



Water Resources Integration Program Pipeline, Segment 1B

Solicitation Number: B-14-046-DD

Job No.: 14-8604

ADDENDUM No. 1

September 17, 2014

To Respondent of Record:

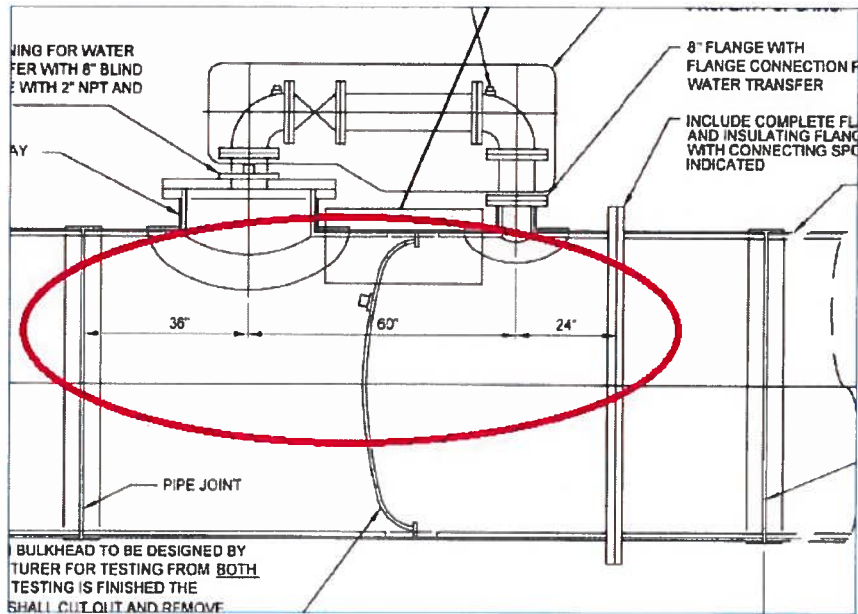
This addendum, applicable to work referenced above, is an amendment to the proposal and plans and specifications and as such will be a part of and included in the Contract Documents. Acknowledge receipt of this addendum by entering the Addendum number and issue date on the space provided in submitted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

A. QUESTIONS SUBMITTED TO SAWS

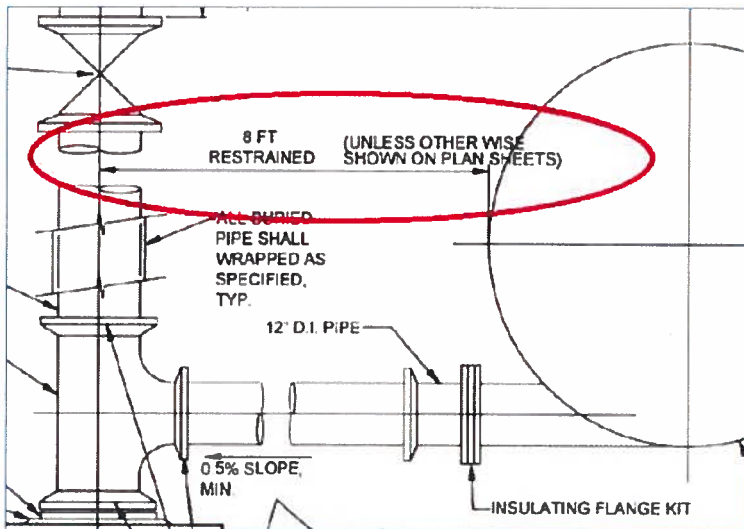
1. See attached Response Log.

B. MODIFICATIONS TO THE PLANS

1. Sheets PP17 – PP21. See attached revised drawings.
2. Sheet PP30. See attached revised drawings.
3. 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.
4. Sheet DT02. Add dimensions to the section view in accordance with the following drawing excerpt:



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



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
- Hanson Pressure Pipe
- The Lane Construction
- Texas Sterling Construction
- Webber, LLC
- CYMI Industrial, Inc.
- Spiess Construction Co., Inc.

- Atlas Construction Corp.
- T & T Construction Corp.
- Oscar Renda Contracting
- JMI
- MKI
- Brinker Jones Environmental
- Condie Construction
- Bortunco Boring and Tunneling Company of America
- Northwest Pipe Co.
- BRH Garver Construction, LP
- Ameron International
- Mountain Cascade
- Thompson Pipe Group
- Carboline
- Holloman Corporation
- McGaharan
- Brinkly
- 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. 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. Change to Page SIR – 3, Supplementary Instruction to Respondents, #12b, Add "0.25" to –inch.

4. 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.

5. THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY MEMORANDUM

- a. Remove The United States Environmental Protection Agency memorandum dated March 20, 2014 (pages 213-232 of the pdf) in its entirety. TWDB- 1106 (Revised 7/28/14) the American Iron and steel (AIS)

Guidance for Clean Water & Drinking Water State Revolving Funds shall serve as the sole guidance manual as part of this contract.

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. 11 shall be \$5,000/day; additive to other liquidated damages.

8. PRICE PROPOSAL

- a. Replace PRICE PROPOSAL in its entirety and replace with the revised version attached, which Respondents should use when submitting a Price Proposal.
- 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.

9. 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.

D. MODIFICATIONS TO THE TECHNICAL SPECIFICATIONS

1. SECTION 02519 – DISINFECTION OF WATER SYSTEMS

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

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

- a. Article 1.01. C. 2. Add “0.25” to –inch.

3. SECTION 01270 – MEASUREMENT AND BASIS OF PAYMENT

- a. Replace Section 01270 - MEASUREMENT AND BASIS OF PAYMENT in its entirety and replace with the revised version.

4. SECTION 02400 – JACK AND BORING

- a. Article 1.07.B. – Add “or” after “The need to change construction method”.

5. 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.”

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

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

7. 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.”

8. 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.

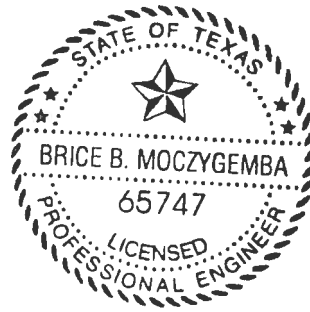
9. SECTION 02571 – STEEL PIPE, MORTAR – LINED (ANSI/AWWA C200, MODIFIED)POLYURETHANE COATING

- 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.



Brice Moczygemba, P.E.
Pape-Dawson Engineers, Inc.



ACKNOWLEDGEMENT BY RESPONDENT

Each Respondent shall acknowledge receipt of this Addendum No. 1 by noting such and signing the Price Proposal.

This undersigned acknowledges receipt of this Addendum No. 1 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 1B**

No.	Date	Questions	Responses
1	8/21/2014	The bid items start with (Item 3) instead of (Item 1), is this correct or was there an error on the numbering?	<i>"This issue has been corrected. The Price Proposal and Measurement and Payment have been revised and are attached to this Addendum."</i>
2	8/22/2014	Please find attached LifeLast's RFI for the WRIP: Pipeline Segment 1B - Solicitation 14-046-DD, requesting that our DuraShield 210 be listed as an approved coating system in the Specification Section 09910- Polyurethane Coating.	<i>Specification Specification 09910, Polyurethane Coating, Section 2.02 B.3.b. increase 30 mils to 35 mils. Section 2.02 B.3.c. add LifeLast Durashield 210 to the list of approved products for polyurethane exterior coatings. Section 1.02 Contractor to submit a color pallet.</i>
3	8/22/2014	On the above mentioned projects there are mandatory pre-proposal meetings...We are bidding these projects as a sub-contractor for the cathodic protection. Is it mandatory that we attend these meeting?	<i>No, only firms that intend to submit a proposal as a prime contractor are required to attend the mandatory pre-proposal meeting.</i>
4	8/21/2014	Please clarify the wire size and insulation type for the rectifier positive cable and the negative cable (drain cable). Cannot locate a reference in specification or details.	<i>See attached Impressed Current Anode Junction Box Detail.</i>
5	8/22/2014	Plan sheet CP1, Rectifier schedule lists two each 40 V 8 Amp rectifiers w/150' depth wells. Sheet CP2, detail 1 calls for a well depth of 160'. Detail 2, same sheet shows the rectifier rating at 24V/18A. Please confirm the rectifier rating and the well depth. We request that the terms of payment for bid item 23, 24, 30, 31, and 32 be revised to allow payment for the materials as stored materials. The terms of payment as stated calls for a maximum payment up to 85% after installation with the balance due upon completion. The rationale for this request is to reduce the cost of these items, as none of the manufactures will honor prices for more than 60 days, to facilitate on time delivery. The lead-time for rectifier manufacturing requires purchasing and delivery to the job site long before they will be installed.	<i>The rectifier rating and depth shall be as listed on sheet CP 1. Rectifier shall be rated 40V/8A and well depth shall be 150 feet. The terms of payment will remain as outlined in the specifications.</i>
6	8/28/2014	I plan to bid the furnishing & installation of the clsm (flowable fill), regular and quick set, on these projects. Would you please post a cubic yardage quantity. A larger volume of product would allow us to post a lower bid per cubic yard. We will also bid the cellular grout & grouting portion of these projects. We would also appreciate a volume statement on the cellular grout.	<i>The cellular grout is incidental to the Jacking, boring or tunneling of the pipe. There is no separate pay item.</i>
7	9/8/2014	1. Is it SAWS's expectation that each bidder perform their own geotechnical investigations to supplement SAWS's geotechnical investigations performed during the project's design stage and include such costs as part of the bid?	<i>As provided in the Contract Documents including but not limited to General Condition Section 5.6, IR-2 ITEM 5B, IR-6 ITEM 19 and Specification 01110 Part 1.02.B, any geotechnical reports provided by SAWS to the bidders are for informational purposes only and in no instance should a bidder rely on the information contained in the geotechnical reports for purposes of preparing their bid. It is the Contractors responsibility to perform whatever investigations it deems necessary in order to prepare the Contractors bid to complete the work, complete and in place.</i>
		2. Is it SAWS's intent that the differing site conditions clause of the contract be NOT applicable for underground conditions and that the bidders should expect the worst case in preparing bids?	<i>All General Conditions shall apply to all aspects of this project unless modified by the Supplemental Conditions.</i>
8	9/8/2014	1. Proposal Bid Item 8. calls out 60" Manual Butterfly Valve with Vault. No vault is indicated on detail. Please clarify.	<i>1. Price Proposal Line Item No. 6, "60" Manual Butterfly Valve with Vault", remove the word Vault.</i>
		2. Bolts/Nuts for Butterfly Valves are to be Stainless Steel or Zinc Plated? Specification references both. Please clarify.	<i>2. Bolts/Nuts are to be stainless steel.</i>
		3. Air Release Valves on plans/proposal are shown as 6" and 8". Air release Valves represented in specifications (Section 15117) are 4" & 6". Please clarify which Model Numbers are to be provided for Bid Items, 10, 11, & 12 respectively.	<i>3. The manufacturer listed in Specification 15117, Section 1.02 B, are acceptable manufacturers for the 6" and 8" Combination Air Release Valves. The manufacturer listed in Section 1.02 C is an acceptable manufacturer for the 6" Anti-Shock Combinatino Air Valve.</i>
		Specification 02571 Steel Pipe, Mortar-Lined (ANSI/AWWA C200, MODIFIED)	
		Section 1.01.B (pg 1): 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.	<i>No changes will be made to the specification</i>
		Section 1.03.B.4 (pg 5): 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?	<i>No, The referenced section does not specify stress analysis for appurtances.</i>
		Section 1.04.B.1 (pg 10): 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.	<i>No changes will be made to the specification</i>

**Questions Received:
RFCSP: WRIP Pipeline Segment 1B**

No.	Date	Questions	Responses
9	9/10/2014	Section 1.04.D.1.f (pg 12): 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.	<i>No changes will be made to the specification</i>
		Section 1.04.D.3 (pg 12): 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.	<i>No changes will be made to the specification</i>
		Section 1.04.D.3.b (pg 13): SAME AS PREVIOUS COMMENT. Please strike the requirement for Charpy testing on ¼-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.	<i>No changes will be made to the specification</i>
		Section 2.02.O (pg 18): 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.	<i>No changes will be made to the specification</i>
		Section 2.02.O.2.b (pg 18): 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.	<i>No changes will be made to the specification</i>
		Section 2.03.B (pg. 19/20): 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.	<i>No changes will be made to the specification</i>
		Section 2.02.D (pg 20): 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.	<i>No changes will be made to the specification</i>
		Section 3.01.A.1 and 2 (pg 22 and 23): It appears that both items 1 and 2 are identical, recommend removing item 2 and renumbering the remaining items in this section.	<i>No changes will be made to the specification</i>
		Section 3.01.G (pg 26): 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.	<i>Section 3.01G will be revised per Addendum No. 1. See attached.</i>
		Section 3.01.K.3 (pg 27): 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."	<i>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.</i>
		Section 3.03.A. (pg 27): 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 <i>wider than that permitted by AWWA C205</i> 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.	<i>No changes will be made to the specification</i>
		Specification 02572 Steel Pipe Fabricated Specials (ANSI/AWWA C200, MODIFIED)	
		Section 3.01.C (pg 8): Suggest removing this paragraph so as not to create any confusion since Tape Coating is not specified on this Project.	<i>Specification 2572, Steel Pipe Fabricated Specials (ANSI/AWWA C200, Modified), "Remove Section 3.01 C".</i>
Section 3.01.H (pg 8): 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.	<i>Section 2575, 3.01H (pg.8): Remove and replace the paragraph with the following: "H. Field Welding. Field welding shall conform to ANSI/AWWA C206."</i>		
Section 3.07.B.3.a.1 thru 5 (pg 27): 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:	<i>See attached Addendum No. 1 for response.</i>		

