

Addendum No. 4
E19: Seguin Road to Nacogdoches Road
SAWS Project No. 15-4506
Solicitation No. CO-00104-DW

**SAN ANTONIO WATER SYSTEM
E19: SEGUIN ROAD TO NACOGDOCHES ROAD
SAWS PROJECT NO. 15-4506
SOLICITATION NO. CO-00104-DW
ADDENDUM NO. 4**

December 9, 2016

This addendum, applicable to work designated above, is an amendment to the proposal and specification documents and as such shall be a part of and included in the Contract. Acknowledge receipt of this addendum by entering the addendum number and issue date in the spaces provided on all submitted copies of the proposal.

1.0 Addenda Purpose

The purpose of this addendum is to issue a revision to the Contract Documents, plans and specifications for E19: Seguin Road to Nacogdoches Road (SAWS Job No. 15-4506).

2.0 Modifications to CONTRACT DOCUMENTS

- a. **OPINION OF PROBABLE CONSTRUCTION COST (OPCC)** – The estimated project construction cost has been revised to \$43,515,011.00
- b. **BID PROPOSAL** – DELETE the Bid Proposal in its entirety and REPLACE with the Bid Proposal provided in Addendum No. 4. Bidders must use this version when submitting a bid for this project.
 - 1) REVISE quantity for line item 202 Prime Coat from 4647 to 4992.
 - 2) REVISE quantity for line item 203 Tack Coat from 2599 to 2772.
 - 3) REVISE quantity for line item 205.4/535 Hot Mix Asphaltic Pavement (2" Type D) from 24,629 to 26,356.
 - 4) REVISE quantity for line item 103.1/500.4 Concrete Curb and Gutter (Remove/Install) from 911 to 936.
 - 5) REVISE quantity for line item 507.1/507.2 Chain-Link Wire Fence (4ft & 6ft high) from 702 to 717.
 - 6) REVISE quantity for line item C69/2 Concrete Drainage Flume Replacement (3.5' wide) from 1870 to 1444.

- c. SPECIAL CONDITIONS - REMOVE in its entirety and REPLACE with revised attached Special Conditions.
 - The changed verbiage is paragraph 1.4, in association with providing the actual UPRR permit as part of this addendum.
- d. APPENDED HERETO and part of Addendum No. 4 – Union Pacific Railroad Pipeline Crossing Agreement/Permit
- e. APPENDED HERETO and part of Addendum No. 4 – CPS Energy Proposed Monopole Construction Exhibit
 - Please note that exhibit is for informational purposes only and contractor shall contact CPS to confirm and/or verify exhibit information during construction.
- f. BID PACKET CHECKLIST - DELETE Bid Packet Checklist in its entirety and REPLACE with the version attached in this Addendum that should be used when bidding the project.
- g. ADDENDUM NO. 3 – REVISE Part 3 (b)(8) quantity of “1” to read quantity of “5”

3.0 Modifications to PLANS FOR CONSTRUCTION

- a. REMOVE – Sheet G4 General Notes, REPLACE with revised attached Sheet G4. This change is to clarify locations and types of temporary fencing required on the project.
- b. REMOVE – Sheet G5 Quantities, REPLACE with revised attached Sheet G5. This change is to clarify locations and types of temporary fencing required on the project.
- c. REMOVE – Sheet C2, C3, C4, C5, and C10 78-inch Sanitary Sewer Plan and Profile, REPLACE with revised attached Sheets C2, C3, C4, C5, and C10. This change is to clarify locations and types of temporary fencing required on the project.

4.0 Clarification Section

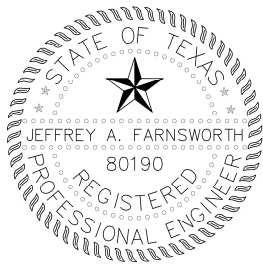
- a. Multiple versions of the Bid Proposal and Record of Performance have been issued during the advertisement period. To ensure Bidders use the correct version to bid the project, Bidders should utilize the attached revised Bid Proposal Checklist that instructs Bidders where to find the most recent version of each of these forms. Failure to use the correct Bid Proposal or Record of Performance form, may result in the bid being found non-responsive.

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SAWS Project No. 15-4506
Solicitation No. CO-00104-DW

12/09/16

Date


Signature



Kimley-Horn and Associates, Inc.
Texas Registered Engineering Firm F-928
601 NW Loop 410, Ste. 350
San Antonio, TX 78216

Appended hereto and part of Addendum No. 4

1. CONTRACT DOCUMENTS – Special Conditions
2. CONTRACT DOCUMENTS – Bid Proposal
3. PLANS – Sheet G4: General Notes (Sheet 2 of 2)
4. PLANS - Sheet G5: Quantities
5. PLANS – Sheet C2, C3, C4, C5, and C10: 78-inch Sanitary Sewer Plan and Profile
6. Union Pacific Railroad Pipeline Crossing Agreement
7. CPS Energy – Monopole Construction Exhibit
8. CONTRACT DOCUMENTS – Bid Packet Checklist

END OF ADDENDUM NO. 4

SPECIAL CONDITIONS

The Special Conditions amend the General Conditions and the other provisions of the Contract Documents as indicated herein. All provisions which are not so amended or supplemented remain in full force and effect.

PROJECT REQUIREMENTS

1.1 The CONTRACTOR shall, to the extent allowed by law, list a landowner or other person or entity with an insurable interest as an additional insured on the Commercial General Liability (CGL) and Commercial/Business Automobile Liability (AL) policy(s) of insurance that CONTRACTOR is required to maintain under this Contract. Landowner shall be added as an additional insured if indicated in the landowner's easement agreement and upon request as needed.

1.2 **Consent Decree Notice Provision**

The San Antonio Water System ("SAWS"), the United States of America and the State of Texas have entered into a Consent Decree in Civil Action No. 5:13-cv-00666- DAE, United States of America and State of Texas v. San Antonio Water System, in the United States District Court for the Western District of Texas, San Antonio Division (the "Consent Decree"). A copy of the Consent Decree is available at

<http://www.saws.org/Infrastructure/EPA/download.cfm>

Work performed pursuant to this contract is work that SAWS is required to perform pursuant to the terms of the Consent Decree. In the event of any conflict between the terms and provisions of this Consent Decree Notice Provision and any other terms and provisions of this Contract or the Contract Documents, the terms and provisions of this Consent Decree Notice Provision shall prevail.

A. Retention of documents.

Contractor shall retain and preserve all non-identical copies of all documents, reports, research, analytical or other data, records or other information of any kind or character (including documents, records, or other information in electronic form including, but not limited to e-mails) in its or its sub-contractors' or agents' possession or control, or that come into its or its sub-contractors' or agents' possession or control, and that relate in any manner to this contract, or the performance of any work described in this contract (the "Information"). This retention requirement shall apply regardless of any contrary corporate or institutional policy or procedure or legal requirement. Contractor, Contractor's sub-contractors and agents shall retain and shall not destroy any of the Information until such time as Contractor has received written approval from the General Counsel of SAWS that the Information or any part of the Information may be destroyed. Contractor shall, within 30 days after receipt of a written request by SAWS, deliver the Information to SAWS. Contractor shall instruct and require its agents and sub-

contractors performing any part of the work described in this contract to comply with the requirements of this paragraph.

B. Notification of events that may cause delay.

If any event occurs that may delay performance by Contractor, or Contractor's agents or sub-contractors of any work or obligation of any kind under this contract, Contractor shall provide notice in accordance with the Notice Provisions of this contract to SAWS within two (2) business days of the date Contractor or Contractor's agents or sub-contractors first knew that the event might cause a delay. Contractor shall provide a written explanation and description of the reasons for the delay, the anticipated duration of the delay, all actions taken or to be taken to prevent or minimize the delay, and a schedule for implementation of any measures to be taken to prevent or mitigate the delay or the effect of the delay. **TIME IS OF THE ESSENCE** in the performance of the requirements of this paragraph and of any work to be performed by the Contractor in this contract.

C. Liability for stipulated penalties.

The Consent Decree provides that the United States of America, the United States Environmental Protection Agency and the State of Texas may assess stipulated penalties against SAWS upon the occurrence of certain events. To the extent that Contractor or Contractor's agents or sub-contractors cause or contribute to, in whole or in part, the assessment of any stipulated penalty against SAWS, Contractor agrees that it shall pay to SAWS the full amount of any stipulated penalty assessed against and paid by SAWS that is caused or contributed to in whole or in part by any action, failure to act, or failure to act within the time required by any provision of this contract. Contractor shall also pay to SAWS all costs, attorney fees, expert witness fees and all other fees and expenses incurred by SAWS in connection with the assessment or payment of any such stipulated penalties, or in contesting the assessment or payment of any such stipulated penalties. In addition to any and all other remedies to which SAWS may be entitled at law or in equity, Contractor expressly authorizes SAWS to withhold all amounts assessed and paid as stipulated penalties, and all associated costs, fees, or expenses from any amount unpaid to Contractor under the terms of this contract, or from any retainage provided in the contract.

- 1.3 A Geotechnical Report has been developed for SAWS on this project and will be made available to potential Bidders for informational purposes only. SAWS will require the execution of a SAWS disclaimer form by the potential Bidder as a condition of and prior to the release of the report. To complete the disclaimer form electronically and obtain the report, please go to the following link on SAWS website: http://www.saws.org/business_center/ContractSol/

Find this project, select 'More', then 'Geotechnical Report'.

- 1.4 The Contractor shall be aware that portions of the work being performed are within the Union Pacific Railroad's ('the Railroad') right-of-way (ROW). The Contractor shall at all times, abide by the conditions outlined in the Pipeline Crossing Agreement between SAWS and the Railroad. SAWS will furnish a copy of the Pipeline Crossing Agreement. The Contractor shall incorporate any costs associated with these requirements into applicable unit prices to which the work pertains. No separate pay item will be established for compliance with Railroad requirements. SAWS will pay for the License Fee, as well as obtain the License from the Railroad.

At all times during construction within Railroad right-of-way, the Contractor must maintain appropriate insurance coverage, as outlined in the Railroad permit.

- 1.5 The Contractor shall be aware that portions of the work being performed are within the Joint Base San Antonio (JBSA), Fort Sam Houston Military Installation. The Contractor must coordinate with JBSA personnel regarding all construction activities that are to occur on base, and the Contractor is responsible for all of the requirements of JBSA for this project. The costs for services described herewith shall be included in the relevant bid items established in the bid proposal. Some of the items that will be required by Contractor are listed below, as follows:

- A. The contractor shall obtain security clearance for all personnel that will be working on the Fort Sam Houston Military Installation.
- B. The Contractor shall obtain all permits required to construct the project on the Fort Sam Houston Military Installation. These permits will include, but are not limited to a project Dig Permit and a project Hotwork permit. The Contractor shall coordinate with the 502 Civil Engineer Squadron regarding permits, on-site haul routes and traffic requirements, temporary removal and replacement of fences, and all other construction activities. The Contractor shall appoint one single point of contact for all communication and coordination with the 502 Civil Engineering Squadron, and this person shall remain the point of contact for the duration of the work performed on the Fort Sam Houston Military Installation. The contact person representing the 502 Civil Engineering Squadron is:

Mr. Charles F. (Chip) Baish III, P.E.

