

**THE CITY OF MURFREESBORO
WATER AND SEWER DEPARTMENT
INVITATION TO BID**

The City of Murfreesboro ("City") will receive and publicly open sealed bids in the Water and Sewer Department Administrative Office, 300 NW Broad Street, Murfreesboro, Tennessee 37130, telephone number (615) 890-0862. This Invitation to Bid (ITB) is subject to the instructions, conditions, specifications, addenda, and any other elements of this ITB, including those incorporated by reference.

DATE ISSUED: December 1, 2014

BID TITLE: Tube Settler System Replacement

CITY CONTACT PERSON: Alan Cranford

TELEPHONE NUMBER: (615) 848-3222
FAX: (615) 848-3244

All bid responses must be received and acknowledged in the City Water and Sewer Department Office on or before the day and time listed below, at which time all bids will be publicly opened and read aloud.

**SUBMIT BID RESPONSE
IN SEALED ENVELOPE TO:** BID – Tube Settler System Replacement
Attn: Alan Cranford
Murfreesboro Water and Sewer Department
300 NW Broad Street
Murfreesboro, Tennessee 37133-1477

Bid envelope must include the bid title, bid opening date, and the bidder's name. Failure to provide this information on the envelope may result in the bid not being considered. Do not submit bids by fax or electronically. Bids submitted by fax or electronically cannot be accepted or considered for award. Sealed bids are required.

BID OPENING DATE: December 15, 2014

BID OPENING TIME: 2:00 p.m. Murfreesboro, Tennessee, local time

BID OPENING LOCATION: Murfreesboro Water and Sewer Department
300 NW Broad Street

**Murfreesboro Water and Sewer Department
Murfreesboro, Tennessee
Invitation to Bid**

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1 INSTRUCTIONS AND CONDITIONS

1.1 Submission to Murfreesboro Water and Sewer Department.

The City of Murfreesboro is requesting bids for the purchase of a tube settler system consisting of tube settler modules, protective surface grating and support system to replace the current system in up to four (4) existing settling basins and add a protective surface grating to a fifth basin as set forth in the specifications. Sealed bids must be received at the Murfreesboro Water and Sewer Department, Administrative Office, Attention Alan Cranford, 300 NW Broad Street, Murfreesboro, Tennessee 37130, before 2:00 p.m. Central Time, December 15, 2014. Late bids will not be considered and will be returned unopened.

1.2 Deadline and Late Responses.

No bids received after bid opening date and time will be accepted. Bids postmarked on or before the bid opening date but received at the Murfreesboro Water and Sewer Department Administrative Office, 300 NW Broad Street, Murfreesboro, Tennessee 37130 after the specified time will be considered late and will be returned unopened. The City shall not be responsible for bids that are mailed or sent via private delivery services. The City will not accept bids submitted by fax or electronic mail.

1.3 Organization of Bid and Completeness.

Please submit an original signed copy of the bid to Alan Cranford at the address set forth in Section 1.1 above. All bids must be sealed and clearly marked with the bidder's name and the words, "***Bid: Tube Settler System Replacement - ATTN: Alan Cranford, Bid Opening Date – December 15, 2014.***" Failure to provide this information on the envelope may result in the bid not being considered. Bidders must allow sufficient time to ensure receipt of the bid. It shall be the sole responsibility of the bidder to have the bid delivered to the Murfreesboro Water and Sewer Department before the bid deadline.

Each bid shall be set forth on the attached bid form.

Partial or incomplete bids will be rejected. All bid responses should be typewritten. If not typewritten, they must be written in ink and clearly legible, and numbers must be expressed in both words and figures. Erasures, white-outs, typeovers, and other modifications should be initialed. Bidders are cautioned to verify their bid response prior to submission.

1.4 Signature.

All bids must be signed by a duly authorized officer of the company empowered with the legal right to bind the company. A typed name will not be acceptable without the person's written signature as well. Signatures are required where indicated; failure to comply with this requirement shall be cause for rejection of bid. All submitted bids must be binding for a period of ninety (90) calendar days from the bid opening date.

1.5 Response to Terms and Conditions.

Unless an exception is taken, the awarded contract will contain the requirements of this Invitation to Bid. In its sole discretion, the Murfreesboro Water and Sewer Department reserves the right to either consider or reject any bid which takes exception to the specifications or attached contract.

1.6 Completeness of Invitation to Bid (“ITB”).

These documents constitute the complete set of specification requirements and ITB. The bidder is responsible for insuring that all pages and all addenda are received. The City advises all bidders to closely examine this ITB package and immediately direct any questions regarding the completeness of this ITB package and any addenda thereto to the City’s Contact Person.

1.7 Communication with the Murfreesboro Water and Sewer Department.

The Murfreesboro Water and Sewer Department has designated Alan Cranford to be responsible for coordinating communications between the department and firms submitting bids for the items in this bid invitation. If additional information is required in order to make an interpretation of items in this ITB, written questions (including faxes or e-mails) will be accepted until seven (7) calendar days prior to the bid opening date. All questions regarding the ITB should be addressed to:

Alan Cranford
Murfreesboro Water and Sewer Department
Telephone: (615) 848-3222
Fax: (615) 848-3244
Email: acranford@murfreesborotn.gov

The Murfreesboro Water and Sewer Department specifically requests that no contact concerning this ITB be made with any other Water and Sewer Department personnel until the selection process has been completed. Failure to honor this requirement will be viewed negatively in the selection process and may result in the disqualification of a bid.

1.8 Discrepancies, Errors, and Omissions.

Any discrepancies, errors, omissions, or ambiguities in this ITB, the specifications or addenda (if any) should be reported to the contact person for the Murfreesboro Water and Sewer Department. If necessary, a written addendum will be issued to firms on record and the addendum will be incorporated in the ITB and will become part of the contract. The Murfreesboro Water and Sewer Department will NOT be responsible for any oral instructions, clarifications or other communications and no such oral communication may be relied on by any bidder.

