



# City of Cottonwood, Arizona

## NOTICE OF FORMAL SOLICITATION

**SOLICITATION TYPE:**  
**COMMODITY/SERVICE SOUGHT:**

**SOLICITATION INVITATION NO.:**  
**BID DUE DATE AND TIME:**  
**LOCATION:**

### INVITATION FOR BIDS

**Fabrication and Erection of One (1) Powder Coated Bolted Steel Reclaimed Water Storage Tank**

**2017-PW-01**

**August 5<sup>th</sup>, 2016 10:00 AM local Arizona time**

**City of Cottonwood**

**Administrative Services Department**

**Purchasing Division**

**816 N. Main Street**

**Cottonwood, Arizona 86326**

Pursuant to Arizona Revised Statutes Section 34-201, notice is hereby given that the City of Cottonwood ("City") will accept bids with the intention of entering into a contract for: the Fabrication and Erection of One (1) Powder Coated Bolted Steel Reclaimed Water Storage Tank, (the "Project"). The Riverfront Reclamation Facility is located at 1083 E. Riverfront Drive, Cottonwood, Arizona 86326.

Bids shall be enclosed in a sealed envelope clearly identified as **Fabrication and Erection Of One (1) Powder Coated Bolted Steel Reclaimed Water Storage Tank**. The name and address of the entity submitting the Bid shall also be clearly marked on the sealed envelope. It is the sole responsibility of the entity submitting the bid to see that his/her bid is received at the proper time. The bid shall be submitted to the **City of Cottonwood, Purchasing Division, 816 N Main Street, Cottonwood, AZ 86326 by 10:00 AM on Friday, August 5<sup>th</sup>, 2016**, at which time all bids shall be opened and the name of each Bidder and the amount of its bid shall be publicly read. Late bids will not be considered and will be returned unopened.

Contractors desiring to submit bids may obtain PDF versions of the plans and specifications and other information pertaining to the Project via email by contacting the Purchasing Division at [jcook@Cottonwoodaz.gov](mailto:jcook@Cottonwoodaz.gov). Documents can also be obtained through the Public Purchase website at [www.publicpurchase.com](http://www.publicpurchase.com).

**There will not be a pre-bid meeting for this solicitation.**

Every bid shall be accompanied by a certified check, cashier's check or surety bond for ten percent (10%) of the amount of the bid as a guarantee that if selected, the Bidder will enter into a contract to construct the Project in accordance with the plans and specifications. Any surety bond submitted in compliance with this requirement shall be executed by a surety company or companies holding a certificate of authority to transact surety business in this state issued by the director of the Department of Insurance pursuant to Arizona Revised Statutes Title 20, Chapter 2, Article 1; shall follow the form prescribed in Arizona Revised Statutes Section 34-201; and all liabilities on the bond shall be determined in accordance with that section as if it were copied at length therein.

The City of Cottonwood will select a vendor based on the lowest responsible and responsive bid. In accordance with Arizona Revised Statutes Section 34-201(A) (4), the City reserves the right to reject any or all bids or to withhold the award for any reason the City determines.

Publish Date: Verde Independent – Sunday, July 24<sup>th</sup>, 2016 and Sunday, July 31<sup>st</sup>, 2016

OFFER

The undersigned (the "Bidder") hereby offers this Bid as an offer to contract with the City under the terms and conditions set forth below and certifies that Bidder has read, understands and agrees to fully comply with, and be contractually bound by, all terms and conditions as set forth in this Invitation For Bids ("IFB"), the Contract formed hereby (as defined below) and any amendments thereto, together with all Exhibits, Specifications, Plans and other documents included as part of this Contract (the "Contract Documents").

Arizona Transaction (Sales) Privilege Tax License Number: <u>ROC 197022</u>	For Clarification of this Bid contact:
Federal Employer Identification Number: <u>CST Storage Inc</u>	Name: <u>Steve McRoberts</u>
Contractor Name <u>903 E. 104th St. Suite 900</u>	Telephone: <u>913 815-1303</u>
Address <u>Kansas City, Mo 64131</u>	Facsimile: _____ Email: <u>smcroberts@cst-storage.com</u>
City                      State                      Zip Code	 <b>Authorized Signature for Contractor</b> <u>Steve McRoberts</u>
	Printed Name <u>Director Project Management</u> Title