Civil Engineer

502 Civil Engineer Squadron, Building 4196

JBSA – Fort Sam Houston, Texas 78234

Charles.f.baish2.civ@mail.mil

Office: (210) 295-4784

- 1) Dig Permit – The following is intended as a guide to assist the Contractor in procuring a Dig Permit from JB SA. Guidelines are subject to change, and it is the Contractor’s responsibility to take all steps necessary in order to obtain a Dig Permit. **Contractor shall not perform any excavation/digging for any reason, outside the boundaries of existing SAWS easements on the Fort Sam Houston Military Installation.** Should any excavation/digging occur outside existing SAWS boundaries, the Contractor will take full responsibility for any resulting environmental mitigation/consequences and any resulting project delays, at no additional cost to SAWS. Dig Permit guidelines are as follows:
 - a. Obtain CE Work Clearance Request (Dig Permit) from 502 CE Squadron, complete, and return 4 copies.
 - b. Prepare/Submit 4 copies of supporting exhibits showing proposed locations of construction activities.
 - c. Clearly mark, with white paint, the locations of proposed construction activity.
 - d. Attend on-site meeting, coordinated by 502 CE Squadron, to discuss access, safety, notifications, restoration, etc.
 - e. Coordinate utility locates for ALL utility companies listed on Dig Permit form.
 - f. After utility locates are complete, submit completed Dig Permit to 502 CE Squadron.
 - g. Contractor should note that any construction activities performed at a later date than specified in the Dig Permit will require a new Dig Permit to be completed and approved.

- 2) Hotwork Permit - The following is intended as a guide to assist the Contractor in procuring a Hotwork Permit from JB SA, which is a permit required for any work that has an open flame, heat or sparks, such as welding and grinding. Guidelines are subject to change, and it is the Contractor’s responsibility to take all steps necessary in order to obtain a Hotwork Permit. This permit can be obtained by contacting 502 CE Squadron, and attending a coordination meeting with the Fort Sam Houston Fire Department.

- C. The Contractor shall sample all dirt excavated within the Fort Sam Houston Military Installation. Dirt shall be sampled and analyzed by a State-Accredited Laboratory prior to disposal. Frequency of samples shall be one test for every 250 cubic yards. The costs for all sampling shall be included in the relevant bid items established in the bid proposal, no separate pay item. Analyses include, but are not limited to:
 - 1) RCRA 11 Metals (Totals)

- 2) Reactivity, Corrosivity and Ignitability (RCI)
- 3) Volatile Organic Compounds (TCLP)
- 4) Semi-Volatile Organic Compounds (TCLP)
- 5) Total Petroleum Hydrocarbons (TPH)
- 6) Pesticides

Test results are to be forwarded to:

Jesse Alvarez, Jr.

Jesse.alvarez.civ@gmail.mil

(210) 671-4844

Mr. Alvarez will classify the excavated dirt, and will provide guidance regarding where the dirt can be properly disposed of. If excavated material meets the definition of a Hazardous Waste, the Fort Sam Houston Military Installation will require the dirt to be disposed of at a RCRA permitted landfill. The Contractor shall also provide copies of test results and manifests are to be sent to the 502 Civil Engineering Squadron, c/o Charles F. (Chip) Baish.

D. The Contractor is required to install portions of this project in the Fort Sam Houston Military Installation, and within existing SAWS easements. In some locations between Petroleum Drive and Binz-Engleman Road, the existing SAWS easement is adjacent to existing CPS Energy Transmission and Distribution easements. In these locations, the Contractor will allow limited use of their adjacent easement, provided the following criteria are met by the Contractor:

- 1) Construction personnel and equipment must maintain a ten (10) foot clearance to distribution structures.
- 2) Access across the Transmission and Distribution easements will be allowed, as long as access for CPS Energy maintenance personnel and equipment is maintained at all times.
- 3) Construction vehicles, equipment and piping may be staged within the easements, as long as access for CPS Energy maintenance personnel and equipment is maintained at all times.
- 4) No trench spoils/piles may be stored or piled within the easement.
- 5) No types of vehicles or equipment may be used that will allow personnel or equipment to be closer to the distribution line than the minimum clearances provided by OSHA or the National Electric Safety Code.
- 6) The easements must be returned to their original condition, as existed prior to any staging or other use.

1.6 Archeological Monitoring - The Owner will apply for an Antiquities Permit from the Texas Historical Commission for this project, for the Salado Battlefield area

located approximately on the northernmost 1000 feet of the Segment 1 alignment. Any open-trenching or bore pits in this area will require that the CONTRACTOR coordinate with the project archeologist for conducting archeological monitoring during construction. If the CONTRACTOR encounters any archeological deposits during construction operations, the CONTRACTOR must stop excavation immediately and contact the City of San Antonio Historic Preservation Officer at 210-207-7306 or 210-207-3327 for an archeological investigation. The CONTRACTOR cannot begin excavating again without written permission from the City of San Antonio. If archeological investigation becomes required, Contractor may request that the demobilization/remobilization bid item be used.

1.7 CPS Pole Bracing Allowance

- A. Description – The Contractor shall coordinate with utility company and provide all labor, supervision, tools, equipment, and materials necessary to brace and/or relocate power poles as required to complete work. No contract days will be added due to delays. This allowance shall reimburse Contractor for direct fees incurred for bracing/relocation of power poles. Any unused portion of the allowance will be credited to the Owner by a deduct change order.
- B. Payment – Payment for this item will be made under the allowance included in the bid. Contractor shall provide receipts to SAWS for reimbursement.

BID PROPOSAL

PROPOSAL OF _____, a corporation

a partnership consisting of

an individual doing business as

THE SAN ANTONIO WATER SYSTEM:

Pursuant to Instructions and Invitation to Bidders, 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:

(PLEASE SEE ATTACHED PDF LIST OF BID ITEMS)

TOTAL BID PRICE

\$ _____

Mobilization and Prep of ROW shall be limited to the maximum percentage shown. **If the percentage 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.**

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 Nos. _____

OWNER RESERVES THE RIGHT TO ACCEPT THE OVERALL MOST RESPONSIBLE BID PROPOSAL
The bidder offers to construct the Project in accordance with the Contract Documents for the contract price, and to complete the Project within **730** calendar days after the start date, as set forth in the Authorization to Proceed. **The bidder 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 Bid Proposal which are included on the following pages.

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General Bid Items:

Line No.	Item No.	Item Description	Unit	Quantity	Unit Bid Price	Total Price
1	104.1	STREET EXCAVATION (12" DEPTH)	CY	7293	\$	\$
2	202	PRIME COAT	GAL	4992	\$	\$
3	203	TACK COAT	GAL	2772	\$	\$
4	205.2	HOT MIX ASPHALTIC PAVEMENT (10" TYPE B)	SY	21879	\$	\$
5	205.4 535	HOT MIX ASPHALTIC PAVEMENT (2" TYPE D)	SY	26356	\$	\$
6	208	SALVAGING, HAULING, & STOCKPILING RECLAIMABLE ASPHALTIC PAVEMENT (2" DEPTH)	SY	2751	\$	\$
7	103.1 500.4	CONCRETE CURB AND GUTTER (REMOVE/INSTALL)	LF	936	\$	\$
8	103.3 503.4	PORTLAND CEMENT CONCRETE DRIVEWAY - COMMERCIAL (REMOVE/INSTALL)	SY	125	\$	\$
9	503.5	GRAVEL DRIVEWAY (REMOVE/INSTALL)	SY	222	\$	\$
10	507.1 507.2	CHAIN-LINK WIRE FENCE - (4 FT & 6 FT. HIGH) (REMOVE/INSTALL)	LF	717	\$	\$
11	507.5	CHAIN-LINK WIRE FENCE VEHICULAR GATE (REMOVE/INSTALL)	EA	1	\$	\$
12	C71/2	BARB-WIRE FENCE WITH METAL POSTS (REMOVE/INSTALL)	LF	2645	\$	\$
13	C69/2	CONCRETE DRAINAGE FLUME REPLACEMENT (3.5' WIDE)	LF	1444	\$	\$
14	C69/3	FORT SAM CONCRETE PAVEMENT REPLACEMENT (UNKNOWN WIDTH)	SF	1870	\$	\$
15	C68/1	FORT SAM HOUSTON TEMPORARY CHAIN-LINK SECURITY FENCE	LF	270	\$	\$
16	C68/1	FORT SAM HOUSTON TEMPORARY SECURITY GATE	EA	1	\$	\$
17	505.1	CONCRETE RIPRAP	SF	720	\$	\$
18	509.1	METAL BEAM GUARD RAIL	LF	342	\$	\$
19	510.1	TIMBER POSTS AND WIRE BARRIER (REMOVE/INSTALL)	LF	745	\$	\$
20	511.3	REPLACE WITH HOT MIX ASPHALTIC CONCRETE PAVEMENT (2" TYPE D AND 10" TYPE B)	SY	1346	\$	\$
21	530.1	BARRICADES, SIGNS AND TRAFFIC HANDLING	LS	1	\$	\$
22	550.1	TRENCH EXCAVATION SAFETY PROTECTION	LF	19285	\$	\$
23	SWPPP	STORM WATER POLLUTION PREVENTION PLAN	LS	1	\$	\$
24	812	8-INCH DR-14 (C-900) PVC WATER LINE	LF	6036	\$	\$
25	812	16-INCH DR-14 (C-905) PVC WATER LINE	LF	1623	\$	\$
26	824	RELAY SHORT SERVICE (3/4" - 2")	EA	12	\$	\$
27	824	RELAY LONG SERVICE (3/4" - 2")	EA	4	\$	\$
28	828	8-INCH GATE VALVE W/VALVE BOX	EA	19	\$	\$
29	828	16-INCH GATE VALVE W/VALVE BOX	EA	5	\$	\$
30	834.1	FIRE HYDRANT ASSEMBLY W/6-INCH VALVE AND BOX	EA	16	\$	\$
31	836	DUCTILE IRON FITTINGS	TN	10	\$	\$
32	840	8-INCH X 6-INCH WATER TIE-IN	EA	3	\$	\$
33	840	8-INCH X 8-INCH WATER TIE-IN	EA	1	\$	\$
34	840	16-INCH X 16-INCH WATER TIE-IN	EA	3	\$	\$
35	841	HYDROSTATIC PRESSURE TEST	LS	1	\$	\$
36	844	2-INCH TEMPORARY BLOW-OFF ASSEMBLY - (6-8-INCH MAINS)	EA	4	\$	\$
37	844	2-INCH TEMPORARY BLOW-OFF ASSEMBLY - (12-16-INCH MAINS)	EA	2	\$	\$
38	846	COMBINATION AIR RELEASE ASSEMBLY (1-INCH)	EA	2	\$	\$
39	848	8-INCH DR-14 (C-900) PVC SEWER LINE, PRESSURE RATED (6' TO 10')	LF	805	\$	\$
40	848	8-INCH DR-14 (C-900) PVC SEWER LINE, PRESSURE RATED (18' TO 22')	LF	93	\$	\$
41	848	8-INCH SDR-26 (ASTM D-3034) PVC SANITARY SEWER LINE (0' TO 6')	LF	37	\$	\$
42	848	8-INCH SDR-26 (ASTM D-3034) PVC SANITARY SEWER LINE (6' TO 10')	LF	60	\$	\$
43	848	8-INCH SDR-26 (ASTM D-3034) PVC SANITARY SEWER LINE (10' TO 14')	LF	358	\$	\$
44	848	8-INCH SDR-26 (ASTM D-3034) PVC SANITARY SEWER LINE (14' TO 18')	LF	55	\$	\$
45	848	8-INCH SDR-26 (ASTM D-3034) PVC SANITARY SEWER LINE (18' TO 22')	LF	24	\$	\$
46	848	10-INCH SDR-26 (ASTM D-3034) PVC SANITARY SEWER LINE (0' TO 6')	LF	20	\$	\$
47	848	10-INCH SDR-26 (ASTM D-3034) PVC SANITARY SEWER LINE (6' TO 10')	LF	112	\$	\$
48	848	10-INCH SDR-26 (ASTM D-3034) PVC SANITARY SEWER LINE (10' TO 14')	LF	16	\$	\$
49	848	10-INCH SDR-26 (ASTM D-3034) PVC SANITARY SEWER LINE (14' TO 18')	LF	24	\$	\$

