



Financial Management Department
Purchasing Division
1112 Manatee Ave W Suite 803
Bradenton, FL 34205
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Email

November 8, 2016

TO: All Interested Bidders

SUBJECT: Invitation for Bid (IFB) #16-2802DC
MLS Tara 20 Rehabilitation

ADDENDUM #3

Bidders are hereby notified that this Addendum shall be acknowledged on the Bid Form and made a part of the above named bidding and contract documents.

1. Bid Opening is extended to **4:00 P.M., November 16, 2016**, same location.
2. Delete Addendum 2 reference to specifications for the sluice gates.
3. Add the attached Specification Section 07000 Sluice Gates.

If you have submitted a bid prior to receiving this addendum you may request in writing that your original, sealed bid be returned to your firm. All sealed bids received will be opened on the date stated.

Bids will be received at Manatee County Purchasing, 1112 Manatee Avenue West, Suite 803, Bradenton, Florida 34205 until **4:00 P.M., November 16, 2016**.

Sincerely,

MW Melissa M. Wendel, CPPO
Purchasing Official

/dcr

Attachment: Specification Section 07000

SECTION 07000 SLUICE GATES

PART 1 GENERAL

1.01 SCOPE

- A. Provide and install complete and operable manually operated single door rising extended spindle type sluice gate with wall thimble, flush bottom closing, flange back frame being suitable for seating and unseating water head, guide, frame, sides, etc. with all required hardware, labor, equipment, and ancillary items. Equipment shall be new, factory and field tested, installed, and ready for operation.

1.02 DESIGN REQUIREMENTS AND CONSTRUCTION FEATURES

- A. The construction of sluice gates shall be in accordance with the specification and generally as per AWWA C501 or IS : 13349/1992 CL-1. The sluice gates shall be capable of performing the duties set out in this specification without undue wear for deterioration. They shall be constructed so that maintenance is kept to a minimum. All parts of sluice gate, including lifting mechanism components shall be designed for the heads specified with a minimum safety factor of five. All sluice gates shall be of the rising spindle type.

1.02 MANUFACTURERS, OR EQUIVALENT

1. Whipps, Inc.
2. Hydrogate
3. Rodney Hunt
4. Waterman Industries
5. Fontaine Ltd

1.06 SUBMITTALS

- A. Submittal of Equipment, Materials, and Details. Submit the following items for review and comment before using them on this project.
 1. Shop Drawings: Shop drawings of all gates shall be submitted to the County in accordance with the Contract Documents.
 2. Certification: The Contractor shall obtain written certification from the manufacturer, addressed to Irving Flood Control District 1 (IFCD #1), stating that the equipment will efficiently and thoroughly perform the required functions in accordance with these Specifications and as shown, and that the designated single manufacturer accepts the Contractor's assignment of full responsibility for coordination of all equipment, including operators and controls, and services required for proper installation and operation. The Contractor shall submit all such certificates to the County.
 3. Tools: Special tools necessary for maintenance and repair of the gates shall be

furnished as a part of the work hereunder; such tools shall be suitably stored in metal tool boxes, and identified with the equipment number by means of stainless steel or solid plastic name tags attached to the box.

4. Spare Parts: The Contractor shall obtain from the manufacturer a list of suggested spare parts of all items subject to wear, such as seals, packing, gaskets, nuts, bolts, washers, etc. He shall furnish all these parts suitably packaged and labeled in a box as described above for tools.
 5. Maintenance: Printed instructions relating to proper maintenance, including lubrication, and parts lists indicating the various parts by name, number, and diagram where necessary, shall be furnished in duplicate with each unit or set of identical units. A recommended spare parts list shall be included. The Contractor shall provide for the services of a factory service representative to instruct the County personnel in the operation and maintenance of the equipment.
 6. Field Procedures: Instructions for field procedures for erection, adjustments, inspection, and testing shall be provided prior to installation of the gates. Service and instruction assistance by the manufacturer's engineering representative for each gate and valve shall be provided by the Contractor during erection and startup.
- B. Operation and Maintenance Manuals. Upon determination of the equipment to be used in this station and before final acceptance of this project, furnish to County three books each containing the following:
1. The portions of data required for approval of Items 1 through 6 in Section 2.A above. Provide the "as built" drawings. Include complete lubrications, operation manual, service, maintenance instructions, and parts lists.
 2. The complete sequence and description in full of the operating instructions, noting all precautions.
 3. The parts list for each item of mechanical and electrical equipment.
 4. Separate each section (slide gates, actuators, flap gates, etc) and indicate name of supplier along with contact person, address and phone number at the beginning of each section.
 5. Name, address and telephone number of nearest competent service representative who can supply parts and service.
 6. Descriptive literature of all equipment with inapplicable information omitted or marked through.
 7. Operating, maintenance and troubleshooting information.
 8. Complete parts lists with part numbers.
 9. Complete connection, interconnection and assembly drawings of all equipment.