**Questions Received:
RFCSP: WRIP Pipeline Segment 1B**

No.	Date	Questions	Responses
		<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>See attached Addendum No. 1 for response.</i></p>
		<p>Specification 09970 Painting and Protective Coatings Section 1.07 A (pg 6): 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>Section 1.07 B (pg 6): 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>Specification 02400 Jacking and Boring Section 2.01 A (pg 6): 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>Section 3.02 C (pg 11): 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>
<p align="center">10</p>	<p align="center">9/9/2014</p>	<p>Would the Owner consider requiring that copies be submitted within 24 hours rather than at the time of bid opening? Based on the normal manufacturers’ practice of not providing final pipe pricing up until minutes before the bid, the pipe supplier may not be known until 09:45 or so. Getting copies of the manufacturer’s information inserted into 8 sets of the proposal can be difficult. Relief from the requirement to submit all copies at the time of turn-in may result in lower pricing for SAWS.</p>	<p><i>SAWS will not waive the requirement.</i></p>
<p align="center">11</p>	<p align="center">9/9/2014</p>	<p>Diana, I’m an HDPE fusible product specialist for HD Supply. Inquiring about using HDPE Piping as an alternative to CSC piping on this project. HD has been working on a couple of other projects, SAWS Twin Oaks and the Desal water projects, that have HDPE on the project. Is there an engineer on this project to contact about the possibilities??</p> <p>Thanks for your help, FRED</p>	<p><i>The Program pipe material to be used is steel pipe, mortar lined, polyurethane-coated with welded joints.</i></p>
<p align="center">12</p>	<p align="center">9/9/2014</p>	<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"> • Submittal Date <ul style="list-style-type: none"> ○ September 24, 2014 • Item 11 – IR-5 States “contract will be awarded within 90 days after the solicitation deadline” <ul style="list-style-type: none"> ○ December 23, 2014 • PC-1 states “ Owner will provide written Authorization to Proceed within 30 days after the award” <ul style="list-style-type: none"> ○ January 22, 2015 • Substantial is 340 days award <ul style="list-style-type: none"> ○ December 28, 2015 • Final is 370 days after award <ul style="list-style-type: none"> ○ January 27, 2016 <p>WRIP - 2B</p> <ul style="list-style-type: none"> • Submittal Date <ul style="list-style-type: none"> ○ September 26, 2014 • Item 11 – IR-5 States “contract will be awarded within 90 days after the solicitation deadline” <ul style="list-style-type: none"> ○ December 25, 2014 • PC-1 states “ Owner will provide written Authorization to Proceed within 30 days after the award” <ul style="list-style-type: none"> ○ January 24, 2015 • Substantial is 400 days award <ul style="list-style-type: none"> ○ February 28, 2016 • Final is 430 days after award <ul style="list-style-type: none"> ○ March 29, 2016 <p>WRIP – 1A</p> <ul style="list-style-type: none"> • Submittal Date <ul style="list-style-type: none"> ○ October 2, 2014 	<p><i>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 by the end of December. Contract milestones shall be as stated in these specifications or as modified in this addendum for each project.”</i></p>

**Questions Received:
RFCSP: WRIP Pipeline Segment 1B**

No.	Date	Questions	Responses
		<ul style="list-style-type: none"> • Item 11 – IR-5 States “contract will be awarded within 90 days after the <ul style="list-style-type: none"> ○ December 31, 2014 • PC-1 states ” Owner will provide written Authorization to Proceed within 30 <ul style="list-style-type: none"> ○ January 30, 2015 • Substantial is 340 days award <ul style="list-style-type: none"> ○ January 5, 2016 • Final is 370 days after award <ul style="list-style-type: none"> ○ February 4, 2016 <p>WRIP – 2A</p> <ul style="list-style-type: none"> • Submittal Date <ul style="list-style-type: none"> ○ October 2, 2014 • Item 11 – IR-5 States “contract will be awarded within 90 days after the <ul style="list-style-type: none"> ○ December 31, 2014 • PC-1 states ” Owner will provide written Authorization to Proceed within 30 <ul style="list-style-type: none"> ○ January 30, 2015 • Substantial is 400 days award <ul style="list-style-type: none"> ○ February 4, 2016 • Final is 430 days after award <ul style="list-style-type: none"> ○ March 5, 2016 	
13	9/9/2014	<p>The minority percentages don’t match between the SAWS standard and the TWDB documents. Which standard is going to be required to use for GFEP? Section IV-2</p> <ul style="list-style-type: none"> ○ MBE: CONSTRUCTION 12.94%; SUPPLIES 9.68%; SERVICES 10.84%; EQUIPMENT 7.12% ○ WBE: CONSTRUCTION 8.72%; SUPPLIES 9.34%; SERVICES 5.72%; EQUIPMENT 5.39% <p>Section: SIR-5</p> <ul style="list-style-type: none"> ○ The SMWB goal for this project is 17% 	<p><i>TWDB’s goals and the 17% SAWS goals are non-mandatory; i.e., you are not required to meet them exactly. What is important is that you conduct an outreach effort to find minority-owned and woman-owned subcontractors through any two of the following methods, and show documented proof of your efforts. Each bullet point counts as one method. For example, e-mail, phone, mail, and fax only count as one outreach method (Direct Contact):</i></p> <ul style="list-style-type: none"> • Newspaper Advertisements • Direct Contact by Phone, Fax, USPS Mail, Email • Meetings or Conferences • Minority Media • Internet and web postings • Trade Association Publications • Other Government Publications
14	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>
15	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 lap 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><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>

**Questions Received:
RFCSP: WRIP Pipeline Segment 1B**

No.	Date	Questions	Responses
		<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><i>Section 2571,1.03 B.8.d (pg 7): Remove and replace the second sentence with the following: "Submit Welding Procedure Specification(s) (WPS) used for welder certifications".</i></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 2nd 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>Section 2571,1.04 D.1.b (pg. 12): Remove and replace the second sentence with the following: "The WPS shall describe the minimum weld to be placed in each pass."</i></p>
16	9/10/2014	<p>1. Would SAWS consider adding Add/Deduct Line to the bidding Proposal? The purpose would be to allow the Bidding Contractor the opportunity to adjust the total Contract Price during Bid Closeout times due to late last minute cuts/adds to the Contract Price. This method has worked in similar large diameter pipeline proposals where pipe material prices are volatile.</p> <p>2. In the Bidding Proposals there are two (2) Wage Scales included. One Wage Scale is for Heavy/Highway and the other is for On-Shore Pipeline. They are significantly different wage rates and Classifications.</p> <p>3. On sheet GN 07 under section title "Oil and Gas Field Facility Notes" Note #3 requires the Contractor to cut well casings 3 feet below the bottom of the trench when the Contractor encounters an abandoned oil well. This is very hard to quantify and price an unknown such as mentioned in this note. Will SAWS add a bid item that lists an allowance per occurrence that can be used to serve as a basis for pricing when this situation occurs?</p> <p>4. Will SAWS consider delaying until after the bid time the Qualifications of the Pipe Supplier? At the least some portion relating to the Production capabilities of the Pipe Supplier. The Pipe supplier may not know how many sections he is being considered for at Bid Time and therefore be at a disadvantage when certifying the capabilities. The Contractor will be the best determiner of what his schedule is and once the Bid Process has finished be able to submit the certifying documents showing the schedule requirements.</p>	<p><i>SAWS will not consider this option</i></p> <p><i>For the purposes of this Contract, Heavy/Highway is the applicable wage scale. The wage decision for On-Shore Pipeline Construction has been removed as part of the Addendum.</i></p> <p><i>No changes will be made</i></p> <p><i>All information must be submitted with the proposal</i></p>

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:

Instructions Columns 1 - 4	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 minimum of 3 business/firms for each type of contract sought (i.e. three engineering, financial advisor, and bond counsel firms) to demonstrate a Good Faith Effort .
Instructions Column 5	Enter one of the following procurement or contract categories: CONSTRUCTION – SUPPLIES – EQUIPMENT – SERVICES
Instructions 6	Enter the type of business: Minority Business Enterprise (MBE), Women-Owned Business Enterprise (WBE), or OTHER (NOTE! "OTHER" = Company or firm is Non-MBE or WBE)
Instructions Column 7	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"> 1. Newspaper Advertisements 2. Direct Contact by Phone, Fax, USPS Mail, E-mail 3. Meetings or Conferences 4. Minority Media 5. Internet & Web Postings 6. Trade Association Publications 7. Other Government Publications

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.

	Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7
	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

Signature - Applicant/Entity or Prime Contractor	Title	Certification Date

III. TWDB APPROVAL SIGNATURE

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

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"/>	EXCEPTION: 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)
Signature – Consultant/Prime Contractor	
Title	
Certification Date	

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%	\$
Total Procurement (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"/>
DBE Coordinator	Approval Date	

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

Instructions Column 1	Enter the full name, street address, city/state/zip for each firm awarded a contract for the project					
Instructions Column 2	Enter one of the following procurement or contract categories: CONSTRUCTION – SUPPLIES – EQUIPMENT – SERVICES					
Instructions Column 3	Enter the type of business: Minority Business Enterprise (MBE), Women-Owned Business Enterprise (WBE), or OTHER (NOTE: "OTHER" = Company or firm is Non-MBE or WBE)					
Instructions Column 4	Enter the exact amount of the awarded contract					
Instructions Column 5	Enter the exact date the contract was or will be executed					
Instructions Column 6	Indicate if valid MBE/WBE Certification is attached					
	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)
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

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	<u>XXXXXXXXXX</u>	\$ _____
2.	60" Steel Pipe – 200 PSI (Open Cut) _____ Dollars _____ Cents	LF	41,284	\$ _____	\$ _____
3.	60" Steel Pipe – 200 PSI (Carrier Pipe Restrained) _____ Dollars _____ Cents	LF	1,487	\$ _____	\$ _____
4.	Trench Excavation Safety Protection _____ Dollars _____ Cents	LF	41,284	\$ _____	\$ _____
5.	78" Steel Casing Pipe _____ Dollars _____ Cents	LF	1,487	\$ _____	\$ _____
6.	60" Manual Butterfly Valve – 250 PSI _____ Dollars _____ Cents	EA	6	\$ _____	\$ _____
7.	24" Manual Butterfly Valve with Vault – 250 PSI _____ Dollars _____ Cents	EA	1	\$ _____	\$ _____
8.	6" Anti-Shock Combination Air Valve – 250 PSI _____ Dollars _____ Cents	EA	2	\$ _____	\$ _____

Job No. 14-8604
 Water Resources Integration Program – Pipeline, Segment 1B
 Solicitation No. B-14-046-DD

ITEM NO.	DESCRIPTION & ESTIMATED QUANTITIES (Unit Price to be written in words)	UNIT	QTY	UNIT PRICE (Figures)	TOTAL PRICE (Figures)
20.	Hydrostatic Testing _____ Dollars _____ Cents	LS	1	\$XXXXXXXX	\$ _____
21.	Rectifier Installation w/Electrical Enclosure _____ Dollars _____ Cents	EA	2	\$ _____	\$ _____
22.	Monitoring Test Station _____ Dollars _____ Cents	EA	21	\$ _____	\$ _____
23.	6" Insulating Flange Kit _____ Dollars _____ Cents	EA	1	\$ _____	\$ _____
24.	8" Insulating Flange Kit _____ Dollars _____ Cents	EA	1	\$ _____	\$ _____
25.	12" Insulating Flange Kit _____ Dollars _____ Cents	EA	6	\$ _____	\$ _____
26.	14" Insulating Flange Kit _____ Dollars _____ Cents	EA	5	\$ _____	\$ _____
27.	60" Insulating Flange Kit _____ Dollars _____ Cents	EA	2	\$ _____	\$ _____
28.	Insulating Joint Test Station _____ Dollars _____ Cents	EA	15	\$ _____	\$ _____
29.	Casing Test Station _____ Dollars _____ Cents	EA	17	\$ _____	\$ _____
30.	Foreign Pipeline Test Station _____ Dollars _____ Cents	EA	28	\$ _____	\$ _____

Job No. 14-8604
 Water Resources Integration Program – Pipeline, Segment 1B
 Solicitation No. B-14-046-DD

ITEM NO.	DESCRIPTION & ESTIMATED QUANTITIES (Unit Price to be written in words)	UNIT	QTY	UNIT PRICE (Figures)	TOTAL PRICE (Figures)
31.	Heat Shrink Sleeve Inspection _____ Dollars _____ Cents	EA	12	\$ _____	\$ _____
32.	Rock Excavation (0-5,000 CY) _____ Dollars _____ Cents	CY	5,000	\$ _____	\$ _____
33.	Rock Excavation (5001-10,000 CY) _____ Dollars _____ Cents	CY	5,000	\$ _____	\$ _____
34.	Disinfection _____ Dollars _____ Cents	LS	1	\$ _____	\$ _____
35.	Jack/Bore Rock Excavation _____ Dollars _____ Cents	LF	200	\$ _____	\$ _____
SUB TOTAL				\$ _____	
100	Mobilization _____ Percent (Maximum of 6% of the <u>Line Item "A"</u> Sub-total Base Bid amount)	LS	1		\$ _____
101	Preparing Rights-of-Way _____ Percent (Maximum of 4% of the <u>Line Item "A"</u> Sub-total Base Bid amount)	LS	1		\$ _____
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.**

Job No. 14-8604
Water Resources Integration Program – Pipeline, Segment 1B
Solicitation No. B-14-046-DD

**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: _____

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.

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

SECTION 01270

MEASUREMENT AND BASIS OF PAYMENT

PART 1 GENERAL

1.01 WORK INCLUDED

- A. This Section defines the method that shall be used to determine the quantities of work performed, or materials supplied, and establish the basis upon which payment shall be made. Descriptions included in items are provided as a general indication of work required on Bid Items and shown on the Drawings. It shall be understood that the CONTRACTOR is required to complete the installation of this Project in accordance with Contract Documents, whether or not such work is listed herein.
- B. Payments for Work shall conform to the provisions of the General Conditions, the Supplementary Conditions, the Agreement, and this Section. Apply provisions for payments in the Section to all Subcontractors and Suppliers.
- C. Submit Applications for Payment at the amounts indicated in the Agreement:
 - 1. CONTRACTOR's bid amount and subsequent invoices supplied in accordance with the contract shall be full compensation for all aspects of the work, including the following:
 - a. Mobilization, demobilization, cleanup, bonds, and insurance.
 - b. Professional services including but not limited to engineering and legal fees.
 - c. The products to be permanently incorporated into the project.
 - d. The products consumed during the construction of the project.
 - e. The labor and supervision to complete the project.
 - f. The equipment, including tools, machinery, and appliances required to complete the project.
 - g. The field and home office administration and overhead costs related directly or indirectly to the project.
 - h. Any and all kinds, amount or class of excavation, backfilling, pumping or drainage, sheeting, shoring and bracing, disposal of any and all surplus materials, permanent protection of all overhead, surface or underground structures; removal and replacement of any

poles, conduits, pipelines, fences, appurtenances and connections, cleaning up, overhead expense, bond, public liability and compensation and property damage insurance, patent fees, and royalties, risk due to the elements, and profits, unless otherwise specified.