**ACCEPTANCE OF OFFER AND NOTICE OF AWARD (FOR CITY OF COTTONWOOD USE ONLY)**

Effective Date: \_\_\_\_\_ Contract No. \_\_\_\_\_ Official File: \_\_\_\_\_

CITY OF COTTONWOOD, an Arizona municipal corporation

\_\_\_\_\_  
 Diane Joens, Mayor

ATTEST:  
 \_\_\_\_\_  
 Marianne Jimenez, City Clerk

APPROVED AS TO FORM:  
 \_\_\_\_\_  
 Steve Horton, City Attorney

PRICE SHEET

Fabrication and Erection of One (1) Powder Coated Bolted  
Steel Reclaimed Water Storage Tank  
2017-PW-01

**NOTE: All pricing blanks must be filled in. Empty or unfilled spaces in the Bid Price Sheet shall result in a determination that a Bid is non-responsive.**

Item No.	Description of Materials and/or Services	Qty	Unit	Total Price
1	ONE (1) Tank Per Specifications Contained within IFB	1	EA	<del>\$</del> 219,575
	TOTAL CONSTRUCTION COST*			<del>\$</del> 219,575

**\* ALL BIDS ARE PRESUMED TO INCLUDE ALL APPLICABLE TAXES. CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL WORK CONTEMPLATED BY THE PLANS FOR THE PROJECT IS BID ON THE PRICE SHEET. THE CITY RESERVES THE RIGHT TO AWARD ANY OR ALL OF THE ITEM NUMBERS LISTED ABOVE AS THE CONTRACT.**

**SECTION 13210**

**POWDER COATED BOLTED STEEL RECLAIMED WATER STORAGE TANK**

**Part 1 - GENERAL**

**1.1 SCOPE**

- A. Furnish and erect a fusion bonded powder coated, bolted-steel reclaimed water storage tank which will serve as a wet well for the Riverfront Water Reclamation Facility (RWRF) pumps. The tank will receive effluent from the tertiary filters.
- B. Work shall include the complete furnishing and installation of all labor, materials, equipment and appurtenances as shown on the drawings and described herein. Equipment numbers are:

<u>Name</u>	<u>Number</u>
Reclaimed Water Reservoir	RT-2001

**1.2 RELATED WORK**

- A. Tank manufacturer shall provide all openings and fittings required for the pumping system, as shown on the drawings.
- B. Tank manufacturer shall provide all openings and fittings required for the instrumentation and control systems.

**1.3 QUALITY ASSURANCE**

- A. Only manufacturers specializing in the design, fabrication and erection of factory applied epoxy coated, bolt together tank systems shall bid on this work. Manufacturer shall fabricate and coat the tank in the same facility which it owns and operates.
- B. Erection of the tank is to be by tank manufacturer. The CONTRACTOR currently working at the site will prepare the tank foundation per separate specification and per AWWA D103-09 Type 5. The tank manufacturer shall review the geotechnical report and field compaction test results for the tank base and provide recommendations for base preparation suitable for the proposed tank.

**1.4 REFERENCES**

- A.** The manufacturer shall have installed a minimum of 5 similar tanks over the past 10 years in climate similar to that in Cottonwood, Az.
- B.** The tank shall meet the AWWA specifications contained in the latest edition of Section 2 of AWWA Specification D103 for Factory-Coated, Bolted Carbon Steel Tanks for Water Storage.

## **1.5 SUBMITTALS**

Shop Drawings Submittals shall comply with Section 01300 and include the following as a minimum.

- A.** Resume of tank installation superintendent.
- B.** List of five (5) similar tanks previously constructed and designed to AWWA D103 standards.
- C.** List of five (5) tanks similar previously constructed and designed to AWWA D.013-09 Seismic Use Group #2 or #3.
- D.** Seven (7) sets of complete shop drawings showing all materials, configuration and fabrication details associated with the tank which contains the following:
  - 1. Dimension Drawings
  - 2. Joint bolting
  - 3. Accessory list with fabrication details
  - 4. Erection drawings, catalog data and description of manufactured items
  - 5. Coating System
- E.** Mill test reports
- F.** Complete set of structural calculations for the tank structure and foundation, which includes the following design requirements.
  - 1. 100 mph wind load
  - 2. 15 PSF Deck live load
  - 3. Zone 2 Seismic requirements

## **1.6 DELIVERY, STORAGE AND HANDLING**

- A.** All materials shall be protected within a climate controlled building against direct sunlight, rain, wind and snow prior to erection.
- B.** All materials shall be inspected prior to erection by tank manufacturer to determine compliance with the Contract Documents and submittal information. In the event manufacturer determines that materials delivered to the site are not in compliance, they shall be removed from the site, and replaced at no cost to the city.