1.9 Minimum Requirements.

Specifications furnished in the ITB are intended to establish a desired quality or performance level, or other minimum requirements, which will provide the Murfreesboro Water and Sewer Department with the best product available at the lowest possible price. Should the bidder wish to propose items which exceed the minimum specifications, the bidder is encouraged to attach a separate sheet providing a description of such components.

1.10 Unit Price and Substitutes.

Bidders must specify manufacturer's name for all products proposed and show the unit price on each individual item as specified. Prices quoted must be the price for new (not reconditioned or remanufactured) merchandise direct from the manufacturer that is free from defects. If proposing a substitute article, a bidder must provide the manufacturer's name, brand, model, make and catalogue reference, specifications for the substituted article, and/or other information that will enable the Murfreesboro Water and Sewer Department to make the determination of similarity,

serviceability and suitability of the substitute. The Murfreesboro Water and Sewer Department reserves the right to be the sole judge in making such determination.

1.11 Bid Modification.

Bids may be modified, withdrawn, and/or resubmitted in writing to the Murfreesboro Water and Sewer Department prior to the deadline for bid submission. After this deadline, no withdrawals or resubmissions may be made for any reason.

1.12 Tax Exempt.

The City is exempt from federal and state taxes. Upon request, the City will provide a sales tax exemption certificate to the awarded firm. Vendors doing business with the City shall not be exempted from paying sales tax to their suppliers for materials to fulfill contractual obligations to the City, nor shall any vendor be authorized to use the City's Tax Exemption Number in securing such materials.

1.13 Pricing Effective for One (1) Year.

The successful bidder shall provide in its bid price the various components of equipment, including all parts, labor, accessories and any other standard equipment, necessary to make these items function as intended. Pricing for each component shall be effective for one (1) year from date of bid award. If, in the bidder's opinion, additional equipment or services are necessary to make the system fully operational, this shall be included with explanation in the bid. It is requested that bidders raise any such questions in advance of submitting a bid to the City. To submit a bid implies consent to the terms set forth in this ITB.

1.14 Approval Required.

No award or acquisition can be made until approved by the Murfreesboro Water and Sewer Department Board and the City Council. This solicitation in no manner obligates the Murfreesboro Water and Sewer Department to the eventual rental, lease, or purchase of any equipment or service described, implied, or which may be proposed, until confirmed by a written contract. Progress towards this end is solely at the discretion of the Murfreesboro Water and Sewer Department and may be terminated at any time prior to the signing of a contract.

1.15 Consideration of Bid.

Any items proposed deemed not of equal and/or better and of comparable quality as that specified shall be cause for rejection of a bid. In addition to the price, the following aspects will also be considered in the award of a contract:

- a. The ability of the bidder to perform the contract or to provide the material or service required;
- b. Whether the bidder can perform the contract and provide the material or service promptly or within the time specified without delay or interference;
- c. The character, integrity, reputation, experience and efficiency of the bidder;
- d. The previous and existing compliance by the bidder with laws and ordinances relating to the contract or service;
- e. The ability of the bidder to provide future maintenance and service for the use of the subject contract;

- f. Terms and conditions stated in bid;
- g. Compliance with specifications or the ITB; and
- h. Utilization of the bid form for submittal of a bid.

1.16 Terms and Conditions.

The Murfreesboro Water and Sewer Department reserves the right to reject any and all bids, to waive any irregularities in a bid, to make awards to more than one (1) bidder, to accept any part or all of a bid, or to accept the bid (or bids) which, in the judgment of the governing body, is in the best interest of the Murfreesboro Water and Sewer Department.

1.17 Withdrawal of Bid.

No bidder may withdraw its bid for a period of ninety (90) calendar days after the date and time set for the opening of the responses. In the event the Murfreesboro Water and Sewer Department awards a contract to a bidder and during such ninety (90) calendar day period determines that such bidder will be unable to properly perform the contract, the Murfreesboro Water and Sewer Department reserves the right to terminate the contract and award the contract to the next best offer without being required to re-advertise the project.

1.18 Cost of Response.

The Murfreesboro Water and Sewer Department will not be liable for any costs incurred by the bidders in preparing a response to this solicitation. Bidders will submit responses at their own risk and expense. The Murfreesboro Water and Sewer Department makes no guarantee that any equipment or services will be purchased as a result of the solicitation and reserves the right to reject any and all responses. All responses and their accompanying documentation will become records of the Murfreesboro Water and Sewer Department.

1.19 Contract.

The successful vendor's response to this ITB shall be included as an addendum to the contract. Should any conflict or discrepancy arise between the ITB and the contract, the contract shall control. All bidders who are awarded contracts pursuant to this ITB agree to be bound by the terms and conditions set forth in the attached City Contract (Attachment A). If the bidder objects to any contract terms or proposes any additional terms, such objections and terms must be set forth in the bid. Rejection of any proposed City Contract terms may be a basis for rejection of the bid.

1.20 Contract Termination.

The Murfreesboro Water and Sewer Department reserves the right to cancel the contract for the work without cost or penalty to the Water and Sewer Department if, in the Murfreesboro Water and Sewer Department's opinion, there is a failure at any time by the contractor to adequately perform the contract, or if there is any attempt to willfully impose upon the Murfreesboro Water and Sewer Department a material or product or workmanship which is, in the opinion of the Murfreesboro Water and Sewer Department, of an unacceptable quality. Cancellation of the contract shall not impair any rights or claim of the Murfreesboro Water and Sewer Department to damages for the breach of any covenants of the contract by the contractor.

The contract awarded may be terminated upon any of, but not limited to, the following occurrences: a) bankruptcy or insolvency of the bidder or one or more of

the bidder's principal owners; b) unauthorized substitution of products other than those identified in the specifications or specifically approved by the City as a substitute prior to award of the contract; c) unsatisfactory performance of products supplied by the bidder or services provided by the bidder; d) fraud and e) any other breach of the terms of the ITB specifications or contract.

