SAN ANTONIO WATER SYSTEM PURCHASING DEPARTMENT

Issued By: D. Anthony Rubin **Date Issued: April 17, 2018**
BID NO.: 18-18047

FORMAL INVITATION FOR BIDS
ANNUAL CONTRACT FOR FOUR (4) MECHANICALLY CLEANED BAR SCREENS WITH MULTIPLE REKE BLADES FOR DOS RIOS WRC
ADDENDUM NO. 1

Sealed bids addressed to the Purchasing Director, San Antonio Water System, 2800 US Hwy 281 North, Administration Bldg., 5th Floor, San Antonio, TX 78212 will be received until **3:00 p.m., April 25, 2018** and then publicly opened and read aloud for furnishing materials or services as described herein below,

The San Antonio Water System Purchasing Department is willing to assist any bidder(s) in the interpretation of bid provisions or explanation of how bid forms are to be completed. Assistance may be received by visiting the Purchasing Office in the SAWS Main Office, 2800 US Hwy 281 North, San Antonio, TX 78212, or by calling (210) 233-3819.

This invitation includes the following:

Invitation for Bids
Terms and Conditions of Invitation for Bids
Specifications and General Requirements
Price Schedule

The undersigned, by his/her signature, represents that he/she is authorized to bind the Bidder to fully comply with the Specifications and General Requirements for the amount(s) shown on the accompanying bid sheet(s). By signing below, Bidder has read the entire document and agreed to the terms therein.

Signer's Name: _____ Firm Name: _____
(Please Print or Type)

Address: _____

_____
Signature of Person Authorized to Sign Bid

City, State, Zip Code: _____

Email Address: _____ Telephone No.: _____

Fax No.: _____

Please complete the following:
Prompt Payment Discount: _____% _____days. (If no discount is offered, Net 30 will apply.)

Please check the following blanks which apply to your company:
Ownership of firm (51% or more):
___Non-minority ____Hispanic ___African-American ____Other Minority (specify) _____
___Female Owned ___Handicapped Owned ___Small Business (less than $1 million annual receipts or 100 employees)
Indicate Status: ___Partnership ___Corporation ____Sole Proprietorship ____Other (specify) _____
Tax Identification Number:_____

To report suspected ethics violations impacting the San Antonio Water System, please call 1-800-687-1918.

This **Addendum no. 1** is being issued for Bid no. 18-18047 for the Purchase of Mechanically Cleaned Bar Screens with Multiple Rake Blades for Dos Rios WRC. This addendum is being used to provide answer and clarification to question submitted. Additional, the following specification revision will be made a part of this bid document. The following paragraphs are being revised:

Approved Manufacturer:

1.2 MANUFACTURERS- MECHANICAL SCREENING UNITS

A. Mechanical Screening Units and motor controllers will be in compliance with these specifications and plans and will be supplied by one of the following manufacturers:
   1. Duperon, Corp "Flexrake" (Link-driven System), Saginaw, MI
   2. Headworks, Inc. "Mahr Type MS1" (Chain-driven System), Houston, TX
   3. Huber "RakeMax" (Chain-driven System), Huntersville, NC
   4. Vulcan Industries, Inc. "VMR" (Chain-driven System), Missouri Valley, IA
   5. Kusters Water, "MRS Mechanically Cleaned Bar Screen" (Chain-driven System), Spartanburg, SC

1.5 SUBMITTALS

E. SAWS's Submittal Review:
   1. SAWS will provide review comments in no **more** than 3 business days for all submittals

2.3 SERVICE CONDITIONS -

C. Design Criteria

1. **Number of Units**	**4: 96-in wide**
2. **Peak Hourly Flow per Unit**	**72.0 MGD**
3. **Average Daily Flow per Unit**	**48.0 MGD**
4. **Minimum Hourly Flow per Unit**	**9.8 MGD**
5. **Clear Spacing between Screen Bars**	**1/4-inch**
6. **Setting Inclination**	**per mfr**
7. **Channel Width**	**8'–0" +/- (See Attachment D)**
8. **Channel Depth**	**9'-2.5" +/- ½"**
9. **Max Water level upstream (Peak Flow~~, 25% blockage~~)**	**7 ft**
10. **Water level differential @ PHF**	**1 ft**
11. **Slot Velocity (maximum)**	**5-ft/sec**
12. ~~**Max water level upstream**~~	~~**6.5 ft**~~ **(DELETE)**
13. **Screen motor horse power**	**0.5 HP (Link Driven), 2 to 5 HP (Chain Driven)**
14. **Motor rating**	**TEFC-XP**
15. ***Periodic Storm Flow Water Depth**	**8 ft**

*Note - Manufacturer shall ensure that the Periodic Storm Flow Water Depth won't submerge any parts that void warranty.