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50	857	48-INCH FRP (ASTM D-3262) (PS 72) SANITARY SEWER LINE (6' TO 10')	LF	18	\$ _____	\$ _____
51	857	78-INCH FRP (ASTM D-3262) (PS 72) SANITARY SEWER LINE (10' TO 14')	LF	707	\$ _____	\$ _____
52	857	78-INCH FRP (ASTM D-3262) (PS 72) SANITARY SEWER LINE (14' TO 18')	LF	2542	\$ _____	\$ _____
53	857	78-INCH FRP (ASTM D-3262) (PS 72) SANITARY SEWER LINE (18' TO 22')	LF	2363	\$ _____	\$ _____
54	857	78-INCH FRP (ASTM D-3262) (PS 72) SANITARY SEWER LINE (22' TO 25')	LF	803	\$ _____	\$ _____
55	857	78-INCH FRP (ASTM D-3262) (PS 72) SANITARY SEWER LINE (25' TO 30')	LF	2485	\$ _____	\$ _____
56	857	78-INCH FRP (ASTM D-3262) (PS 72) SANITARY SEWER LINE (30' TO 35')	LF	795	\$ _____	\$ _____
57	857	78-INCH FRP (ASTM D-3262) (PS 72) SANITARY SEWER LINE (35' TO 40')	LF	225	\$ _____	\$ _____
58	850	SANITARY SEWER STRUCTURE (COMPLETE) TYPE "C" (ALL DEPTHS)	EA	1	\$ _____	\$ _____
59	852	SANITARY SEWER MANHOLE	EA	12	\$ _____	\$ _____
60	852	SANITARY SEWER DROP MANHOLE	EA	3	\$ _____	\$ _____
61	852	EXTRA DEPTH MANHOLE (>6')	VF	108	\$ _____	\$ _____
62	852	EXTRA DEPTH DROP MANHOLE (>6')	VF	25	\$ _____	\$ _____
63	853	FIBER-REINFORCED SANITARY SEWER MANHOLE - TEE BASE FIBERGLASS MANHOLE, MITER	EA	24	\$ _____	\$ _____
64	853	FIBER-REINFORCED SANITARY SEWER MANHOLE - TEE BASE FIBERGLASS MANHOLE, EXTRA DEPTH (>6')	VF	371	\$ _____	\$ _____
65	853	FIBER-REINFORCED SANITARY SEWER DROP MANHOLE - TEE BASE FIBERGLASS MANHOLE, MITER	EA	15	\$ _____	\$ _____
66	853	FIBER-REINFORCED SANITARY SEWER MANHOLE - TEE BASE FIBERGLASS MANHOLE, MITER W/DROP EXTRA DEPTH (>6')	VF	315	\$ _____	\$ _____
67	853	FIBER-REINFORCED SANITARY SEWER MANHOLE - TEE BASE FIBERGLASS MANHOLE, MITER, STAINLESS STEEL CLOSURE COUPLING	EA	2	\$ _____	\$ _____
68	854	SANITARY SEWER LATERAL - (4"-8")	LF	285	\$ _____	\$ _____
69	854	SANITARY SEWER CLEANOUT (4"-8")	EA	8	\$ _____	\$ _____
70	856	STEEL CASING PIPE BY OPEN CUT - (24")	LF	85	\$ _____	\$ _____
71	856	JACKING, BORING, OR TUNNELING - (24") INCLUSIVE OF CASING	LF	42	\$ _____	\$ _____
72	856	JACKING, BORING, OR TUNNELING - (30") INCLUSIVE OF CASING	LF	355	\$ _____	\$ _____
73	02345 02610	MICROTUNNELING - 96" INCLUSIVE OF CASING	LF	6343	\$ _____	\$ _____
74	856	8-INCH PVC SDR-26 (ASTM D-3034) RESTRAINED CARRIER PIPE (INSTALL)	LF	42	\$ _____	\$ _____
75	856	8-INCH PVC DR-14 (C-900) CARRIER PIPE (INSTALL)	LF	85	\$ _____	\$ _____
76	856	16-INCH PVC DR-14 (C-905) CARRIER PIPE (INSTALL)	LF	355	\$ _____	\$ _____
77	02349	78-INCH FRP (ASTM D-3262) (PS 72) CARRIER PIPE (INSTALL)	LF	6343	\$ _____	\$ _____
78	862	ABANDON - SANITARY SEWER MAIN (48-INCH)	LF	16285	\$ _____	\$ _____
79	864-S1	BYPASS PUMPING SMALL DIAMETER SANITARY SEWERS (< 24")	LS	1	\$ _____	\$ _____
80	864-S2	BYPASS PUMPING LARGE DIAMETER SANITARY SEWERS (≥ 24")	LS	1	\$ _____	\$ _____
81	866A	EXISTING SEWER MAIN TELEVISION INSPECTION (48")	LF	16285	\$ _____	\$ _____
82	866.2	SEWER MAIN POST TELEVISION INSPECTION (8" - 15")	LF	1646	\$ _____	\$ _____
83	866.3	SEWER MAIN POST TELEVISION INSPECTION (30" OR LARGER)	LF	16281	\$ _____	\$ _____
84	3000	REMOVAL, TRANSPORT, AND DISPOSAL OF AC PIPE	LF	1612	\$ _____	\$ _____
85	C72/3	WOOD FENCE (REMOVE/INSTALL)	LF	95	\$ _____	\$ _____
86	C71/1	WROUGHT IRON FENCE (REMOVE/INSTALL)	LF	365	\$ _____	\$ _____
87	C72/4	IRON WIRE FENCE (REMOVE/INSTALL)	LF	348	\$ _____	\$ _____
88	C72/5	IRON WIRE FENCE VEHICULAR GATE (REMOVE/INSTALL)	EA	1	\$ _____	\$ _____
89	03100	TEMPORARY 8" WATER BYPASS	LF	1600	\$ _____	\$ _____
90	SC	CPS POLE BRACING ALLOWANCE	LS	1	\$ <u>\$30,000.00</u>	\$ _____
91	02345	MICROTUNNELING - OBSTRUCTION REMOVAL	EA	5	\$ _____	\$ _____
92	100.1	MOBILIZATION (MAXIMUM of 10% of LINE 1 - 91 SUB-TOTAL BASE BID AMOUNT)	LS	1	\$ _____	\$ _____
93	101.1	PREPARING RIGHT-OF-WAY (MAXIMUM of 5% of LINE 1 - 91 SUB-TOTAL BASE BID AMOUNT)	LS	1	\$ _____	\$ _____
94	SP100A	INTERMEDIATE DEMOBILIZATION/REMOBILIZATION (OPEN-CUT CONSTRUCTION)	EA	2	\$ _____	\$ _____
95	SP100B	INTERMEDIATE DEMOBILIZATION/REMOBILIZATION (MICROTUNNELING CONSTRUCTION)	EA	2	\$ _____	\$ _____

General Notes (Cont.)

CPS ENERGY NOTE:

- CALL CPS LOCATOR AT 353-2970 48 HOURS BEFORE BEGINNING ANY EXCAVATION.
- THE CONTRACTOR WILL BE RESPONSIBLE FOR PROTECTING CPS ENERGY OVERHEAD AND UNDERGROUND ELECTRIC FACILITIES IF ADJACENT TO WORK AREAS.
- DUE TO FEDERAL REGULATIONS TITLE 49, PART 192.181, CPS ENERGY MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND CPS VALVES THAT ARE IN THE PROJECT AREA.
- CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH CPS TO BRACE DISTRIBUTION POWER POLES. ANY POLES WITHIN 10 FEET OF CONSTRUCTION SHALL BE REVIEWED WITH CPS TO DETERMINE IF BRACING IS REQUIRED (NO SEPARATE PAY ITEM).
- NEW SEWER CONSTRUCTION IS TO OCCUR IN CLOSE PROXIMITY TO TRANSMISSION POWER LINES ON THE FORT SAM HOUSTON MILITARY INSTALLATION ON THE SAN ANTONIO MILITARY MEDICAL CENTER PROPERTY. IN THESE AREAS, THE CONTRACTOR IS DIRECTED TO CONTAIN ALL CONSTRUCTION ACTIVITIES TO REMAIN 30-FEET OR MORE FROM TRANSMISSION TOWERS/POLES. CONTRACTOR MAY USE THE EXISTING CPS ENERGY DISTRIBUTION AND TRANSMISSION LINE EASEMENTS FOR ACCESS, FOR VEHICLE PARKING AND FOR TEMPORARY LAY DOWN OF CONSTRUCTION MATERIALS. CONSTRUCTION MATERIALS THAT ARE LAID DOWN TEMPORARILY MAY NOT REMAIN IN THE EASEMENT FOR LONGER THAN 48 HOURS, WITHOUT PERMISSION FROM CPS ENERGY. STOCKPILING OF DIRT, STACKING OF CONSTRUCTION MATERIALS, OR CREATION OF ANY MEANS FOR PERSONNEL OR EQUIPMENT TO BE CLOSER TO LIVE POWER LINES, IS STRICTLY FORBIDDEN. CONTRACTOR SHALL TAKE ALL MEANS NECESSARY TO CONSTRUCT NEW SEWER IN PROXIMITY TO POWER LINES SAFELY, AND IN ACCORDANCE WITH CURRENT OSHA GUIDELINES. CONTRACTOR SHALL BE PREPARED TO RELOCATE ANY AND ALL TEMPORARILY STORED MATERIALS WITHIN CPS EASEMENT AT ANY TIME UPON REQUEST BY CPS.

TRENCHLESS

- THE CONTRACTOR SHALL SECURE ALL BORE AREAS AND RECEIVING PITS WITH SECURITY FENCING AND ALL PROPER SAFETY MEASURES (N.S.P.I.)*
- CONTRACTOR SHALL SUBMIT BORING PLAN TO INSPECTOR AND ENGINEER FOR REVIEW AND APPROVAL. BORE/RECEIVING SHAFT LOCATIONS AND DIMENSIONS ARE FOR INFORMATIONAL PURPOSES ONLY. (N.S.P.I.)*
- ONLY CASING WILL BE ALLOWED, NO LINER PLATE WILL BE PERMITTED.