1.21 Contract Modification.

The contract may be modified only by written amendment executed by all parties and their signatories hereto.

1.22 Replacement or Repair.

No waiver of any provision of the contract shall affect the right of any party thereafter to enforce such provision or to exercise any right or remedy available to it in the event of any other default.

The Murfreesboro Water and Sewer Department, at its option and in lieu of immediate termination, may request the awarded bidder replace or repair any defective goods or correct performance by written notice to the contractor. In that event, the contractor shall take corrective action within the amount of time specified by the Murfreesboro Water and Sewer Department in the written notice. Exercise of this option shall not relieve the contractor of any liability to the Murfreesboro Water and Sewer Department for damages for the breach of any covenants of the contract by the contractor.

1.23 Expense of Legal Action.

Awarded bidder agrees that, in the event either party deems it necessary to take legal action to enforce any provision of the contract, and in the event the City prevails, awarded bidder shall pay all expenses of such action including the City's attorney fees and costs at all stages of the legal action.

1.24 Governing Laws.

The validity, construction and effect of the contract, and any and all extensions and/or modifications thereof shall be governed by the laws of the State of Tennessee.

1.25 Severability.

Should any provision of the contract be declared to be invalid by any court of competent jurisdiction, such provision shall be severed and shall not affect the validity of the remaining provisions of the contract. Any action between the parties arising from this agreement shall be maintained in the courts of Rutherford County, Tennessee.

1.26 Indemnification and Hold Harmless.

Contractor shall indemnify and hold harmless the City, its officers, agents and employees from: i) any claims, damages, costs, and attorney fees for injuries or damages arising, in part or in whole, from the negligent or intentional acts or omissions of awarded bidder, its officers, employees and/or agents, including its sub or independent contractors, in connection with the performance of this contract; and ii) any claims, damages, penalties, costs, and attorney's fees arising from any failure of awarded bidder, its officers, employees and/or agents, including its sub or independent contractors, to observe applicable laws, including, but not limited to, labor laws and minimum wage laws.

1.27 Statutory Disqualification.

By submitting a response, it is represented that neither it nor any of its officers, directors, shareholders, members, or partners has been convicted or plead guilty or nolo contendere to any violation of the Sherman Anti-Trust Act, mail fraud, or other state or federal criminal violation in connection with a contract let by the State of Tennessee, or any political subdivision of the State of Tennessee.

1.28 Contractor's Employment Practices.

Bidder, after being first duly sworn, affirms that by its employment policy, standards and practices, it does not subscribe to any personnel policy which permits or allows for the promotion, demotion, employment, dismissal or laying off of any individual due to the individual's race, creed, color, national origin, age or sex and it is not in violation of and will not violate any applicable laws concerning the employment of individuals with disabilities.

1.29 City's Employment Practices.

It is the policy of the City not to discriminate on the basis of age, race, sex, color, national origin, or disability in its hiring and employment practices, or in admission to, access to, or operation of its programs, services, and activities. With regard to all aspects of this contract, Contractor certifies and warrants it will comply with this policy.

1.30 Conflict of Interest.

By submitting a response, it is represented that no Board member or officer of the Murfreesboro Water and Sewer Department or other persons whose duty is to vote for, let out, overlook, or in any manner supervise any work on any contract for the Murfreesboro Water and Sewer Department has a "direct interest", as defined by T.C.A. §12-4-101, in the bidder or in the work which is subject to this ITB.

1.31 Ethical Standards.

Bidder understands that it shall be a breach of ethical standards for any person to offer, give or agree to give any employee or former employee, or for any employee or former employee to solicit, demand, accept or agree to accept from another person, a gratuity or an offer of employment in connection with any decision, approval, disapproval, recommendation, preparation of any part of a program requirement or a purchase request, influencing the content of any specification or procurement standard, rendering of advice, investigation, auditing or in any other advisory capacity in any proceeding or application, request for ruling, determination, claim or controversy or other particular matter, pertaining to any program requirement of a contract or subcontract or to any solicitation or bid therefore.

1.32 Breach of Ethical Standards.

A breach of ethical standards could result in civil and/or criminal sanctions and/or debarment or suspension from being a contractor or subcontractor under City contracts.

1.33 Payment.

Payment will be made by the Murfreesboro Water and Sewer Department after goods and/or services have been received, accepted, and properly invoiced as indicated in the contract and/or purchase order. Invoices must bear the purchase order number.

1.34 Delivery.

All items must be available for delivery within ninety (90) calendar days after contract execution and purchase order is issued. Unless otherwise specified in this ITB, delivery and freight charges are to be prepaid and included in the bid price. Forty-eight (48) hours advance notice should be given prior to delivery. Deliveries of all items shall be made as stated in the ITB specifications. The bidder must indicate the best delivery date after receipt of order. Deliveries resulting from this ITB are to be made during the normal working hours of the Murfreesboro Water and Sewer Department. Time is of the essence and the bidder's delivery date must be specified and adhered to. Should the awarded firm fail to deliver items on or before its stated date, the Murfreesboro Water and Sewer Department reserves the right to cancel the order or contract. The awarded firm(s) shall be responsible for making any and all claims against carriers for missing or damaged items.

Deliver according to Manufacturer's standard requirements. Deliver tube settler systems to 5528 Sam Jared Drive, Murfreesboro, TN 37130, 90 days ARO. Coordination for delivery shall be made with Alan Cranford or Steve Toler at (615) 848-3222.

1.35 Acceptance of Delivery.

Delivered items will not be considered "accepted" until an authorized agent for the Murfreesboro Water and Sewer Department has, by inspection or test of such items, determined that they fully comply with specifications. Acceptance will take place upon final completion of project after an inspection has been made by the Owner's representative. Contact Alan Cranford at (615) 848-3222 to schedule final inspection. The Murfreesboro Water and Sewer Department may return, for full credit and at no expense to the Murfreesboro Water and Sewer Department, any item(s) received which fail to meet the specifications as stated in this ITB. All deliveries made pursuant to this ITB, and the contract award, must be made pursuant to written purchase order of the City. The Murfreesboro Water and Sewer Department assumes no liability for goods and/or services provided without a written purchase order from the Murfreesboro Water and Sewer Department.

