion proof control panel bid option, it is anticipated the control panel will be mounted locally therefore the emergency button may be mounted on the panel.

#### DOCUMENTATION:

Bidder shall furnish three sets of Operation and Maintenance manuals, including detailed installation instruction, the name and telephone number of the manufacturer's service representative.

#### WARRANTY:

The processing unit shall be provided with a 2 year warranty beginning on the date of beneficial use/installation date.

The warranty shall be furnished in writing by the original equipment manufacture covering labor and materials for any component failures during the warranty period. The warranty shall specifically cover the replacement of any cutter teeth/cartridges that fail during the course of normal operation during the warranty period.