## **1.7 WARRANTY**

- A.** Tank manufacturer shall warrant to the city that all materials and accessories furnished under this contract shall be new and free from faults and defects following erection and testing.
- B.** The tank manufacturer shall warrant the tank shall be free from any defect in material or workmanship, under design use, for a period of two (2) years after erection.

## **PART 2 - PRODUCTS**

### **2.1 ACCEPTABLE MANUFACTURERS.**

Tank shall be provided by the following manufacturers, or approved equal, providing they comply with these specifications.

- 1. Superior Tank Co.; Rancho Cucamonga, CA.
- 2. American Tank Co. Windsor, CA.
- 3. Approved equal

### **2.2. DESIGN CRITERIA**

- 1. Tank Size. Tank shall have a nominal diameter of 62 feet with a nominal sidewall height (to roof eave) of 24 feet.
- 2. Tank Capacity. Tank working capacity shall be 500,000 gallons (nominal, U.S. gallons).
- 3. Tank Freeboard. Tank freeboard shall be 1 foot.

### **2.3. PIPING AND APPURTANCES**

1. The reservoir shall be furnished with piping and appurtenances as shown on the plans and as follows:
  - a. 8 inch inlet pipe
  - b. 6 inch overflow pipe
  - c. 10 inch outlet pipe
  - d. 4 inch drain pipe
  - e. 24" square, hinged, lockable roof hatch (Bilco Co. Type D, or equal)
  - f. One 24 inch diameter shell manhole with hinged cover
  - g. 2 – 3.5' high handrails enclosing the roof hatch and the top of the ladder.
  - h. Outside ladder with ladder gate and lock, with fall protection
  - i. Inside ladder without fall protection
  - j. 6 inch screened gooseneck roof vent
  - k. Level indicator/transducer
  - l. Identification name plate
  - m. Antenna mount

### **2.4. TANK MATERIALS**

1. The materials, design, fabrication and erection of the bolt together tank shall conform to the AWWA Standard for "Factory-Coated Bolted Steel Tanks For Water Storage" – ANSI/AWWA D103-09.
2. The tank coating system shall conform to Section 10.6 Thermoset Powder Coatings of ANSI/AWWA D103-09.
3. Plates and Sheets design requirements for mild strength steel shall be ASTM A36 or ASTM A1011 Grade 30, 36, 40, or 50 with a maximum allowable tensile stress 18,000 psi.
4. Design requirements for high strength steel shall be ASTM A1011 Grade 42, 50, 55, or 60 with a maximum allowable tensile stress of 30,000 psi. unless otherwise noted in the engineering specifications and/or submittals.
5. Rolled Structural Shapes material shall conform to minimum standards of ASTM A36 or AISI 1010.

### **2.5. BOLT FASTENERS**

1. Bolts used in tank lap joints shall be ½ - 13 UNC-2A rolled thread, and shall meet the minimum requirements of AWWA D103, Section 2.2.

2. **Bolt Material**
  - a. SAE Grade 5 (1" thru 1 ½")
  - b. Tensile strength – 105,000 psi Min
  - c. Proof Load – 74,000 psi Min.
  - d. SAE Grade 8 (1" thru 1 ½")
  - e. Tensile Strength – 150,000 psi Min.
  - f. Proof Load – 120,000 psi min.
3. **Bolt Finish**
  - a. Zinc, mechanically deposited.
  - b. 2.0 Mils Minimum – under bolt head, on shank and threads.
4. **Bolt Head Encapsulation**
  - a. High impact polypropylene copolymer encapsulation of entire bolt head up to the splines on the shank.
  - b. Resin shall be stabilized with an ultraviolet light resistant material such that the color shall appear black.
5. All bolts on the vertical tank wall shall be installed such that the head portion is located inside the tank, and the washer and nut are on the exterior.
6. Bolt lengths shall be sized to achieve a neat and uniform appearance. Excessive threads extending beyond the nut after torquing will not be permitted.

## **2.6 SEALANTS**

1. The lap joint sealant shall be a one component, moisture cured, polyurethane compound.
2. The sealant shall be used to seal lap joints and bolt connections and edge inlets for sheet notches and starter sheets. The sealant shall cure to a rubber-like consistency, have excellent adhesion to the epoxy coating, low shrinkage, and be suitable for interior and exterior use.
3. Sealant curing rate at 73° F and 50% RH
4. Tack-free time: 6 to 8 hours

5. Final cure time: 10 to 12 days
6. Neoprene gaskets and tape type sealer shall not be used in liquid contacting surfaces.