1.36 Warranty.

Unless otherwise specified every item proposed shall have a manufacturer's warranty against defects in parts or workmanship. System shall be warranted to be free from defects in material for a period of fourteen months (14) months from date of delivery to Owner or twelve (12) months from the date of start-up by Factory Authorized Technician, whichever is earlier.

1.37 Codes and Regulation.

All equipment must comply with Murfreesboro Water and Sewer Department, City of Murfreesboro, county, state, and federal laws, rules, codes and regulations. The contractor will obtain and pay for all permits, if any, necessary to complete the work.

1.38 Operations Manual.

The system must be accompanied with an operations and maintenance manual.

2 SCOPE OF PROJECT

2.1 Equipment.

The Murfreesboro Water and Sewer Department is seeking bids for the purchase of a tube settler system consisting of tube settler modules, protective surface grating and support system to replace the current system in up to four (4) existing settling basins and add a protective surface grating to a fifth basin as set forth in the specifications. This project is for materials specified and for the Tube Settler System Manufacturer to provide the services of a qualified field installation supervisor as set forth in the specifications.

3 BID AND SUBMISSION REQUIREMENTS

3.1 Bid Form.

To achieve a uniform review process and obtain the maximum degree of comparability, it is required that the bid be submitted on the bid form set forth in Section 5 of this ITB. Any deviation from the bid specifications must be noted otherwise the bid may be rejected.

3.2 References.

Please provide contact information for three clients, including name, title and telephone number for the representative of the organizations or firms for which you provided similar equipment and services.

3.3 Cost.

The bid shall include a total delivered price for the tube settler system consisting of tube settler modules, protective surface grating and support system to replace the current system in up to four (4) existing settling basins and add a protective surface grating to a fifth basin as set forth in the specifications.

4 EVALUATION

4.1 Bid Evaluation.

Each bid will be evaluated based on the following criteria:

- a. *Bidder's Compliance.* The Murfreesboro Water and Sewer Department will evaluate bids for compliance and completeness.
- b. *Experience.* The Murfreesboro Water and Sewer Department will evaluate the overall experience of the bidder.
- c. *Costs and Terms.* The Murfreesboro Water and Sewer Department will evaluate whether the proposed costs and terms are, in the Murfreesboro Water and Sewer Department's judgment, consistent with current market pricing, appropriate for the equipment and services provided, and commensurate with the level of quality expected.
- d. *Other.* Any other information that the Murfreesboro Water and Sewer Department deems relevant and material in evaluating the bidders.

It is estimated that the Murfreesboro Water and Sewer Department evaluation will result in a recommendation of an award of contract to the Murfreesboro Water and Sewer Department Board and the City Council within thirty (30) days of the bid opening date.

The specifications described in this ITB are designed to establish a minimum level of quality and are not meant to preclude equipment manufacture of equal or better quality.

5 BID FORM

Bid Name: Tube Settler System Replacement
Bid Opening: 2:00 p.m. December 15, 2014 at Murfreesboro Water and Sewer Administrative Office, 300 NW Broad Street, Murfreesboro, TN

All prices must include all costs of items as specified. Costs included in the bid prices shall include parts, materials, accessories, freight, and delivery. **Pricing shall be effective for one (1) year from date of bid award.** The City is not subject to sales tax.

The City intends to purchase tube settler systems within one (1) year contract award. Bidder acknowledges, however, that the City does not guarantee the purchase of any specific or minimum quantity of units during the term of this agreement.

In compliance with this ITB, and subject to all conditions thereof, the undersigned agrees that if this bid response is accepted within ninety (90) calendar days from the date of award, to furnish any or all of the items upon which price(s) are quoted, at the price set opposite each item unless otherwise specified.

Location*	Price per System		Total Price
	Tube Settler Modules	Protective Surface Grating	
Basin #1	\$	\$	\$
Basin #2	\$	\$	\$
Basin #3	\$	\$	\$
Basin #4	\$	\$	\$
Basin #5	\$	\$	\$
Total Price If All Materials Purchased In One Order			\$
Installation Supervision			\$
Four (4) Spare 12 ft. x 24 in. Tube Settler Modules			\$
Ten (10) Full Size Protective Surface Grating Panels			\$

* For details see Section 6.9.

THIS RESPONSE SHALL BE REJECTED IF NOT SIGNED WHERE INDICATED.

Name of Firm: _____

Form of Business: _____

Authorized Signature and Date:

Name Printed and Title: _____

Address: _____

Telephone Number: _____ Fax Number: _____

E-Mail _____ Delivery Date: _____

6 BID SPECIFICATIONS

6.1 Specifications.

The City seeks to purchase a tube settler system consisting of tube settler modules, protective surface grating and support system as set forth herein to replace the current system in four (4) existing settling basins and adding the protective surface grating to a fifth basin. System must be supplied by a factory authorized distributor providing start-up and service.

Specifications are minimums. Substitutions that exceed minimums may be allowed where such substitutions are in the best interests of the Department and do not affect the intended use. Any substitutions must be identified on the Bid Form. Specifications listed below describe a Brentwood Industries AccuPac® IFR-6024 Tube Settler System to establish a minimum acceptable level of quality, and are not intended to preclude acceptance of an equal or better system.

6.2 Definitions.

6.2.1 Tube Settler Module – Tube settlers are comprised of multiple tubular channels sloped at an angle of about 60°, which allow enhanced settling characteristics and accumulation of solids within a settling basin. Modules will be 24 in. (0.610 meters) height, 12 in. (0.305 meters) or 24 in. (0.610 meters) widths, up to 12 ft. (3.66 meters) lengths as required by the tank geometry and support structure. Tube settler modules shall have a minimum tube length of 27.5 in.