2. Provide work not specifically set forth as an individual payment item but required to provide a complete and functional system. These items are a subsidiary obligation of the CONTRACTOR and are to be included in the Cost of Work.
3. Payment will be made for materials on hand.
 - a. Store materials properly on site.
4. Payment will be made for the invoice amount less the specified retainage.
5. Provide invoices at the time materials are included on the materials-on-hand tabulation.
 - a. Provide documentation of payment for materials-on-hand with the next payment request. Adjust payment to the amount actually paid if this differs from the invoice amount. Remove items from the materials on hand tabulation if this documentation is not provided so payment will not be made.
 - b. Payment for materials-on-hand is provided for the convenience of the CONTRACTOR and does not constitute acceptance of the product.

1.02 PAYMENT PROCEDURES

- A. Submit Applications for Payment per the General Conditions.
- B. Applications for Payment shall be submitted on forms approved by SAWS.
 1. Do not alter the schedule of values and the form for the submission of requests without the written approval of the OWNER.
 2. Final payment requires additional procedures and documentation per the General Conditions.
- C. Progress payments shall be made as the work progresses on a monthly basis.

1. End the payment period on the day indicated in the Agreement and submit an Application for Payment for Work completed and materials received since the end of the last payment period.
 2. At the end of the payment period, submit a draft copy of the Application for Payment for that month to the OWNER. Agreement is to be reached on:
 - a. The percentage of work completed for each lump sum item.
 - b. The quantity of work completed for each unit price item.
 - c. The percentage of work completed for each approved Change Order item.
 - d. The amount of materials-on-hand.
 3. On the basis of these agreements the CONTRACTOR is to prepare a final copy of the Application for Payment and submit it to the OWNER for approval.
 4. The CM will review the Application for Payment and if appropriate will recommend payment of the application to the OWNER and provide a copy to the CONSULTANT.
- D. Provide a revised and up-to-date progress schedule per Section 01321, Progress Schedule with each Application for Payment.
- E. Provide project photographs per Section 01322, Construction Photographs and Video with Application for Payment.
- F. Payment contingent upon as-built information provided to OWNER'S Representative for all work performed within pay period.

1.03 ALLOWANCES MEASUREMENT PROCEDURES (IF INCLUDED IN THE BID PROPOSAL)

- A. Measure the Work described in the Agreement for payment. Payment will be made only for the actual measured and/or computed length, area, solid contents, number and weight, unless otherwise specifically provided. No extra or customary measurements of any kind will be allowed.

1.04 BASIS OF PAYMENT

The following detailed list includes the description, measurement, payment provisions and applicable conditions associated with each pay item included in this project. The pay item number indicated below correlates to the pay item number in the Bid Proposal.

A. ITEM No. 100 - MOBILIZATION

1. **Description** - This item shall govern the mobilization of personnel, equipment and supplies at the project site in preparation for the beginning work on contract items and the acquisition of insurance and bonds. Mobilization shall include, but not be limited to the movement of equipment, personnel, material, supplies, etc. to the project site and the establishment of temporary offices and other facilities necessary to the start of the work.
2. **Measurement** - Measurement of the item “Mobilization” shall be by the lump sum as the work progresses. “Mobilization” lump sum bid shall be limited to a maximum of 6% of the adjusted contract amount bid. The adjusted contract amount is defined as the total contract amount less the lump sum bid total for Mobilization and Preparation of Right-of-Way.
3. **Payment** – Except as stipulated herein, eligible partial payments of the lump sum bid for Mobilization shall be as follows:
 - a. When 1% of the adjusted contract amount for construction items is earned, 25% of the Mobilization portion of this item or 5% of the total contract amount, whichever is less, shall be paid.
 - b. When 5% of the adjusted contract amount for construction items is earned, 50% of the Mobilization component of this item or 10% of total contract amount, whichever is less, shall be paid.
 - c. When 10% of the adjusted contract amount for construction items is earned, 75% of the Mobilization component of this item or 15% of total contract amount, whichever is less, shall be paid.
 - d. When 25% of the adjusted contract amount for construction items is earned, 90% of the Mobilization component of this item or 20% of total contract amount, whichever is less, shall be paid.
 - e. The eligible payment for this item as determined above shall be factored by 50% until all of these submittals have been made: Health and Safety Plan, Quality Control / Quality Assurance Plan, Pre-Construction Video/photography, and Construction Schedule. A factor of 75% shall be applied after submittal and until all of the above submittals are approved.
 - f. Upon completion of all work under this CONTRACT, payment for the remainder of the “Lump Sum” bid for Mobilization will be made.

Note: Cost for Insurance and Bond is inclusive to cost of Mobilization Item.

THE SUM TOTAL FOR MOBILIZATION (BID ITEM 1) AND PREPARING RIGHT-OF-WAY (BID ITEM 2) SHALL NOT EXCEED 10% OF THE ADJUSTED CONTRACT AMOUNT. A BID WITH SAID SUM IN EXCESS OF THIS AMOUNT MAY BE CONSIDERED UNBALANCED AND THE BID MAY BE REJECTED. AMOUNTS IN EXCESS OF THIS AMOUNT FOR ACCEPTED BIDS WILL BE ELIGIBLE FOR PAYMENT UPON PROJECT SUBSTANTIAL COMPLETION.

B. ITEM No. 101 - PREPARING RIGHTS-OF-WAY

1. **Description** - This item shall govern preparing the right-of-way for construction operations by removing and disposing of all obstructions from the right-of-way and from designated easements where removal of such obstructions is not otherwise provided for in the Drawings and Specifications. It shall include the furnishing of all materials, equipment, tools, labor, supervision, and incidentals necessary to complete the work.
2. **Measurement** - Preparing Right-of-Way shall be paid based on the bid lump sum price, with a maximum value of 4% of the adjusted contract amount bid. The adjusted contract amount is defined as the total contract amount less the lump sum bid total for Mobilization and Preparing Right-of-Way.
3. **Payment** – Payment for this item shall be based on the bid lump sum price, pro-rated based on the percentage of the progress of pipeline trench excavation, and as stipulated herein.

Payment for this item shall be factored by 50% until all of these submittals have been made: Health and Safety Plan, Quality Control / Quality Assurance Plan, Pre-Construction Video/photography, and Construction Schedule. A factor of 75% shall be applied after submittal and until all of the above submittals are approved.

C. ITEM No. 1 - EROSION AND SEDIMENTATION CONTROLS

1. **Description** – This item shall govern preparation, maintenance and implementation of the SW3P; complying with Texas Commission on Environmental Quality (TCEQ) regulations; Texas Pollution Discharge Elimination System (TPDES) General Permit requirements (Permit No. TXR150000); and the City of San Antonio Stormwater Compliance with Construction Activity Ordinance 94002 to include submittal and permit termination notifications.

The CONTRACTOR shall be the operator as defined by TPDES General Permit. The CONTRACTOR shall comply with all TPDES General Permit requirements to include preparation, maintenance and implementation of the SW3P. The CONTRACTOR shall submit all notifications and pay all associated fees required by the TPDES General Permit. The CONTRACTOR shall provide the OWNER copies of any submitted notifications and associated fee checks.

The CONTRACTOR'S temporary control measures shall be installed and maintained throughout the construction contract and coordinated with proposed or existing permanent pollution control features to assure effective and continuous water pollution control throughout the construction and post construction period. The CONTRACTOR shall maintain and inspect the temporary control measures in accordance with the TPDES General Permit requirements. The control measures may include, but not limited to: sediment control fences, inlet protection, baled hay, rock filter dams, dikes, swales, construction exits, soil retention blanket, sediment traps and basins, or non-structural water pollution controls. The CONTRACTOR is responsible for any type of disastrous event resulting from negligence in providing the appropriate devices to prevent the contamination of storm water sewers and flooding on the roadway and private properties, in an event of a rainstorm. The CONTRACTOR shall provide control measures to prevent or minimize the impact to the existing municipal separate storm water system. This SW3P is to be adjusted and updated as the project progresses to meet compliance with permit and ordinance.

CONTRACTOR shall be responsible for the removal and appropriate disposal of any project control measures not incorporated as a permanent control when final stabilization has been obtained on the project.

2. **Measurement** – SW3P Plan and Execution shall be measured by the lump sum.
3. **Payment** – Payment for this item shall be based on the contract lump sum price for SW3P Plan and Execution. Payment eligibility shall be determined as follows:
 - a. When the plan has been completed, accepted, and provided to the OWNER, 10% of the lump sum price shall be paid.
 - b. Upon initial installation of control devices required by the plan, up to 20% of the lump sum price shall be eligible for payment.
 - c. As approved for payment by the Inspector monthly and until removal, up to 50% of the lump sum price shall be eligible for

payment. Payments shall be monthly in approximate equal amounts based on the number of months remaining in the contract after completed and accepted initial installation indicated above.

- d. When control devices have been removed after the completion of all work and in accordance with specifications, and required documentation and records are filed up to 90% of the lump sum price shall be eligible for payment.
- e. When the required notice of termination has been filed with the TCEQ, 100% of the lump sum price shall be paid.

D. ITEM No. 2 – RESTRAINED WATER MAIN

- 1. **Description** - The CONTRACTOR shall provide all labor, supervision, tools, equipment, and materials necessary to restrain the joints of water main and make the restrained water main complete and operable. This shall include, but not be limited to acquisition of pipe with inherent restraint systems that comply with appropriate sections of these Specifications, transportation of the pipe to the site, unloading, excavation of the trench, dewatering, placement of bedding material, lowering and coupling of the pipe in the trench, backfilling, compaction, location tape, existing topsoil restoration, and hauling and disposal of surplus excavated material, hydrostatic testing and disinfection. This item shall include all associated and connected fittings and appurtenances not separately paid for under these Contract Documents.
- 2. **Measurement** – Except where paid for within other pay items, restrained water main shall be measured by the horizontal linear foot, as shown on the plan stationing for uncased pipe, installed in a trench, approved in size and type as follows:
 - a. From the centerline intersection of runs and branches of tees to the end of the valve of a dead end run.
 - b. Between the centerline intersection of runs and branches of tees. Where the branch is plugged for future connection, the measurement shall include the horizontal length, as shown on the plan stationing, of the branch or branches of the fitting.
 - c. The measurement of each line of pipe shall be continuous and shall include the horizontal lengths, as shown on the plan stationing, of all fittings and valves between the ends, except that the horizontal length of reducers shall be divided equally between the connected pipe sizes.

3. **Payment** – Payment for this item shall be based on the bid unit price, with the percentage eligible for payment based on the following:
 - a. 95% of the linear foot bid price after installation, backfill and compaction of the water main and submittal of associated mil certificates and shop testing information for the pipe installed.
 - b. 100% upon CONTRACTOR’S successful completion of hydrostatic testing and demonstration of compliance with requirements of these specifications.

E. ITEM No. 3 – RESTRAINED WATER MAIN, CARRIER PIPE, INSTALLED IN CASING PIPE

1. **Description** - This item consists of furnishing restrained water main of the size and type shown on the Drawings and as specified with casing spacers, grout, flowable fill, end seals, and providing all other materials, tools, equipment, labor, dewatering, and supervision necessary to install restrained water main in casing pipe complete and operable, including hydrostatic testing and disinfection.
2. **Measurement** - Restrained water main installed in casing pipe shall be measured by the horizontal linear foot, by approved size and type, and based on plan stationing measured along the centerline of the casing pipe from the beginning of the casing pipe to the end of the casing pipe.
3. **Payment** - Payment for this item shall be based on the bid unit price, with the percentage eligible for payment based on the following:
 - a. 95% of the linear foot bid price after installation of the water main, casing spacers, grout, flowable fill, end seals and submittal of associated mil certificates and shop testing information for the pipe installed.
 - b. 100% upon CONTRACTOR’S successful completion of hydrostatic testing and demonstration of compliance with requirements of these specifications.

F. ITEM No. 4 – TRENCH EXCAVATION SAFETY PROTECTION

2. **Description** - This item shall govern designing by professional engineer in the state of Texas, furnishing, and installation of all trench excavation safety protection systems to be utilized on the project. Such work shall include sloping, sheeting, trench boxes or trench shields, sheet piling, cribbing, bracing, shoring, and temporary pumping or diversion and recapture of storm water to provide adequate drainage. The work shall also

include all trenches, regardless of depth, any over excavation and additional backfill necessary to accommodate the trench protection system, as well as any jacking or removal of jacks and trench supports after completion.

3. **Measurement** - Trench excavation safety protection shall be measured by the horizontal linear foot along the centerline of the pipeline.
4. **Payment** - Payment for this item shall be based on the contract unit price. Payment eligibility shall be based on accepted pipeline secondary backfill of protected trenches.

G. ITEM No. 5 – STEEL CASING PIPE

1. **Description** - This item includes all work associated with furnishing and installing casing pipe by the methods of boring or open cut as specified and shown on the Drawings. The work includes providing all materials, labor, supervision, equipment, tools, excavation, grouting and removal of all soil and rock materials, dewatering, grouting, excavation and backfill of bore pits, shoring, bracing, installing temporary plugs, and all other incidentals necessary to complete the work in place and restore the site to its original condition. This item does not include installation of the carrier pipe into the casing.
2. **Measurement** – Steel Casing Pipe shall be measured by the horizontal linear foot, by approved size and type, and based on plan stationing measured along the centerline of the casing pipe from the beginning of the casing pipe to the end of the casing pipe.
3. **Payment** – Payment for this item shall be based on the bid unit price, with the percentage eligible for payment based on the following:
 - a. 95% after installation and grouting of the steel casing pipe.
 - b. 100% upon successful hydrostatic testing of the associated water main and demonstration of compliance with requirements of these specifications.