## **2.7 THERMOSET POWDER COATING**

The thermoset powder coatings shall be applied according to the tank manufacturer's specific procedure. Thermoset powder coatings shall comply with the following:

1. Surface preparation. The steel shall be steel-grit-blasted on all sides in accordance with SSPC SP10/NACE No. 2.
2. Application. The coating shall be applied as follows:

Within 30 minutes of blast cleaning, the interior and exterior surfaces shall be dry-powder coated by electrostatic application with a powder coating.

The dry powder shall be deposited at a rate to yield 5-mil minimum dry film thickness interior, and 3-mil minimum dry film thickness exterior.

The surfaces shall be oven-cured in accordance with the coating manufacturer's recommendations.

3. Inspection. Interior and exterior coated surfaces shall be inspected for visible defects or holidays. Coating thickness shall be verified by a nondestructive mil-thickness test (Mikrotest or equal). Interior coating inspection shall include a holiday detection test and solvent rub test in accordance with ASTM D5402 for organic coatings and ASTM D4752 for ethyl silicate (inorganic) zinc rich primers. Any coating defect shall be repaired and shall pass inspection prior to shipment.
4. Holiday Testing. All holiday tests shall be nondestructive and shall use an electric DC meter and a wet sponge holiday detector operated by a trained technician in accordance with NACE SP0188 and ASTM D5162. The maximum voltage of the meter shall not exceed 67.5 volts. The sponge shall be dipped in plain tap water as required to keep it uniformly damp, not soaked or dry. Unless specifically required by the testing equipment manufacturer, no "conductive" or "wetting" additives shall be used.

## **2.8 PROTECTION**

All coated parts shall be protected from damage during shipment.

## **PART 3 - EXECUTION**

### **3.1. INSTALLATION**

**A. Foundation**

1. The tank manufacturer shall confirm that the foundation design shall safely sustain the structure and its live loads. Copies of the soil report are included in the contract documents.

**B. Sidewall Structure**

1. Field erection of the bolted steel tank shall be in strict accordance with the procedures outline by the manufacturer, using factory trained erectors.
2. Particular care shall be taken in handling and bolting of the tank panels and members to avoid abrasion of the coating system. Prior to a liquid test, the Engineer may visually inspect all surface areas.
3. An electrical leak test shall be performed during erection using a wet sponge low voltage leak detection device. All electrical leak points found on the inside surface shall be repaired in accordance with manufacturer's published touch up procedures.
4. The placement of sealant on each panel may be inspected prior to placement of adjacent panels; however, inspection will not relieve the bidder from his responsibility for liquid tightness.

**C. Appurtenances**

1. Pipe Connections:
  - a. Where pipe connections are shown to pass through tank panels, they shall be located, saw cut, (acetylene torch cutting or welding is not permitted), and utilize an interior and exterior angle assembly and the tank shell reinforcing shall comply with AWWA D103. A single component urethane sealer shall be applied on any cut panel edges or bolt connections.
2. Outside Tank Ladder:
  - a. An outside tank ladder shall be furnished and installed as shown on the drawings. Safety cage and platforms shall be fabricated of galvanized steel. Ladder shall be equipped with a hinged lockable entry device.
3. Access Door:

- a. One bottom access door shall be provided in accordance with AWWA D103.
  - b. The opening shall be a minimum of 24 inches in diameter. The access door (shell manhole) and the tank shell reinforcing shall comply with AWWA D103, Sec. 5.1.
4. Name Plate:
- a. A manufacturer's nameplate shall list the tank serial number, tank diameter and height and maximum design capacity. The nameplate shall be to the tank exterior sidewall at a location next to the access door.
5. Antenna Mount:
- a. An antenna mount and brackets shall be furnished and installed for the City's communication equipment.

### **3.2 FIELD TESTING**

#### **A. Hydrostatic**

1. Following completion of erection and cleaning of the tank, the structure shall be tested for liquid tightness.
2. The CONTRACTOR in accordance with the manufacturer's recommendations shall correct any leaks disclosed by this test.
3. The OWNER shall furnish water required for testing at the time of tank completion at no charge to the tank erector. Disposal of test water shall be the responsibility of the OWNER.

#### **B. Vacuum Test**

1. Test for porosity in the bolted joints of the tank bottom by observation of bubbles in a soap solution with a glass top metal testing box connected to equipment that produces a vacuum of at least two (2) PSI. Correct deficiencies.

### **3.3 DISINFECTION**

#### **1. Standards**

- a. The tank structure shall be disinfected at the time of testing by chlorination in accordance with AWWA Standard C652 “Disinfection of Water Storage Facilities”.
2. Disinfection shall not take place until tank sealant is fully cured.

**\*\*END OF SECTION\*\***