



**SAN ANTONIO WATER SYSTEM**  
**2013 REHABILITATION WORK ORDER CONSTRUCTION CONTRACT 3**  
**SAWS Job No. 13-4507**  
**SAWS Solicitation No. B-13-024-DD**

**ADDENDUM NO.1**  
**May 7, 2013**

**To Bidder of Record:**

This addendum, applicable to work referenced above, is an amendment to the bidding documents and as such will be 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.

**Item 1: Invitation to Bidders**

REPLACE the following sentence at the beginning of Paragraph 5:

**“Sealed bids will be received by the Contract Administration Division, 2800 U.S. Hwy 281 North, Customer Center Building, Suite 171, San Antonio, Texas 78212, until 2:00 p.m. (CT), May 17, 2013.”**

with the following sentence:

**“Sealed bids will be received by the Contract Administration Division, 2800 U.S. Hwy 281 North, Customer Center Building, Suite 171, San Antonio, Texas 78212, until 10:30 a.m. (CT), May 17, 2013.”**

**Item 2: Responses to Bidders Questions**

**Question 1:** Do you know if there are coatings specified for the “rehabilitation” of the manholes?

**Answer 1:** *Yes, coatings are specified for rehabilitation of manholes.*

**Question 2:** If so, which coatings have been specified?

**Answer 2:** *Approved manhole coatings are specified in Specification Item 910 – Manhole Rehabilitation. See Item 3 of this Addendum for revisions to Specification Item 910.*

**Question 3:** Are you accepting “approved equals”?

**Answer 3:** *No, approved equals are not allowed. See Item 3 of this Addendum for revisions to Specification Item 910.*

**Item 3: Technical Specifications**

REMOVE Specification Item 910 - Manhole Rehabilitation, in its ENTIRETY and REPLACE with the attached revised Specification Item 910.


**Item 4: Non-Mandatory Pre-Bid Meeting**

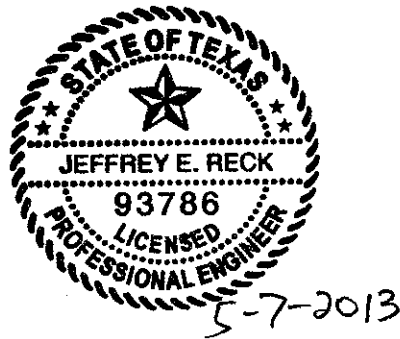
Meeting Notes are attached for information only. The pre-bid meeting sign-in sheet has been posted previously on the SAWS website.

The remainder of the bid documents remains unchanged.

This Addendum, including this page, is two (2) pages in its entirety.

**Each bidder is requested to acknowledge receipt of this Addendum No. 1 by his/her signature affixed hereto and to file same as an attachment to his/her bid.**

  
Jeffrey E. Reck, P.E.  
Project Manager  
LNV, Inc.  
TBPE Firm No. F-366



The Undersigned acknowledges receipt of this Addendum No. 1 and the bid submitted herewith is in accordance with the information and stipulation set forth.

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature of Bidder

**END OF ADDENDUM**

## ITEM 910 MANHOLE REHABILITATION SPECIFICATION

### 910.1 Description

This item shall govern rehabilitation of manholes complete and in place and the materials used therein, including cleaning, interior surface restoration, priming the prepared surface and coating (including bench and invert of the manhole). It shall also include all required by-pass pumping necessary to complete the work.

### 910.2 Certification

Manufacturer shall certify that Applicator has been trained and approved in the handling, mixing and application of the products to be used. Equipment to be used for applying the products by the Applicator shall be certified and approved by the Manufacturer. At least five (5) recent references of Applicator indicating successful application of proposed liner on project of similar size and scope shall be submitted by Contractor. *Only manhole rehabilitation products approved by the SAWS Standards Committee shall be used. All contractors doing this work must have a minimum of 15,000 vertical feet installed within the State of Texas.*

The Contractor shall submit descriptive information including technical data sheets and ASTM test results on each product proposed indicating that the product conforms to and it is suitable for its intended use per these specifications. *All required submittals must be satisfactory to SAWS.*

### 910.3 Surface Preparation

Proper surface preparation procedures must be followed to ensure adequate bond strength to any surface to be coated. Applicator shall inspect all surfaces specified to receive a liner prior to surface preparation. Applicator shall notify Owner of any noticeable disparity in the surfaces which may interfere with the proper preparation or application of the repair mortar and/or liner(s). Concrete that is not sound or or has been damaged by chemical exposure shall be removed to a sound, concrete surface. All contaminants including: all oils, grease, incompatible existing coatings, waxes, form release, curing compounds, efflorescence, sealers, salts, or other contaminants shall be removed. Surface preparation methods(s) should be based upon the conditions of the substrate and the requirements of the liner to be applied.

Surface to receive liner shall be cleaned and abraded to produce a sound concrete surface with adequate profile and porosity to provide a strong bond between the protective coating and substrate. High pressure cleaning with a minimum of 4,000 psi, and 4 gallons per minute using a rotating pencil nozzle, shall be used to clean and free all foreign material within the manhole. Detergent water and cleaning or muratic acid shall be used when grease and oil are present. All materials resulting from the cleaning of the manhole shall be removed prior to application of coating.