ABANDONMENT/REMOVAL OF OLD MAINS AND MANHOLES

- ABANDONMENT OF SANITARY SEWER MAINS AND MANHOLES SHALL BE IN ACCORDANCE WITH SAWS SPECIFICATION NO. 862.

SUPPLEMENTARY

- ALL ASTM D-3262 SANITARY SEWER PIPE SHALL HAVE A MINIMUM PRESSURE RATING OF 150 PSI.
- NO EXTRA-PAYMENT SHALL BE ALLOWED FOR WORK CALLED FOR ON THE PLANS BUT NOT INCLUDED ON THE BID SCHEDULE. THIS INCIDENTAL WORK WILL BE REQUIRED AND SHALL BE INCLUDED UNDER THE PAY ITEM TO WHICH IT RELATES. WORK COMPLETED BY THE CONTRACTOR WHICH HAS NOT RECEIVED A WORK ORDER OR THE NOTICE TO PROCEED FROM THE ENGINEER AND INSPECTOR WILL BE SUBJECT TO REMOVAL AND REPLACEMENT BY AND AT THE EXPENSE OF THE CONTRACTOR.
- NO MORE THAN 200 LINEAR FEET OF TRENCH EXCAVATION IN ADVANCE OF THE UTILITY WILL BE ALLOWED AT A TIME.
- CONTRACTOR MUST CALL FOR BACKFILL INSPECTIONS.
- DENSITY REPORTS MUST BE SUBMITTED TO THE INSPECTOR WITHIN 24 HOURS OF TESTING.

COSA

- NEW SEWER CONSTRUCTION IS TO OCCUR IN HOLBROOK ROAD AND ADJACENT TO THE CITY OF SAN ANTONIO SALADO CREEK GREENWAY IN SOME AREAS. IN THESE AREAS, THE CONTRACTOR IS DIRECTED TO PLACE TEMPORARY CONSTRUCTION 6-FOOT CHAIN-LINK FENCE ON GROUND BETWEEN SAWS UTILITY CONSTRUCTION AND THE GREENWAY, SO THAT USERS OF THE GREENWAY WILL BE UNABLE TO ENTER CONSTRUCTION ZONE. IF CONSTRUCTION ACTIVITIES ARE REQUIRED THAT MAY IMPACT OR TEMPORARILY CLOSE THE GREENWAY, CONTRACTOR IS DIRECTED TO NOTIFY SAWS INSPECTIONS, COSA PARKS AND RECREATION, AND THE PROJECT DESIGN MANAGER AT LEAST 2 WEEKS IN ADVANCE OF INTENDED GREENWAY CLOSURE. CONTRACTOR WILL ALSO INSTALL TEMPORARY WARNING SIGNS, AS DIRECTED BY THE CITY OF SAN ANTONIO, PRIOR AND DURING WORK. CONTRACTOR IS DIRECTED TO TAKE A HIGH DEGREE OF CARE TO ENSURE THAT GREENWAY PATRONS ARE KEPT SAFE. (N.S.P.I.)*

UPRR

- FOR ALL WORK WITHIN UNION PACIFIC RAILROAD RIGHT-OF-WAY, REFER TO SPECIAL CONDITIONS. CONTRACTOR SHALL NOTIFY THE FOLLOWING UNION PACIFIC RAIL ROAD (UPRR) CONTACTS AT LEAST TEN (10) WORKING DAYS PRIOR TO ANY CONSTRUCTION.
 UPRR TRACK MAINTENANCE (CONTACT): JASON M. PEDERSON 210-825-0362
 UPRR SIGNAL MAINTENANCE (CONTACT): MARIO ALCALA 210-200-3505
- CONTRACTOR SHALL CONTACT THE FOLLOWING NUMBER DURING NORMAL BUSINESS HOURS (7:00 AM TO 9:00 PM CENTRAL TIME), MONDAY THROUGH FRIDAY, EXCEPT FOR HOLIDAYS TO DETERMINE IF FIBER OPTIC CABLE IS BURIED ANYWHERE IN THE UPRR RIGHT-OF-WAY TO BE USED BY THE CONTRACTOR:
 UPRR COMMUNICATIONS 1-800-336-9193

GENERAL SEWER NOTES:

- NEW SEWER CONSTRUCTION IS TO OCCUR IN CLOSE PROXIMITY TO EXISTING SEWER MAINS ALONG HOLBROOK ROAD, IN LOCATIONS WHERE WORKING ROOM IS LIMITED, IN SOME OF THESE LOCATIONS, SOIL STRATA MAY BE UNSTABLE/LOOSE. THIS COULD LEAD TO SLOUGHING OF TRENCH WALLS, THAT COULD BE DETRIMENTAL TO THE EXISTING ADJACENT SEWER LINE AND CAUSE A SEWER SPILL INTO THE NEW TRENCH. CONTRACTOR IS TO DEVISE A MEANS TO ENSURE THAT TRENCH WALLS REMAIN STABLE DURING CONSTRUCTION, SO THAT THE INTEGRITY OF THE ADJACENT EXISTING SEWER IS PRESERVED AT ALL TIMES. THIS IS TO BE DONE INCIDENTAL TO THE PRICE OF PIPE INSTALLATION (N.S.P.I.)*
- CONTRACTOR IS RESPONSIBLE TO SUPPORT AND PROTECT ANY EXISTING UTILITIES ADJACENT TO WORK AREA (N.S.P.I.)*
- ALL GRADES ARE CALCULATED TO THE CENTERLINE OF MANHOLE FOR MANHOLES WITH A 0.1 FOOT DROP. MANHOLES WITH POINT OF INTERSECTION SHALL HAVE 0.1 FOOT DROP PLUS INCREASE FOR PIPE GRADES. RESULTING DROP BETWEEN PIPES ACROSS ENTIRE MANHOLE WILL BE THE SUM OF THE 0.1 FOOT DROP AND THE TWO INTERSECTION PIPE GRADES MULTIPLIED BY THE RADIUS FOR ALL MANHOLES SPECIFIED IN THE PLANS TO HAVE A DROP. (TOTAL DROP ACROSS MANHOLE = 0.1 + GRADE1(R) + GRADE2(R))
- CONNECTION OF EXISTING SANITARY SEWERS TO PROPOSED MANHOLES, CONNECTION OF PROPOSED SANITARY SEWERS TO EXISTING MANHOLES, AND EXTENSIONS OF EXISTING SANITARY SEWER PIPE TO PROPOSED MANHOLES SHALL BE SUBSIDIARY TO THE COST OF THE PROJECT (NO SEPARATE PAY ITEM).
- REMOVAL OF EXISTING SEWER LINES TO BE REPLACED WITH PROPOSED LINES IN THE SAME TRENCH AT THE SAME OR SHALLOWER GRADE SHALL BE SUBSIDIARY TO THE COST OF THE PROPOSED SEWER LINES (NO SEPARATE PAY ITEM).
- THE CONTRACTOR SHALL MAINTAIN SERVICE TO EXISTING SANITARY SEWERS AT ALL TIMES DURING CONSTRUCTION. (N.S.P.I.)*
- ALL HINGED SANITARY SEWER MANHOLES INSTALLED WITHIN PAVEMENT SHALL CLOSE IN DIRECTION OF TRAFFIC FLOW.
- ELEVATIONS POSTED FOR TOP OF MANHOLES ARE FOR REFERENCE ONLY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAKE ALLOWANCES AND ADJUSTMENTS FOR THE TOP OF MANHOLES TO MATCH THE FINISHED GRADE FOR THE STREET IMPROVEMENTS (N.S.P.I.)*
- MANHOLES INSTALLED IN OUTSIDE OF PAVEMENT LIMITS SHALL HAVE A RIM ELEVATION 6-INCHES ABOVE NATURAL GROUND ELEVATION.
- CONTRACTOR MAY ENCOUNTER CONCRETE ENCASEMENT IN THE IMMEDIATE VICINITY OF EXISTING MANHOLES. ANY CONCRETE REMOVAL REQUIRED FOR THE PROPER INSTALLATION OF PROPOSED SEWER MAIN AND TIE-INS SHALL BE AT NO ADDITIONAL COST TO THE OWNER. (N.S.P.I.)*
- SEWER IS TO BE BUILT IN PHASES, TEMPORARY CONNECTIONS AND BYPASS PUMPING MAY BE REQUIRED.
- ALL SANITARY SEWER MANHOLE RING AND COVERS SHALL BE WATERTIGHT.
- ALL FIBER GLASS REINFORCED PIPE SHALL BE HOBAS. NO APPROVED EQUAL WILL BE ACCEPTED.

FLOODPLAIN

- THE CONTRACTOR SHALL COMPLY WITH THE APPROVED COSA FLOODPLAIN PERMIT. THE CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL OF ALL WASTE MATERIALS UPON PROJECT COMPLETION.
- CONTRACTOR IS RESPONSIBLE FOR PROTECTION OF WORK, MATERIAL, AND EQUIPMENT PRIOR TO RAIN EVENTS. THE LOCATION OF THE PROJECT IS LOCATED ENTIRELY WITHIN THE 100-YEAR FLOODPLAIN AND FLOODWAY AREAS OF SALADO CREEK. THE PROJECT SITE IS SUSCEPTIBLE TO QUICKLY RISING WATER IN RESPONSE TO RAINFALL EVENTS. NO MATERIAL SHALL BE STORED IN THE 100-YEAR FLOODPLAIN LONGER THAN THE END OF THE SHIFT IN WHICH IT WAS GENERATED. CONTRACTOR IS SOLELY RESPONSIBLE FOR PROTECTING TRENCHES, PITS, MATERIALS, AND EQUIPMENT FROM DAMAGE/INUNDATION OF FLOOD WATERS. ROADWAYS TO THE PROJECT SITE CAN BE EXPECTED TO BE BLOCKED OFF AS LOW WATER CROSSING DURING STORM EVENTS AND FOR EXTENDED PERIODS THEREAFTER. CONTRACTOR SHALL COORDINATE WITH SAWS TO DETERMINE WHETHER CONTRACTOR MAY RETURN TO WORK ONSITE AFTER RAIN EVENT/PARK CLOSURE.

TRAFFIC CONTROL

- BARRICADES AND WARNING SIGNS SHALL CONFORM TO THE CURRENT TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND ARE TO BE GENERALLY LOCATED TO AFFORD MAXIMUM PROTECTION TO THE PUBLIC AS WELL AS CONSTRUCTION PERSONNEL AND EQUIPMENT AND TO ASSURE AN EXPEDITIOUS TRAFFIC FLOW AT ALL TIMES. DURING THE PROGRESS OF WORK, THE CONTRACTOR SHALL PROVIDE ACCESS FOR LOCAL TRAFFIC.
- CONTRACTOR TO ESTABLISH AND MAINTAIN TRAFFIC BARRICADING AND CONTROL DEVICES ALONG THE ALIGNMENT IN ACCORDANCE WITH THE TRAFFIC CONTROL PLAN.

