



**Water Resources Integration Program Pipeline, Segment 1A**

**Solicitation Number: B-14-047-DD**

**Job No.: 14-8603**

**ADDENDUM No. 2**

**September 26, 2014**

To Respondent of Record:

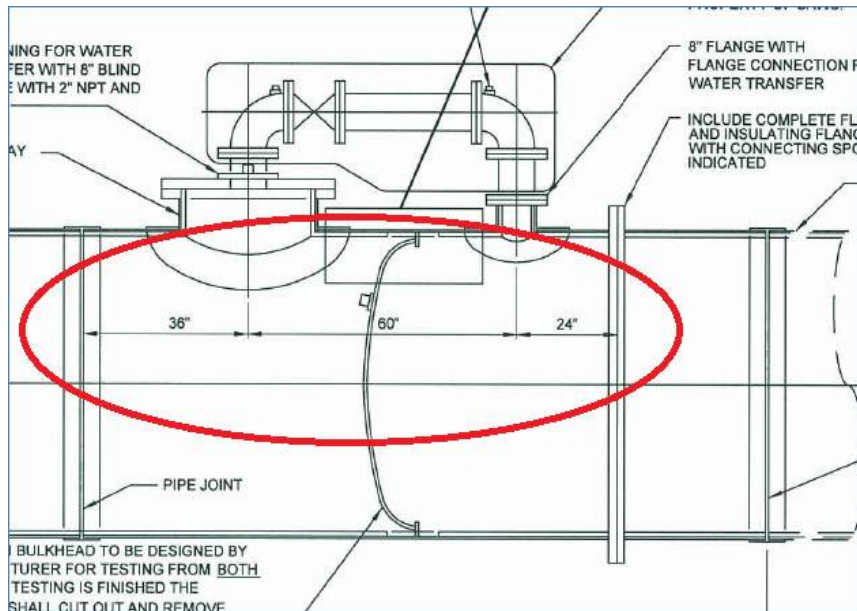
This addendum, applicable to work referenced above, is an amendment to the proposal and plans and specifications and as such will be a part of and included in the Contract Documents. Acknowledge receipt of this addendum by entering the Addendum number and issue date on the space provided in submitted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

**A. QUESTIONS SUBMITTED TO SAWS**

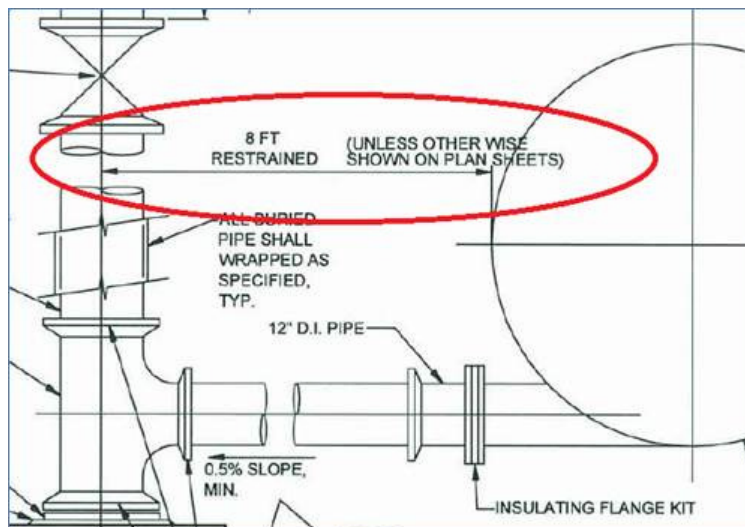
1. See attached Response Log.

**B. MODIFICATIONS TO THE PLANS**

1. Sheet PP01. See attached revised drawing.
2. Sheet DT02. Remove and replace PIPELINE CLOSURE TESTING AND CHLORINATION REQUIREMENT NOTES 7-10 with these revised notes:
  7. After Contractor A & B have both passed hydrostatic testing, Contractors shall drain water from each side. Contractor B shall remove temporary piping and dish bulkhead and apply mortar to interior surfaces per the specifications.
  8. Contractor B shall sweep and thoroughly clean all impacted work areas inside the pipe and then swab or spray all pipe surfaces to at least 10 feet beyond impacted work area on both sides of the test bulkhead with a 1% hypochlorite solution. SAWS inspector shall witness and inspect and must approve final closure.
  9. Activities related to the program disinfection will be completed in accordance with the specifications.
  10. Contractor A will be paid one internal test bulkhead assembly. Contractor B will be paid for one tie-in. Each Contractor shall include all costs not in other pay items including all testing, cleaning, and all other required effort and costs.
3. Sheet DT02. Add dimensions to the section view in accordance with the following drawing excerpt:



4. Sheet DT03. Section view, Add the note “8 FT RESTRAINED (UNLESS OTHERWISE SHOWN ON PLAN SHEETS)” as indicated in the following drawing excerpt:



5. Sheet GN07. Remove reference to Specification 2561 on General Note #11.

**C. BIDDING AND CONTRACT REQUIREMENTS**

1. INVITATION FOR COMPETITIVE SEALED PROPOSALS.
  - a. Page 1. Add the following at the end of the invitation:

“Mandatory Pre-Proposal – Firms in Attendance”

Proposals will not be accepted from any firm not represented at the mandatory pre-proposal meeting held on August 27, 2014. The following list is a record of the represented firms:

- SJ Louis Construction
- Jarco Transport
- Pronto Sandblasting & Coating
- John Chance Land Surveys, Inc.

- WRA
- Hanson Pressure Pipe
- Gulf Coast Grouting
- Jindal Tubular
- Texas Sterling Construction
- Webber, LLC
- CYMI Industrial, Inc.
- Spiess Construction Co., Inc.
- Atlas Construction Corp.
- T & T Construction Corp.
- Oscar Renda Contracting
- JMI Demolition/Site
- MKI Construction Services
- Northwest Pipe Co.
- Carboline
- Holloman Corporation
- Garney Companies, Inc.

2. INSTRUCTION TO RESPONDENTS.

- a. Change to Page IR-6, Instructions to Respondents #17. Remove and replace with the following:

San Antonio Water System Contracting Office may reject the Proposal when: (a) the Respondent misstates or conceals any material fact in the proposal, or if (b) the proposal does not strictly conform with the law or the requirements of this RFCSP, or if (c) the proposal is conditional, or if (d) the price proposal is unbalanced, or if (e) the Respondent fails to acknowledge in the final price of the price proposal any and all addendums issued on the price proposal prior to the solicitation deadline.

3. RESPONDENT'S PROPOSAL CHECKLIST

- a. Remove the Respondent's Proposal Checklist in its entirety and replace with the attached. This version should be used when submitting a Proposal for this project.

4. SUPPLEMENTARY INSTRUCTIONS TO RESPONDENTS

- a. Change to Page SIR – 7, Supplementary Instructions to Respondents, #6. Remove and replace with the following:

Proposals shall be printed on letter-size 8-1/2" x 11" paper and assembled with plastic spiral-type binding, t-post type that screw together or staples. 11 x 17 pages folded in half are allowable if used for schedules, exhibits, etc. and will count as one (1) page.

- b. All pipe manufacturer/fabricator qualifications requested as part of #12 a. – h. of the Supplementary Instructions to Respondents will be considered required documents and will not count towards the page limit.

5. GENERAL CONDITIONS OF THE CONTRACT

- a. Change to Page GC- 25, General Conditions, Section 5.7.1.6. Remove and replace the following sentence:

Excess/Umbrella Liability (UL) insurance shall have minimum policy limits of \$5,000,000 per occurrence and \$5,000,000 in the aggregate. This policy shall be of an "Occurrence" type and the limit of liability shall be concurrent with (following form) and in excess of the EL, CGL, and AL lines of insurance coverage as described in Articles 5.7.1.1.2, 5.7.1.1.3, and 5.7.1.1.5 listed above.

The remainder of the paragraph remains unchanged.

6. WAGE DECISION

- a. Remove Wage Decision titled *General Decision Number TX140045 01/03/14 TX 45 for On-Shore Pipeline Construction* in its entirety. The Heavy Highway wage decision will remain.

7. SUPPLEMENTAL CONDITIONS

- a. Supplemental Conditions, Article IX. Project Completion and Acceptance, add to the text being inserted on page GC - 47, Section 8.6 with the following additional liquidated damages provision:

3. Project Milestones: Completion date after 12/31/2015 for hydrostatic testing per Special Condition Item No. 9 shall be \$5,000/day; additive to other liquidated damages.

8. SPECIAL CONDITIONS

- a. Page SC-1, Special Conditions, remove #2 re: Bidder's Escrow Documents. This is not a requirement for this project.
- b. Page SC – 2, Special Conditions, #8, replace the work "throughout" with "for".

9. PRICE PROPOSAL

- a. Remove the PRICE PROPOSAL (PP-1 through PP-6) and the Proposal Certification page (PC-1) in their entirety and replace with the attached. This version should be used when submitting a proposal for this project.
- b. Please note that the calendar days for substantial completion has been modified to 388 and calendar days for final completion has been modified to 418 days.

10. TWDB DBE FORMS

- a. Insert TWDB DBE forms (TWDB-0216, TWDB-0217, and TWDB-0373) immediately following the TWDB-0210, Guidance for U.S. Environmental Protection Agency Disadvantaged Development Business Enterprise Program and use these forms when submitting a proposal for this project within 24 hours.

<b>D. MODIFICATIONS TO THE TECHNICAL SPECIFICATIONS</b>
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1. COVER PAGE

- a. Remove and replace the solicitation number to reflect the following B-14-047-DD.

2. SECTION 02519 – DISINFECTION OF WATER SYSTEMS

- a. Replace Section 02519 – Disinfection of Water Systems in its entirety and replace with the revised version attached.

3. SECTION 01270 – MEASUREMENT AND BASIS OF PAYMENT

- a. Item 39 – Jack/Bore Rock Excavation, Article CC.1. second paragraph – Add "with a minimum 200,000 foot – pounds of available torque (in 1<sup>st</sup> gear) and a thrust capacity of at least 1,000,000 pounds" after boring equipment. Remove "that is adequate to handle the subsurface conditions that the CONTRACTOR can expect to be encountered in the area."

4. SECTION 02571 – STEEL PIPE, MORTAR – LINED (ANSI/AWWA C200, MODIFIED)

- a. Article 3.01.k.3. – Replace the last sentence with the following: "Pipe which has floated shall be removed, cleaned, the trench repaired and restored, and the pipe re-installed in accordance with these specifications to the required line and grade at no additional cost to the OWNER. Pipe damaged for any

reason shall be repaired or replaced in accordance with these specifications at no expense to the OWNER.”