H. ITEM Nos. 6 & 7 – BUTTERFLY VALVES

1. **Description** - This item shall consist of furnishing butterfly valves and valve boxes of the size and type specified and providing all materials, tools, equipment, labor, and supervision necessary to provide a complete installation capable of supporting the operation of the water system. Such work shall include, but not be limited to excavation, installation of the valve with operator, concrete and masonry support pads, access manways

placement of selected embedment material, harness mechanical coupling or equivalent, cast iron boot, valve box extension, valve box, concrete collar, lockable valve box lid, bollards, markers and all associated work, complete in place. IF MANUFACTURER REQUIRES ADDITIONAL INSTALLATION WORK, ALL ASSOCIATED COSTS SHALL BE INCLUDED WITH THIS ITEM.

2. **Measurement** – After acceptance, butterfly valve and valve box installation shall be measured by the unit of each assembly, of approved size and type for the various size butterfly valves and valve boxes required and specified in these Contract Documents.
3. **Payment** - Payment for this item shall be made at the contract unit price bid for each assembly of the various size butterfly valves shown on the plans and specified as follows:
 - a. 95% of the Unit Price after approved installation.
 - b. 100% upon OWNER’S acceptance of all testing required for Butterfly Valves in these specifications.

I. ITEM No. 8 – SURGE PROTECTION AIR RELEASE VALVE ASSEMBLIES

1. **Description** - This item shall consist of the work required to furnish and install Vent-O-Mat anti-shock air release valve assemblies of the sizes shown in the Drawings. Such work shall include, but not be limited to excavation, dewatering, installation of the air valve assembly, attachment to the access manways, valves, vent piping, concrete vault, hatch assembly concrete support, placement of selected embedment material or anti-corrosion embedment material, backfill and compaction, hauling and disposal of surplus excavated materials, bollards. Markers, and completion of all related work, complete in place. As applicable, said item shall include dual body or combined air release valve and air vacuum valve, surge relief valve, isolating butterfly valve, sample port and associated appurtenances.
2. **Measurement** - Air valve assemblies shall be measured by the unit of each such assembly of the various sizes and types installed.
3. **Payment** - Payment for this item shall be made at the contract unit price bid for each assembly of the various size air valves and valve operators shown on the plans and specified as follows:
 - a. 95% of the Unit Price after approved installation.

- b. 100% upon completion of the Hydrostatic Test.

J. ITEM Nos. 9 & 10 – COMBINATION AIR VALVE ASSEMBLIES

1. **Description** - This item shall consist of the work required to furnish and install air valve assemblies of various types and sizes in accordance with the Drawings and Specifications. Such work shall include, but not be limited to excavation, dewatering, installation of the air valve assembly, attachment to the access manways, valves, vent piping, concrete vault, hatch assembly concrete support, placement of selected embedment material or anti-corrosion embedment material, backfill and compaction, hauling and disposal of surplus excavated materials, bollards. Markers, and completion of all related work, complete in place. As applicable, said item shall include dual body or combined air release valve and air vacuum valve, surge relief valve, isolating butterfly valve, sample port and associated appurtenances.
2. **Measurement** - Air valve assemblies shall be measured by the unit of each such assembly of the various sizes and types installed.
3. **Payment** - Payment for this item shall be made at the contract unit price bid for each assembly of the various size air valves and valve operators shown on the plans and specified as follows:
 - a. 95% of the Unit Price after approved installation.
 - b. 100% upon completion of the Hydrostatic Test.

K. ITEM No. 11 – PIPE DRAIN STRUCTURES

1. **Description** - This item shall govern the furnishing and installation of pipe drain structures and all associated appurtenances as depicted on Drawings. Such work shall include excavation, connecting to the drain pipe, concrete, reinforcing steel, energy dissipaters, erosion control materials, associated piping, backfill, compaction, hauling and disposal of surplus excavated materials, bollards, markers, and completion of all related work, complete in place.
2. **Measurement** - Pipe drain structures installation shall be measured by the unit of each assembly shown on the Drawings.
3. **Payment** – Payment for pipe drain structures shall be made at the unit price bid for each such assembly of the various sizes and types installed as follows:
 - a. 95% of the Unit Price after approved installation.

b. 100% upon completion of the Hydrostatic Test.

L. ITEM No. 12 – PIPE FLUSH STRUCTURES

1. **Description** - This item shall govern the furnishing and installation of pipe flushing structures and all associated appurtenances as depicted on Drawings. Such work shall include excavation, connecting to the drain pipe, concrete, reinforcing steel, energy dissipaters, erosion control materials, associated piping, backfill, compaction, hauling and disposal of surplus excavated materials, bollards, markers, and completion of all related work, complete in place.
2. **Measurement** - Pipe flushing structures installation shall be measured by the unit of each assembly shown on the Drawings.
3. **Payment** – Payment for pipe drain structures shall be made at the unit price bid for each such assembly of the various sizes and types installed as follows.
 - a. 95% of the Unit Price after approved installation.
 - b. 100% upon completion of the Hydrostatic Test.

M. ITEM No. 13 – WATER TIE-IN

1. **Description** – The CONTRACTOR shall provide all labor, supervision, tools, equipment, and materials necessary to fully coordinate and complete water tie ins where designated on the plans. A tie-in is required to connect to work installed by others or to connect to other SAWS infrastructure. Except as designated on the plans, a tie in will occur at a pipeline internal test bulkhead assembly. This item shall include removing temporary blow offs or other extraneous appurtenances, dewatering both sides of the tie in (as required), excavation, making the physical connection, removing the internal dish head, repairs to the mortar liner, backfilling, compaction, providing all required pipe, fittings, and other incidentals to complete the tie-in as specified.

Where tying into others or to existing infrastructure, work shall include advance coordination and adjustments to assure pipe is installed as intended, to drain.
2. **Measurement** - Tie-ins shall be measured by each size and type. This item is not eligible for measurement or payment if work is performed by others.

3. **Payment** - Payment for tie-ins shall be at the contract unit price for each tie-in completed by the Contractor as shown on the Drawings.

N. ITEM No. 14 – PIPELINE INTERNAL TEST BULKHEAD ASSEMBLY

1. **Description** - The CONTRACTOR shall provide all labor, supervision, tools, equipment, and materials necessary to furnish and install the pipeline internal bulkhead assembly where designated on the plans, excluding areas where said fitting was installed by others. All pipeline testing shall be made against internal bulkhead assemblies and not against 60 inch diameter butterfly valves. Included in this item shall be excavation, pipe and fittings, temporary blow off assembly, installation to the lines and grades shown on the plans, coordination with others regarding this installation, access manways, placement of select embedment material or anticorrosion embedment material, backfill and compaction, and all related work and incidentals, complete in place..

Pipeline internal bulkhead assemblies are required and therefore eligible for payment in accordance with the plans at the beginning and ending of the project and at changes in pipe pressure class.

Additional bulkheads required by these Contract Documents beyond the quantity shown in the bid proposal or added for any reason (such as for testing, for phasing, for Contractor's convenience, etc) will not be paid, so all associated and related such costs should be included with other pay items.

2. **Measurement** – Eligible Pipeline Internal Bulkhead Assemblies shall be measured by each size and type completed and accepted as shown on the plans and quantified in the Bid Proposal. Measurement for this item will not be made for assemblies installed by others, or for assemblies installed at locations other than those shown on the plans and included in the Bid Proposal and these specifications.
3. **Payment** - Payment for this item shall be based on the contract unit price for each assembly, with said payment being factored by the same percentage of payment applicable to the connected pipe indicated above.

O. ITEM No. 15 – SUBGRADE FILLER, GRAVEL

1. **Description** - This item shall consist of furnishing and placing materials for purposes of stabilizing subgrades in trenches or other excavations where quick-sands, muck or other unsuitable material is encountered and the OWNER's representative requires stabilization to occur. This item shall also include removal and disposal of unsuitable materials below the established subgrade level and placement of filter fabric as specified.

2. **Measurement** - Subgrade filler of the class specified shall be measured by the cubic yard of material actually placed.
3. **Payment** - Payment for this item shall be based on the contract unit price

P. ITEM Nos. 16 & 17 – FENCING & METAL GATES

1. **Description** – This item shall consist of all work required to remove and replace fences at permanent locations designated on the Drawings, install a metal gate per plans and details, and furnish and install any additional materials required. Temporary fences, gates, barricades, and management to control livestock shall not be separately paid, but included as required to facilitate the work and requirements of these specifications.
2. **Measurement** – Accepted work as performed and prescribed by this item shall be measured by the linear foot of fence removed and replaced. Temporary fences and temporary gates are not pay items unless required by the landowner and included as a pay item. Permanent gates shall be measured as a separate payment item when installed per the plans, and shall be measured by the each.
3. **Payment** – The work performed and the materials furnished as prescribed by this item shall be paid for at the contract unit price per linear foot for “Fencing”, and the contract unit price per each gate, which price shall be full compensation for removing and reinstalling the existing fence and gates, providing any needed bracing, maintaining same during construction, and for furnishing and installing all additional materials necessary to complete the work.

Q. ITEM No. 18 – BASE MATERIAL DRIVES AND ROADS

1. **Description** – This item shall consist of removing materials and replacing base material roads and driveways specifically indicated on the plans and where instructed by the OWNER. Note that the Contractor shall protect roads and drives and repair damage caused by his operations at no cost to the owner, so this item is not for the CONTRACTOR’s use to make general road and drive repairs. Instead, the OWNER desires to have additional materials available for unforeseen situations that may not be the entire fault of the CONTRACTOR and repairs have to be made.

Depths of soil removal and thickness of compacted base material shall be as indicated in the Bid Proposal. As determined by the OWNER, pay items may be used to prepare, maintain, or restore roads and drives associated with sections of the pipeline that have completed installation and hydrostatic testing. The item includes but is not limited to providing all materials, supplies, equipment, tools, labor, supervision, training, and

testing for all necessary subgrade preparation & base material installation and compaction.

2. **Measurement** – This item shall be measured by the unit of Square Yard of finished road or drive complete and accepted. Areas damaged that are not indicated on the plans for replacement will not be measured as a part of this bid item. Restoration of those driveways will be at no cost to the Owner.
3. **Payment** – This item shall be paid for at the contract unit price per square yard bid of each type of Base Material Drive and Road upon completion and acceptance.

R. ITEM No. 19 – LAND RESTORATION & REVEGETATION

1. **Description** - This item shall consist of all work required after infrastructure installation to prepare ground, provide for sowing of seeds, mulching with cellulose fiber and other management practices along and across such areas as are designated on the Drawings and as specified. All areas shall be covered with live grass before acceptance, unless otherwise shown in the construction documents. (crop land).
2. **Measurement** - Measurement for acceptable land restoration and revegetation, complete in place, shall be made according to the linear foot of pipe that has passed hydrostatic testing and has the associated easement or construction zone area restored and revegetated.
3. **Payment** - Payment for this item shall be made at the contract unit price bid per linear foot.

S. ITEM NO. 20 – HYDROSTATIC TESTING

1. **Description** - This item shall govern the hydrostatic testing of all project water mains as specified.
2. **Measurement** - Hydrostatic testing shall be measured by the lump sum.
3. **Payment** - Payment for hydrostatic testing shall be made at the contract lump sum price for "Hydrostatic Testing" and shall not be made until entire project water main has been successfully tested and accepted.

T. ITEM No. 21 – RECTIFIER INSTALLATION WITH ELECTRICAL ENCLOSURE SECTION

1. **Description** – This item shall consist of rectifier installation with electrical enclosure section at the location indicated on the plans. The

work includes but is not limited to providing all labor, materials and equipment required to provide a complete and functioning system as required by the Contract Drawings and Project Specifications, including but not limited to an impressed current system including a deep anode ground bed, rectifier station, pipeline connections, electrical enclosure section and electrical service work including coordination with utilities to provide electrical service.

2. **Measurement** – Rectifier Installation with Electrical Enclosure shall be measured by each installation completed and accepted.
3. **Payment** - Payment for this item shall be made at the contract unit price for each installation with up to 85% of said bid price payable for each installation per the specifications, complete in place, with the remainder payable only after successful and documented testing of the system.

U. ITEM Nos. 22, 28, 29 & 30 – MONITORING TEST STATIONS

1. **Description** – This item shall consist of the installation of corrosion monitoring test stations per each of the type specified in the location shown and shall be full compensation for all labor, materials and equipment to provide a complete and functioning test station of any type in accordance with the Contract Drawings and Project Specifications. Installation of the test station includes but is not limited to installation of lead wires, concrete collar, flush mounted test station in accordance with the details, making required connections, and for Foreign Pipelines coordination as required to connect lead wires to the foreign pipeline.
2. **Measurement** – Test station shall be measured by each test station installed.
3. **Payment** – Payment for this item shall be made at the contract unit price for each installation with up to 85% of said bid price payable for each installation per the specifications, complete in place, with the remainder payable only after successful and documented testing of the cathodic protection system.

V. ITEM No. 23, 24, 25, 26 & 27 – DIELECTRIC INSULATING FLANGE KIT

1. **Description** – This item shall consist of the installation of Dielectric Insulating Flange Kits and shall be full compensation for all labor, materials and equipment to provide a complete dielectric insulation flange kit with flanges that are pressure rated at a minimum of the adjacent pipe and also include connection pieces in accordance with the Contract Drawings and Project Specifications. Installation of the dielectric

insulating flange kit includes but is not limited to any and all related appurtenances required for installation of insulating flange kit.

2. **Measurement** – Flange kits shall be measured by each flange kit installed.
3. **Payment** – Payment for this item shall be made at the contract unit price for each installation with up to 85% of said bid price payable for each installation per the specifications, complete in place, with the remainder payable only after successful and documented testing of the cathodic protection system.