ROAD NOTES

- PRIOR TO BEGINNING ANY TRENCHING WITHIN ROADWAY PAVEMENT, CONTRACTOR IS EXPECTED TO PERFORM SURVEY CROSS SECTIONS OF EXISTING PAVED SURFACE AT 50-FT INTERVALS. EACH CROSS SECTION SHOULD CONTAIN A SURVEYED ELEVATION AT THE EDGE OF PAVEMENT ON EACH SIDE OF THE ROAD, AND AT THE CENTERLINE OF THE ROAD. THE CONTRACTOR SHALL USE THESE ELEVATIONS TO CONSTRUCT THIS TYPICAL SECTION AT PRIOR ROAD ELEVATIONS.
- ROAD STRIPING SHALL BE INSTALLED TO MATCH EXISTING CONDITION. ALL STRIPING SHALL BE SUBSIDIARY TO HOT MIX ASPHALTIC PAVEMENT LINE ITEM. STRIPING SHALL BE IN ACCORDANCE WITH THE LATEST LOCAL AND STATE REQUIREMENTS.
- CONTRACTOR SHALL SALVAGE RUBBER SPEED BUMP MATS OR REPLACE THEM AS NEEDED PER CITY OF SAN ANTONIO. CONTRACTOR SHALL RE-INSTALL MATS AT SAME LOCATION AFTER PAVEMENT INSTALLATION (N.S.P.I.)*

GENERAL WATER NOTES:

- THRUST RESTRAINTS ARE REQUIRED AT ALL MECHANICAL JOINT (M.J.) FITTINGS AND BELL JOINTS PER SAWS STANDARD SPECIFICATION ITEM NO. 818. THIS SHALL BE CONSIDERED SUBSIDIARY TO THE COST OF THE LINE.

LEGEND

	PROPOSED SANITARY SEWER LINE
	PROPERTY LINE
	PROPOSED EASEMENT
	EXISTING EASEMENT
	PROPOSED WATERLINE
	EXISTING WATERLINE
	6" W
	6" AC-W
	48" SS
	4" G
	OHE
	UGC
	EXISTING ASPHALT PAVEMENT
	EXISTING CONCRETE
	EXISTING GRAVEL PAVEMENT
	EXISTING 100-YR FLOOD PLAIN
	EXISTING STORM DRAIN
	EXISTING POST AND CABLE FENCE
	EXISTING BARBED-WIRE FENCE
	EXISTING SANITARY SEWER MANHOLE
	EXISTING STORM DRAIN MANHOLE
	PROPOSED WATER VALVE
	PROPOSED FIRE HYDRANT
	EXISTING WATER METER
	EXISTING WATER VALVE
	EXISTING FIRE HYDRANT
	EXISTING SIGN
	EXISTING POWER POLE
	EXISTING GUY WIRE ANCHOR
	EXISTING TELECOMMUNICATION BOX
	EXISTING MAILBOX
	EXISTING TREE

* N.S.P.I. (NO SEPARATE PAY ITEM)



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No.	Revision	By	Date
▲	ADDENDUM 2	JAF	11/22/2016
▲	ADDENDUM 3	JAF	12/05/2016
▲	ADDENDUM 4	JAF	12/08/2016

E19: SEGUIN TO NACOGDOCHES ROAD - SEGMENT 1 SHEET

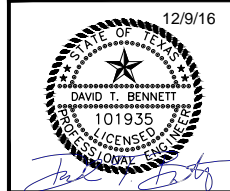
GENERAL NOTES (SHEET 2 OF 2)

DATE: NOVEMBER 2016	SAWS PROJECT NO. 15-4506	G4
DESIGN: MAV	KHA PROJECT NO. 068665018	
DRAWN: DPF		
CHECKED: GAG		

PLOTTED BY: DANIEL LEMUS/12/15/16
 KISSIA, UTILITIES/08/08/16; SAWS E. IFC/CAUSEMENT/INSURETY/GENERAL NOTES, 3-P, 25/01/2016/SHRDLING
 12/15/16

ESTIMATED QUANTITIES			
ITEM	DESCRIPTION	UNIT	QUANTITY
104.1	STREET EXCAVATION (12" DEPTH)	CY	7293
202	PRIME COAT	GAL	4992
203	TACK COAT	GAL	2772
205.2	HOT MIX ASPHALTIC PAVEMENT (10" TYPE B)	SY	21879
205.4	HOT MIX ASPHALTIC PAVEMENT (2" TYPE D)	SY	26356
208	SALVAGING, HAULING, & STOCKPILING RECLAIMABLE ASPHALTIC PAVEMENT (2" DEPTH)	SY	2751
103.1	CONCRETE CURB AND GUTTER (REMOVE/INSTALL)	LF	936
500.4	PORTLAND CEMENT CONCRETE DRIVEWAY - COMMERCIAL (REMOVE/INSTALL)	SY	125
103.3	PORTLAND CEMENT CONCRETE DRIVEWAY - COMMERCIAL (REMOVE/INSTALL)	SY	125
503.2	PORTLAND CEMENT CONCRETE DRIVEWAY - COMMERCIAL (REMOVE/INSTALL)	SY	125
503.5	GRAVEL DRIVEWAY (REMOVE/INSTALL)	SY	222
507.1	CHAIN-LINK WIRE FENCE - (4 FT & 6 FT. HIGH) (REMOVE/INSTALL)	LF	717
507.2	CHAIN-LINK WIRE FENCE VEHICULAR GATE (REMOVE/INSTALL)	EA	1
C71/2	BARB-WIRE FENCE WITH METAL POSTS (REMOVE/INSTALL)	LF	2645
C69/2	CONCRETE DRAINAGE FLUME REPLACEMENT (3.5' WIDE)	LF	1444
C69/3	FORT SAM CONCRETE PAVEMENT REPLACEMENT (UNKNOWN THICKNESS)	SF	1870
C68/1	FORT SAM HOUSTON TEMPORARY CHAIN-LINK SECURITY FENCE	LF	270
C68/1	FORT SAM HOUSTON TEMPORARY SECURITY GATE	EA	1
505.1	CONCRETE RIPRAP	SF	720
509.1	METAL BEAM GUARD RAIL	LF	342
510.1	TIMBER POSTS AND WIRE BARRIER (REMOVE/INSTALL)	LF	745
511.3	REPLACE WITH HOT MIX ASPHALTIC CONCRETE PAVEMENT (2" TYPE D AND 10" TYPE B)	SY	1346
530.1	BARRICADES, SIGNS AND TRAFFIC HANDLING	LS	1
550.1	TRENCH EXCAVATION SAFETY PROTECTION	LF	19285
SWPPP	STORM WATER POLLUTION PREVENTION PLAN	LS	1
812	8-INCH DR-14 (C-900) PVC WATER LINE	LF	6036
812	16-INCH DR-18 (C-905) PVC WATER LINE	LF	1623
824	RELAY SHORT SERVICE (3/4" - 2")	EA	12
824	RELAY LONG SERVICE (3/4" - 2")	EA	4
828	8-INCH GATE VALVE W/VALVE BOX	EA	19
828	16-INCH GATE VALVE W/VALVE BOX	EA	5
834.1	FIRE HYDRANT ASSEMBLY W/6-INCH VALVE AND BOX	EA	16
836	DUCTILE IRON FITTINGS	TON	10
840	8-INCH X 6-INCH WATER TIE-IN	EA	3
840	8-INCH X 8-INCH WATER TIE-IN	EA	1
840	16-INCH X 16-INCH WATER TIE-IN	EA	3
841	HYDROSTATIC PRESSURE TEST	LS	1
844	2-INCH TEMPORARY BLOW-OFF ASSEMBLY - (6-8-INCH MAINS)	EA	4
844	2-INCH TEMPORARY BLOW-OFF ASSEMBLY - (12-16-INCH MAINS)	EA	2
846	COMBINATION AIR RELEASE ASSEMBLY (1-INCH)	EA	2
848	8-INCH DR-14 (C-900) PVC SEWER LINE, PRESSURE RATED (6' TO 10')	LF	805
848	8-INCH DR-14 (C-900) PVC SEWER LINE, PRESSURE RATED (18' TO 22')	LF	93
848	8-INCH SDR-26 (ASTM D-3034) PVC SANITARY SEWER LINE (0' TO 6')	LF	37
848	8-INCH SDR-26 (ASTM D-3034) PVC SANITARY SEWER LINE (6' TO 10')	LF	60
848	8-INCH SDR-26 (ASTM D-3034) PVC SANITARY SEWER LINE (10' TO 14')	LF	358
848	8-INCH SDR-26 (ASTM D-3034) PVC SANITARY SEWER LINE (14' TO 18')	LF	55
848	8-INCH SDR-26 (ASTM D-3034) PVC SANITARY SEWER LINE (18' TO 22')	LF	24
848	10-INCH SDR-26 (ASTM D-3034) PVC SANITARY SEWER LINE (0' TO 6')	LF	20
848	10-INCH SDR-26 (ASTM D-3034) PVC SANITARY SEWER LINE (6' TO 10')	LF	112
848	10-INCH SDR-26 (ASTM D-3034) PVC SANITARY SEWER LINE (10' TO 14')	LF	16