5. SECTION 02571 – STEEL PIPE, MORTAR – LINED (ANSI/AWWA C200, MODIFIED)

- a. Article 3.05.A, replace “tape-coated with “polyurethane coated.”

6. SECTION 02572 – STEEL PIPE FABRICATED SPECIALS (ANSI/AWWA C200, MODIFIED)

- a. Article 3.01 H (pg. 8): Remove and replace the paragraph with the following:

“H. Field Welding. Field Welding shall conform to ANSI/AWWA C206.”

7. SECTION 09910 – POLYURETHANE COATING

- a. Article 3.07.B.3.a.1 thru 5: Replace Item No.’s 1, 3 and 4 with the following:

1. Acceptance will be based on one pull minimum, with no pulls less than the minimum 1,750 criteria where multiple accepted pulls are conducted on the same joint of pipe.

3. Adhesion testing shall be conducted on two sufficiently cured, coated sections of pipe from each shift selected at random with one from the beginning of the shift and one from halfway through the shift. Adhesion testing shall be conducted in accordance with ASTM D4541. The coating around the dolly shall be scored completely through to the steel substrate. If the adhesion is not satisfactory, two additional tests shall be made at two different locations on the same pipe. If either additional test fails, the pipe shall be rejected. If the pipe is rejected, a systematic inspection of all pipe coated on that shift shall be made, and all pipe not meeting this adhesion requirement shall be rejected. Damaged test areas of accepted pipe and areas determined to have unsatisfactory adhesion shall be repaired as outlined in this specification.

4. Each pipe in a lot shall be tested if the initial average value for the first two pipe spools is below the minimum requirement. Pipe lots that do not meet the average value for all adhesion pulls shall be rejected. Each pipe that fails the minimum adhesion criteria shall be rejected as determined above.

8. SECTION 02571 – STEEL PIPE, MORTAR – LINED (ANSI/AWWA C200, MODIFIED)

- a. Article 3.01 G: Remove and replace the paragraph G with the following:

“Long-term Exposure: Pipe that is exposed to UV rays for a period of over 180 days after application shall either be provided with a UV resistant topcoat, covered to prevent UV degradation, or be certified in writing by the coating manufacturer that UV exposure will not affect the thickness of the coating if exposed up to 1 year of sunlight. Exposure greater than 1 year shall not impact the dry film thickness of the coating. Areas of coating that display UV degradation and more than 2 mils per year of coating loss in accordance with SSPC PA2-2012 shall be removed and repaired at sole cost of the CONTRACTOR. For exposures greater than 1 year with UV degradation, the required application of a UV resistant topcoat will depend on the project location, laying schedule, anticipated length of exposure, and type of outer wrap. The manufacturer shall be consulted for 3,000 psi water blasting minimum and a compatible UV resistant topcoat or pipe shall be stored under a protective cover. Protective covering can be colored plastic sheeting, canvas, or other UV blocking material. Clear plastic sheets are not acceptable.

9. SECTION 02572 – STEEL PIPE FABRICATED SPECIALS (ANSI/AWWA C200, MODIFIED)

- a. Article 3.01 C: Remove in its entirety Article 3.01C.

10. SECTION 02571 – STEEL PIPE, MORTAR – LINED (ANSI/AWWA C200, MODIFIED)

- a. Article 1.04.D.1.b: Remove and replace the second sentence with the following: “The WPS shall describe the minimum weld to be placed in each pass.”

11. SECTION 02571 – STEEL PIPE, MORTAR – LINED (ANSI/AWWA C200, MODIFIED)

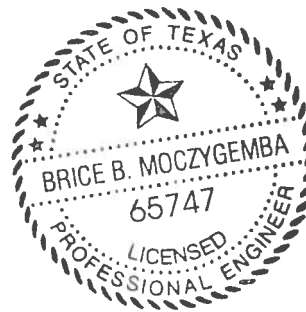
- a. Article 1.03.B.8.d: Remove and replace the second sentence with the following: “Submit Welding Procedure Specification(s) (WPS) used for welder certifications.”

12. SECTION 15117 – AIR RELEASE AND AIR VACUUM VALVES

- a. Article 1.02: Update the specifications to indicate acceptable Combination Air Valves with and without surge check by replacing paragraph C with the following:

"C. Acceptable Manufacturers -- Combination Air Valves 6" through 12" diameter with and without Surge Protection				
Manufacturer	6" Flange	8" Flange	10" Flange	12" Flange
Vent-O-Mat	150.RBX.P.F.E4	200.RBX.P.F.E4	250.RBX.P.F.E4	300.RBX.P.F.E4
<p>P = Pressure rating, use 19, 25, or 40 representing 276 psi, 363 psi, or 580 psi                  F = Flanged valve inlet connection, use 41 for ANSI B16.5 Class 150# or 61 for ANSI B16.5 Class 300#                  E4 designates epoxy flanges with 304SS trim. Other materials also available.</p> <p>Actual model numbers, setup and configuration shall be coordinated by the Contractor with his supplier and manufacturer to match the needs of these contract documents.</p>				

*Brice Moczygemba* 9/25/14  
 Brice Moczygemba, P.E.  
 Pape-Dawson Engineers, Inc.



**ACKNOWLEDGEMENT BY RESPONDENT**

Each Respondent shall acknowledge receipt of this Addendum No. 2 by noting such and signing the Price Proposal.

This undersigned acknowledges receipt of this Addendum No. 2 and the proposal submitted herewith is in accordance with the information and stipulations set forth.

\_\_\_\_\_  
 Date

\_\_\_\_\_  
 Signature of Respondent

**END OF ADDENDUM**

Questions Received:  
 RFCSP: WRIP Pipeline Segment 1A

No.	Date	Questions	Responses
1	8/28/2014	I see in the specifications that <u>hand mining will only be allowed in limited circumstances</u> . I was wondering why this technique will be limited?	SAWS limited hand tunneling for safety reasons.
2	9/9/2014	<p>1. Although all projects are required to test before 12/31/15 per the Special Conditions (Item 9, 10, or 11 depending on which segment), Project 2B could contractually hold up the progress of the other projects if the test was completed on 12/31/15. Additionally, disinfection of segment 2B could significantly delay the other projects if performed after hydrostatic testing. See below:</p> <p>WRIP - 1B</p> <ul style="list-style-type: none"> <li>• Submittal Date           <ul style="list-style-type: none"> <li>○ September 24, 2014</li> </ul> </li> <li>• Item 11 – IR-5 States “contract will be awarded within 90 days after the solicitation deadline”           <ul style="list-style-type: none"> <li>○ December 23, 2014</li> </ul> </li> <li>• PC-1 states “ Owner will provide written Authorization to Proceed within 30 days after the award”           <ul style="list-style-type: none"> <li>○ January 22, 2015</li> </ul> </li> <li>• Substantial is 340 days award           <ul style="list-style-type: none"> <li>○ December 28, 2015</li> </ul> </li> <li>• Final is 370 days after award           <ul style="list-style-type: none"> <li>○ January 27, 2016</li> </ul> </li> </ul> <p>WRIP - 2B</p> <ul style="list-style-type: none"> <li>• Submittal Date           <ul style="list-style-type: none"> <li>○ September 26, 2014</li> </ul> </li> <li>• Item 11 – IR-5 States “contract will be awarded within 90 days after the solicitation deadline”           <ul style="list-style-type: none"> <li>○ December 25, 2014</li> </ul> </li> <li>• PC-1 states “ Owner will provide written Authorization to Proceed within 30 days after the award”           <ul style="list-style-type: none"> <li>○ January 24, 2015</li> </ul> </li> <li>• Substantial is 400 days award           <ul style="list-style-type: none"> <li>○ February 28, 2016</li> </ul> </li> <li>• Final is 430 days after award           <ul style="list-style-type: none"> <li>○ March 29, 2016</li> </ul> </li> </ul> <p>WRIP – 1A</p> <ul style="list-style-type: none"> <li>• Submittal Date           <ul style="list-style-type: none"> <li>○ October 2, 2014</li> </ul> </li> <li>• Item 11 – IR-5 States “contract will be awarded within 90 days after the solicitation deadline”           <ul style="list-style-type: none"> <li>○ December 31, 2014</li> </ul> </li> <li>• PC-1 states “ Owner will provide written Authorization to Proceed within 30 days after the award”           <ul style="list-style-type: none"> <li>○ January 30, 2015</li> </ul> </li> <li>• Substantial is 340 days award           <ul style="list-style-type: none"> <li>○ January 5, 2016</li> </ul> </li> <li>• Final is 370 days after award           <ul style="list-style-type: none"> <li>○ February 4, 2016</li> </ul> </li> </ul> <p>WRIP – 2A</p> <ul style="list-style-type: none"> <li>• Submittal Date           <ul style="list-style-type: none"> <li>○ October 2, 2014</li> </ul> </li> <li>• Item 11 – IR-5 States “contract will be awarded within 90 days after the solicitation deadline”           <ul style="list-style-type: none"> <li>○ December 31, 2014</li> </ul> </li> <li>• PC-1 states “ Owner will provide written Authorization to Proceed within 30 days after the award”           <ul style="list-style-type: none"> <li>○ January 30, 2015</li> </ul> </li> <li>• Substantial is 400 days award           <ul style="list-style-type: none"> <li>○ February 4, 2016</li> </ul> </li> <li>• Final is 430 days after award           <ul style="list-style-type: none"> <li>○ March 5, 2016</li> </ul> </li> </ul>	<p>Timeframes for review of proposals, award of contracts and issuance of the Notice to Proceed are maximum allowable days. Specifically for these projects, SAWS intends to award all four (4) WRIP Pipeline Segments at the December 2 Board Meeting. In addition, SAWS intends to issue the Authorization to Proceed for all Segments within 30 days of executing the Construction Contract. Contract milestones shall be as stated in these specifications or as modified in this addendum for each project."</p>