10. After completion, the Contractor shall furnish to the County the manufacturer's written guarantees, that the gates will meet these specifications. The Contractor shall also furnish the manufacturer's warranties as published in its literature and as specified.

PART 2 PRODUCTS

2.01 MATERIAL OF CONSTRUCTION

<u>Component</u>	<u>Material</u>
Frame Assembly and Retainers	Type 316 SS, ASTM A-240
Slide and Stiffeners	Type 316 SS, ASTM A-240
Stem	Type 316 SS, ASTM A276
Fasteners, Nuts and Bolts	Type 316 SS, ASTM A593 & 594
Invert Seal	Neoprene ASTM D2000
Seats/Seals and Facing	UHMWP, ASTM D4020
Lift Nuts	Bronze ASTM B584
Pedestals and Wall Brackets	Type 316 SS, ASTM A-276
Operator Housing	Cast aluminum

All stainless steel shall have a mil finish. Sandblast welds to remove weld burn and scale.

- A. Provide sluice gates of an approved design acceptable to the County equal to that shown on the plans and specified herein. Sluice gates shall be provided with a manually operated gear reduction floor stand and a frame suitable for mounting in concrete structure as indicated. All gates shall be adequately braced to prevent warping and bending under the intended usage. Appropriate wall thimbles shall be provided to accommodate installation of the gates.
- B. General.
 1. All manufactured items provided under this Section shall be new, of current manufacture, and shall be the products of reputable manufacturers specializing in the manufacture of such products for a minimum of 20 years. Upon request of the County, furnish the names of not less than 25 successful installations of substantially similar equipment in comparable service to that offered under this contract.
 2. All combinations of manufactured equipment which are provided under these Specifications shall be entirely compatible, and the Contractor and the listed manufacturer shall be responsible for the compatibility and successful operation of the various components of the units conforming to specified requirements. All necessary mountings and appurtenances shall be included.
 3. All materials employed in the manufacture and installation of the sluice gates and operators shall be suitable for the intended application; material not specifically called for shall be high-grade, standard commercial quality, free from all defects and imperfection that might affect the serviceability of the product for the purpose for which it is intended.

C. Frame, slide, and Reinforcing Members:

Shall be stainless steel ASTM A276, Type 316. Gate frames and slides shall be of formed stainless steel. Gate assemblies shall be shop tested and certified by the manufacturer to meet the maximum heads indicated. Minimum material thickness shall be 1/4 in. Slides shall be reinforced with angle, channel, or plate stiffeners as required to prevent distortion during normal handling, during installation and while in service. Maximum deflection in the slide shall be 1/360 of the span or 1/16 in., whichever is smaller, under the maximum design head.

D. Stem

Shall be stainless steel, ASTM A276 Type 316. Stems shall be provided with adjustable bronze bushed stem guides to ensure that the L/R ratio of the stem does not exceed 200. The stem shall be 1/2 in. larger than required, with a minimum diameter of 1 1/2 in. Stem connectors consisting of two vertical members welded to the slide shall be provided. Each stem shall be bolted to the stem connector with 316 stainless steel attachment bolts.

E. Fasteners

Shall be stainless steel, ASTM F593, Type 316. All anchor bolts assembly bolts, screws, nuts, etc shall be of ample section to safely withstand the forces created by operation of the gate.

