



**SAN ANTONIO WATER SYSTEM
CENTRAL WATER INTEGRATION PIPELINE
TERMINUS TREATMENT FACILITY
SAWS Job No. 18-8616
SAWS Solicitation No. CO-00185**

**ADDENDUM No. 7
September 7, 2018**

To Respondent of Record:

This addendum, applicable to work referenced above, is an amendment to the bidding documents and as such will be made a part of and included in the Contract Documents. Acknowledge receipt of this addendum by entering the addendum number and issue date in the space provided in submitted copies of the proposal.

QUESTIONS AND ANSWERS

Q1. Can you confirm the pricing in the price proposal does not need to be written in words?

A1. Yes, only the figures of the Unit Prices and Total are needed on the Price Proposal.

REVISIONS TO CONTRACT DOCUMENTS AND TECHNICAL SPECIFICATIONS

REQUEST FOR COMPETITIVE SEALED PROPOSALS

a) Remove the last paragraph from the Request for Competitive Sealed Proposals, page IV-1, and replace with the following:

Sealed proposals will be received by Counter Services in the Customer Service office across from the Guard Station, 2800 U.S. Hwy 281 North, Customer Center Building, San Antonio, Texas 78212, **until 10:00 AM (CT), September 14, 2018**. Proposals will then be publicly opened and read aloud by Contract Administration in CR-C145, Customer Center Building, 2800 U.S. Hwy 281 North, San Antonio, Texas. Each proposal must be accompanied by a cashier's check, certified check, or bid bond in an amount not less than five percent of the total proposal price.

SECTION 13216

a) Add Paragraph 2.02.B.2.e as follows:

e. Tank head shall have a factory-applied non-skid coating.

SECTION 17310

a) Add Paragraph 2.03 as follows:

2.03 THERMAL FLOW SWITCH

A. Type:

1. Insert heat elements.
2. Two SPDT relay contacts.
3. 316 stainless steel body.

B. Function/Performance:

1. Function: To provide a contact output when liquid flow is sensed in a pipeline.
2. Operating principle: Two 316 stainless steel RTDs, one is heated and the other senses the process temperature. The temperature difference between the two RTDs is proportional to the process flow. In a no flow condition, the temperature difference between the RTDs is greatest, and in high flow process flow is decreasing as the flow increasing.
3. Operating supply voltage: 120 V ac \pm 5%, 60 Hz \pm 2 Hz.

C. Functional:

1. Output: Form 2C (SPDT) snap action switch, rates for 6 amps, 125 volts AC.

D. Physical:

1. Two 316 Stainless Steel sensors.
2. Body: 316 stainless steel with a flanged connection. The explosion proof unit shall be UL listed for Class I, Divisions 1 and 2, Groups C and D; and Class II, Divisions 1 and 2, Groups E, F and G.
 - a. 1-in minimum NPT mounting, or otherwise match the process line connection.

E. Manufacturer(s):

1. Magnetrol
2. FCI

SECTION 17500

a) Add Paragraph 2.05 as follows:

2.05 OPERATOR INTERFACE TERMINAL (OIT)

A. Operator Interface Terminal

1. Subject to compliance with the Contract Documents, the following Manufacturers are acceptable:
 - a. Rockwell Automation/Allen Bradley PanelView 5500 Touchscreen with Keypad and Studio 5000 software
2. The listing of specific manufacturers above does not imply acceptance of their products that do not meet the specified ratings, features and functions. Manufacturers listed above are not relieved from meeting these specifications in their entirety.
3. Environmental

- a. Operating Temperature 32 – 113 Degrees F
 - b. Relative Humidity 10% - 90% Non-condensing
 - c. Shock (Operating) 15 G for 11 ms.
 - d. NEMA 4
4. Physical
- a. Sizes 15 “
 - b. ColorTFT LCD Touch screen and keypad
 - c. Cooling fans as required
 - d. Embedded Operating System
 - e. Two serial and USB ports
 - f. Minimum 64 Mb of battery backed memory
 - g. Programmable keys as required.
 - h. Power Supply 120 VAC
5. Protocol Interfaces
- a. Rockwell Automation Ethernet/IP
 - b. Modbus TCP
 - c. Allen Bradley DF1
 - d. Modbus RTU
6. Programming Capability
- a. Provide Manufacturer’s software package for programming the OIT.
 - b. Alarm and event management.
 - c. Bar graphs.
 - d. Multi colored background and objects.
 - e. Multi-level password security.