6.2.2 Protective Surface Grating – Interlocking panels, a minimum 1-1/4 in. height, to absorb hydraulic impact (during washdowns), provide operator access, provide a protective layer from foot traffic, and added UV protection to tube settler area.

6.3 General Description.

6.3.1 System includes tube settler modules, protective surface grating, and support structures.

6.3.2 Each tube shall have a cross sectional perimeter of approximately 10.0 in. (0.254 meters) to give a low Reynolds number and of an approximate triangular shape that allows rapid accumulation, concentration, and drainage of solids.

6.3.3 Cross corrugation of tubes with mixing points within individual modules is not allowed. This causes mixing currents, which adversely affect the settlement of solids as well as re-suspend the settled solids within the system.

6.3.4 Reversal of tube direction between adjacent modules is not allowed. Such reversal causes mixing currents at the surface of the module as described above.

6.3.5 Protective surface grating shall not impact performance of tube settlers or cause physical damage to tube settler material.

6.4 Quality Assurance.

6.4.1 Qualifications of manufacturer:

Tube settler module manufacturer shall have minimum five (5) years continuous experience in manufacture and supply of tube settlers. Pre-qualification is required for bidding, except for acceptable manufacturers named herein.

6.4.2 Installation Requirements:

6.4.2.1 Installation of tube settler system by Owner in accordance with manufacturer's written instructions.

6.4.2.2 Tube settler system manufacturer provides services of qualified representative onsite to provide instructions on installation, cutting, etc.

6.4.3 Source Quality Control:

6.4.3.1 Current certification of tube modules and surface grating as tested and certified with ANSI/NSF-Standard 61 for use in potable water.

6.4.3.2 Individual tube settler modules will bear the seal as being NSF Certified.

6.4.3.3 All equipment to use potable grade materials suitable for use in drinking water treatment plants.

6.5 Submittals.

6.5.1 Shop drawings required for following:

6.5.1.1 Tube Settler Modules.

6.5.1.2 Protective Surface Grating.

6.5.2 Product Data required as follows:

6.5.2.1 Tube Settler Modules

6.5.2.1.1 Materials.

6.5.2.1.2 Installation instructions.

6.5.2.2 Protective Surface Grating

6.5.2.2.1 Materials.

6.5.2.2.2 Installation instructions.

6.5.3 Documentation and Samples:

At least ten (10) days prior to bid, submit to Owner 12 in. width x full height by minimum 24 in. long sample of tube module, 24 in. x 24 in. sample of surface grating and documentation of up to date structural testing for any manufacturers to be considered for pre-qualification to bid. (Include with submittal sample three (3) copies of complete product specifications, and written instructions for field cutting and installing tube modules). All samples

to be retained by Owner. Manufacturers named as acceptable herein are not required to submit samples.

6.5.4 Operating and Maintenance (O&M) Instructions:

6.5.4.1 O & M Instructions shall include:

6.5.4.1.1 Storage and installation procedures.

6.5.4.1.2 Cleaning procedures.

6.5.5 Certificates:

Provide current certificate that tube settler modules and surface grating are tested and Certified by NSF to ANSI/NSF Standard 61 Drinking Water System Components.

6.6 Delivery, Storage and Handling.

6.6.1 Delivery:

Tube modules shall be shipped and delivered to job site on pallets.

6.6.2 Storage:

6.6.2.1 All material and equipment shall be shipped, stored, handled, and installed in such a manner as to not degrade quality or serviceability.

6.6.2.2 The tube settling modules shall not be stacked more than four (4) high (8 ft.) (one (1) over the other).

6.6.2.3 All modules shall be stacked such that the PVC sheet planes are in a vertical position (similar to the manner of their placement inside the tank).

6.6.2.4 A light colored cover shall cover all modules required to be stored in the open beyond two months. Ideally these covers should be double sided such as a white on black. The white side, facing out, is used to reflect light away. Clear covers are prohibited. Black is not recommended. Black will absorb heat and if the cover comes in direct contact with the media, this heat can be quickly transferred to the media.

6.6.2.5 Covers cannot be wrapped tightly around the media. There should be at least a 6 in. air gap between the cover and top of media. The ends of the cover should be securely anchored on all sides with at least a 12 in. air gap at the bottom. These covers should provide shading while allowing air to pass through to prevent heat from building up.

6.6.2.6 Modules should be checked at least once a week. It is very possible that the covers can become loose over time due to wind or rain. A check of the stored area should be done to make any minor repairs to the cover or to restack any modules that could have fallen.

6.6.3 Handling:

- 6.6.3.1 Tube modules shall remain on shipping pallets until ready to install.
- 6.6.3.2 Any abusive handling of the modules shall not be permitted. Workmen shall be careful in placing the tube modules and avoid any damage to the corners and tube edges.
- 6.6.3.3 Personnel shall not stand or walk directly on top of the modules, except as outlined in Section 6.7.2.8.
- 6.6.3.4 Media modules may get brittle at low temperatures or soft at high temperatures. Therefore, care should be used in the handling of modules.

6.7 Products.

6.7.1 Acceptable Manufacturers, Tube Settler System:

- 6.7.1.1 Brentwood Industries, Inc. of Reading, Pennsylvania.
- 6.7.1.2 Approved equal. (Pre-qualification required per Section 6.5.3).

6.7.2 Tube Modules:

- 6.7.2.1 Tube settler modules shall have a minimum vertical height of 24 in.
- 6.7.2.2 Tube settler modules shall have a minimum tube length of 27.5 in.
- 6.7.2.3 The material of construction shall be flame resistant, self-extinguishing, rigid PVC Blue in color.
- 6.7.2.4 White and/or Black colored PVC will not be allowed without exception.
- 6.7.2.5 Material shall be inert and resistant to naturally occurring constituents in water and to the normal dosage of water treatment chemicals required in the treatment process.
- 6.7.2.6 Tube settler modules must be Tested and Certified by NSF to ANSI/NSF Standard 61 Drinking Water System Components. Evidence of current certification must be included with submittal package and indelibly marked on the sheets of the modules.
- 6.7.2.7 The PVC sheet shall be prime, rigid PVC conforming to commercial standard ASTM D1784:12344B with the following properties.