ESTIMATED QUANTITIES			
ITEM	DESCRIPTION	UNIT	QUANTITY
848	10-INCH SDR-26 (ASTM D-3034) PVC SANITARY SEWER LINE (14' TO 18')	LF	24
857	48-INCH FRP (ASTM D-3262) (PS 72) SANITARY SEWER LINE (6' TO 10')	LF	18
857	78-INCH FRP (ASTM D-3262) (PS 72) SANITARY SEWER LINE (10' TO 14')	LF	707
857	78-INCH FRP (ASTM D-3262) (PS 72) SANITARY SEWER LINE (14' TO 18')	LF	2542
857	78-INCH FRP (ASTM D-3262) (PS 72) SANITARY SEWER LINE (18' TO 22')	LF	2363
857	78-INCH FRP (ASTM D-3262) (PS 72) SANITARY SEWER LINE (22' TO 25')	LF	803
857	78-INCH FRP (ASTM D-3262) (PS 72) SANITARY SEWER LINE (25' TO 30')	LF	2485
857	78-INCH FRP (ASTM D-3262) (PS 72) SANITARY SEWER LINE (30' TO 35')	LF	795
857	78-INCH FRP (ASTM D-3262) (PS 72) SANITARY SEWER LINE (35' TO 40')	LF	225
850	SANITARY SEWER STRUCTURE (COMPLETE) TYPE "C" (ALL DEPTHS)	EA	1
852	SANITARY SEWER MANHOLE	EA	12
852	SANITARY SEWER DROP MANHOLE	EA	3
852	EXTRA DEPTH MANHOLE (>6')	VF	108
852	EXTRA DEPTH DROP MANHOLE (>6')	VF	25
853	FIBER-REINFORCED SANITARY SEWER MANHOLE - TEE BASE FIBERGLASS MANHOLE, MITER	EA	24
853	FIBER-REINFORCED SANITARY SEWER MANHOLE - TEE BASE FIBERGLASS MANHOLE, EXTRA DEPTH (>6')	VF	371
853	FIBER-REINFORCED SANITARY SEWER DROP MANHOLE - TEE BASE FIBERGLASS MANHOLE, MITER	EA	15
853	FIBER-REINFORCED SANITARY SEWER MANHOLE - TEE BASE FIBERGLASS MANHOLE, MITER W/DROP EXTRA DEPTH (>6')	VF	315
853	FIBER-REINFORCED SANITARY SEWER MANHOLE - TEE BASE FIBERGLASS MANHOLE, MITER, STAINLESS STEEL CLOSURE COUPLING	EA	2
854	SANITARY SEWER LATERAL - (4"-8")	LF	285
854	SANITARY SEWER TWO-WAY CLEANOUT (4"-8")	EA	8
856	STEEL CASING PIPE BY OPEN-CUT - (24")	LF	85
856	JACKING, BORING, OR TUNNELING - (24") INCLUSIVE OF CASING	LF	42
856	JACKING, BORING, OR TUNNELING - (30") INCLUSIVE OF CASING	LF	355
02345	MICROTUNNELING - (96") INCLUSIVE OF CASING	LF	6343
856	8-INCH PVC SDR-26 (ASTM D-3034) RESTRAINED CARRIER PIPE (INSTALL)	LF	42
856	8-INCH PVC DR-14 (C-900) CARRIER PIPE (INSTALL)	LF	85
856	16-INCH PVC DR-18 (C-905) CARRIER PIPE (INSTALL)	LF	355
02349	78-INCH FRP (ASTM D-3262) (PS 72) CARRIER PIPE (INSTALL)	LF	6343
862	ABANDON - SANITARY SEWER MAIN (48-INCH)	LF	16285
864-S1	BYPASS PUMPING SMALL DIAMETER SANITARY SEWERS (< 24")	LS	1
864-S2	BYPASS PUMPING LARGE DIAMETER SANITARY SEWERS (≥ 24")	LS	1
866A	EXISTING SEWER MAIN TELEVISION INSPECTION (48")	LF	16285
866.2	SEWER MAIN POST TELEVISION INSPECTION (8" - 15")	LF	1646
866.3	SEWER MAIN POST TELEVISION INSPECTION (30" OR LARGER)	LF	16281
3000	REMOVAL, TRANSPORT, AND DISPOSAL OF AC PIPE	LF	1612
C72/3	WOOD FENCE (REMOVE/INSTALL)	LF	95
C72/1	WROUGHT IRON FENCE (REMOVE/INSTALL)	LF	365
C72/4	IRON WIRE FENCE (REMOVE/INSTALL)	LF	348
C72/5	IRON WIRE FENCE VEHICULAR GATE (REMOVE/INSTALL)	EA	1
03100	TEMPORARY 8" WATER BYPASS	LF	1600
SC	CPS POLE BRACING ALLOWANCE	LS	1
02345	MICROTUNNELING - OBSTRUCTION REMOVAL	EA	5
100.1	MOBILIZATION	LS	1
101.1	PREPARING RIGHT-OF-WAY	LS	1
SP100A	INTERMEDIATE DEMOBILIZATION/REMOBILIZATION (OPEN-CUT CONSTRUCTION)	EA	2
SP100B	INTERMEDIATE DEMOBILIZATION/REMOBILIZATION (MICROTUNNELING CONSTRUCTION)	EA	2



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No.	Revision	By	Date
△	ADDENDUM 1	DTB	11/11/2016
△	ADDENDUM 3	DTB	12/05/2016
△	ADDENDUM 4	DTB	12/09/2016

SAN ANTONIO WATER SYSTEM

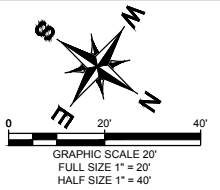
E19: SEGUIN TO NACOGDOCHES ROAD - SEGMENT 1

SHEET

QUANTITIES

DATE: NOVEMBER 2016	SAWS PROJECT NO. 15-4506	SHEET NO. G5
DESIGN: RWR	FNI PROJECT NO.	
DRAWN: DDH	KMH16157	
CHECKED: DTB		

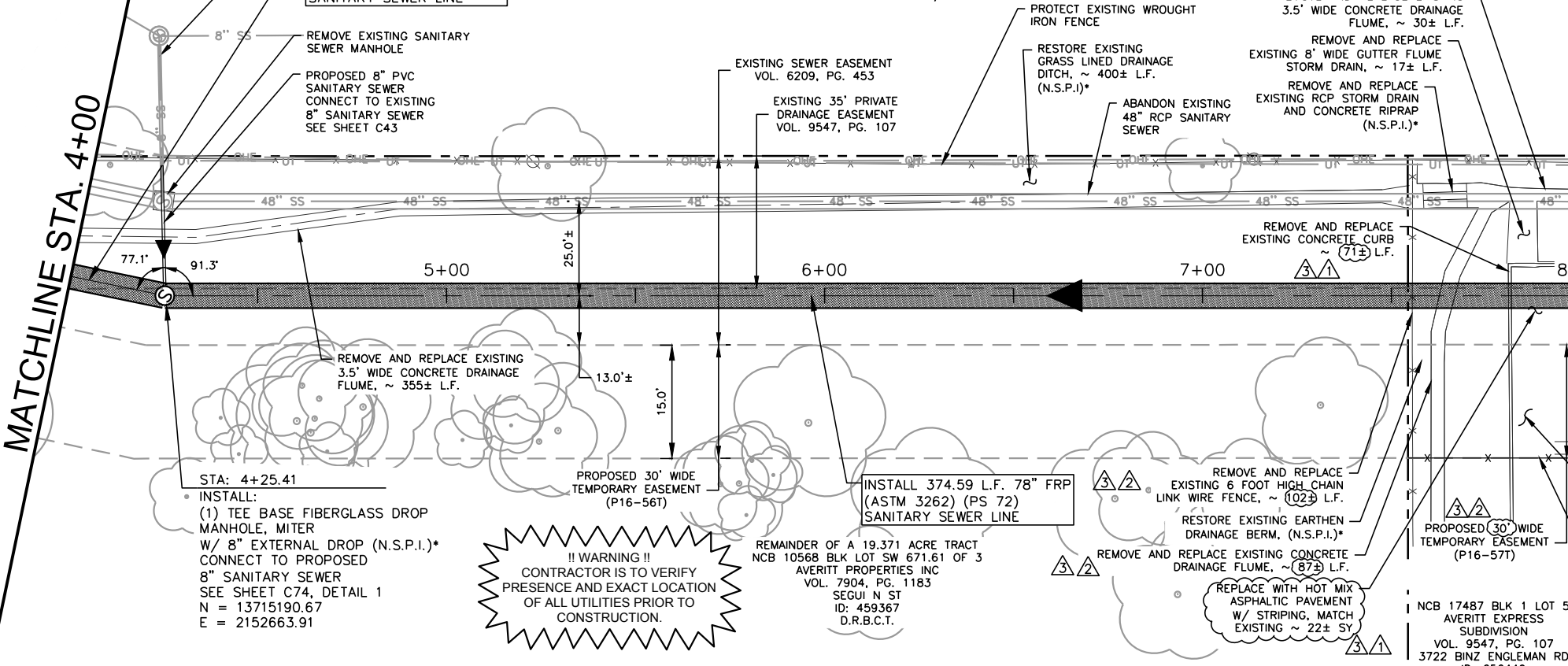
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1063402
3714 BINZ ENGLEMAN RD
LAS VARAS PUBLIC FACILITY CORP
NCB 17487 BLK 1 LOT 8
ARTISAN SALADO CREEK PHASE II NEW ACCT FOR 2007
- PLAT 9571/25-26

MATCHLINE STA. 4+00

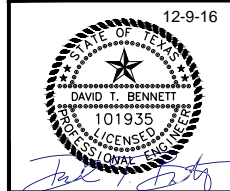
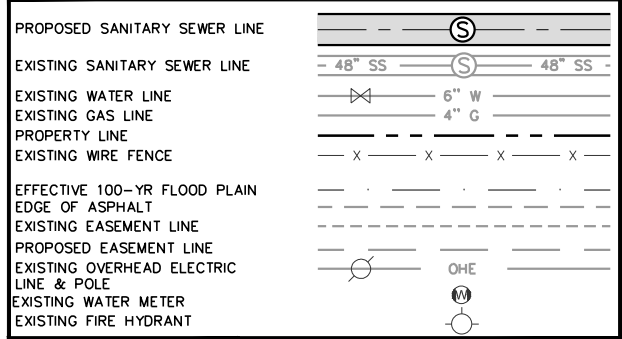
MATCHLINE STA. 8+00



ESTIMATED QUANTITIES			
ITEM	DESCRIPTION	UNIT	QUANTITY
202	PRIME COAT	GAL	1,223
203	TACK COAT	GAL	111
205.4	HOT MIX ASPHALTIC PAVEMENT (2\"/>		

- NOTES:
1. REFERENCE TREE PROTECTION PLAN FOR TREE REMOVAL SHEETS TP-1 TO TP-35
 2. AT NO TIME SHALL THE AVERITT EXPRESS SITE BE LEFT UNATTENDED BY THE CONTRACTOR WITHOUT EXISTING, PROPOSED OR TEMPORARY FENCING IN PLACE.
 3. NO WORK IS ALLOWED ON THE WEEKENDS IN THE PROPOSED TEMPORARY EASEMENT ON THE EXISTING ASPHALT PAVEMENT OF THE AVERITT EXPRESS SUBDIVISION.
 4. THE CONTRACTOR SHALL MAINTAIN SERVICE TO EXISTING SANITARY SEWERS AT ALL TIMES DURING CONSTRUCTION (N.S.P.I.).

LEGEND
FULL SIZE (22" x 34") 1" = 10' VERTICAL
HALF SIZE (11" x 17") 1" = 20' VERTICAL



FREESE NICHOLS
4040 Broadway Street, Suite 600
San Antonio, Texas 78209-6350
Phone - (210) 298-3800
Fax - (210) 298-3801
Texas Registered Engineering Firm F-2144