Questions Received:  
RFCSP: WRIP Pipeline Segment 1A

No.	Date	Questions	Responses
3	9/9/2014	<p>I am requesting that Permalok be considered as an alternate to the casing as specified. Permalok offers a water tight joint that is readily made up saving time and ultimately money. The fabricated joint delivers a level of quality that is difficult to maintain in the field. We see a lot of projects that use the AWWA C210 specification to cover the production and installation of the casing, this specification is used for the production of steel water lines and casing cannot be installed in the field under the same controlled environment that the water line can be manufactured. Unfortunately I am not aware of a good casing specification otherwise I would be sending it instead of this request. Permalok is not cheap and if allowed as an alternate may not compete but I can assure you that we will give its benefits a thorough consideration.</p> <p>My request is based upon my past experiences not only on large diameter SAWS projects but other projects as well. On a recent bid to install some 48" diameter casing using a pneumatic hammer the equipment manufacturer asked what casing we were using and how it would be welded. The problem with hammer jobs is that they are very hard on the casing and casing connections. When we told them we were using Permalok they said their concerns over welding and welding procedure no longer were a problem. Once the joints are made up they provide a joint that is flush both on the inside and on the outside and they are almost impossible to separate we have used diameters up to 96" on a bore and jack project in El Paso.</p> <p>I would appreciate your consideration of the merits of this product.</p>	<p><i>The casing pipe for the Program is steel pipe. After the contract has been awarded, the Contractor can submit the use of Permalok to the Owner for consideration.</i></p>
4	9/10/2014	<p>(1) Would you change Section 02571, Page 17, Paragraph 2.02.F to remove the statement, "Gaskets shall be furnished by the PIPE MANUFACTURER" and replace with the statement, "Gaskets shall be furnished by the CONTRACTOR."? The justification for this change is that the pipe manufacturer will not have readily available access to valve dimensions or flange sizes on the valves. Also, having the pipe manufacturer attempt to coordinate with the valve supplier through the contractor will result in delays for supplying the materials as well as greater chance of miscommunication and mistakes in ordering of materials. Contractors, who typically purchase valves directly, have a much better position for coordinating flange gasket purchasing, which is why they have traditionally supplied those gaskets on other projects.</p> <p>(2) We request a clarification about the temperature control joints, which are currently required to be butt strap joints. The clarification for this would be as follows: Would you change Section 02571, Page 22, Paragraph 2.04.C as follows: "Where restrained joints are required, a special longer <u>lap</u> joint (temperature control joint) shall be...."? The justification for this change is that butt strap joints require 3 extra welds compared to lap welded joints while providing no additional benefit over a lap welded joint. The higher number of welds means that there is more opportunity for problems with the welds to develop longer term. The lap joints provide the same function and can be provided on the pipe with the required extra lap dimension (2") without the need for the extra welding. Also, changing the verbiage to lap joint does not necessarily preclude the use of butt strap joints for the temperature control joints, but it does allow those manufacturers who can provide a more economical and structurally sound joint to do so</p> <p>(3) Would you change Section 02571, Page 7, Paragraph 1.03.B.8.d as follows: Either 1) delete the following sentence "Welder's certification shall be in the same Welding Procedure Specification that has been submitted." or 2) change wording to "Submit Welding Procedure Specification(s) (WPS) used for welder certifications."? The justification for this change: Welding codes (ASME BPVC and AWS D1.1) require a single WPQ per process for each qualified welder. Welders are qualified by process and position, not to a specific weld procedure (WPS).</p> <p>(4) Would you change Section 02571, Page 12, Paragraph 1.04.D.1.b as follows: This paragraph limits each pass for hand welds to 1/8". ASME allows up to 1/2" and AWS allows up to 3/8" per pass. Besides being inefficient, our Senior Certified Welding Inspector (SCWI), based on his 25+ years welding experience, tells me such a small weld size will <u>increase</u> the chances of weld cracking. The weld pass thickness limit should be based on the codes and procedure qualification. Would you change the 2<sup>nd</sup> sentence be change to read "For hand welds, no less than 2 passes and not more than 3/8-inch thickness of metal shall be deposited in each pass."? The justification for this change is: 1/8" passes in our experience increase the probability of weld cracking. Welding codes allow up to 1/2" per pass; our weld procedures have been qualified and shown to produce acceptable welds using 3/8" passes.</p>	<p><i>The specification does indicate the PIPE Manufacturer is to provide the gaskets. This requirement will not change for this project. The Pipe Manufacturer, by being responsible for providing the gaskets, will then be able to assure and certify the flanges he is providing have a matching gasket compliant with the pressure requirements for the pipeline. The Contractor is responsible for assuring valves and other components are fully coordinated.</i></p> <p><i>No changes will be made to the specification.</i></p> <p><i>This has been modified see Section D.11 of this Addendum.</i></p> <p><i>This has been modified see Section D.10 of this Addendum.</i></p>
5	9/12/2014	<p>Questions: 1. On Sheet GN07, General Note #11, mentions spec 2561. However, the specifications is missing this item. Please add this item to the specs. 2. Can Pape Dawson provide existing elevations on their plan/profile sheets? CEC has them on all of their plan/profile sheets on the other projects. This will help with bid quantities and field quantities as well.</p>	<p><i>1. This Section has been modified see Section B.5 of this Addendum. 2. The topography shown on the plan and profiles is aerial. Actual ground elevations were not surveyed. Therefore, PD will not show existing elevations on the plan/profile sheets.</i></p>
6	9/18/2014	<p>For the Segment 1A Project will SAWS or the engineer accept Crispin Multiplex for the Combination Air Valve Assemblies with the Surge Check as was the case in the Pearsall Project that bid 9/16 (see attached addendum#5 for Pearsall)? Please advise.</p>	<p><i>No. Approved Manufacturers for Combination Air Valve Assemblies with Surge Check shall be as named in the specification.</i></p>
7	9/19/2014	<p>I am with the Carboline Company and my product Polyclad 777 is currently on SAWS's coating pipeline specification standards and on the upcoming WRIP Segment 1A and 2A projects bidding on Oct 3rd 2014. Carboline also has another product Polyclad 777PL which is the same chemistry with some slight modifications. I have a customer bidding these projects that prefers the 777PL version. My question is as follows, would SAWS accept 777PL if submitted. Thank You</p>	<p><i>Approved coatings shall be as indicated in the specification. The Contractor may submit an alternative for SAWS consideration during the submittal process.</i></p>
8	9/16/2014	<p>The specs call for an Arborist (Licensed Tree Professional) to be on site throughout the project. Is he only to be there during clearing and tree protection activities or should he be there for additional activities? Please Clarify. Thanks,</p>	<p><i>Per the ordinance, "it shall be unlawful for any person or firm to engage in the business or occupation of pruning, treating, or removing trees without a valid tree maintenance license by the city."</i></p>



Questions Received:  
RFCSP: WRIP Pipeline Segment 1A

No.	Date	Questions	Responses
9	9/12/2014	How far apart will the sample points need to be for the disinfection process? Will it be similar to SAWS standard spec's at 1,500' or will the separation be allowed to be longer for these projects? Thanks,	Collect and analyze samples in accordance with AWWA C651 per Specification 02519-3.05.D
10	9/12/2014	1 the SIR documents it ask us to have documents printed on 8.5" x 11" pages. Can the project schedule for all sections be printed on 11"x17" pages to help with legibility?	The RFCSP has been modified to allow for 11 x 17 pages as part of this Addendum.
11	9/12/2014	I was reviewing the proposal checklist and noticed the one for 1A was a little different than the one for 1B. Can you clarify which one is correct? Also, if the one for 1A is correct, can you clarify what a TWDB Tier 3 is?	The Proposal Checklist has been modified as part of this Addendum and should be used by Respondent's when submitting a proposal packet. TWDB Tier III funding are federal monies that have been passed through to the Texas Water Development Board to disseminate to local agencies for use with eligible water projects.
		<b>Specification 02571 Steel Pipe, Mortar-Lined (ANSI/AWWA C200, MODIFIED)</b>	
12	9/22/2014	<b>Section 1.01.B (pg 1):</b> Request adding list of (4) approved Steel Pipe manufacturers. This list was previously in the draft specifications. Doing so will ensure steel pipe will be manufactured by companies who are experienced and qualified for this work.	No changes will be made to the specification
		<b>Section 1.03.B.4 (pg 5):</b> Please clarify what is meant by "complete stress analysis." Does this mean that the manufacturer is supposed to verify the adequacy of the pipeline and appurtenances based on the hydraulic gradient?	No, The referenced section does not specify stress analysis for appurtenances.
		<b>Section 1.04.B.1 (pg 10):</b> 2nd paragraph, the (80) hour requirement for onsite manufacturer observation is excessive. A manufacturer field representative typically observes the first (2) days of delivery and installation, will follow up visits as needed. Requiring (80) hours will result in increased cost, without benefit, to the project.	No changes will be made to the specification
		<b>Section 1.04.D.1.f (pg 12):</b> Please strike the requirement for liquid penetrant testing for 12-inches on the bell and spigot ends. Bell ends are required to have magnetic particle testing by AWWA C200. Spigot ends are not "formed" and do not require testing.	No changes will be made to the specification
		<b>Section 1.04.D.3 (pg 12):</b> Please strike the requirement for Charpy testing on 0.3-inch steel and thicker. Per AWWA C200-12, charpy testing is only required for steel in excess of ½-inch thickness. Not modifying this requirement will add unnecessary costs to the project, without benefit to the owner.	No changes will be made to the specification
		<b>Section 1.04.D.3.b (pg 13):</b> SAME AS PREVIOUS COMMENT. Please strike the requirement for Charpy testing on ¾-inch steel and thicker. Per AWWA C200-12, charpy testing is only required for steel in excess of ½-inch thickness. Not modifying this requirement will add unnecessary costs to the project, without benefit to the owner.	No changes will be made to the specification
		<b>Section 2.02.O (pg 18):</b> Please strike the words, "and installation." Stulling is provided for handling and transport to the job site only. It is not "designed" to withstand backfill or live loads on the job site during installation. This requirement can be construed as the pipe manufacturer being responsible for deflection control once the pipe has reached the job-site, which is under the control of the Contractor. That is not the purpose of stulls.	No changes will be made to the specification
		<b>Section 2.02.O.2.b (pg 18):</b> For pipe joints 36 to 50 ft long, please change the minimum 4 stulls requirement to 3 stulls, or as determined by the pipe manufacturer.	No changes will be made to the specification
		<b>Section 2.03.B (pg. 19/20):</b> Please change the last sentence in this paragraph so as to allow the cement mortar lining to be used in pipe wall stiffness calculations, as permitted by both AWWA M11 and ASCE MOP 119. For stiffness calculations, cement mortar lining is considered a laminar ring which adds stiffness to a steel piping system.	No changes will be made to the specification
		<b>Section 2.02.D (pg 20):</b> Based on the type of backfill material specified for this project, we request that the E' value be raised to at least 2000 psi or higher. Values of E' listed in Table 6-1 of the AWWA M11 Steel Pipe Design Manual are much higher. It is also requested that an E' value for CLSM also be specified in this section as we were unable to find it elsewhere; industry accepted E' value for CLSM is typically 3000 psi.	No changes will be made to the specification
		<b>Section 3.01.A.1 and 2 (pg 22 and 23):</b> It appears that both items 1 and 2 are identical, recommend removing item 2 and renumbering the remaining items in this section.	No changes will be made to the specification
		<b>Section 3.01.G (pg 26):</b> Request replacing this paragraph in its entirety and replacing with the following wording: "Pipe shall be coated with "off white" or light colored polyurethane to lower pipe surface temperature. Pipe shall not be exposed for longer periods than what is recommended by the polyurethane coating manufacturer. For exposure longer than recommended, pipe shall be covered as per coating manufacturer recommendations." Reason for change: UV inhibitors are not part of polyurethane formulation and would require new formulation (change in chemistry) of approved polyurethane materials. Polyurethane manufactures have extensive experience and proven science into exposure limits of current polyurethane formulations and will make recommendations on long term exposure limits specific to their formulations.	This has been modified see Section D.8 of this Addendum.
		<b>Section 3.01.K.3 (pg 27):</b> The requirement to replace any floated pipe is excessive and unnecessary if the condition of the pipe isn't first assessed. Request changing the last to read as follows: "Pipe which has floated shall be replaced at no cost to OWNER if it is determined to have sustained any damage by the Engineer."	The intent of this item is to indicate the CONTRACTOR shall remove and re-install floated but otherwise undamaged pipe if it no longer meets specification requirements, including line and grade. Pipe damaged due to floating shall be removed and either repaired or replaced in accordance with the specification. The specification will be modified so the intent is more clear.
<b>Section 3.03.A. (pg 28):</b> Request that the first sentence be changed to read as follows: "No pipe and specials shall be installed where the lining or coating/interior or exterior surfaces show cracks wider than that permitted by AWWA C205 or damage that may jeopardize the integrity of the pipe as determined by the OWNER." This will ensure that the width of cracks is within the limits of AWWA standards (which will heal over time through the process of Autogenous Healing) and not subject simply to the discretion of an inspector.	No changes will be made to the specification		
		<b>Specification 02572 Steel Pipe Fabricated Specials (ANSI/AWWA C200, MODIFIED)</b>	
		<b>Section 3.01.C (pg 8):</b> Suggest removing this paragraph so as not to create any confusion since Tape Coating is not specified on this Project.	This has been modified see Section D.9 of this Addendum.