W. ITEM No. 31 – HEAT SHRINK SLEEVE INSPECTION

1. **Description** - This item shall consist of all work required to facilitate OWNER's inspection of heat shrink sleeves where and when requested by the OWNER. Contractor shall coordinate with the OWNER and provide all work, labor, materials and incidentals needed. Work includes locating joints in the vicinity of the OWNER's request and then providing excavation, facilitating personnel entry, witness of testing by others (Contractor option), providing temporary fencing around the excavation for livestock control and safety, and after OWNER approval, preparation for and installation and replacement with a new heat shrink sleeve, replacing and compacting all pipe zone and other backfill, pipeline marker tape, surface restoration, and other work necessary to complete the item.
2. **Measurement** - Measurement for this item will be per each requested by the OWNER, completed, and approved.
3. **Payment** - Payment for this item shall be made at the contract unit price bid per each.

X. ITEM No. 32 & 33 – OPEN - CUT ROCK EXCAVATION

1. **Description** – Notwithstanding limitations included elsewhere in these contract documents related to classification of excavation, this item is intended to provide additional compensation for additional labor, material, equipment, supplies and other costs and work necessary to excavate rock in limited circumstances. Rock is defined as solid material that cannot, in the OWNER's judgment based on observing Contractors performance, be reasonably loosened, broken, or ripped by either a single-tooth, hydraulically operated ripper mounted on a crawler tractor in good condition rated at a minimum 300 flywheel horsepower, or excavated with a minimum 325 flywheel horsepower hydraulic excavator in good condition equipped with manufacturer's standard boom, two rippers and rock points, or similar approved equipment. Solid material in thin enough layers and in a configuration that allows it to be removed with the above

equipment or similar with some additional effort will not meet the threshold for payment. Removal of rock material on this pay item shall utilize additional means necessary including hoe ram, rock trencher, jack/power hammer, hydraulic rock breakers, expansive compounds, or similar, but excluding by any form of blasting. Boulders encountered during excavation will be eligible for payment if ½ cubic yard or larger and breakup is required to facilitate removal. All other work associated with excavation will apply and costs shall be included as part of other work. All excavation on the project not meeting the definition above will remain unclassified and not eligible for additional payment.

2. **Measurement** – Rock eligible for measurement shall be as indicated above within pay limits AND with OWNER advance documented approval. Pay limits shall generally extend in width up to the vertical plan of the maximum trench width or width being used by the Contractor, whichever is less. Depth pay limits shall extend as needed to facilitate bedding requirements. If extending beyond these limits, boulders will be fully payable as indicated above. Pay limits other than trenches shall be in width and depth needed to facilitate construction. Measurement will be by the cubic yard for materials removed meeting the definition above. Contractor shall facilitate OWNER advance measurement by exposing rock surface for examination and safe entry, assistance with measurement, and provide documentation required for payment. Where hand measurement is not applicable, Contractor shall provide survey and volumetric calculations to confirm measurements. Rock outside the definition herein or removed prior to OWNER approval will not be eligible for measurement or payment.
3. **Payment** - Payment for this item shall be made at the contract unit price bid per cubic yard for Rock Excavation for approved quantities.

Y. ITEM No. 34 – DISINFECTION

1. **Description** – This item shall govern all effort and costs to complete disinfection as specified for all project water mains and appurtenances.
2. **Measurement** – Disinfection shall be measured by the lump sum.
3. **Payment** – Payment for disinfection shall be made at the CONTRACT lump sum price for “Disinfection” and shall not be made until the project water main has been successfully disinfected and accepted.

Z. ITEM No. 35 – JACK AND BORE ROCK EXCAVATION

1. **Description** –Notwithstanding other provisions of these contract documents indicating all excavation is unclassified, there is a possibility

due to certain rock conditions that casing pipe installation cannot be completed using a traditional jack and bore and auger type pipe casing installation method. In this limited circumstance, and upon prior approval by the OWNER, this item will provide additional and full compensation for the incremental and additional costs to complete the installation, inclusive of additional labor, materials, equipment, designs, submittals, and incidentals whenever rock conditions are encountered on any of the jack and bore installations included on this project.

For the purpose of this pay item, rock shall be defined as material in a shape and with a hardness preventing excavation and casing pipe installation using boring equipment with a minimum 200,000 foot-pounds of available torque (in 1st gear) and a thrust capacity of at least 1,000,000 pounds.

2. **Measurement** – This item will be measured by the linear foot of casing or liner installed as specifically authorized in advance by SAWS. This pay item will not be measured when a tunnel boring machine is used or required by these specifications. With SAWS advance approval, this item will be eligible for measurement only when a substantial change in the casing installation method is required and only for the limits of rock actually encountered.
3. **Payment** - Payment for this item shall be made at the contract unit price bid per linear foot of authorized jack and bore rock excavation, and is in addition to the contract unit price bid per linear foot for the installation of steel casing pipe by jack and bore, payable as follows:
 - a. 95% after approved installation and grouting of the steel casing/liner
 - b. 100% upon accepted installation and hydrostatic testing of the associated carrier water pipeline

PART 2 PRODUCTS [NOT USED]

PART 3 EXECUTION [NOT USED]

END OF SECTION

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). 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.

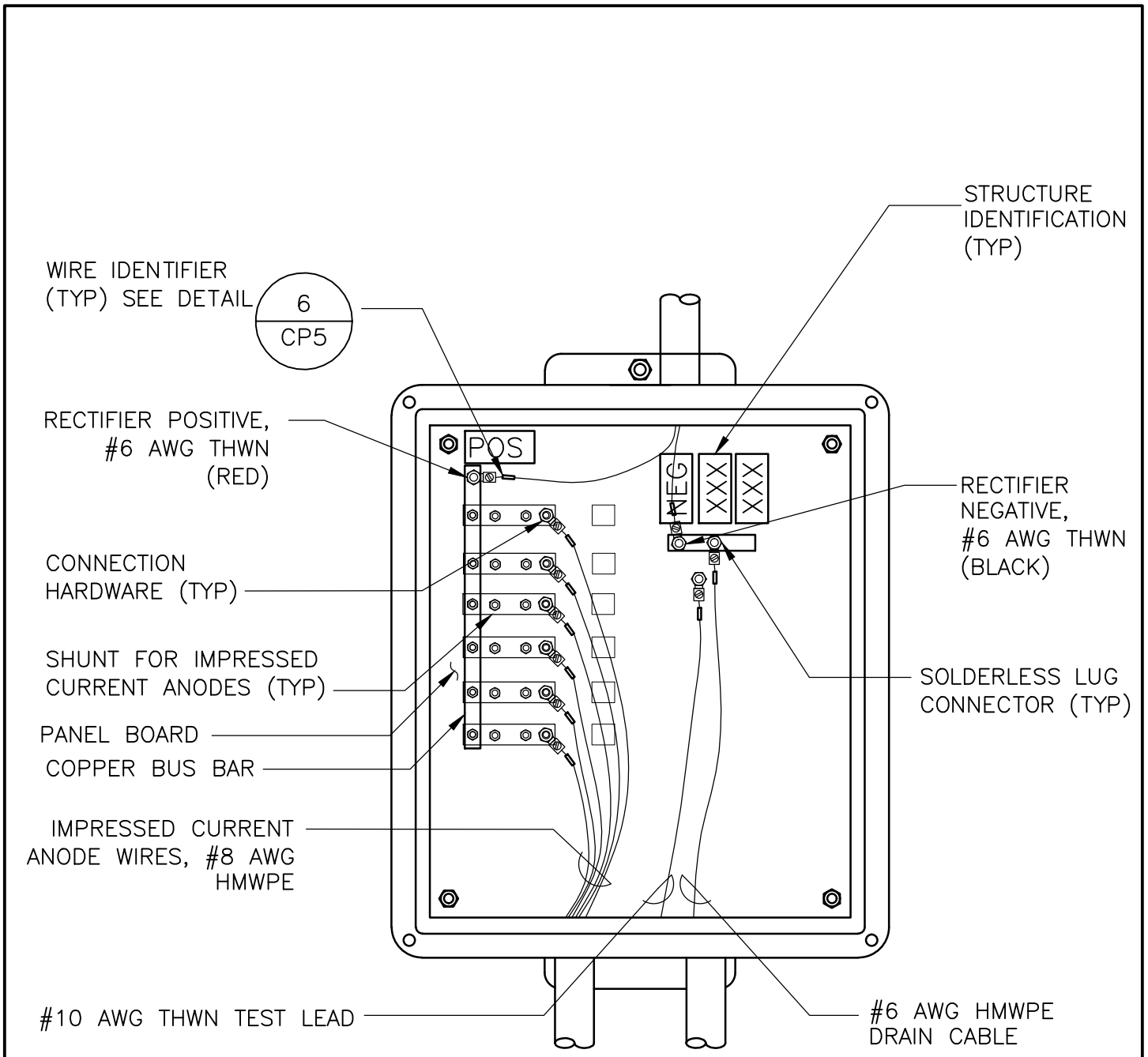
D. Chlorine Concentration Sampling and Analysis: (PROGRAM DISINFECTION CONTRACTOR)

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-



WIRE IDENTIFIER
(TYP) SEE DETAIL



RECTIFIER POSITIVE,
#6 AWG THWN
(RED)

CONNECTION
HARDWARE (TYP)

SHUNT FOR IMPRESSED
CURRENT ANODES (TYP)

PANEL BOARD
COPPER BUS BAR

IMPRESSED CURRENT
ANODE WIRES, #8 AWG
HMWPE

#10 AWG THWN TEST LEAD

STRUCTURE
IDENTIFICATION
(TYP)

RECTIFIER
NEGATIVE,
#6 AWG THWN
(BLACK)

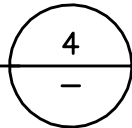
SOLDERLESS LUG
CONNECTOR (TYP)

#6 AWG HMWPE
DRAIN CABLE

NOTE:

COVER, LATCH, HINGES, AND NEOPRENE GASKET
NOT SHOWN FOR CLARITY

IMPRESSED CURRENT ANODE
JUNCTION BOX DETAIL
NTS



8220 Jones Road, Suite 500
Houston, TX 77056
Tel. (713) 568-9067, Fax (713) 568-9068
Firm No. F-9154

IMPRESSED CURRENT ANODE
JUNCTION BOX DETAIL

Page 1 of 1

Plotted on: 9/4/2014

Design File name: p:\60\42\20\h-dgn\design\civil\water\segment b\WR03DC0236.dgn

CONTRACTOR SHALL COORDINATE WITH EACH PROPERTY OWNER TO DETERMINE IF ANY SERVICE LATERALS CROSS THE WRIP PIPELINE PRIOR TO EXCAVATION.

CONTRACTOR SHALL PROVIDE CONTINUOUS ACCESS DURING CONSTRUCTION AND SHALL RESTORE ACCESS ROAD/DRIVEWAY TO EXISTING OR BETTER CONDITIONS

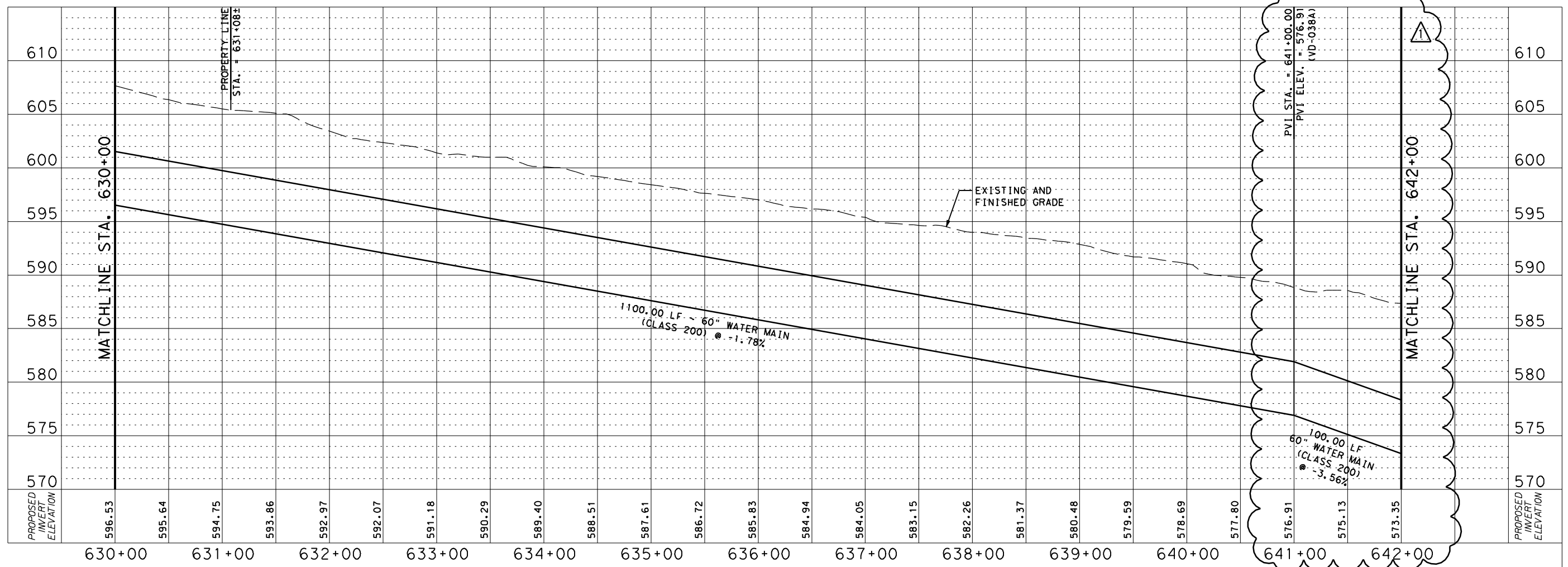
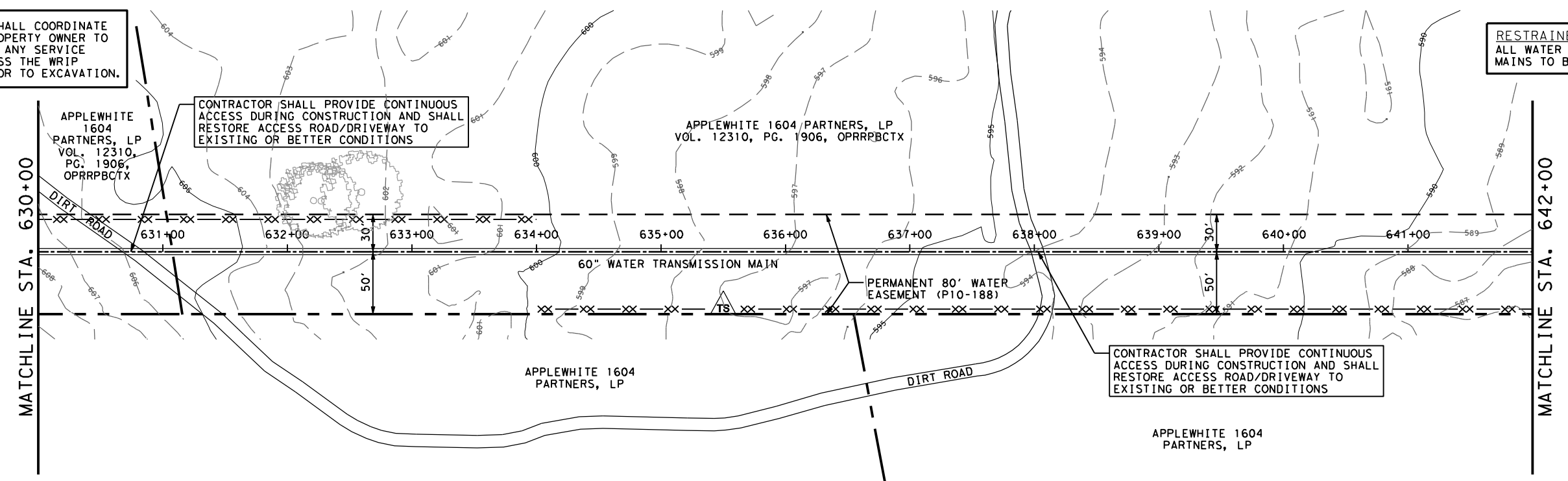
RESTRAINED NOTE:
ALL WATER TRANSMISSION MAINS TO BE RESTRAINED