Property	Test Method	Unit	Typical Value
Specific Gravity	D792	gm/cu.cm.	1.45 max.
Tensile Strength	D638/D882	psi	6,000 min.
Flexural Modulus	D790	psi	425,000 min.
Flexural Strength	D790	psi	11,000 min.
Elastic Modulus	D638/D882	psi	360,000 min.
Impact Resistance	D5420	in.lbs./mil	0.8 min.
Heat Deflection	D648	°F (264 psi)	158 min.

Flammability	D635	self-extinguishing < than 5 sec.
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- 6.7.2.8 The modules shall be self-supporting and constructed to support foot traffic, such foot traffic may occur only after the tube settler surface has been covered with 48 in. X 48 in. x 3/8 in. thick plywood sheets or the Brentwood AccuGrid surface grating. The sheeting/grating is required to prevent damage to the tube settler edges and to distribute the weight of the worker. A potential safety hazard may occur if the sheeting/grating is not utilized when walking atop the tube settlers.
- 6.7.2.9 Structural integrity of an individual 12 in. wide module shall be maintained, with no influence of a protective surface grating, under a loading of 15 pounds per sq. ft. (psf) (73.23 kgs/m²) which includes the module dead weight plus a uniformly distributed load of 10 psf (48.82 kgs/m²) while bearing a movable live load of 250 lbs (113 kgs) concentrated over a one (1) sq. ft. (0.0929 sq. meter) area at the midpoint of the module span.
- 6.7.2.10 The maximum unsupported module span shall be 8 ft.
- 6.7.3 Protective Surface Grating:
 - 6.7.3.1 The protective surface grating when installed as per manufacturer's recommendations shall provide a protective surface (such as operator access or for minimizing the hydraulic impact on the media during washdowns, etc.) on top of the tube settler media. Such grating shall comprise of multiple square mesh of 2 in. x 2 in. (app. 50 mm x 50 mm) openings, molded together to provide a strong and light weight panel. Each panel of the grating will measure about 24 in. (610 mm) in width, 24 in. (610 mm) in length and about 1¼ in. (app. 31 mm) in height. In addition, each panel shall have a net weight of about 3 lbs. (app. 1.4 kgs.). The grating panels will contact with the media to provide an economical as well as an effective grating when the grating panels are placed on top of the tube settler media. Any grating heavier than the specified weight, or which can cause damage to the tube settlers shall not be acceptable.
 - 6.7.3.2 The material of construction shall be current NSF certified HDPE blue in color that will be specifically UV stabilized for inhibiting UV degradation of the grating under extended exposure to the sun. The material shall be inert and resistant to naturally occurring constituents in water and wastewater.
 - 6.7.3.3 Grating shall be installed in panels side-by-side and placed on top of the tube settler media as shown on the plans and drawings for the project. Each panel shall be snapped together with the adjacent panel with locks provided at the edges of each panel. The grating panels shall be placed on top of the media such that the grating is in contact with the media.
 - 6.7.3.4 The grating system shall be designed to prevent damage to the tube settler media, and allow for ease of placement and removal.

6.8 Fabrication.

6.8.1 Tube Modules:

- 6.8.1.1 All PVC sheets shall be thermoformed and have a continuous, dedicated glue guide to allow precise alignment of sheets during assembly and installation. Non-thermoformed sheets, which do not provide dedicated guides for precise tube alignment, are not acceptable.
- 6.8.1.2 Fabricated modules shall be comprised of tube-like channels sloped at an angle of about 60° placed in same direction to prevent mixing points and unstable flow patterns. Modules consisting of tubes in alternating directions are not acceptable.
- 6.8.1.3 Tube settler modules shall have a minimum vertical height of 24 in.
- 6.8.1.4 The settling tube length (consistent with efficient solids separation) shall not be less than 27.5 in. (Tube settler modules shall have a minimum tube length of 27.5 in.)
- 6.8.1.5 Rectangular or square shape tubes or "cross-flow" tube settlers shall not be acceptable.
- 6.8.1.6 Tube Settlers must be unidirectional. (All tubes must be oriented in the same direction without exception.)
- 6.8.1.7 Tube settlers with alternating tube direction shall not be allowed without exception.
- 6.8.1.8 Join PVC sheets and channels by solvent bonding to provide a rigid structure, resistant to separation of sheets

6.9 Location Details.

6.9.1 Basin #1.

- 6.9.1.1 Dimensions. 31 ft. 8in. length x 33 ft. 6 in. width.
- 6.9.1.2 Tube Settler Module 24 in. width.
 - 6.9.1.2.1 12 ft. 0 in. length – 30.
 - 6.9.1.2.2 10 ft. 6 in. length – 15.
- 6.9.1.3 Protective Surface Grating. 272 – 24 in. x 24 in. x 1¼ in.

6.9.2 Basin #2.

- 6.9.2.1 Dimensions. 31 ft. 8in. length x 33 ft. 6 in. width.
- 6.9.2.2 Tube Settler Module 24 in. width.
 - 6.9.2.2.1 12 ft. 0 in. length – 30.
 - 6.9.2.2.2 10 ft. 6 in. length – 15.
- 6.9.2.3 Protective Surface Grating. 272 – 24 in. x 24 in. x 1¼ in.

6.9.3 Basin #3.

- 6.9.3.1 Dimensions. 30 ft. 8 in. length x 34 ft. 8 in. width.