Questions Received:  
RFCS: WRIP Pipeline Segment 1A

No.	Date	Questions	Responses
		<p><b>Section 3.01.H (pg 8):</b> Request removal of ANSI/AWS D1.1 since ANSI/AWWA C206 contains all pertinent sections of the former. Listing both may result in conflicts. ANSI/AWWA C206 pertains specifically to the field welding of pipe.</p>	<p><i>This has been modified see Section D.6 of this Addendum.</i></p>
		<p><b>Specification 09910 Polyurethane Coating</b></p> <p><b>Section 3.07.B.3.a.1 thru 5 (pg 27):</b> Request consideration be given to making adhesion values consistent with that listed in AWWA C222 of 1,500 psi. The currently stated minimum value of 1,750 psi and average value of 2,000 psi is excessive. Furthermore, the other items addressing corrective action for adhesion values below the average are also excessive and unnecessary, and will likely result in substantially added costs to the Owner, with no additional value to the project. Suggest removing items 1 thru 5, and replacing with the wording found in the current version of AWWA C222 as follows:</p> <p>“Adhesion testing shall be conducted on two sufficiently cured, coated sections of pipe from each shift selected at random with one from the beginning of the shift and one from halfway through the shift. Adhesion testing shall be conducted in accordance with ASTM D4541. The coating around the dolly shall be scored completely through to the steel substrate. The adhesion will be considered satisfactory if the test value is a minimum of 1,500 psi. If the adhesion is not satisfactory, two additional tests shall be made at two different locations on the same pipe. If either additional test fails, the pipe shall be rejected. If the pipe is rejected, a systematic inspection of all pipe coated on that shift shall be made, and all pipe not meeting this adhesion requirement shall be rejected. Damaged test areas of accepted pipe and areas determined to have unsatisfactory adhesion shall be repaired as outlined in this specification.”</p>	<p><i>This has been modified see Section D.7 of this Addendum.</i></p>
		<p><b>Specification 09970 Painting and Protective Coatings</b></p> <p><b>Section 1.07 A (pg 6):</b> The industry-accepted warranty period for pipe materials and accompanying coating and lining systems is ONE YEAR following acceptance of the project. We request that the 2-year guarantee requirement be removed. The quality control measures outlined in these Project Specifications are very stringent as is for the polyurethane coatings, per Section 09910. The requirement of a 2-year guarantee will likely result in added costs to the Owner, with no additional value to the project.</p>	<p><i>No changes will be made to the specification</i></p>
		<p><b>Section 1.07 B (pg 6):</b> Request that the 11th month testing be kept, but the 23rd month test requirement be removed.</p>	<p><i>No changes will be made to the specification</i></p>
		<p><b>Specification 02400 Jacking and Boring</b></p> <p><b>Section 2.01 A (pg 6):</b> We request that the Permalok casing pipe with proprietary joint be included as an acceptable casing pipe option. This product can be provided in sizes and thicknesses outlined in Table 1. A completed package as part of the new product approval process has been submitted to the Chairman of the Materials Committee of SAWS.</p>	<p><i>The casing pipe for the Program is steel pipe. After the contract has been awarded, the Contractor can submit the use of Permalok to the Owner for consideration.</i></p>
		<p><b>Section 3.02 C (pg 11):</b> By permitting Permalok as requested above, casing pipe joints can be installed without butt welding, thereby substantially increasing productivity and minimizes seizing of the casing on longer tunnel installations. The proprietary Permalok joint utilizes a precision machined interference fit interlocking jointing system for the connection of successive casing pipe sections, eliminating the need to perform any field welds. Use of a silicon gel during joint assembly results in leak-free joints.</p>	<p><i>The casing pipe for the Program is steel pipe. After the contract has been awarded, the Contractor can submit the use of Permalok to the Owner for consideration.</i></p>

PRICE PROPOSAL

PROPOSAL OF \_\_\_\_\_, a corporation \_\_\_\_\_

a partnership consisting of \_\_\_\_\_  
 an individual doing business as \_\_\_\_\_

THE SAN ANTONIO WATER SYSTEM:

Pursuant to Instructions and Invitations for Competitive Sealed Proposals, the undersigned proposes to furnish all labor and materials as specified and perform the work required for the project as specified, in accordance with the Plans and Specifications for the following prices to wit:

ITEM NO.	DESCRIPTION & ESTIMATED QUANTITIES (Unit Price to be written in words)	UNIT	QTY	UNIT PRICE (Figures)	TOTAL PRICE (Figures)
1.	Erosion & Sedimentation Controls/SWPPP _____ Dollars _____ Cents	LS	1	\$ _____	\$ _____
2.	60" Steel Pipe – 200 PSI (Open Cut) _____ Dollars _____ Cents	LF	19,532	\$ _____	\$ _____
3.	60" Steel Pipe – 250 PSI (Open Cut) _____ Dollars _____ Cents	LF	19,794	\$ _____	\$ _____
4.	60" Steel Pipe – 200 PSI (Carrier Pipe Restrained) _____ Dollars _____ Cents	LF	1,105	\$ _____	\$ _____
5.	60" Steel Pipe – 250 PSI (Carrier Pipe Restrained) _____ Dollars _____ Cents	LF	1,459	\$ _____	\$ _____
6.	Trench Excavation Safety Protection _____ Dollars _____ Cents	LF	39,367	\$ _____	\$ _____
7.	78" Steel Casing Pipe _____ Dollars _____ Cents	LF	2,564	\$ _____	\$ _____
8.	60" Manual Butterfly Valve – 250 PSI _____ Dollars _____ Cents	EA	6	\$ _____	\$ _____



Job No. 14-8603  
Water Resources Integration Program, – Pipeline, Segment 1A  
Solicitation No. B-14-047-DD

ITEM NO.	DESCRIPTION & ESTIMATED QUANTITIES (Unit Price to be written in words)	UNIT	QTY	UNIT PRICE (Figures)	TOTAL PRICE (Figures)
20.	Remove and Replace Existing Asphalt Drive				
	_____ Dollars				
	_____ Cents	SY	422	\$ _____	\$ _____
21.	Remove and Replace Existing Gravel Drive				
	_____ Dollars				
	_____ Cents	SY	316	\$ _____	\$ _____
22.	Land Restoration & Revegetation				
	_____ Dollars				
	_____ Cents	LF	40,937	\$ _____	\$ _____
23.	Hydrostatic Testing				
	_____ Dollars				
	_____ Cents	LS	1	\$ _____	\$ _____
24.	Rectifier Installation w/Electrical Enclosure				
	_____ Dollars				
	_____ Cents	EA	2	\$ _____	\$ _____
25.	Monitoring Test Station				
	_____ Dollars				
	_____ Cents	EA	20	\$ _____	\$ _____
26.	12” Insulating Flange Kit				
	_____ Dollars				
	_____ Cents	EA	5	\$ _____	\$ _____
27.	14” Insulating Flange Kit				
	_____ Dollars				
	_____ Cents	EA	6	\$ _____	\$ _____
28.	16” Insulating Flange Kit				
	_____ Dollars				
	_____ Cents	EA	1	\$ _____	\$ _____
29.	60” Insulating Flange Kit				
	_____ Dollars				
	_____ Cents	EA	2	\$ _____	\$ _____
30.	Insulating Joint Test Station				
	_____ Dollars				
	_____ Cents	EA	14	\$ _____	\$ _____

Job No. 14-8603  
 Water Resources Integration Program, – Pipeline, Segment 1A  
 Solicitation No. B-14-047-DD

ITEM NO.	DESCRIPTION & ESTIMATED QUANTITIES (Unit Price to be written in words)	UNIT	QTY	UNIT PRICE (Figures)	TOTAL PRICE (Figures)
31.	Casing Test Station _____ Dollars _____ Cents	EA	26	\$ _____	\$ _____
32.	Foreign Pipeline Test Station _____ Dollars _____ Cents	EA	1	\$ _____	\$ _____
33.	Heat Shrink Sleeve Inspection _____ Dollars _____ Cents	EA	12	\$ _____	\$ _____
34.	Rock Excavation (0-5000 CY) _____ Dollars _____ Cents	CY	5,000	\$ _____	\$ _____
35.	Rock Excavation (5001-10000 CY) _____ Dollars _____ Cents	CY	5,000	\$ _____	\$ _____
36.	Erosion Control Matting _____ Dollars _____ Cents	SY	711	\$ _____	\$ _____
37.	Disinfection _____ Dollars _____ Cents	LS	1	\$ _____	\$ _____
38.	Well Abandonment _____ Dollars _____ Cents	LS	1	\$ _____	\$ _____
39.	Jack/Bore Rock Excavation _____ Dollars _____ Cents	LF	200	\$ _____	\$ _____
<b>SUB TOTAL</b>				<b>\$ _____</b>	
100	Mobilization _____ Percent (Maximum of 6% of the Line Item "A" Sub-total Base Bid amount)	LS	1		\$ _____