CONTRACTOR SHALL REFER TO TREE PRESERVATION PLAN FOR REMOVAL OF HERITAGE TREES.

TRENCH EXCAVATION SAFETY PROTECTION:

CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLIES WITH, AT A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

CAUTION!!!
CONTRACTOR TO EXERCISE EXTREME CAUTION WHEN WORKING UNDER AND / OR AROUND OVERHEAD ELECTRIC LINES. CONTRACTOR SHALL COORDINATE WITH CPS ENERGY TO ESTABLISH THE MAXIMUM WORKING HEIGHT FROM GROUND ELEVATION. COORDINATE ALL WORK WITH CPS ENERGY.



BM APP. PAPE-DAWSON Job No. 6042-20

REVISIONS

1 9/4/14 ADDENDUM #1 REVISIONS

Date: AUG. 2014
Designed by: JO
Drawn by: BS
Checked by: BM
Scale: 1"=100' HORIZ
1"=10' VERT

PAPE-DAWSON ENGINEERS
SAN ANTONIO, TEXAS 78216
PHONE: 210.375.8000
FAX: 210.375.9010
TEXAS BOARD OF PROFESSIONAL ENGINEERS, FIRM REGISTRATION # 470

SAN ANTONIO WATER SYSTEM

SAWS JOB NO. 14-8604
WATER RESOURCES INTEGRATION PROGRAM
PIPELINE SEGMENT 1B
PLAN AND PROFILE
STA. 630+00 TO STA. 642+00

Sheet PP17

Plotted on: 9/4/2014

Design File name: p:\60\42\20\h-dgn\design\civil\water\segment b\WR03DC0237.dgn

CONTRACTOR SHALL COORDINATE WITH EACH PROPERTY OWNER TO DETERMINE IF ANY SERVICE LATERALS CROSS THE WRIP PIPELINE PRIOR TO EXCAVATION.

100-YEAR EXISTING CONDITIONS FLOODPLAIN FROM DFIRM REFER TO BEXAR COUNTY FLOODPLAIN CONSTRUCTION NOTES ON SHEET GN05

RESTRAINED NOTE: ALL WATER TRANSMISSION MAINS TO BE RESTRAINED

MATCHLINE STA. 642+00

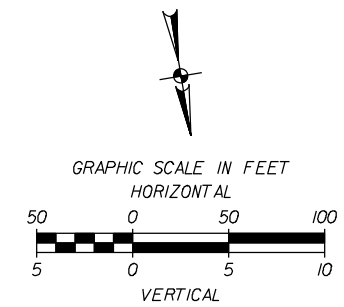
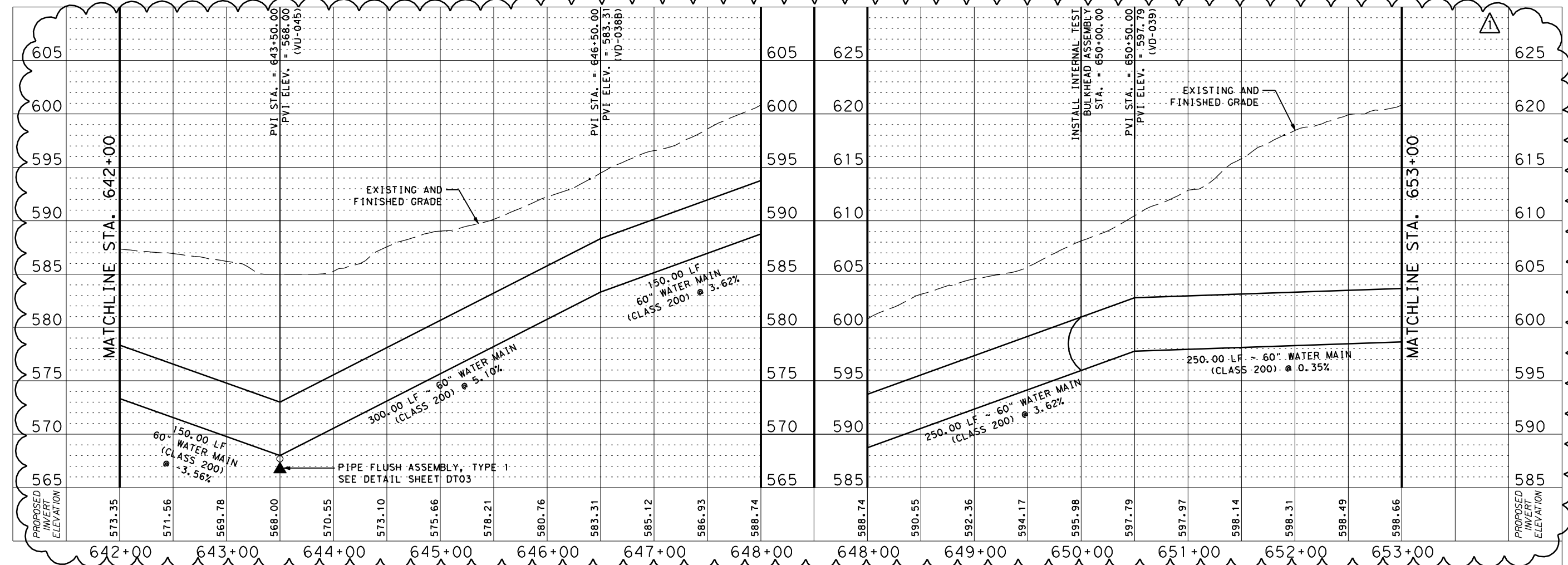
MATCHLINE STA. 653+00

CONTRACTOR SHALL REFER TO TREE PRESERVATION PLAN FOR REMOVAL OF HERITAGE TREES.

TRENCH EXCAVATION SAFETY PROTECTION:

CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLIES WITH, AT A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

CAUTION!!! CONTRACTOR TO EXERCISE EXTREME CAUTION WHEN WORKING UNDER AND / OR AROUND OVERHEAD ELECTRIC LINES. CONTRACTOR SHALL COORDINATE WITH CPS ENERGY TO ESTABLISH THE MAXIMUM WORKING HEIGHT FROM GROUND ELEVATION. COORDINATE ALL WORK WITH CPS ENERGY.



PAPE-DAWSON
 Job No. 6042-20

BRICE B. MOCZYGEMBA
 LICENSE NO. 65747
 PROFESSIONAL ENGINEER

Date: AUG. 2014
 Designed by: JO
 Drawn by: BS
 Checked by: BM
 Scale: 1"=100' HORIZ
 1"=10' VERT

PAPE-DAWSON ENGINEERS

555 EAST RAMSEY | SAN ANTONIO, TEXAS 78216 | PHONE: 210.375.8800
 TEXAS BOARD OF PROFESSIONAL ENGINEERS, FIRM REGISTRATION # 470

SAN ANTONIO WATER SYSTEM

SAWS JOB NO. 14-8604
 WATER RESOURCES INTEGRATION PROGRAM
 PIPELINE SEGMENT 1B
 PLAN AND PROFILE
 STA. 642+00 TO STA. 653+00

Sheet PP18

Plotted on: 9/4/2014

Design File name: p:\60\42\20\h-dgn\design\civil\water\segment b\WR03DC0238.dgn

CONTRACTOR SHALL COORDINATE WITH EACH PROPERTY OWNER TO DETERMINE IF ANY SERVICE LATERALS CROSS THE WRIP PIPELINE PRIOR TO EXCAVATION.

RESTRAINED NOTE: ALL WATER TRANSMISSION MAINS TO BE RESTRAINED

CONTRACTOR SHALL REFER TO TREE PRESERVATION PLAN FOR REMOVAL OF HERITAGE TREES.

MATCHLINE STA. 653+00

MATCHLINE STA. 665+00

APPLEWHITE 1604 PARTNERS, LP VOL. 12310, PG. 1906, OPRRPBCTX

CONTRACTOR SHALL PROVIDE/CONTINUOUS ACCESS DURING CONSTRUCTION AND SHALL RESTORE ACCESS ROAD/DRIVEWAY TO EXISTING OR BETTER CONDITIONS

PERMANENT 80' WATER EASEMENT (P10-188)

60" WATER TRANSMISSION MAIN

STA. 658+00.00 6" COMBINATION AIR VALVE, TYPE 1 SEE DETAIL SHEET DT04

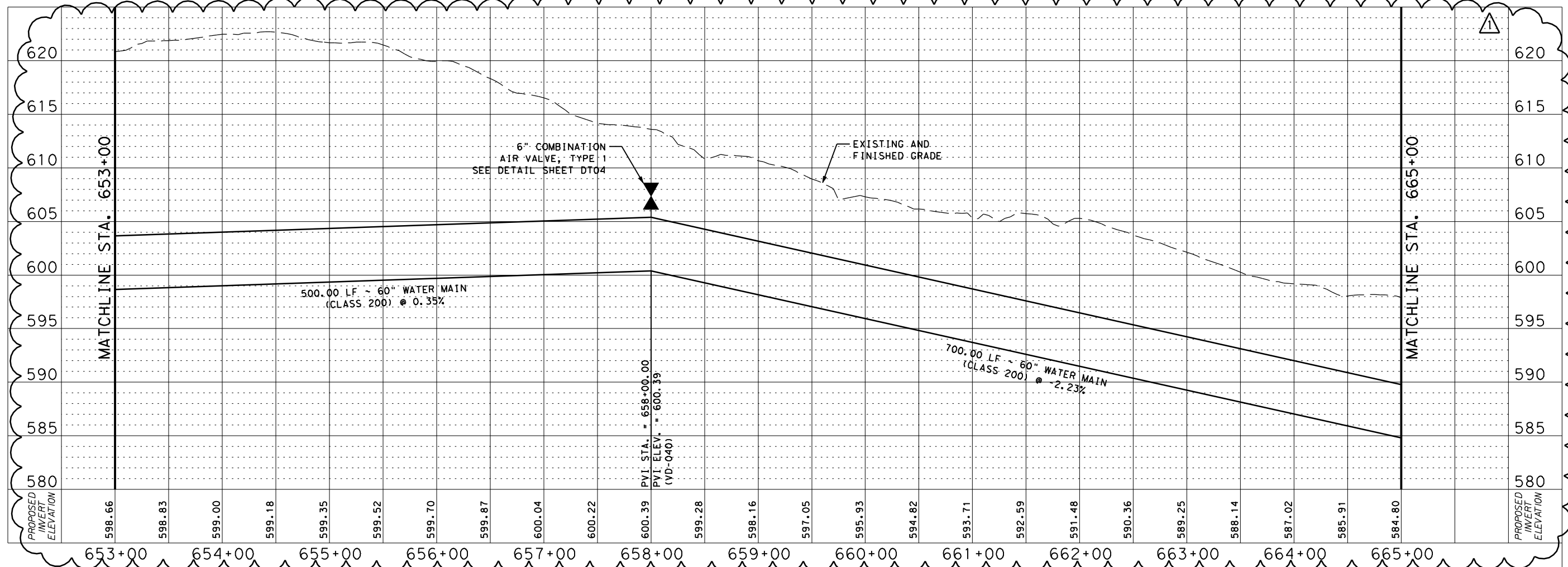
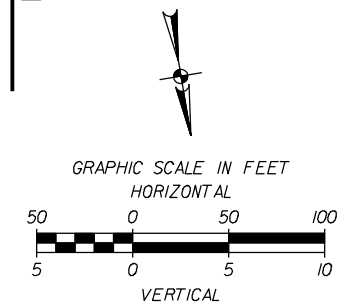
APPLEWHITE 1604 PARTNERS, LP

APPLEWHITE 1604 PARTNERS, LP

TRENCH EXCAVATION SAFETY PROTECTION:

CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLIES WITH, AT A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

CAUTION!!! CONTRACTOR TO EXERCISE EXTREME CAUTION WHEN WORKING UNDER AND / OR AROUND OVERHEAD ELECTRIC LINES. CONTRACTOR SHALL COORDINATE WITH CPS ENERGY TO ESTABLISH THE MAXIMUM WORKING HEIGHT FROM GROUND ELEVATION. COORDINATE ALL WORK WITH CPS ENERGY.