F. Rubber Seals

Shall be neoprene, ASTM D2000. The frames shall be equipped with seats/seals to prevent metal-to-metal contact and restrict leakage. Under seating head conditions, sufficient adjustable wedging or with self adjusting compression cord and UHMWPE seals shall be provided to ensure a leakage rate of 0.05 gpm per foot of seal perimeter or less. The guides of all gates shall incorporate adjustable ultra high molecular weight polyethylene (UHMW) seat/seals on both the upstream and downstream sides of the slide. Each seat/seal will be shaped to act as both a bearing surface and a seal. The top seal shall be mounted on the frame and be of low friction polymer construction. All gates shall contain a replaceable, flush bottom neoprene invert seal, mounted on the slide or into the bottom frame member. The seal shall extend into the guide frames and provide complete sealing for the entire width of the disc. J-bulb type seals shall be mounted inside of the gate frame and be secured with stainless steel flat head screws and UHMW poly cover bars. J-bulb seals shall have mitered and epoxy sealed corners.

G. Guide Bars shall be Ultra High Molecular Weight Polyethylene, ASTM D4020.

Guides shall be 316 stainless steel with formed channel members for maximum rigidity and shall be face mounted. The length of guide shall be such to contact faces. Arrangement shall be made to prevent lateral movement of bolted on guides. They shall be capable of taking the entire thrust produced by water pressure and wedging action. Wedges or wedge facings shall be attached securely to the guides at points where, in the closed position, they will make full contact with the wedging surfaces on the slides.

H. Stem Guides

Guides shall be constructed of 316 stainless steel, bronze bushed, adjustable and spaced to provide an l/r ratio of 200 or less.

I. Operating Mechanism (Handwheel)

Operators shall be weatherproof, UV resistant, equipped with clear lexan, polycarbonate or butyrate stem covers, and shall be mounted on fabricated stainless steel pedestals. The pedestal shall have an ample base or bracket area to evenly distribute the load to the supporting concrete structure. The center line of the operator shall be approximately 3 feet above the base of the pedestal. The operating nut shall be of solid bronze, ASTM B 584. Operating thrust shall be taken on roller or ball bearings. All parts shall be provided with an alternate lubrication system. The unit shall be designed so that a maximum of 40 lb effort on the handwheel will operate the gate. Clockwise movement of the handwheel shall close the gate. Handwheel operators shall have cast aluminum handwheels and bearing housings.

The stem covers shall be provided with vent holes and rain caps. Travel shall be indicated on mylar scales designed for outside conditions and marked to properly indicate open and closed positions in 1" increments.

J. Wall Thimbles

Gates shall be provided with fabricated 316 stainless steel wall thimbles to match the thickness of the walls in which they are installed. Thimbles shall be supplied by the manufacturer of the gates and shall fit the bolt dimensions of the gates. The frame shall be attached to the thimble with 316 stainless steel bolts or studs.

K. Identification

All gates shall be provided with nameplates permanently fastened to gate and provided with manufacturer's information.

2.02 INSPECTION AND TESTING

After completing the installation in every detail, subject the slide gate system to functional tests in the presence of County personnel. Cycle each gate to confirm that they operate without binding, scraping, or distorting. The effort to open and close manual operators shall be measured, and shall not exceed the maximum operating effort specified. Repeat the test as many times as necessary to secure a properly tested working unit. The Contractor shall be responsible for the coordination of the tests of each slide gate and valve with operators, in the presence of the manufacturer's factory service representative.

The slide gate leakage, when subjected to the specified heads shall not exceed 0.05 gpm per foot of seal perimeter (seating head condition), and 0.10 gpm per foot of seal perimeter (unseating head). Any leakage in excess of the allowable specified shall be corrected and the equipment retested until found satisfactory. Contractor shall be responsible for making

any changes and assume the costs for equipment that does not meet specifications or operational requirements.

After the above described tests are complete and before acceptance of the work under this item, furnish the County certificates from the respective manufacturers, guaranteeing the equipment against defects in material and workmanship for a period of three years starting from the date of the acceptance. In addition, furnish the County certified statements from the manufacturers or their authorized representatives that the installation has been thoroughly inspected by them and that it is in accordance with their installation recommendations.

PART 3 EXECUTION (NOT USED)

END OF SECTION