Job No. 14-8603  
 Water Resources Integration Program, – Pipeline, Segment 1A  
 Solicitation No. B-14-047-DD

ITEM NO.	DESCRIPTION & ESTIMATED QUANTITIES (Unit Price to be written in words)	UNIT	QTY	UNIT PRICE (Figures)	TOTAL PRICE (Figures)
101	Preparing Rights-of-Way  _____ Percent	LS	1		\$ _____
	Maximum of 4% of the <u>Line Item "A"</u> Sub-total Base Bid amount)				
	MOBILIZATION AND PREPARING ROW SUB-TOTAL				\$ _____

Mobilization lump sum bid shall be limited to a maximum 6% of the Line Item "A" Sub-total Base Bid amount. Preparing Right-of-Way lump sum bid shall be limited to a maximum of 4% of the Line Item "A" Sub-total Base Bid amount. The Line Item "A" Sub-total base bid is defined as all bid items **EXCLUDING** Item 100, Mobilization and Item 101, Preparing Right-of-Way. **In the event of a discrepancy between the written percentage and dollar amount shown for Mobilization and Preparation of ROW bid items the written percentage will govern. If the percentage written exceeds the allowable maximum stated for mobilization and or preparation of ROW, SAWS reserves the right to cap the amount at the percentages shown and adjust the extensions of the bid items accordingly.**

**TOTAL BID AMOUNT (Line Item "A", Mobilization & Preparing Right of Way)** \$ \_\_\_\_\_

\_\_\_\_\_ **DOLLARS AND**  
 \_\_\_\_\_ **CENTS**

\_\_\_\_\_  
 BIDDER'S SIGNATURE & TITLE

\_\_\_\_\_  
 FIRM'S NAME (TYPE OR PRINT)

\_\_\_\_\_  
 FIRM'S ADDRESS

\_\_\_\_\_  
 FIRM'S PHONE NO./FAX NO.

\_\_\_\_\_  
 FIRM'S EMAIL ADDRESS

The Contractor herein acknowledges receipt of the following

Addendum No. \_\_\_\_\_ Dated \_\_\_\_\_ Signed: \_\_\_\_\_  
 Addendum No. \_\_\_\_\_ Dated \_\_\_\_\_ Signed: \_\_\_\_\_  
 Addendum No. \_\_\_\_\_ Dated \_\_\_\_\_ Signed: \_\_\_\_\_  
 Addendum No. \_\_\_\_\_ Dated \_\_\_\_\_ Signed: \_\_\_\_\_

Job No. 14-8603  
Water Resources Integration Program, – Pipeline, Segment 1A  
Solicitation No. B-14-047-DD

The Respondent offers to construct the Project in accordance with the Contract Documents for the contract price, and that the project shall be substantially complete within **388** calendar days after the start date and Final Completion shall occur within **418** calendar days after the start date, as set forth in the Authorization to Proceed. **The Respondent understands and accepts the provisions of the contract Documents relating to liquidated damages of the project if not completed on time.**

Complete the additional requirements of the Proposal which are included on the following pages.



# PROPOSAL CERTIFICATION

Accompanying this proposal is a Bid Bond or Certified or Cashier's Check payable to the Order of the San Antonio Water System for \_\_\_\_\_ dollars (\$\_\_\_\_\_), which amount represents five percent (5%) of the total bid price. Said bond or check is to be returned to the bidder unless the proposal is accepted and the bidder fails to execute and file a contract within **10** calendar days after the award of the Contract, in which case the check shall become the property of said San Antonio Water System, and shall be considered as payment for damages due to delay and other inconveniences suffered by said San Antonio Water System due to the failure of the bidder to execute the contract. The San Antonio Water System reserves the right to reject any and all bids.

It is anticipated that the Owner will act on this proposal within **90** calendar days after the bid opening. Upon acceptance and award of the contract to the undersigned by the Owner, the undersigned shall execute standard San Antonio Water System Contract Documents and make Performance and Payment Bonds for the full amount of the contract within **10** calendar days after the award of the Contract to secure proper compliance with the terms and provisions of the contract, to insure and guarantee the work until final completion and acceptance, and the guarantee period stipulated, and to guarantee payment of all lawful claims for labor performed and materials furnished in the fulfillment of the contract.

It is anticipated that the Owner will provide written Authorization to Proceed within **30** days after the award of the Contract.

The work called for in this Contract shall commence on the date indicated in the SAWS written Authorization to Proceed. Under no circumstances shall the work commence prior to the date provided for in the SAWS issued, written Authorization to Proceed. Work shall be completed in full within **418** consecutive calendar days.

The undersigned certifies that the bid prices contained in the proposal have been carefully checked and are submitted as correct and final and are in conformance with the requirements of the American Iron and Steel provisions of P.L. 113-76. Consolidated Appropriations Act, 2014.

The undersigned certifies that the proposal prices contained in the proposal have been carefully checked and are submitted as correct and final.

The undersigned further acknowledges compliance with "Wage and Labor Standard Provisions" of this contract and the use of the Blue Book rental rates for establishment of equipment rental rates whether owned or leased during the course of this Contract.

In completing the work contained in this proposal the undersigned certifies that bidder's practices and policies do not discriminate on the grounds of race, color, religion, sex or national origin and that the bidder will affirmatively cooperate in the implementation of these policies and practices.

Signed: \_\_\_\_\_  
Company Representative

\_\_\_\_\_  
Company Name

\_\_\_\_\_  
Address

Please return bidder's check to: \_\_\_\_\_  
Company Name

\_\_\_\_\_  
Address

## RESPONDENT'S PROPOSAL CHECKLIST

(Rev. 9/26/14)

Project Name: Water Resources Integration Program, Pipeline Segment 1A

SAWS Job No.: 14-8603

SAWS Solicitation Number: B-14-047-DD

### ENVELOPE 1 (sealed envelope or box)

- Signed Price Proposal/Acknowledgement of Addendums (Do not include this Price Proposal within the 7 required copies)
- Signed Proposal Certification Page (PC-1)
- Bid Bond/Cashier's Check

### ENVELOPE (OR BOX ) 2

#### ORIGINAL PROPOSAL

- Proposal Checklist
- One (1) CD of Original Proposal Packet (*excluding the Price Proposal and Financial Statement*)
- Statement on President's Executive Orders – Page IB 6 or 7
- Good Faith Effort Plan
- Conflict of Interest Questionnaire – Form CIQ
- Financial Statement
- W-9
- Proof of Insurability (Letter from Insurer or Sample Certificate of Insurance)
- Respondent Questionnaire
- Background, Experience, Qualifications and Past Performance narrative **A. 1.-11.** (pages SIR-1 to SIR-3)
- Pipe Manufacturer/Fabricator Qualifications **12. a.-h.** (pages SIR-3 to SIR-4)
- Project Approach and Quality Program narrative **B. 1.-5.** (pages SIR-4 to SIR-5)
  - OSHA 300
  - OSHA Form 300A
  - TRIR
  - Any OSHA Citations
  - Experience Modifier Rate (EMR) from insurance carrier
- TWDB Form WRD 255
- TWDB Form TWDB-0459
- TWDB Form SRF 404

Items to be submitted with 24 hours of the Proposal Opening:

- TWDB Form TWDB-0216 (include copy of current SMWB certification) (*Reference DB-0210 and FAQ*)
- TWDB Form TWDB-0217 (*Reference DB-0210 and FAQ*)
- TWDB Form TWDB-0373 (*Reference DB-0210 and FAQ*)
- EPA Form 6100-3 Subcontractor Performance Form
- EPA Form 6100-4 Subcontractor Utilization Form

Items to be submitted with Awarded Contract:

- TWDB Form ED 103
- TWDB Form ED 104

Project Name: Water Resources Integration Program, Pipeline Segment 1A

SAWS Job No.: 14-8603

SAWS Solicitation Number: B-14-047-DD

**PROPOSAL PACKET COPIES -7** (separate sealed envelope or box for all 7 copies)

- Proposal Checklist
- Respondent Questionnaire
- Background, Experience, Qualifications and Past Performance narrative **A. 1.-11.** (pages SIR-1 to SIR-3)
- Pipe Manufacturer/Fabricator Qualifications **12. a.-h.** (pages SIR-3 to SIR-4)
- Project Approach and Quality Program narrative **B. 1.-5.** (pages SIR-4 to SIR-5)
  - OSHA 300
  - OSHA Form 300A
  - TRIR
  - Any OSHA Citations
  - Experience Modifier Rate (EMR) from insurance carrier

I certify that the proposal packet submitted includes the items as indicated above.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Title

**TWDB-0216**

**TEXAS WATER DEVELOPMENT BOARD  
AFFIRMATIVE STEPS SOLICITATION REPORT**

**I. PROJECT INFORMATION**

A. TWDB Project No.	B. Applicant/Entity Name	C. Total TWDB Funding Request	D. Program Type (insert "X" for all that apply)	
			<input type="checkbox"/>	Drinking Water SRF (DWSRF)
			<input type="checkbox"/>	Clean Water SRF (CWSRF)

**Project Name:** \_\_\_\_\_

**Solicitation By:**  Applicant/Entity  Prime Contractor: \_\_\_\_\_

**Project Phase:**  Application  Planning/Design  Construction Contract # \_\_\_\_\_

**II. PROJECT BIDDERS LIST:**

<b>Instructions Columns 1 - 4</b>	List on this form, or provide on a separate list, each business entity solicited for procurement, the following: 1-Full business name & point of contact, 2-business address, 3-telephone number and 4-email for each business or firm. Entities must solicit to a <b>minimum of 3</b> business/firms for each type of contract sought (i.e. three engineering, financial advisor, and bond counsel firms) to demonstrate a <b>Good Faith Effort</b> .
<b>Instructions Column 5</b>	Enter one of the following procurement or contract categories: <b>CONSTRUCTION – SUPPLIES – EQUIPMENT – SERVICES</b>
<b>Instructions 6</b>	Enter the type of business: <b>Minority Business Enterprise (MBE), Women-Owned Business Enterprise (WBE), or OTHER (NOTE! "OTHER" = Company or firm is Non-MBE or WBE)</b>
<b>Instructions Column 7</b>	To achieve a "Good Faith Effort" a minimum of two methods must be utilized for solicitation, however, additional methods are encouraged by the TWDB should any of the attempted methods fail to meet DBE program requirements. Adequate backup documentation must be attached to this form for each method used. Methods of solicitation include:  <ol style="list-style-type: none"> <li>1. <b>Newspaper Advertisements</b></li> <li>2. <b>Direct Contact by Phone, Fax, USPS Mail, E-mail</b></li> <li>3. <b>Meetings or Conferences</b></li> <li>4. <b>Minority Media</b></li> <li>5. <b>Internet &amp; Web Postings</b></li> <li>6. <b>Trade Association Publications</b></li> <li>7. <b>Other Government Publications</b></li> </ol>

**Notice:** Entities receiving federal SRF loans must create and maintain a bidder's list if the recipient of the loan is subject to competitive bidding requirements. The list must include all firms that bid or quote on subcontracts under EPA assisted projects, including both MBE/WBEs and non-MBE/WBEs. Entities must keep the bidders list until the project is complete, the project period has expired, and the recipient is no longer receiving EPA funding under the loan.