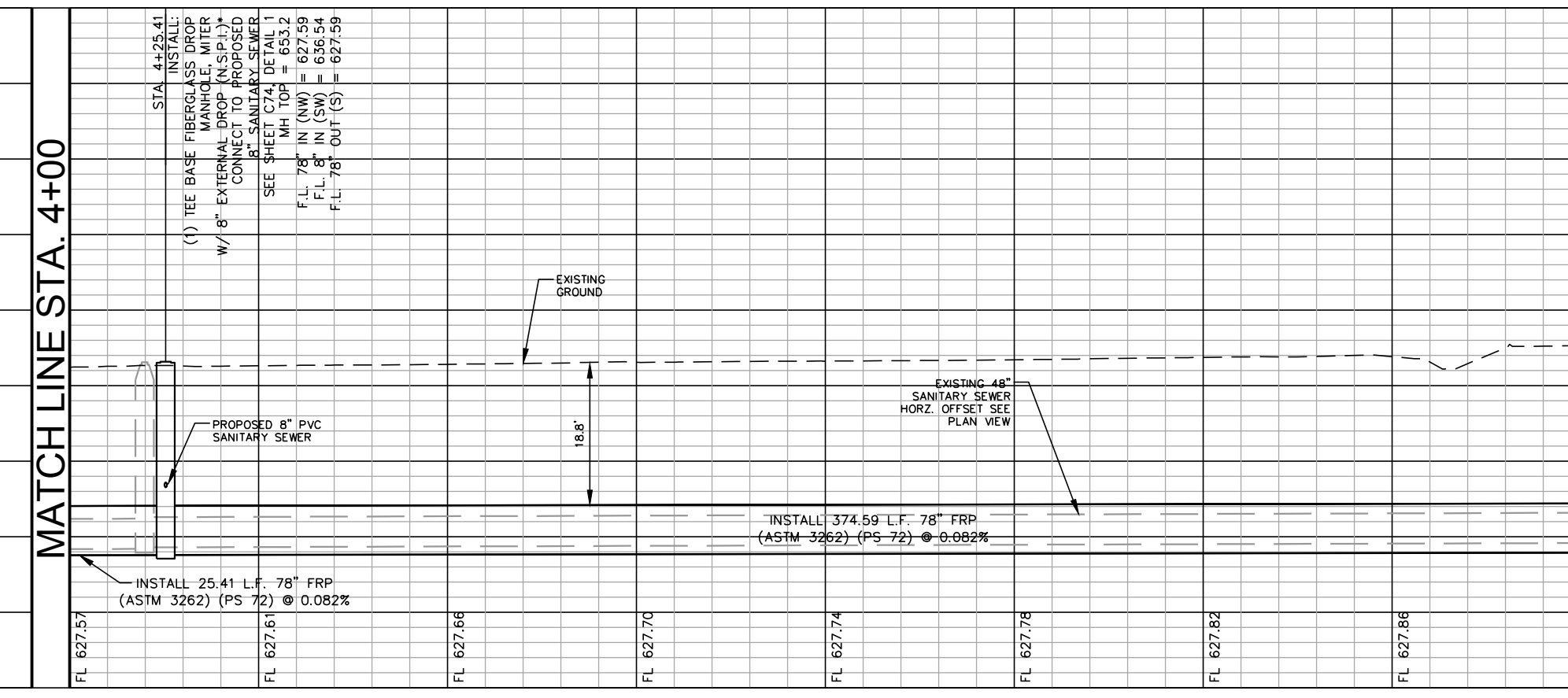
No.	Revision	By	Date
ADDENDUM 1		DTB	11/11/2016
ADDENDUM 3		DTB	12/05/2016
ADDENDUM 4		DTB	12/09/2016

E19: SEGUIN TO NACOGDOCHES ROAD - SEGMENT 1
SHEET
78-INCH SANITARY SEWER PLAN & PROFILE STA. 4+00 TO 8+00

DATE: NOVEMBER 2016	SAWS PROJECT NO. 15-4506	SHEET NO. C2
DESIGN: RWR	FNI PROJECT NO. KMH16157	
DRAWN: DDH		
CHECKED: RR		

MATCHLINE STA. 4+00

MATCHLINE STA. 8+00



4+00 4+50 5+00 5+50 6+00 6+50 7+00 7+50 8+00

700

700

MATCHLINE STA. 4+00

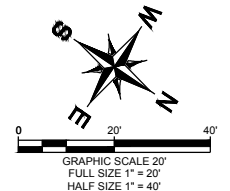
MATCHLINE STA. 8+00

4+00

8+00

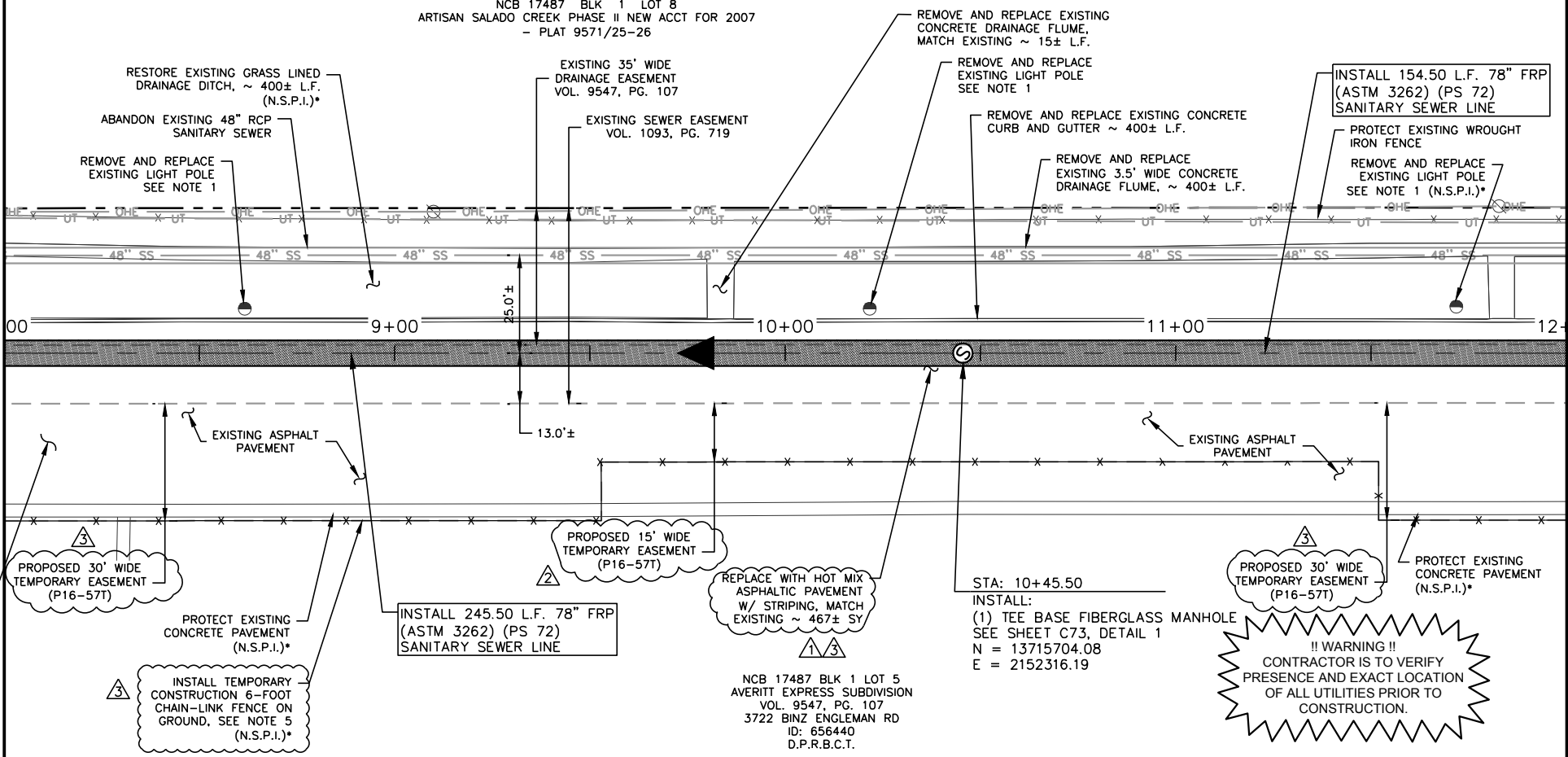
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DRAWN: DDH
CHECKED: RR
DATE: 12/20/16

1063402
3714 BINZ ENGELMAN RD
LAS VARAS PUBLIC FACILITY CORP
NCB 17487 BLK 1 LOT 8
ARTISAN SALADO CREEK PHASE II NEW ACCT FOR 2007
- PLAT 9571/25-26



MATCHLINE STA. □+00

MATCHLINE STA. 12+00



ESTIMATED QUANTITIES			
ITEM	DESCRIPTION	UNIT	QUANTITY
202	PRIME COAT	GAL	3369
203	TACK COAT	GAL	184
205.4	HOT MIX ASPHALTIC PAVEMENT (2" TYPE D)	SY	1378
511.3	REPLACE WITH HOT MIX ASPHALTIC CONCRETE PAVEMENT (2" TYPE D AND 10" TYPE B)	SY	467
103.1	CONCRETE CURB AND GUTTER (REMOVE/INSTALL)	LF	400
500.4	CONCRETE DRAINAGE FLUME REPLACEMENT (3.5' WIDE)	LF	415
C69/2	TRENCH EXCAVATION SAFETY PROTECTION	LF	400
550.1	78-INCH FRP (ASTM D-3262) (PS 72) SANITARY SEWER LINE (25' TO 30')	LF	400
853	FIBER-REINFORCED SANITARY SEWER MANHOLE - TEE BASE FIBERGLASS MANHOLE, MITER	EA	1
853	FIBER-REINFORCED SANITARY SEWER MANHOLE - TEE BASE FIBERGLASS MANHOLE, EXTRA DEPTH (>6')	VF	22
866.3	SEWER MAIN POST TELEVISION INSPECTION (30" OR LARGER)	LF	400

- NOTES:
- REMOVE AND REPLACE EXISTING LIGHT POLES AND UNDERGROUND ELECTRIC TO LIGHT POLES AS REQUIRED. (N.S.P.I.) MATCH EXISTING.
 - REFERENCE TREE PROTECTION PLAN FOR TREE REMOVAL SHEETS TP-1 TO TP-35.
 - NO WORK IS ALLOWED ON THE WEEKENDS IN THE PROPOSED TEMPORARY EASEMENT ON THE EXISTING ASPHALT PAVEMENT OF THE AVERITT EXPRESS SUBDIVISION.
 - THE CONTRACTOR SHALL MAINTAIN SERVICE TO EXISTING SANITARY SEWERS AT ALL TIMES DURING CONSTRUCTION (N.S.P.I.).
 - AT NO TIME SHALL THE AVERITT EXPRESS SITE BE LEFT UNATTENDED BY THE CONTRACTOR WITHOUT EXISTING, PROPOSED OR TEMPORARY FENCING IN PLACE.

REPLACE 2" HOT MIX ASPHALTIC PAVEMENT OUTSIDE TRENCH FROM PAVEMENT CURB TO TEMPORARY FENCING ~ 1378± SY

INSTALL TEMPORARY CONSTRUCTION 6-FOOT CHAIN-LINK FENCE ON GROUND. SEE NOTE 5 (N.S.P.I.)*

INSTALL 245.50 L.F. 78" FRP (ASTM 3262) (PS 72) SANITARY SEWER LINE

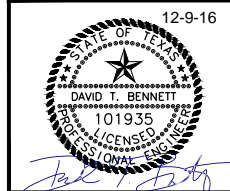
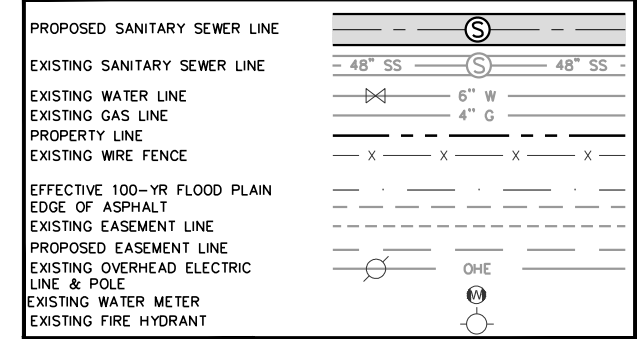
REPLACE WITH HOT MIX ASPHALTIC PAVEMENT W/ STRIPING, MATCH EXISTING ~ 467± SY

STA: 10+45.50
INSTALL:
(1) TEE BASE FIBERGLASS MANHOLE
SEE SHEET C73, DETAIL 1
N = 13715704.08
E = 2152316.19

!! WARNING !!
CONTRACTOR IS TO VERIFY PRESENCE AND EXACT LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.