BM APP.

PAPE-DAWSON Job No. 6042-20

STATE OF TEXAS
BRUCE B. MOCZYGMBA
65747
LICENSED PROFESSIONAL ENGINEER

Date: AUG. 2014
Designed by: JO
Drawn by: BS
Checked by: BM
Scale: 1"=100' HORIZ
1"=10' VERT

PAPE-DAWSON ENGINEERS

555 EAST RAMSEY | SAN ANTONIO, TEXAS 78216 | PHONE: 210.375.8800
FAX: 210.375.9010
TEXAS BOARD OF PROFESSIONAL ENGINEERS, FIRM REGISTRATION # 470

SAN ANTONIO WATER SYSTEM

SAWS JOB NO. 14-8604
WATER RESOURCES INTEGRATION PROGRAM
PIPELINE SEGMENT 1B
PLAN AND PROFILE
STA. 653+00 TO STA. 665+00

Sheet PP19

Plotted on: 9/4/2014

Design File name: p:\60\42\20\h-dgn\design\civil\water\segment b\WR03DC0239.dgn

CONTRACTOR SHALL COORDINATE WITH EACH PROPERTY OWNER TO DETERMINE IF ANY SERVICE LATERALS CROSS THE WRIP PIPELINE PRIOR TO EXCAVATION.

100-YEAR EXISTING CONDITIONS FLOODPLAIN FROM DFIRM REFER TO BEXAR COUNTY FLOODPLAIN CONSTRUCTION NOTES ON SHEET GN05

RESTRAINED NOTE: ALL WATER TRANSMISSION MAINS TO BE RESTRAINED

APPLEWHITE 1604 PARTNERS, LP VOL. 12310, PG. 1906, OPRRPBCTX

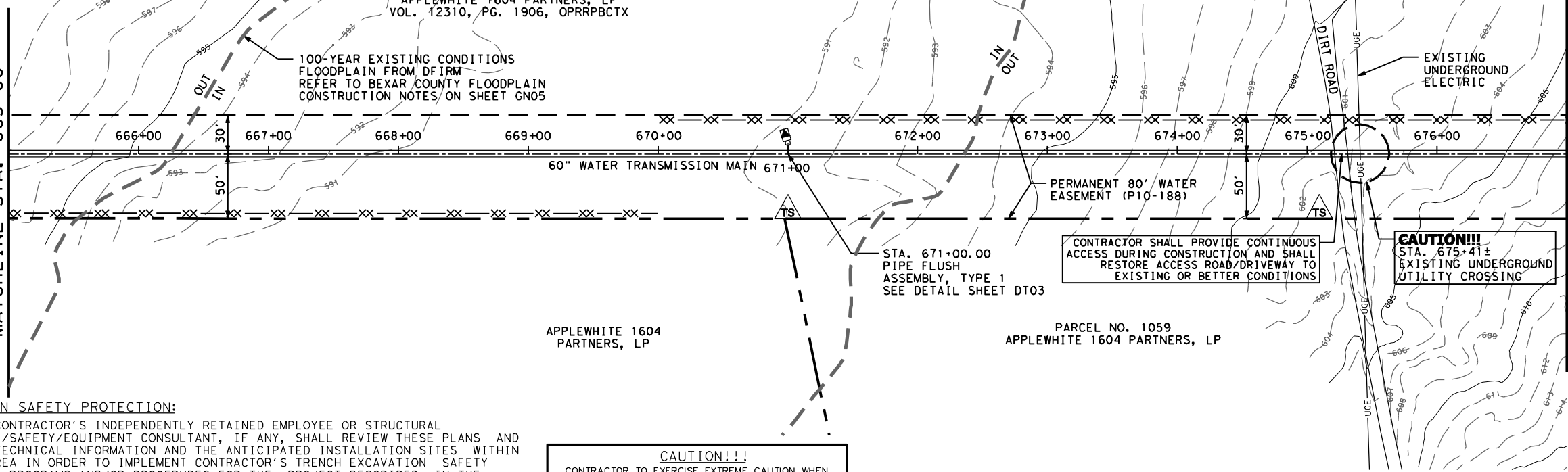
100-YEAR EXISTING CONDITIONS FLOODPLAIN FROM DFIRM REFER TO BEXAR COUNTY FLOODPLAIN CONSTRUCTION NOTES ON SHEET GN05

APPLEWHITE 1604 PARTNERS, LP

PARCEL NO. 1059 APPLEWHITE 1604 PARTNERS, LP

MATCHLINE STA. 665+00

MATCHLINE STA. 677+00



CONTRACTOR SHALL REFER TO TREE PRESERVATION PLAN FOR REMOVAL OF HERITAGE TREES.

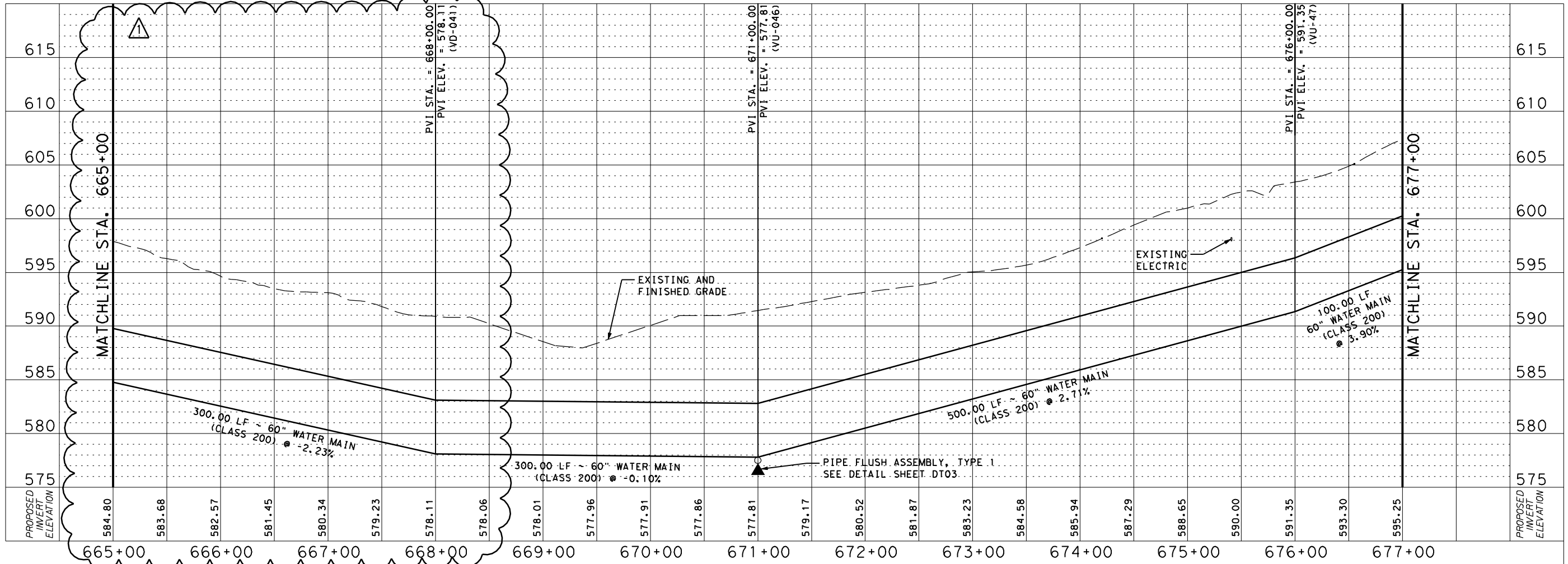
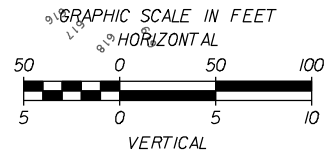
TRENCH EXCAVATION SAFETY PROTECTION:

CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLIES WITH, AT A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

CAUTION!!! CONTRACTOR TO EXERCISE EXTREME CAUTION WHEN WORKING UNDER AND / OR AROUND OVERHEAD ELECTRIC LINES. CONTRACTOR SHALL COORDINATE WITH CPS ENERGY TO ESTABLISH THE MAXIMUM WORKING HEIGHT FROM GROUND ELEVATION. COORDINATE ALL WORK WITH CPS ENERGY.

CONTRACTOR SHALL PROVIDE CONTINUOUS ACCESS DURING CONSTRUCTION AND SHALL RESTORE ACCESS ROAD/DRIVEWAY TO EXISTING OR BETTER CONDITIONS

CAUTION!!! STA. 675+41± EXISTING UNDERGROUND UTILITY CROSSING



PAPE-DAWSON Job No. 6042-20. Includes professional engineer seal for BRICE B. MOCZYGEMBA, LICENSE NO. 65747, and project details: Date: AUG. 2014, Designed by: JO, Drawn by: BS, Checked by: BM, Scale: 1"=100' HORIZ, 1"=10' VERT.

PAPE-DAWSON ENGINEERS logo and contact information: 555 EAST RAMSEY | SAN ANTONIO, TEXAS 78216 | PHONE: 210.375.9800 | FAX: 210.375.9010 | TEXAS BOARD OF PROFESSIONAL ENGINEERS, FIRM REGISTRATION # 470

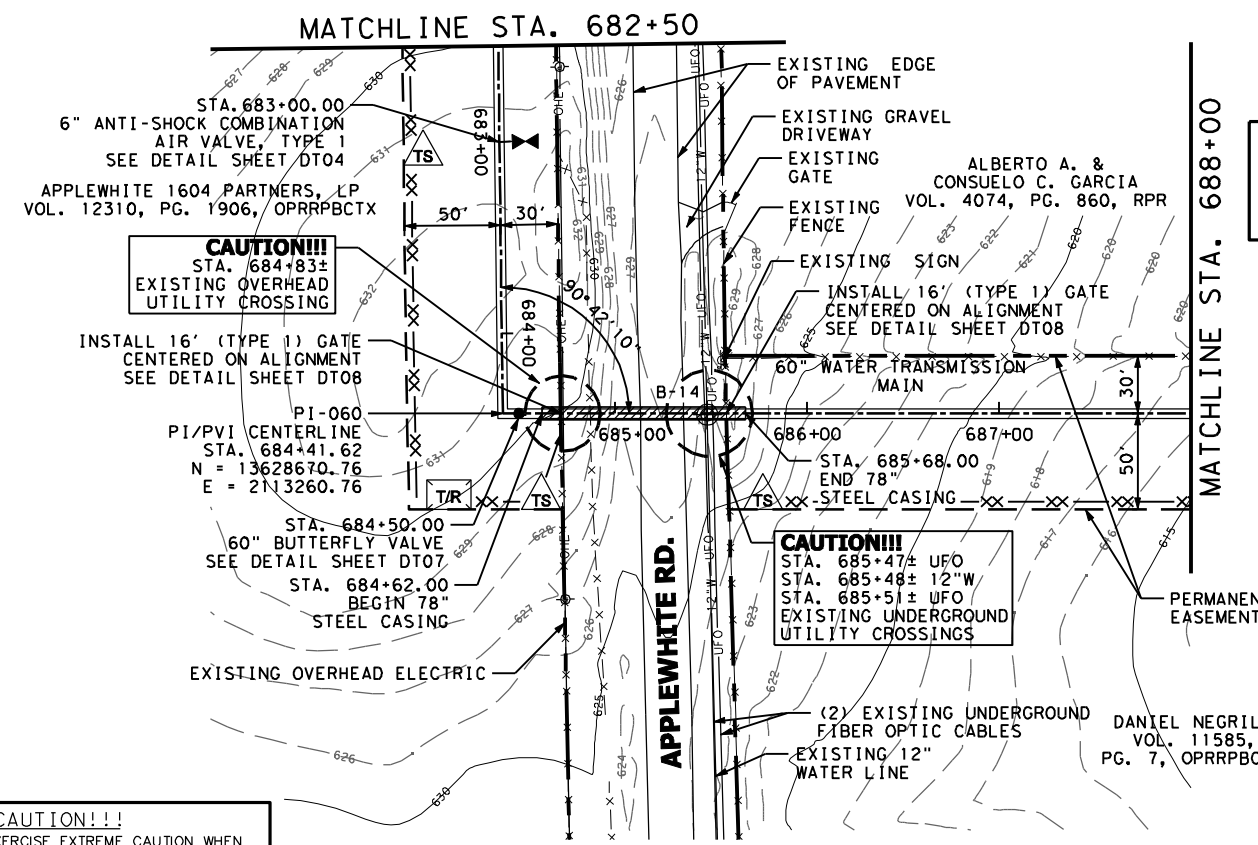
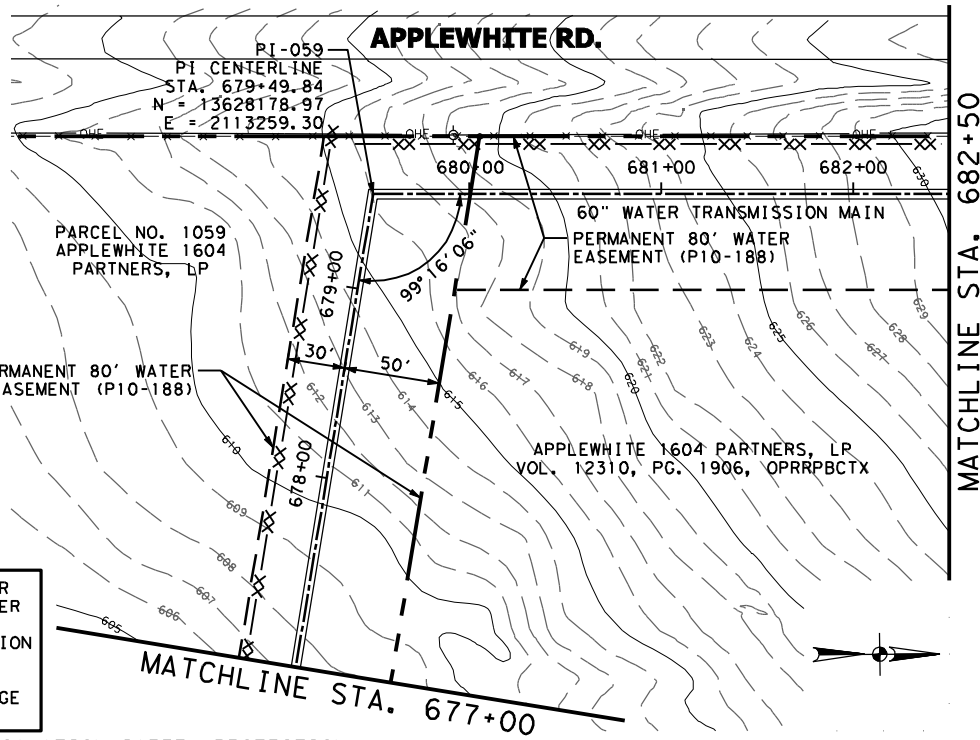
SAN ANTONIO WATER SYSTEM logo