	<b>Column 1</b>	<b>Column 2</b>	<b>Column 3</b>	<b>Column 4</b>	<b>Column 5</b>	<b>Column 6</b>	<b>Column 7</b>
	Business Name & Point of Contact	Business Address	Telephone Number	E-Mail Address	Procurement Category	MBE/WBE Status	Solicitation Methods
1.							
2.							
3.							
4.							
5.							
6.							
7.							
8.							
9.							

Use additional sheets if necessary

<b>Signature - Applicant/Entity or Prime Contractor</b>	<b>Title</b>	<b>Certification Date</b>

**III. TWDB APPROVAL SIGNATURE**

<b>Form meets DBE Requirements</b>	Yes <input type="checkbox"/>	No <input type="checkbox"/>
<b>DBE Coordinator</b>	<b>Approval Date</b>	

**TWDB-0217**

**TEXAS WATER DEVELOPMENT BOARD (TWDB)  
AFFIRMATIVE STEPS CERTIFICATION and GOALS**

**I. PROJECT INFORMATION**

A. TWDB Project No.	B. Applicant/Entity Name	C. Total TWDB Funding Request	D. Program Type (insert "X" for all that apply)	
			<input type="checkbox"/>	Drinking Water SRF DWSRF)
			<input type="checkbox"/>	Clean Water SRF (CWSRF)

Prime Contractor: \_\_\_\_\_

Contract Number: \_\_\_\_\_ Contract Amount: \_\_\_\_\_

**II. GOOD FAITH EFFORT (Applicable to all sub-agreements awarded by the prime contractor)**

I understand that it is my responsibility to comply with all state and federal regulations and guidance in the utilization of Minority and Women-Owned Businesses in procurement. I certify that I will make a "good faith effort" to afford opportunities for Minority Business Enterprise (MBE), and Women-Owned Business Enterprise (WBE) by:		
1	Including qualified MBEs and WBEs on procurement solicitation lists	
2	Soliciting potential MBE's and WBE's	
3	Reducing contract size/quantities when economically feasible to permit maximum participation by MBE's and WBE's	
4	Establishing delivery schedules to encourage participation by MBE's and WBE's	
5	Using the services and assistance of the Small Business Administration, Minority Business Development Agency, U.S. Department of Commerce, and Texas Marketplace	
6	Submitting documentation to the Texas Water Development Board to verify good faith effort, steps 1-5.	
<input type="checkbox"/>	<b>EXCEPTION:</b> As the Prime Contractor, I certify that I have reviewed the contract requirements and found no available subcontracting opportunities. I also certify that I will fulfill 100 percent of the contract requirements with my own employees & resources. (Check if applicable)	
	<b>Signature – Consultant/Prime Contractor</b>	<b>Title</b>
		<b>Certification Date</b>

**III. PROJECT PARTICIPATION ESTIMATES**

Total Procurement		Potential MBE Participation		Potential WBE Participation	
Cost Category	Total	Goal	Extension	Goal	Extension
Construction	\$	12.94%	\$	8.72%	\$
Equipment	\$	7.12%	\$	5.39%	\$
Supplies	\$	9.68%	\$	9.34%	\$
Services	\$	10.84%	\$	5.72%	\$
<b>Total Procurement</b> (must equal contract amount)	\$		\$		\$

*The fair share goals listed above are required by 40 CFR Part 33 Subpart D and are directly negotiated with EPA Region 6. Entities receiving federal financial assistance are subject to the TWDB's goals and may not be substituted with other agency or program goals.*

**IV. TWDB APPROVAL SIGNATURE**

Form Meets DBE Requirements	Yes <input type="checkbox"/>	No <input type="checkbox"/>
<b>DBE Coordinator</b>	<b>Approval Date</b>	

**TWDB-0373**

**TEXAS WATER DEVELOPMENT BOARD  
LOAN/PRINCIPAL FORGIVENESS PARTICIPATION SUMMARY**

**I. PROJECT INFORMATION**

A. TWDB Project No.	B. Applicant/Entity Name	C. Total TWDB Funding \$ _____	D. Program Type (insert "X" for all that apply)	
			<input type="checkbox"/>	Drinking Water SRF (DWSRF)
			<input type="checkbox"/>	Clean Water SRF (CWSRF)

**Project Name:** \_\_\_\_\_

**Solicitation By:**  Applicant/Entity  Prime Contractor: \_\_\_\_\_

**Project Phase:**  Loan Commitment/Closing  Planning/Design  Construction Contract # \_\_\_\_\_

**II. LIST OF ACTUAL CONTRACTS/PROCUREMENTS**

<b>Instructions Column 1</b>	Enter the full name, street address, city/state/zip for each firm awarded a contract for the project					
<b>Instructions Column 2</b>	Enter one of the following procurement or contract categories: <b>CONSTRUCTION – SUPPLIES – EQUIPMENT – SERVICES</b>					
<b>Instructions Column 3</b>	Enter the type of business: <b>Minority Business Enterprise (MBE), Women-Owned Business Enterprise (WBE), or OTHER (NOTE: "OTHER" = Company or firm is Non-MBE or WBE)</b>					
<b>Instructions Column 4</b>	Enter the exact amount of the awarded contract					
<b>Instructions Column 5</b>	Enter the exact date the contract was or will be executed					
<b>Instructions Column 6</b>	Indicate if valid MBE/WBE Certification is attached					
	<b>Column 1</b>	<b>Column 2</b>	<b>Column 3</b>	<b>Column 4</b>	<b>Column 5</b>	<b>Column 6</b>
	Name & Address of Contracted Firm/Vendor	Procurement Category	MBE/WBE Status	Actual Contract Awarded (\$)	Contract Execution Date	MBE/WBE Certification Included? (Y/N) (if applicable)
1						<input type="checkbox"/> Yes <input type="checkbox"/> No
2						<input type="checkbox"/> Yes <input type="checkbox"/> No

	Column 1	Column 2	Column 3	Column 4	Column 5	Column 6
	Name & Address of Contracted Firm/Vendor	Procurement Category	MBE/WBE Status	Actual Contract Awarded (\$)	Contract Execution Date	MBE/WBE Certification Included? (Y/N) (if applicable)
3						<input type="checkbox"/> Yes <input type="checkbox"/> No
4						<input type="checkbox"/> Yes <input type="checkbox"/> No
5						<input type="checkbox"/> Yes <input type="checkbox"/> No
6						<input type="checkbox"/> Yes <input type="checkbox"/> No
7						<input type="checkbox"/> Yes <input type="checkbox"/> No
8						<input type="checkbox"/> Yes <input type="checkbox"/> No
9						<input type="checkbox"/> Yes <input type="checkbox"/> No
Signature - Applicant/Entity Representative			Title		Certification Date	

**III. TWDB APPROVAL SIGNATURE**

Form meets DBE Requirements	Yes <input type="checkbox"/> No <input type="checkbox"/>
DBE Coordinator	Approval Date



## SECTION 02519

### DISINFECTION OF WATER SYSTEMS

#### PART 1 GENERAL

This specification indicates requirements of the program disinfection plan and communicates associated responsibilities of the CONTRACTOR.

##### 1.01 PIPELINE AND PROGRAM DISINFECTION PLAN

- A. Disinfect the facilities conveying potable water to comply with the standards for potable water of the regulatory agency of jurisdiction. Potable water is defined as any water that has been filtered, disinfected or otherwise treated to the meet regulatory standards.
- B. Disinfect piping systems that are used to convey water, solutions, or chemicals to the potable water facilities.
- C. Test water from the disinfected system per regulatory standards to verify that water is acceptable. Repeat procedure if tests do not meet standards.

##### 1.02 CONTRACTOR REPONSIBLITIES

- A. The WRIP Segment 2B Contractor shall be designated as the PROGRAM DISINFECTION CONTRACTOR responsible for the PROGRAM DISINFECTION as described herein.
- B. For the purposes of this specification, all WRIP pipeline Contractors (Segments 2B, 2A, 1B and 1A) shall be designated as the PROJECT CONTRACTOR, with responsibilities as described herein.
  - 1. The PROGRAM DISINFECTION CONTRACTOR responsibilities will include:
    - a. Coordinating with SAWS to introduce water from the Old Pearsall Road Pumping Station site into the new pipeline. SAWS intent is to provide water from this location to facilitate slug disinfection of all 4 pipeline segments in the program, including all pipeline appurtenances and connecting pipes and drains.
    - b. Coordinating to add sufficient disinfectant into the pipeline at that point and along the pipeline as needed to disinfect the 60 inch pipeline using the slug method.
    - c. At the Twin Oaks Treatment Plant existing lagoon, coordinating with SAWS to dispose of excess clean water and to treat and dispose of

- dechlorinated water using temporary piping and available appurtenances at the site.
- d. Select, provide, install, use, maintain, move, reuse, and remove up to 500 LF of temporary piping during disinfection and disposal operations. The main disposal site shall be at the Twin Oaks Plant and the connection there shall be via the standard internal test bulkhead assembly to be installed at the end of the Segment 1A. If other disposal sites become necessary, temporary disposal lines shall utilize existing flanged connections that could vary in size depending on where disposal is required. The actual disposal site(s), flows, and configuration at or near the existing lagoon shall be coordinated with SAWS. Damage caused by water disposal shall be anticipated, managed, and any damage repaired.
  - e. Review readiness of all pipeline segments for disinfection and coordinate with the Contractors from Segments 2A, 1B, and 1A to assure sampling locations, valves positions, and all pipe appurtenances are ready for program disinfection. If any deficiencies are found, report findings to make sure repairs are made prior to program disinfection.
  - f. Initiate disinfection operations. Complete the program disinfection in a single, coordinated event.
  - g. Direct valve and appurtenance operations needed to achieve and complete the disinfection process.
  - h. Obtain all samples needed along segments 2B, 2A, 1B and 1A and in accordance with regulatory requirements and these contract documents. Document and maintain sample chain of custody throughout the process.
  - i. Sample and obtain test results within 48 hours from a testing lab approved by the OWNER and report any findings to the OWNER along with a written and detailed summary with recommendations to address any failed results.
  - j. Repeat disinfection operations for the all parts of the program until passing tests are achieved and results are certified by the testing lab and disinfection provider for the entire pipeline system.
  - k. Direct valve operations and maintain pressure on the pipeline throughout and residual disinfectant to maintain potable water status of the pipeline upon receipt of passed bacteriological test results.