SECTION 17318

a) Add Paragraph 2.01.D.6 as follows:

- 6. Each analyzer shall be provided with an adjustable flow switch for alarming low sample water flow rate.
 - a. Manufacturer: FCI
 - (i) Model: FS10 Series
 - (ii) Approved equal

b) Add Paragraphs 2.02.D.4 and 5 as follows:

- 4. Each analyzer shall be provided with an adjustable water acrylic flow meter for adjusting the sample water flow rate.
 - a. Manufacturer: Key Instruments
 - (i) Model: FR4000 Series 4L48 (2-25 gph)
 - (ii) Approved equal
- 5. Each analyzer shall be provided with an adjustable flow switch for alarming low sample water flow rate.

- a. Manufacturer: FCI
 - (i) Model: FS10 Series
 - (ii) Approved equal

c) Add Paragraphs 2.03.D.4 and 5 as follows:

- 4. Each analyzer shall be provided with an adjustable water acrylic flow meter for adjusting the sample water flow rate.
 - a. Manufacturer: Key Instruments
 - (i) Model: FR4000 Series 4L48 (2-25 gph)
 - (ii) Approved equal
- 5. Each analyzer shall be provided with an adjustable flow switch for alarming low sample water flow rate.
 - a. Manufacturer: FCI
 - (i) Model: FS10 Series
 - (ii) Approved equal

d) Add Paragraph 2.04.D.6 as follows:

- 6. Each analyzer shall be provided with an adjustable flow switch for alarming low sample water flow rate.
 - a. Manufacturer: FCI
 - (i) Model: FS10 Series
 - (ii) Approved equal

e) Add Paragraph 2.06 as follows:

2.06 HARDNESS ANALYZER

- A. Subject to compliance with the contract documents, the following manufacturers are acceptable:
 - 1. Hach
 - a. Model SP510
- B. The listing of specific manufacturers above does not imply acceptance of their products that do not meet the specified ratings, features and functions. Manufacturers listed above are not relieved from meeting these specifications in their entirety.
- C. General
 - 1. Range: Hardness levels: 0 - 100 ppm (expressed as mg/L of CaCO₃)
 - 2. Accuracy: ±25% of set point value
 - 3. Cycle time: One complete sample analysis every 1.9 minutes
 - 4. Output: Form 2C (SPDT) snap action switch, rates for 6 amps, 125 volts AC.
 - 5. Power: 100-115 VAC, 60 Hz, 70 VA maximum
 - 6. Warranty: The analyzer shall be warranted for three (3) full years against defects in materials and workmanship and shall include a maintenance

contract with a three (3) year supply of standards and reagents from the manufacturer.

D. Accessories Required:

1. Provide one full year's supply of any expendable items such as reagents, chemicals, membranes, etc., as required for each analyzer furnished.
2. Provide a complete flow through tee mounting system, the flow through tee mounting system shall include all flow regulators, pressure regulators, shutoff valves, sample pumps, etc., as detailed or required for a complete operational system.
3. Provide a conditioning kit for each analyzer furnished.
4. Each analyzer shall be provided with an adjustable water acrylic flow meter for adjusting the sample water flow rate.
 - a. Manufacturer: Key Instruments
 - (i) Model: FR4000 Series 4L48 (2-25 gph)
 - (ii) Approved equal
5. Each analyzer shall be provided with an adjustable flow switch for alarming low sample water flow rate.
 - a. Manufacturer: FCI
 - (i) Model: FS10 Series
 - (ii) Approved equal

SECTION 17410

- a) Items 46-49, revise Comments column as follows:

Replace "Provided by Filter System Supplier" with "Furnished by Control System Integrator"

- b) Items 46-49, revise Spec Section column as follows:

Replace "11200" with "FCI Model FS10 series or equal"

- c) Item 114, revise Comment column: Replace "Controls System Integrator" with "Vendor Supplied Equipment"

- d) Item 114, revise Spec Section Column: Replace "17310" with "15440".

This addendum is comprised of a total of 6 pages (including attachments).



Jarrett Kinslow, P.E.
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END OF ADDENDUM No. 7