Active water infiltration shall be stopped by using a cementitious water plug or hydroactive grout such as Strong-Seal Strong-Plug, Quadex Hydra-Plug or approved equal, which is compatible

with the specified coating. Prepared surfaces should be tested after cleaning but prior to application of the coating, if a specific pH or moisture content of the concrete is required according to manufacturer's recommendations.

#### 910.4 Product Handling

Protective-coating materials are to be handled according to their material safety data sheets. Materials are to be kept dry, protected from weather and stored under cover.

Repair/under-coat materials must be accepted and approved by the protective coating manufacturer for compatibility with the specified liner and shall be used to fill voids, structurally reinforce and/or rebuild surfaces, etc. as determined necessary by the engineer and liner applicator.

#### 910.5 Materials and Components

- (1) Concrete: Concrete shall conform to City of San Antonio (CoSA) Standard Specifications for Public Works Constructed dated October 1995. Item 300- Concrete (concrete class "A").
- (2) Mortar shall be composed of one part Portland Cement, one part masonry cement (or ¼ part hydrated lime) and masonry sand equal to 2-1/2 to 3 times the sum of the volumes of the cements and lime used.
- (3) Unless otherwise specified, all grouting shall be done with non-shrinking grout. Non-shrinking Grout: Non-shrinking grout shall be furnished factory premixed so only water is added at the job site. Grout shall be mixed in a mechanical mixer. No more water shall be used than is necessary to produce a flowable grout. All proportioning and mixing of the components shall be in accordance with manufacturer's recommendations.
- (4) Reinforcement: Reinforcing steel shall conform to the requirements of COSA Item 301- Reinforcing Steel.
- (5) Brick: Replacement brick for ring adjustment courses shall be of first quality, sound, kiln fired, new unbroken brick.
- (6) For rehabilitation of existing manholes, apply a combination of cementitious coating and epoxy coating, with the cementitious coating first, followed by the epoxy coating. Lafarge SewperCoat 2000 HR regular, with the required one inch thick application, is the only product yet approved which satisfies the requirement of applying the combination of both the cementitious coating and epoxy coating. Approved materials are as follows:

Cementitious coating: With required one inch thick application.

- Permacast CR-5000
- Strong - Seal MS-2C
- Standard Cement Material Inc. Reliner

- Quadex Aluminaliner

Epoxy coating: With specified thickness application.

- Raven 405 Series High Build Epoxy Liner: Required thickness 125 mils
- Spray Wall Polyurethane System: Required thickness 150 mils

### **910.6 Liner Application**

Application procedures shall conform to the recommendations of the liner manufacturer, including material handling, mixing, environmental controls during application, safety, and equipment. The liner application equipment shall be specifically designed to accurately apply the specified liner materials and shall be regularly maintained and proper working order. The liner material must be applied by a Certified Applicator of the liner manufacturer. The liner shall be applied to minimum thickness or as specified by the Engineer according to the Owner's requirements and manufacturer's recommendations. Temperature of the surface to be coated shall be maintained between 40 deg F and 120 deg F during application. Prior to and during application, care should be taken to avoid exposure of direct sunlight or other intense heat source to the structure being coated. Where varying surface temperatures do exist, care should be taken to apply the liner when the temperature is falling versus rising (later afternoon into evening versus early morning into afternoon).

### **910.7 Measurement**

Manhole Rehabilitation shall be measured by vertical feet of manhole depth. Sewer Structure Rehabilitation (Noncircular Manholes, and Manholes Greater than 4 ft. in Diameter) shall be measured by the square feet of area to be rehabilitated.

### **910.8 Testing**

Contractor shall perform testing for manhole rehabilitation – structural/low sulfate, and structural lining/moderate sulfate shall consist of the following:

1. Visually verify the absence of leaks.
2. Perform an exfiltration test.
  - a. For manholes 0 to 6 foot deep, if water loss is 1-inch or less in five minutes, manhole passes the exfiltration test.
  - b. For manholes over 6 foot deep, if water loss is 1-inch or less plus 1/8-inch per additional foot of depth in five minutes, manhole passes the exfiltration test.
3. Perform a vacuum test conforming to SAWS Standard Specifications for Construction, Item 852.4, at randomly selected manhole on every five manholes that are rehabilitated.
4. For every five (5) manholes that are rehabilitated, one manhole shall be inspected using high-voltage holiday detection equipment. All detected holidays shall be marked and repaired by abrading the coating surface with grit disk paper or other hand tooling method. After abrading and cleaning, additional protective coating

material shall be applied to the repair area. All touch-up repair procedures shall follow the protective coating manufacturer's recommendations.

If a manhole fails to pass one of the above tests, it shall be repaired in accordance with the manufacturer's recommendation and re-tested. It shall not be accepted until it passes all tests. All repairs and re-testing shall be at no additional cost to SAWS. If more than 20 percent (20%) of the manholes fail to pass any testing requirement, all manholes shall be vacuum tested and holiday tested as appropriate at no additional cost to SAWS.