SAWS JOB NO. 14-8604 WATER RESOURCES INTEGRATION PROGRAM PIPELINE SEGMENT 1B PLAN AND PROFILE STA. 665+00 TO STA. 677+00

Sheet PP20

Plotted on: 9/4/2014

Design File name: p:\60\42\20\h-dgn\design\civil\water\segment b\WR03DC0240.dgn



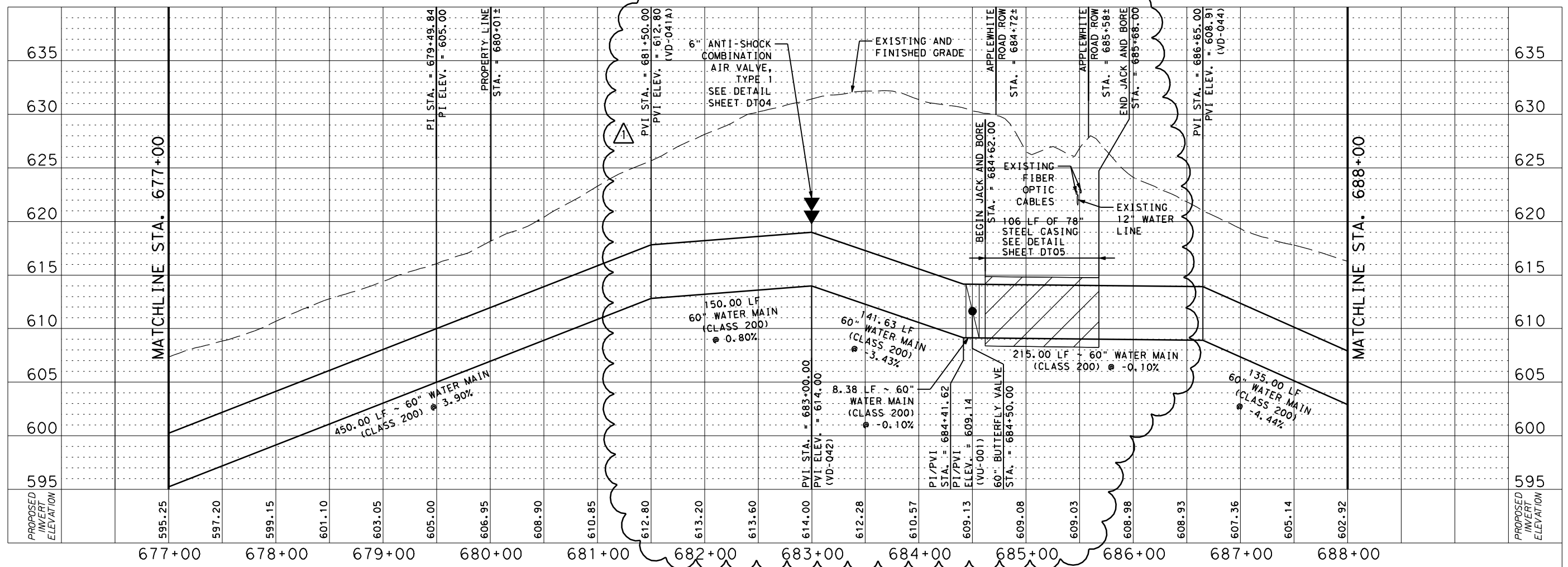
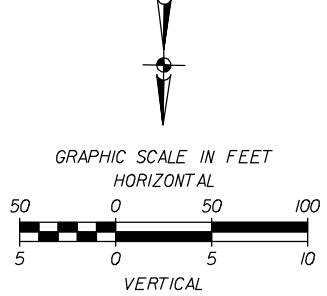
RESTRAINED NOTE:
ALL WATER TRANSMISSION MAINS TO BE RESTRAINED

CONTRACTOR SHALL COORDINATE WITH EACH PROPERTY OWNER TO DETERMINE IF ANY SERVICE LATERALS CROSS THE WRIP PIPELINE PRIOR TO EXCAVATION.

CONTRACTOR SHALL REFER TO TREE PRESERVATION PLAN FOR REMOVAL OF HERITAGE TREES.

TRENCH EXCAVATION SAFETY PROTECTION:
CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLIES WITH, AT A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

CAUTION!!!
CONTRACTOR TO EXERCISE EXTREME CAUTION WHEN WORKING UNDER AND / OR AROUND OVERHEAD ELECTRIC LINES. CONTRACTOR SHALL COORDINATE WITH CPS ENERGY TO ESTABLISH THE MAXIMUM WORKING HEIGHT FROM GROUND ELEVATION. COORDINATE ALL WORK WITH CPS ENERGY.



PAPE-DAWSON
Job No.
6042-20

STATE OF TEXAS
BRUCE B. MOCZYNGEMBA
65747
LICENSED PROFESSIONAL ENGINEER

9/4/14 APPENDUM #1 REVISIONS

Date: AUG. 2014
Designed by: JO
Drawn by: BS
Checked by: BM
Scale: 1"=100' HORIZ
1"=10' VERT

PAPE-DAWSON ENGINEERS
SAN ANTONIO, TEXAS 78216 | PHONE: 210.375.8000
555 EAST RAMSEY | SAN ANTONIO, TEXAS 78216 | FAX: 210.375.9010
TEXAS BOARD OF PROFESSIONAL ENGINEERS, FIRM REGISTRATION # 470

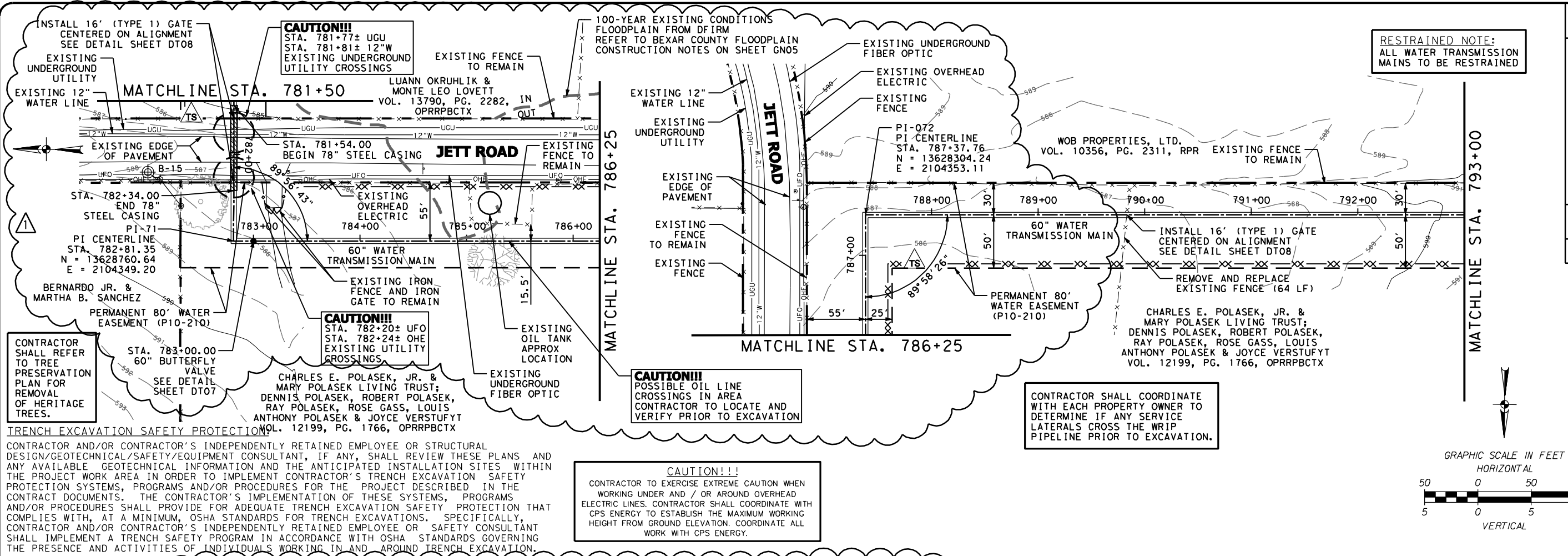
SAN ANTONIO WATER SYSTEM

SAWS JOB NO. 14-8604
WATER RESOURCES
INTEGRATION PROGRAM
PIPELINE SEGMENT 1B
PLAN AND PROFILE
STA. 677+00 TO STA. 688+00

Sheet PP21

Plotted on: 9/16/2014

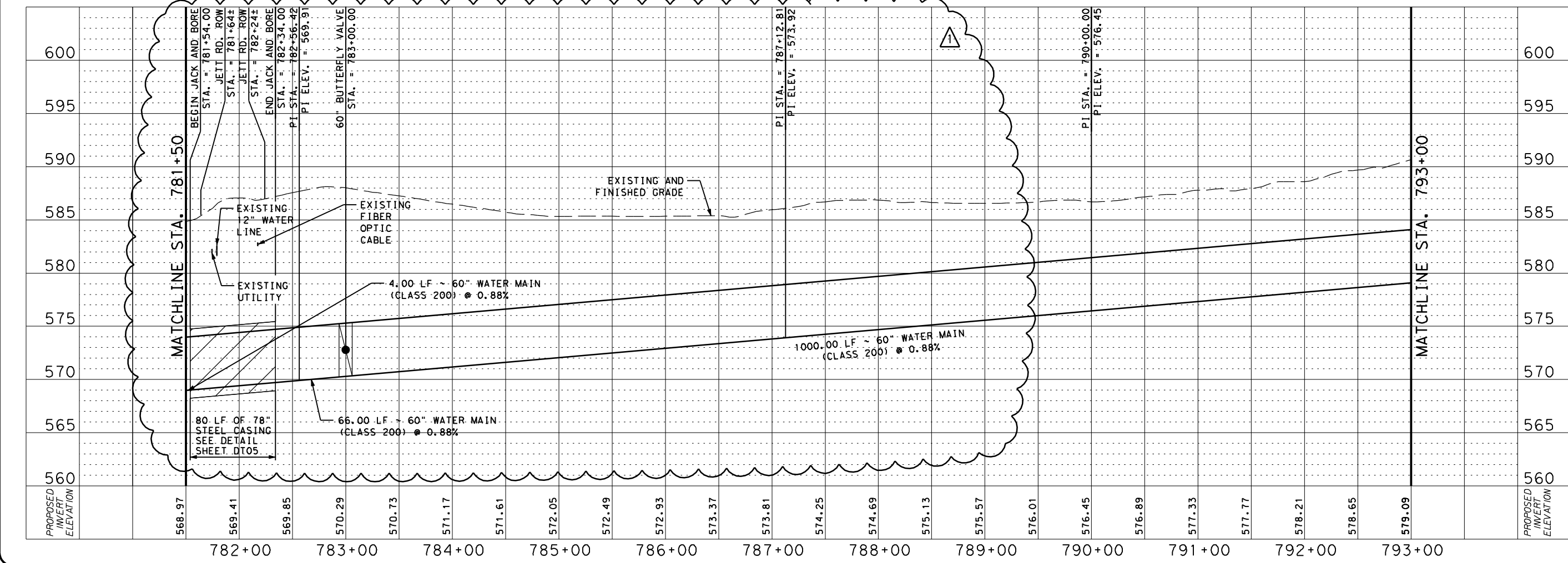
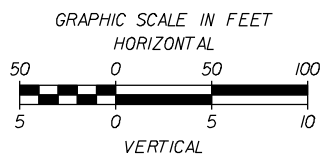
Design File name: P:\60\42\20\H-dgn\Design\Civil\Water\Segment B\WR03DC0249.dgn



RESTRAINED NOTE:
ALL WATER TRANSMISSION
MAINS TO BE RESTRAINED

CAUTION!!!
POSSIBLE OIL LINE
CROSSINGS IN AREA
CONTRACTOR TO LOCATE AND
VERIFY PRIOR TO EXCAVATION

CAUTION!!!
CONTRACTOR TO EXERCISE EXTREME CAUTION WHEN
WORKING UNDER AND / OR AROUND OVERHEAD
ELECTRIC LINES. CONTRACTOR SHALL COORDINATE WITH
CPS ENERGY TO ESTABLISH THE MAXIMUM WORKING
HEIGHT FROM GROUND ELEVATION. COORDINATE ALL
WORK WITH CPS ENERGY.



BM	PAPE-DAWSON
APP.	Job No.
	6042-20
1	9/4/14
ADDENDUM #1	REVISIONS
No.	Date
1	9/4/14
DESIGNED BY:	JO
DRAWN BY:	BS
CHECKED BY:	BM
SCALE:	1" = 100' HORIZ 1" = 10' VERT
SAN ANTONIO WATER SYSTEM	
SAWS JOB NO. 14-8604 WATER RESOURCES INTEGRATION PROGRAM PIPELINE SEGMENT 1B PLAN AND PROFILE STA. 781+50 TO STA. 793+00	
Sheet PP30	