2. THE PROJECT CONTRACTOR responsibilities will include:
  - a. Upon project completion and acceptance of the hydrostatic testing and tie-ins as described in the plans and specifications, communicate readiness for the PROGRAM DISINFECTION TESTING to SAWS and others as directed.
  - b. Along the PROJECT CONTRACTORS pipeline segment, operate, maintain, and monitor all pipeline appurtenances as required for the chlorination process, including valves, ARV's, sample ports, etc., until the PROGRAM DISINFECTION has been completed and accepted by

the OWNER. Should introduction of disinfectant be required along the PROJECT CONTRACTOR'S segment, provide connections necessary to facilitate that work in conjunction with the PROGRAM DISINFECTION CONTRACTOR.

- c. Respond to and address in a timely manner any issues associated with the PROJECT CONTRACTORS pipeline segment.
  
- C. The Disinfection pay item included on each contract shall be utilized for each Contractor to include all costs, effort, material, labor, equipment, chemicals (if any), and incidentals necessary to complete the responsibilities indicated above for the pipeline segment being bid in accordance with the roles and responsibilities indicated above.

### **1.03 REFERENCES**

The following is a list of standards which may be referenced in this section:

- A. American Water Works Association (AWWA):
  - 1. B300, Hypochlorites
  - 2. B301, Liquid Chlorine
  - 3. B303, Sodium Chlorite
  - 4. C651, Disinfecting Water Mains, Dechlorination
  - 5. C652, Disinfection of Water Storage Facilities
  
- B. Standard Methods for the Examination of Water and Wastewater, as published by the American Public Health Association, American Water Works Association, and the Water Environment Federation.

### **1.04 SUBMITTALS**

**PROGRAM DISINFECTION CONTRACTOR:**

- A. A Program Disinfection Plan, to include procedures and plans for the disinfection and testing of all segments of the pipeline, inclusive of drains, lateral piping, connections, and related appurtenances. Plan shall be signed by the person responsible for performing and coordinating the work, and shall be submitted to SAWS for approval. Plan shall communicate and confirm the understood role of the PROJECT DISINFECTION CONTRACTOR and required coordination items involving the PROJECT CONTRACTORS on other parts of the program.
  
- B. Certification of testing lab that PROGRAM DISINFECTION CONTRACTOR proposes to use, subject to SAWS approval.
  
- C. Type of pipeline disinfecting solution and method of preparation.

- D. Method of disposal for highly chlorinated disinfecting water at Twin Oaks and any intermediate sites along the pipeline route.
- E. A water supply plan for disinfection. Confirm understanding of where and how water will be obtained, how much will be needed, how it will be accounted for and how connections will be made to fill and disinfect all pipeline segments.
- F. Submit proposed arrangement of temporary piping and appurtenances including pressure sustaining valves (if any), backflow prevention, and fittings.
- G. Certification that employees working with concentrated chlorine solutions or gas have received appropriate safety training

#### PROJECT CONTRACTOR

- A. A written work plan, including all methods and equipment required and to be used by the PROJECT CONTRACTOR to get ready for pipeline disinfection and to fulfill the assigned role in achieving program disinfection. Plan shall be signed by the person responsible for performing and coordinating the work, and shall be submitted to SAWS for approval. Plan shall communicate the understood role of the PROJECT CONTRACTOR.
- B. Confirm sample site locations to be utilized by the PROGRAM DISINFECTION CONTRACTOR.

## **PART 2 PRODUCTS**

### **2.01 WATER FOR DISINFECTION**

- A. Clean, uncontaminated and potable.
- B. To facilitate a Program Disinfection Plan, it is SAWS intent to make water available to the PROGRAM DISINFECTION CONTRACTOR from the new Old Pearsall Road Pump Station site. The PROGRAM DISINFECTION CONTRACTOR shall account for all water obtained from SAWS as described in SAWS Standard Specification Item No. 906 Water Use Accountability ([www.saws.org](http://www.saws.org)). The PROGRAM DISINFECTION CONTRACTOR is required to provide SAWS with a written 30 day notice prior to obtaining water for disinfection. The PROGRAM DISINFECTION CONTRACTOR is advised that water availability may have limitations subject to SAWS operational needs. Testing requirements shall conform to Section 02643.

## **2.02 MATERIALS**

### **PROGRAM DISINFECTION CONTRACTOR**

- A. Liquid Chlorine: Meeting the requirements of AWWA B301.
- B. DELIVERY, STORAGE AND HANDLING

Chlorination and dechlorination shall be performed by competent individuals knowledgeable and experienced in the operation of the necessary application and safety equipment in accordance with applicable Federal, State and Local laws and regulations. The transport, storage and handling of these materials shall be performed in accordance with Code of Federal Regulations (CFR) 1910.120 Hazardous Waste Operations and Emergency Response, CFR 49.172 Hazardous Materials Regulations. Storage location of chemicals on site shall be approved by SAWS.

## **2.03 CONTRACTOR'S EQUIPMENT**

### **PROGRAM DISINFECTION CONTRACTOR shall:**

- A. Furnish chemicals and equipment, such as pumps and hoses, to accomplish disinfection. PROGRAM DISINFECTION CONTRACTOR shall provide all necessary valves, piping, backflow prevention devices, pressure sustaining valves, fittings, and any other appurtenances to convey disinfection water to the pipeline at NSPI including any equipment, piping and appurtenances to facilitate disposal of any water from the pipeline to facilitate disinfection.
- B. Provide protection as required by AWWA C651 05, Disinfecting Water Mains, Section 4.3.9 against cross-connections.

### **PROJECT CONTRACTORS shall:**

- A. Furnish connections needed to facilitate disinfection, sampling and flushing of water.

## **PART 3 EXECUTION**

Contractors shall perform preparation, disinfection, and associated work in accordance with their identified roles and as indicated below.

### **3.01 GENERAL**

In accordance with contractor roles and responsibilities described herein, the following items further describe required work:

- A. Cleaning and disinfection procedures shall conform to AWWA C651 05, Disinfecting Water Mains and this Specification.
- B. Clean and disinfect the following items installed or modified under this project, intended to hold, transport, or otherwise contact potable water:
  - 1. Pipeline, beginning of project to end of project, inclusive of all appurtenances and connecting outlets.
  - 2. During construction keep basins, pipe, fittings, equipment, and appurtenances free from dirt and debris.
  - 3. Seal the open ends of pipe with water-tight plugs when pipe is not being laid.
  - 4. Pump water from trenches before removing the plug when water accumulates in the trench.
- C. Wash the surfaces to be disinfected, including unclean pipe walls, valve components, and other surfaces that will be in contact with potable water. .
- D. Pipelines: clean and disinfect new pipelines that connect to existing pipelines up to point of connection.
- E. Disinfect surfaces of materials that will contact finished water, both during and following construction. Disinfect prior to contact with finished water. Take care to avoid recontamination following disinfection.
- F. Prior to application of disinfectants, clean pipelines of loose and suspended material. Use water suitable for flushing and disinfecting.
- G. Conform to AWWA C651 for pipes and pipelines, except as modified in these Specifications.
- H. Allow freshwater and disinfectant solution to flow into pipe or vessel at a measured rate so that chlorine-water solution is at specified strength. Do not place concentrated commercial disinfectant in pipeline or other facilities to be disinfected before it is filled with water.

### **3.02 SEQUENCING AND SCHEDULING**

- A. Commence disinfection after completion of following:
  - 1. Completion and acceptance of pipeline installation and thorough cleaning.

2. Pneumatic testing, hydrostatic testing, pressure testing, and acceptance of pipelines.

### **3.03 PIPELINES**

#### **PROJECT CONTRACTORS**

- A. Flushing (for pipelines smaller than 24-inch diameter, prior to disinfection):
  1. Before disinfecting, flush all foreign matter from pipe in accordance with AWWA C651. Provide hoses, temporary pipes, ditches, and other conduits as needed to dispose of flushing water without damage to adjacent properties.
  2. Flush service connections and hydrants. Flush distribution lines prior to flushing hydrants and service connections.
  3. Operate valves during flushing process at least twice during each flush.
  4. The minimum quantity of water used for flushing must exceed the capacity of the line to insure that clean water has traversed the entire length of the pipe.
  5. Disinfection can then be performed in accordance with AWWA C651, unless herein modified.
  6. Restore and repair areas damaged by any flushing operations
- B. Cleaning (for pipelines larger than 24-inch diameter):
  1. For pipelines larger than 24-inch diameter, ALL Contractors shall clean all pipe in their segment by broom sweeping and then removing all debris from sweeping.
  2. Cleaning and Disinfection shall be performed in accordance with AWWA C651-99 Paragraph 4.4.3.2.

### **3.04 DISPOSAL OF WATER AND HEAVILY CHLORINATED WATER**

- A. The PROGRAM DISINFECTION CONTRACTOR shall dispose of water and heavily contaminated chlorinated water by providing temporary piping and connections and discharging “de-chlorinated” water into the existing designated lagoons at the Twin Oaks Treatment Plant.