D. The Raw Sewage characteristics are expected to be as follows:
   1. pH: 5.5 to 8.0
   2. Flow:

a. ~~**The screens must be sized to accommodate the specified peak flow with 25% clogging.**~~ **(DELETE)**

Question & Responses:

1. Terms and Conditions of Invitation for Bids, Part 18, paragraph (b), page 8.: It is stated that a performance deposit in the amount set forth in the Invitation for Bids is required of Vendors. Please specify the amount of the performance deposit as it cannot be located in the Invitation for Bids. Answer: No Performance Bond is required
2. Terms and Conditions of Invitation for Bids, Part 18, paragraph (f), page 9.: The required time of 10 days for vendor to perform any warranty service conflicts with Technical Specifications, Section 1.9 which states the vendor has 30 days. Please clarify. Answer: Does not apply
3. Specifications and General Requirements, Part 11, page 13: Equipment delivery is stated as no later than December 21, 2018. Could this be amended to a number of days or weeks following receipt of PO? It is difficult for a manufacturer to state with certainty they can provide equipment by a given date without knowing the expected date of receipt of PO. Currently, Manufacturer is stating that submittals will be completed in 6-8 weeks following PO and delivery of equipment will occur 22-24 weeks following receipt of approved submittal drawings. Below is an example of the resulting dates given 4 weeks for submittal review? Answer: The equipment delivery date as stated in the bid is changed from December 21, 2018 to December 28, 2018. SAWS will do everything it can to make sure all manufacturer have enough time to meet this schedule delivery date.
4. Technical Specifications, Part 1.4, B, page 16: It is stated that the screen manufacturer shall have at least 10 installations of this size or larger. Response: Changed to the following "at least 20 US installations of this type of screen, and at least 4 US installations must be this size or larger
5. Technical Specification, Part 1.6, E, page 17: It is stated that submerged pickling is required following fabrication. Manufacturer suggest that the paragraph be modified to the following:

   "All stainless steel parts of the unit shall be fully submerged into a pickling bath for at least 8 hours to remove welding spots and to protect the stainless steel against corrosion. Alternately, all welds shall be paste passivated after fabrication per ASTM-380."

   As a justification, stainless steel from the mill is already immersion passivated (pickled) and therefore, only the stainless steel surface areas affected by fabrication (welding, grinding, drilling, etc.) or contamination need to be re-passivated. Based on ASTM-A380 (the American standard for stainless steel passivation), there are a number of methods including immersion and paste passivation systems that provide re-establishment of the oxide protective film. The passivation process begins by elimination of oils and other substances that would impede chemical passivation. This includes hot water/soap power washing of all components and structures. Following cleaning, the passivation process includes the use of acid baths / sprays in three parts to re-establish the oxidation film that protects the surface from attack by common chemicals / aerosols found in wastewater treatment plants (hydrogen sulfide, mercaptans, chlorine, salts, etc). Again, following the chemical passivation process, a thorough high pressure water rinsing is used to remove all chemical residual. Response: The requested pickling method is acceptable. Paste passivation, per ASTM -380, is acceptable in lieu of submergence pickling after fabrication.