### **910.9 Warranty**

Contractor shall warrant all work against defects in materials and workmanship for a period of two (2) years, unless otherwise noted, from the date of final acceptance of the projects. Applicator shall, within a reasonable time after receipt of written notice thereof, repair defects in material or workmanship which may develop during said two (2) year period, and any damage to other work caused by such defects or the repairing of same, at their own expense and without cost to the Owner.

### **910.10 Payment**

This item shall be paid for by square foot at the unit price bid or by the vertical foot of depth for the unit price bid for "Manhole Rehabilitation." Payment shall be full compensation for materials, labor, equipment, tools, testing, and any incidentals necessary to complete the work including the bench, invert, and all interior surfaces of the manhole. Payment will be made under the following:

- Pay Item (910.1): Manhole Rehabilitation (Standard Manholes 4 ft diameter) per Vertical Feet.
- Pay Item (910.2): Sewer Structure Rehabilitation (Noncircular Manholes, and Manholes Greater than 4 ft. in Diameter) – per Square Feet.

**NON-MANDATORY PRE-BID MEETING NOTES**  
**2013 REHABILITATION WORK ORDER CONSTRUCTION CONTRACT 3**  
**SAWS Job No. 13-4507**  
**SAWS Solicitation No. B-13-024-DD**

I. MEETING TIME/PLACE

- Tuesday, April 30, 2013 2:30 p.m.
- SAWS, Customer Service Building, Tower II, Conf. Rm. C137

II. INTRODUCTION AND SIGN-IN

Sandra L. Gomez, P.E., San Antonio Water System

IV. PROJECT DISCUSSION

1. Duration of the Contract is 365 Days or until funds are exhausted, whichever comes first.
2. Cost Estimate is \$5 Million and liquidated damages are \$350 per day per work order.
3. Bid Opening is May 17, 2013 at 10:30 a.m. (time revised per this Addendum 1).
4. Questions can be submitted to Diana Dwyer until 4 PM on May 2, 2013.
5. Answers to questions will be posted to web site by 4:00 PM on May 7, 2013, as part of an addendum.
6. This project will be with TWDB funds, therefore TWDB forms included in contract documents are required to be completed and returned with the bid packet as identified on the bid packet checklist.
7. Work orders are unspecified at this point.
8. A minimum of 40% of work must be performed by Prime Contractor's own crews (see Page SS-1, Supplemental Condition No. 1, of Contract Documents).
9. Bidders will need to include a Record of Performance Submittal with their bids as stated in Section II. Terms and Conditions of SC-1.0 Scope of Work in the Special Conditions.
10. Contractor is to make available up to four independent crews for multiple work orders under this Contract.
11. A 48-hr mobilization response time is required for each work order.
12. Mobilization is not paid for separately, but is subsidiary to other bid items.
13. Bypass pumping is now required in lieu of flow management. Bypass pumping will be measured and paid for each initial setup, for bypass of main (based on linear feet of main being rehabilitated) and for each secondary setup required (for mains that are not contiguous within a work order).
14. Special Provision to Item 852 has been added to include requirements for new manhole ring and covers required.
15. Typically used pavement marking and marker items have also been added to the bid proposal.

V. QUESTIONS DISCUSSED AT PRE-BID MEETING (NOT RECEIVED IN WRITING BY SAWS)

1. How many locations will be included in each work order?  
*There could be one location or several locations within each work order.*
2. Will plates be allowed?  
*Yes, no trenches are to be left open over-night. If a permanent backfill is not made, the trench must be temporarily backfilled & plated. There are no compaction or material requirements for a temporary backfill.*
3. Is this a new contract?  
*Yes, this is a new contract.*
4. What is the MWBE goal?  
*The Small, Minority and Women-owned Business goal is 17% as identified on the Good Faith Effort Plan within the specifications.*
5. Is there 1 bypass per work order?  
*No, bypass pumping will be measured and paid for each initial setup, for bypass of main (based on linear feet of main being rehabilitated) and for each secondary setup required (for mains that are not contiguous within a work order). See Specification Item 864 - Bypass Pumping for more information.*
6. Do all work orders require a 48 hour response time?  
*Yes.*
7. Are work orders compiled already?  
*No, all work orders are unspecified at this time.*

VI. CLOSING COMMENTS

- Submit questions in writing by 4:00 PM (CST) on May 2, 2013 to Diana Dwyer at [Diana.Dwyer@saws.org](mailto:Diana.Dwyer@saws.org). Questions regarding the content or interpretation of the Bid Documents must be submitted in writing to be considered valid and to elicit a response.
- Bids are due no later than 10:30 AM, May 17, 2013 at The Contract Administration Division, 2800 U.S. Hwy 281 North, Customer Center Building, Suite 171, San Antonio, Texas 78212
- Bids will be publicly opened and read aloud by the SAWS Contract Administration Division in Conference Suite 169, SAWS Customer Center Building.