- B. Water not disposed of at this site shall be disposed of by the PROGRAM DISINFECTION CONTRACTOR in an acceptable manner at no expense to the OWNER.
- C. If the PROGRAM DISINFECTION CONTRACTOR elects to dispose of disinfectant water in another manner, he shall notify federal, state, and local regulatory agencies to determine if any special procedures or permits are required for disposal of water used for pipeline testing and cleaning and to identify acceptable locations for disposal of the water. Such effort shall be documented and provided to the OWNER for the file in advance of any discharge. All requirements and costs associated with notifications and obtaining any discharge permit or approvals shall be responsibility of the PROGRAM DISINFECTION CONTRACTOR. In addition to complying with any federal, state, or local requirements regarding water disposal, following completion of testing, the PROGRAM DISINFECTION CONTRACTOR and PROJECT CONTRACTOR if applicable shall dispose of water in a manner acceptable to the OWNER.
- D. Prior to disposal, chlorinated water must be “de-chlorinated” to eliminate adverse impacts to the surrounding environment. Water released to the environment shall meet all AWWA, EPA, and TCEQ regulatory requirements.
- E. CONTRACTOR shall take care when disposing of water to assure the disposal location can handle the flow without damage, and that there will be no adverse impacts downstream. Damage caused downstream due to disposed water will be the responsibility of the PROGRAM DISINFECTION CONTRACTOR to remedy at no expense to OWNER.
- F. The use of the sanitary sewer system for disposal will not be allowed. This section shall conform to Section 02643 Water Pipeline Testing.
- G. Valves shall be manipulated by the PROJECT CONTRACTOR so that the strong chlorine solution in the main being treated will be flushed out of the main and will not flow back into the main supplying the water under the supervision of the PROGRAM DISINFECTION CONTRACTOR.
- H. See the appendix of AWWA C651 for acceptable neutralization methods.
- I. PROGRAM DISINFECTION CONTRACTOR shall monitor, track, and estimate all flows being disposed, and provide a report to the OWNER.

### **3.05 TESTING**

- A. Collection of Samples:

Disinfection of all pipelines shall be monitored by the Inspector



PROJECT DISINFECTION CONTRACTOR shall coordinate and take all samples.

PROJECT CONTRACTOR shall:

1. Coordinate activities to allow samples to be taken in accordance with this Specification.
2. Provide temporary sampling facilities, including valves, as indicated on the details and as directed by the engineer or inspector. Flexible tubing shall not be used.
3. Provide access to sampling points.

B. Test Equipment:

1. Chlorine Residual Kit: PROGRAM DISINFECTION CONTRACTOR shall take chlorine residual measurements using method approved by the US Environmental Protection Agency. Test kits shall be Hach Pocket Colorimeter, or approved equal. The kits must be capable of measuring Free Chlorine Residual in the range of 0.02 to 2.00 mg/L and the Total Chlorine in the range of 0.01 to 8.00 mg/L. The use of swimming pool test devices is specifically prohibited.
2. Bacteriologic Test Kit: PROGRAM DISINFECTION CONTRACTOR shall obtain sampling bottles with instructions for handling from the approved testing laboratory.

C. Testing Laboratory – PROGRAM DISINFECTION CONTRACTOR’S testing laboratory shall be located within 100 miles of the project site. Testing laboratory certifications shall be submitted to OWNER for approval prior to use.

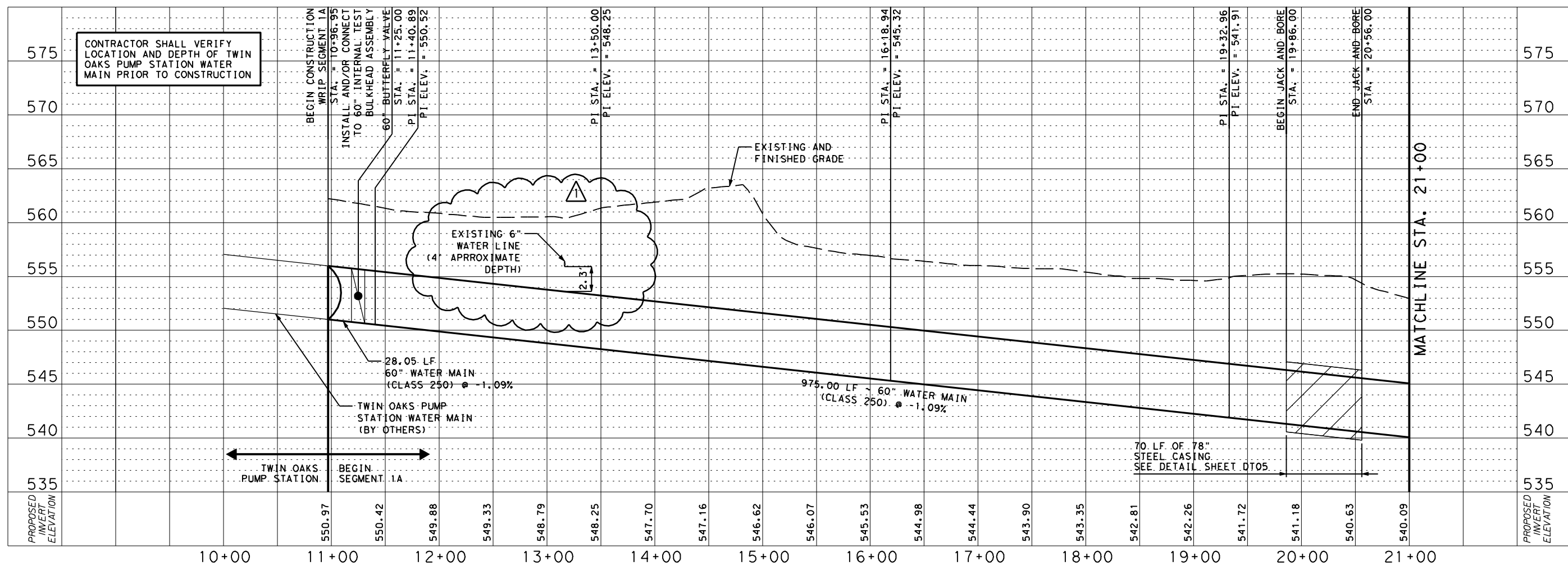
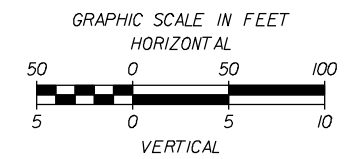
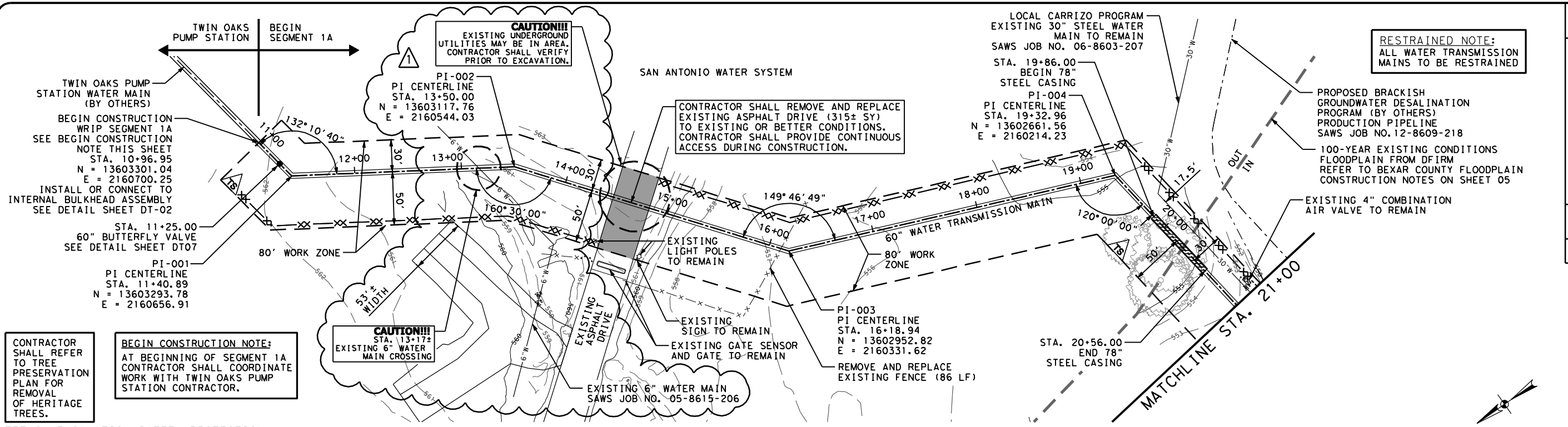
D. Chlorine Concentration Sampling and Analysis: (PROGRAM DISINFECTION CONTRACTOR)

1. Collect and analyze samples in accordance with AWWA C651.
2. De-chlorinated Disinfecting Wastewater Residual Samples: A minimum of 2 grab samples are to be taken for every hour that discharge occurs.
3. Analysis to be performed by laboratory obtained by PROGRAM DISINFECTION CONTRACTOR. Samples will be analyzed using method for free chlorine as described in latest edition of Standard Methods for Examination of Water and Wastewater. OWNER may take random samples to verify PROGRAM DISINFECTION CONTRACTOR’S laboratory results.

- E. After all contractors have completed hydrostatic testing and completed the tie-ins, the PROGRAM DISINFECTION CONTRACTOR will disinfect the pipeline, take water samples and have them analyzed for conformance to bacterial limitations for public drinking water supplies and other requirements of the regulatory agency of jurisdiction for potable water. The PROGRAM DISINFECTION CONTRACTOR will monitor the system for two (2) days. All PROJECT CONTRACTORS will witness testing on their pipeline segment to assure compliance with these specifications and regulatory requirements.
- F. If any samples required above are bacterially positive, disinfecting procedures and bacteriological testing shall be repeated until bacterial limits are met, at no additional cost to the OWNER.

When applicable, additional costs to repeat the program disinfection shall be equally borne by all PROJECT CONTRACTORS, except if the location of a failed sample(s) is indicative of a particular segment(s) having responsibility for the failed test as determined by the OWNER, in which case said PROJECT CONTRACTOR(S) on associated with the failed segment(s) will provide full reimbursement to the PROJECT DISINFECTION CONTRACTOR for all additional work. Additional costs to be reimbursed shall be promptly communicated by the PROJECT DISINFECTION CONTRACTOR.

**-END OF SECTION-**



BM	PAPE-DAWSON
APP.	Job No. 6042-20
Revisions	
1	9/23/14
ADDENDUM #2 REVISIONS	Date: AUG. 2014
No.	Designed by: JO
Date	Drawn by: BS
	Checked by: BM
	Scale: 1" = 100' HORIZ 1" = 10' VERT

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**SAN ANTONIO WATER SYSTEM**

SAWS JOB NO. 14-8603  
WATER RESOURCES INTEGRATION PROGRAM  
PIPELINE SEGMENT 1A  
PLAN AND PROFILE  
STA. 10+96.95 TO STA. 21+00

Sheet PP01