6. Technical Specifications, Part 2.1, I, page 20: The maximum slot velocity of 5 ft/s is not attainable at 90.91 MGD per screen. See below comment. Answer: The depth has been increased to 7 ft, the peak flow has been reduced to 72 MGD per screen, and blinding changed to zero (0%). A special note is being made that there are periodic occasions of abnormally heavy flow that could increase the channel depth to 9 ft. This note is being made to ensure that no bearings or vulnerable parts will be submerged and void warranty.
7. Technical Specifications, Part 2.3, C, page 21: It is stated that the peak hourly flow per screen is 90.91 MGD with a max upstream water level for a blinded screen is 6.5' and the max slot velocity is 5 ft/s. With 1/4" spacing these hydraulic conditions are not possible. Please reevaluate the channel hydraulics. Answer: Please see above.
8. Technical Specifications, Part 2.6, B,2 on page 22: Can trapezoidal shaped bars be utilized that are 5/16" x 5/32" x 1-9/16" deep. Answer: Change from "tear-shaped or tapered" to "tear-shaped, tapered, or trapezoidal".
9. Technical Specifications, Part 2.7, B, 4, b, page 29: If the intent of this paragraph is to have the transformer in the panel sized adequately to power nearby outlets, please providing number of outlets and desired amp rating of circuit. Answer: The following was inserted: (One outlet per panel)
10. Spec page 21 is enclosed, which gives the Design Criteria for these screens. To get the hydraulics even close at the required max allowable 6.5 ft upstream liquid depth at 25% blinding, we have to lay the screen down to 50 degree incline. At that condition, the screen does not fit in the channel. Even then, we don't meet the 5 fps max slot velocity. We can stand the screen up at a more normal 75°, and it would fit in the available channel length. But then, the upstream liquid depth needs to be at least 8.5 ft, with almost no freeboard, and the slot velocity approaches 6 fps, above the allowable 5 fps. Answer: The depth has been increased to 7 ft, the peak flow has been reduced to 72 MGD per screen, and blinding changed to zero (0%). A special note is being made that there are periodic occasions of abnormally heavy flow that could increase the channel depth to 9 ft. This note is being made to ensure that no bearings or vulnerable parts will be submerged and void warranty.
11. Do you have an expected downstream water level at the peak condition? Answer: 1 ft for water level differential at peak flow.
12. We would like to inquiry if it would be possible to extend the delivery date for these screens from December 22, 2018 to December 28 2018? Answer: SAWS will extend the delivery date to December 28, 2018.
13. A single main control panel shall be furnished with a lockable NEMA 4X corrosion-resistant Type 316 stainless steel enclosure together with a local push button station for each screen rated for a NEMA 7, Class 1 Division 2 environment. **Comment:** Two main control panels shall be furnished with lockable NEMA 4X corrosion-resistant 3 6 stainless steel enclosures together with two common local push button stations rated for a NEMA 7, Class 1 Division 2 environment. **Response:** The original language is being changed to that of the comment. In addition, the local push button stations are now required to be rated for a NEMA 4X.
14. Thermostatically controlled air conditioning units manufactured by Thermal Edge Inc. type CS or approved equal. **Comment:** Please consider Saginaw Controls and Engineering Enviro-Therm panel

AC with integral heater as an equal. **Response:** Once specifications for the proposed Saginaw unit are received, a determination will be made as to its equivalency.

15. 2. Peak Hourly Flow per Unit 90.91 MGD 9. Water level upstream (Peak Flow, 25% blockage) 6.5 ft 10. Water level differential @ PHF 1 ft 11. Slot Velocity (maximum) 5-ft/sec 12. Max water level upstream 6.5 ft **Comment:** The slot velocity requirement in the Bid Specifications is not attainable for any 1/4" mechanical barscreen. **Response:** The depth has been increased to 7 ft, the peak flow has been reduced to 72 MGD per screen, and blinding changed to zero (0%). A special note is being made that there are periodic occasions of abnormally heavy flow that could increase the channel depth to 9 ft. This note is being made to ensure that no bearings or vulnerable parts will be submerged and void warranty.
16. Each Control Panel shall incorporate two (2) new ultrasonic transducers installed overhead in front and behind each bar screen. The dedicated transducers shall connect to corresponding, intrinsically safe terminations in the main control panel and utilize the rake manufacturer's stand rake controller. The rake controller logic shall include at a minimum differential level and cycle timing program. **Comment:** Each Control Panel shall incorporate two (2) new ultrasonic transducers installed overhead in front and behind each bar screen. The dedicated transducers shall connect to corresponding externally mounted transmitter and utilize the rake manufacturer's standard rake control. The rake controller logic shall include at a minimum differential level and cycle timing program. **Response:** It is acceptable to connect the transducers to the corresponding externally mounted transmitter.
17. The existing local control stations are Nema 4x, but in one place the spec says replacements to be Nema 7. Which is it? **Response:** Both the control panels and the local push button stations are required to be NEMA 4X, the reference to NEMA 7 has been deleted.

IT IS NOT NECESSARY TO RETURN THIS ADDENDUM WITH THE ORIGINAL BID DOCUMENTS.