- 6.9.3.2 Tube Settler Module 24 in. width.
 - 6.9.3.2.1 12 ft. 0 in. length – 30.
 - 6.9.3.2.2 11 ft. 0 in. length – 15.
- 6.9.3.3 Tube Settler Module 12 in. width.
 - 6.9.3.3.1 12 ft. 0 in. length – 2.
 - 6.9.3.3.2 11 ft. 0 in. length – 1.
- 6.9.3.4 Protective Surface Grating. 288 – 24 in. x 24 in. x 1¼ in.
- 6.9.4 Basin #4.
 - 6.9.4.1 Dimensions. 30 ft. 8 in. length x 34 ft. 8 in. width.
 - 6.9.4.2 Tube Settler Module 24 in. width.
 - 6.9.4.2.1 12 ft. 0 in. length – 30.
 - 6.9.4.2.2 11 ft. 0 in. length – 15.
 - 6.9.4.3 Tube Settler Module 12 in. width.
 - 6.9.4.3.1 12 ft. 0 in. length – 2.
 - 6.9.4.3.2 11 ft. 0 in. length – 1.
 - 6.9.4.4 Protective Surface Grating. 288 – 24 in. x 24 in. x 1¼ in.
- 6.9.5 Basin #5.
 - 6.9.5.1 Dimensions. 30 ft. 8 in. length x 34 ft. 8 in. width.
 - 6.9.5.2 Protective Surface Grating. 288 – 24 in. x 24 in. x 1¼ in.

6.10 Installation Supervision.

Tube settler system manufacturer shall provide the services of a qualified field installation supervisor. Installation supervision shall be provided for three (3) working days on-site (not to exceed 8 hours per day). This time period will be for one (1) trip with two (2) travel days and three (3) working days per trip.

6.11 Warranty.

Tube settler system shall be guaranteed to be free from defects in material for a period of fourteen months (14) months from date of delivery to Owner or twelve (12) months from the date of start-up by Factory Authorized Technician, whichever is earlier.

6.12 Extra Stock/Spare Parts.

- 6.12.1 Spare tube modules - Furnish four (4) full size 12 ft. length x 24 in. width x 24 in. spare tube modules to Owner.
- 6.12.2 Wastage/Spare Protective Surface Grating – Furnish ten (10) full size panels for use as spare or wastage during installation. If fiberglass grating is being provided, a fiberglass patch and repair kit must be provided as necessary to repair cut fiberglass ends.

SAMPLE CONTRACT - ATTACHMENT A
CONTRACT BETWEEN
CITY OF MURFREESBORO
AND
[INSERT CONTRACTOR NAME]
TUBE SETTLER SYSTEM

This contract is entered into on this [INSERT DATE], by and between **THE CITY OF MURFREESBORO WATER AND SEWER DEPARTMENT**, a municipal corporation of the State of Tennessee ("City") and **[INSERT CONTRACTOR NAME], [INSERT TYPE OF ENTITY]** of the State of Tennessee ("Contractor"). This contract consists of the following documents:

- **Invitation to Bid issued** _____
- **Bid Specifications issued** _____
- **Contractor's Bid Response dated** _____
- **This Contract** _____

In the event of conflicting provisions, all documents shall be construed according to the following priorities:

- **Any properly executed amendment or change order to this contract (most recent with first priority)**
- **This Contract**
- **Invitation to Bid and Bid Specifications**
- **Contractor's Bid Response**

1. **Duties and Responsibilities of Contractor.** During the term of this Contract, Contractor agrees to provide a tube settler system consisting of tube settler modules, protective surface grating and support system to replace the current system in up to four (4) existing settling basins and add a protective surface grating to a fifth basin as set forth in the attached Request for Bids, bid specification, and Contractor's Bid Response upon receipt of a purchase order from the City. Contractor acknowledges that the City does not guarantee the purchase of any specific or minimum quantity of units during the term of this agreement.

2. **Term.** The term of this contract shall be for one (1) year from the date of contract award. This contract shall not be effective until approved by the City Council and signed by all required parties.

3. **Payment and Delivery.**

3.1. Payment will be made by the City after goods and/or services have been received, accepted, and properly invoiced. Invoices must bear the purchase order number. Deliveries of all items shall be made within ninety (90) calendar days of order. Deliver according to Manufacturer's standard requirements. Deliver two (2) generators to the Stones River Water Treatment Plant, 5528 Sam Jared Drive, Murfreesboro, TN 37130, 90 days ARO. Coordination for delivery shall be made with Alan Cranford or Steve Toler at (615) 848-3222.

3.2. Deliveries of all items shall be made as stated in the ITB and bid specifications. Should the Contractor fail to deliver items on or before its stated date, the City reserves the right to cancel the order or contract. The Contractor shall be responsible for making any and all claims against carriers for missing or damaged items.

- 3.3. Delivered items will not be considered “accepted” until an authorized agent for the City has, by inspection or test of such items, determined that they fully comply with specifications. The City may return, for full credit and at no expense to the City, any item(s) received which fail to meet the specifications as stated in the Invitation to Bid.
- 3.4. All deliveries made pursuant to the contract must be made pursuant to the written purchase order of the City. The City assumes no liability for goods and/or services provided without a written purchase order from the City. Delivery and freight charges are to be prepaid and included in the bid price.
4. **Price.** The price for goods and other items and/or services shall be invoiced at the prices and charges fixed by the Contractor as per the attached bid which reflects a price of _____.
5. **Warranty.**
 - 5.1. Unless otherwise specified every item proposed shall have a manufacturer’s warranty against defects in parts or workmanship. System shall be warranted to be free from defects in material for a period of fourteen months (14) months from date of delivery to Owner or twelve (12) months from the date of start-up by Factory Authorized Technician, whichever is earlier.
 - 5.2. The Bidder will submit all warranties, stating length of warranties, and subjects warranty covers.
6. **Taxes.** The City of Murfreesboro is exempt from State sales tax and will issue a tax exemption certificate to the Contractor as requested. City shall not be responsible for any taxes that are imposed on Contractor. Furthermore, Contractor understands that it cannot claim exemption from taxes by virtue of any exemption that is provided to City.
7. **Termination—Breach.** In the event that any of the provisions of the Contract are violated by the Contractor, the City may serve written notice upon the Contractor of its intention to terminate the Contract, and unless within seventy-two (72) hours after the serving of such notice upon the Contractor, such violation or delay shall cease and satisfactory arrangement for correction be made, the City may immediately terminate the Contract at any time after said seventy-two (72) hours. Such termination shall not relieve Contractor of any liability to City for damages sustained by virtue of any breach by Contractor.
8. **Termination—Funding.** Should funding for this contract be discontinued, City shall have the right to terminate the contract immediately upon written notice to Contractor.
9. **Termination—Notice.** City may terminate this contract at any time upon thirty (30) calendar days written notice to Contractor. In that event, the Contractor shall be entitled to receive just and equitable compensation for any satisfactory authorized work completed as of the termination date.
10. **Compliance with Laws.** Contractor agrees to comply with any applicable federal, state and local laws and regulations.

11. **Notices.**

- 11.1. Notices to City including but not limited to notice of assignment of any rights to money due to Contractor under this contract must be mailed or hand delivered to the attention of the Director, Murfreesboro Water and Sewer Department, P.O. Box 1477, 300 NW Broad Street, Murfreesboro, Tennessee 37133-1477.
- 11.2. Notices to Contractor shall be mailed or hand delivered to: [INSERT CONTRACTOR NAME AND ADDRESS]

12. **Maintenance of Records.** Contractor shall maintain documentation for all charges against City. The books, records, and documents of Contractor, insofar as they relate to work performed or money received under the contract, shall be maintained for a period of three (3) full years from the date of final payment and will be subject to audit, at any reasonable time and upon reasonable notice by City or its duly appointed representatives. The records shall be maintained in accordance with generally accepted accounting principles.

13. **Modification of Contract.** This contract may be modified only by written amendment executed by all parties and their signatories hereto. Depending upon the nature and amount of the amendment, the approval of the City Council may be required. Minor modifications to the contract may be approved by the Director of the Murfreesboro Water and Sewer Department.

14. **Partnership/Joint Venture.** Nothing herein shall in any way be construed or intended to create a partnership or joint venture between the parties or to create the relationship of principal and agent between or among any of the parties. None of the parties hereto shall hold itself out in a manner contrary to the terms of this paragraph. No party shall become liable for any representation, act or omission of any other party contrary to the terms of this paragraph.

15. **Waiver.** No waiver of any provision of this contract shall affect the right of any party thereafter to enforce such provision or to exercise any right or remedy available to it in the event of any other default.

16. **Employment.** Contractor shall not subscribe to any personnel policy which permits or allows for the promotion, demotion, employment, dismissal or laying off of any individual due to race, creed, color, national origin, age, sex, or which is in violation of applicable laws concerning the employment of individuals with disabilities.

17. **Non-Discrimination.** It is the policy of the City not to discriminate on the basis of age, race, sex, color, national origin, or disability in its hiring and employment practices, or in admission to, access to, or operation of its programs, services, and activities. With regard to all aspects of this contract, Contractor certifies and warrants it will comply with this policy.

18. **Indemnification and Hold Harmless.** Contractor shall indemnify and hold harmless City, its officers, agents and employees from:

- 18.1. Any claims, damages, costs and attorney fees for injuries or damages arising, in part or in whole, from the negligent or intentional acts or omissions of Contractor, its officers, employees and/or agents, including its sub or independent Contractors, in connection with the performance of the contract, and,
 - 18.2. Any claims, damages, penalties, costs and attorney fees arising from any failure of Contractor, its officers, employees and/or agents, including it sub or independent Contractors, to observe applicable laws, including, but not limited to, labor laws and minimum wage laws.
 - 18.3. Contractor shall pay City any expenses incurred as a result of Contractor's failure to fulfill any obligation in a professional and timely manner under this Contract.
19. **Attorney Fees.** Contractor agrees that, in the event either party deems it necessary to take legal action to enforce any provision of the contract, and in the event City prevails, Contractor shall pay all expenses of such action including City's attorney fees and costs at all stages of the litigation.
20. **Assignment—Consent Required.** The provisions of this contract shall inure to the benefit of and shall be binding upon the respective successors and assignees of the parties hereto. Except for the rights of money due to Contractor under this contract, neither this contract nor any of the rights and obligations of Contractor hereunder shall be assigned or transferred in whole or in part without the prior written consent of City. Any such assignment or transfer shall not release Contractor from its obligations hereunder. NOTICE OF ASSIGNMENT OF ANY RIGHTS TO MONEY DUE TO CONTRACTOR UNDER THIS CONTRACT **MUST** BE SENT TO THE ATTENTION OF THE DIRECTOR, MURFREESBORO WATER and SEWER DEPARTMENT, P.O. BOX 1477, MURFREESBORO, TENNESSEE 37133-1477.
21. **Entire Contract.** This contract, invitation to bid, bid specifications, and Contractor's bid response set forth the entire agreement between the parties with respect to the subject matter hereof and shall govern the respective duties and obligations of the parties.
22. **Force Majeure.** No party shall have any liability to the other hereunder by reason of any delay or failure to perform any obligation or covenant if the delay or failure to perform is occasioned by *force majeure*, meaning any act of war, order of legal authority, act of nature, or other unavoidable causes not attributed to fault or negligence of Contractor.
23. **Governing Law.** The validity, construction and effect of this contract and any and all extensions and/or modifications thereof shall be governed by the laws of the State of Tennessee. Tennessee law shall govern regardless of any language in any attachment or other document that the Contractor may provide.
24. **Venue.** Any action between the parties arising from this agreement shall be maintained in the courts of Rutherford County, Tennessee.
25. **Severability.** Should any provision of this contract be declared to be invalid by any court of competent jurisdiction, such provision shall be severed and shall not affect the validity of the remaining provisions of this contract.