* NO SEPARATE PAY ITEM (N.S.P.I.)
FULL SIZE (22" x 34") 1" = 10' VERTICAL
HALF SIZE (11" x 17") 1" = 20' VERTICAL

LEGEND



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San Antonio, Texas 78209-6350
Phone - (210) 298-3800
Fax - (210) 298-3801
Texas Registered Engineering Firm F-2144

No.	Revision	By	Date
ADDENDUM 1		DTB	11/11/2016
ADDENDUM 3		DTB	12/05/2016
ADDENDUM 4		DTB	12/09/2016



E19: SEGUIN TO NACOGDOCHES ROAD - SEGMENT 1
SHEET
78-INCH SANITARY SEWER PLAN & PROFILE STA. 8+00 TO 12+00

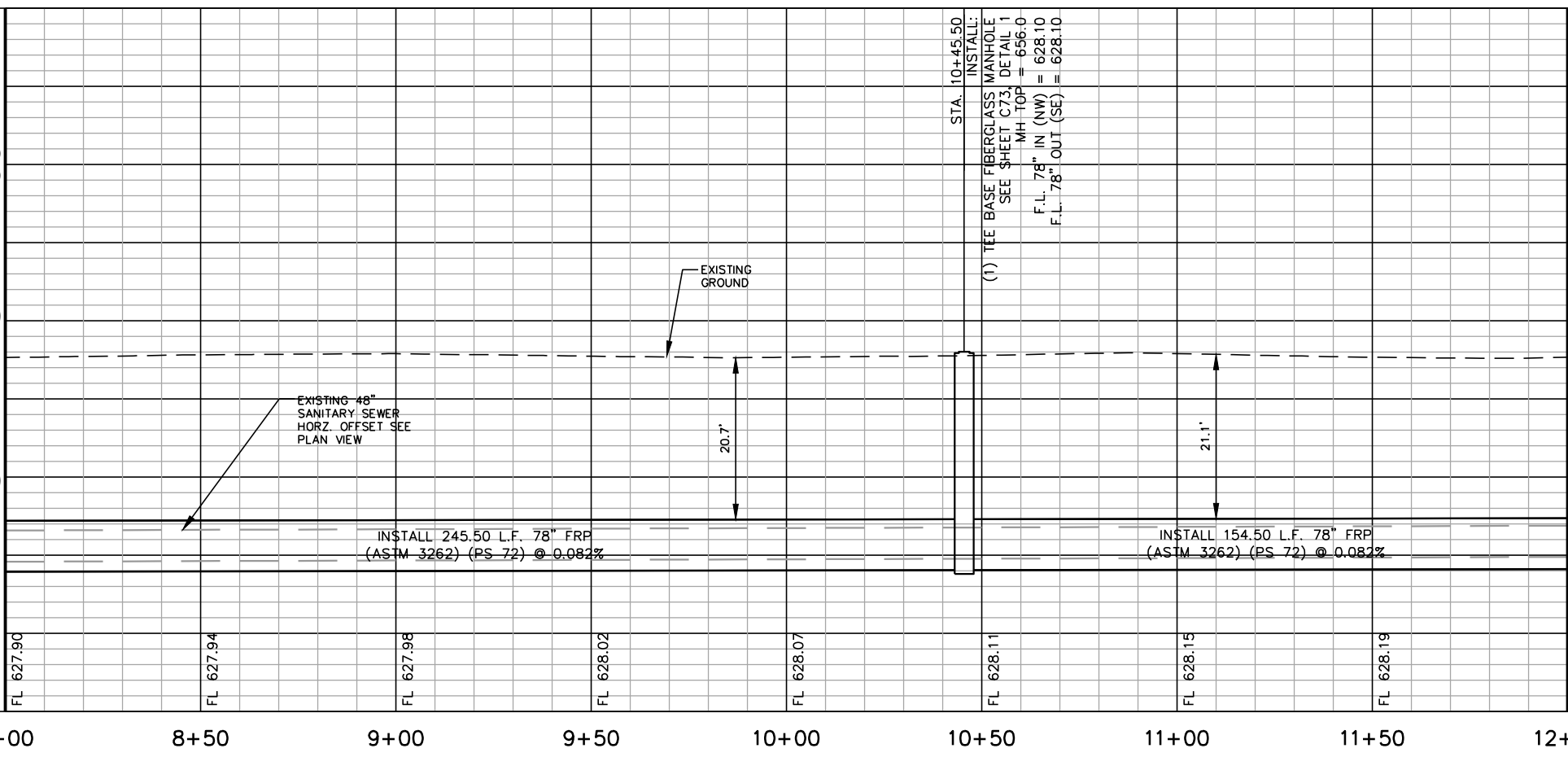
DATE:	SAWS PROJECT NO.	SHEET NO.
NOVEMBER 2016	15-4506	C3
DESIGN:	FNI PROJECT NO.	
RWR	KMH16157	
DRAWN:		
DDH		
CHECKED:		
DTB		

700

700

MATCHLINE STA. □+00

MATCHLINE STA. 12+00



EXISTING 48" SANITARY SEWER HORZ. OFFSET SEE PLAN VIEW

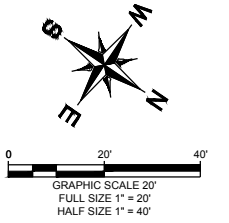
INSTALL 245.50 L.F. 78" FRP (ASTM 3262) (PS 72) @ 0.082%

INSTALL 154.50 L.F. 78" FRP (ASTM 3262) (PS 72) @ 0.082%

STA. 10+45.50
INSTALL:
(1) TEE BASE FIBERGLASS MANHOLE
SEE SHEET C73, DETAIL 1
MH TOP = 656.0
F.L. 78" IN (NW) = 628.10
F.L. 78" OUT (SE) = 628.10

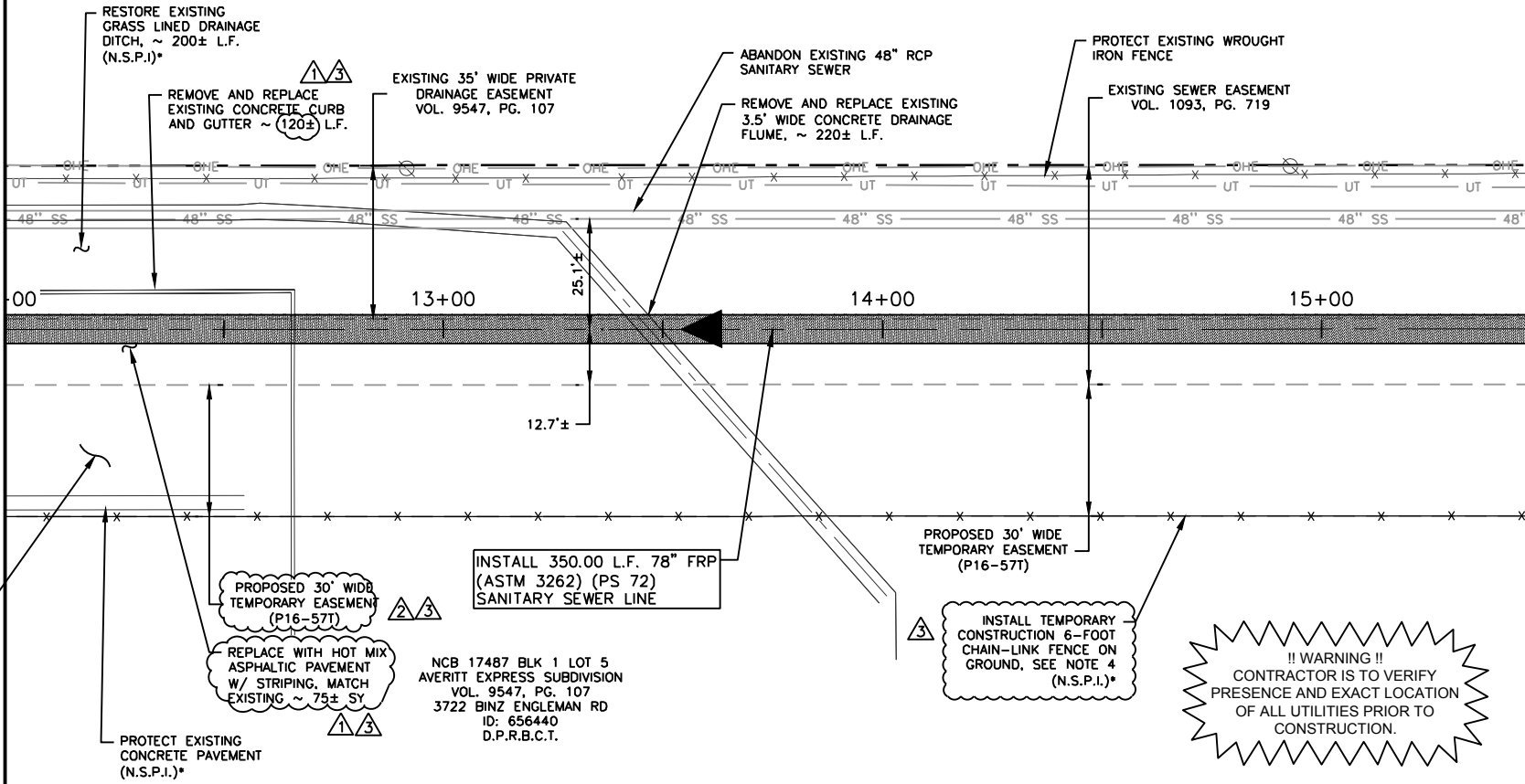
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DRAWN: DDH
CHECKED: DTB
DATE: 12/20/16

1063402
 3714 BINZ ENGELMAN RD
 LAS VARAS PUBLIC FACILITY CORP
 NCB 17487 BLK 1 LOT 8
 ARTISAN SALADO CREEK PHASE II NEW ACCT FOR 2007
 - PLAT 9571/25-26



MATCHLINE STA. 12+00

MATCHLINE STA. 15+50



ESTIMATED QUANTITIES			
ITEM	DESCRIPTION	UNIT	QUANTITY
202	PRIME COAT	GAL	67
203	TACK COAT	GAL	34
205.4	HOT MIX ASPHALTIC PAVEMENT (2" TYPE D)	SY	260
511.3	REPLACE WITH HOT MIX ASPHALTIC CONCRETE PAVEMENT (2" TYPE D AND 10" TYPE B)	SY	75
103.1	CONCRETE CURB AND GUTTER (REMOVE/INSTALL)	LF	120
500.4	CONCRETE DRAINAGE FLUME REPLACEMENT (3.5' WIDE)	LF	220
C69/2	CONCRETE DRAINAGE FLUME REPLACEMENT (3.5' WIDE)	LF	220
550.1	TRENCH EXCAVATION SAFETY PROTECTION	LF	350
857	78-INCH FRP (ASTM D-3262) (PS 72) SANITARY SEWER LINE (25' TO 30')	LF	350
866.3	SEWER MAIN POST TELEVISION INSPECTION (30" OR LARGER)	LF	350

- NOTES:
1. REFERENCE TREE PROTECTION PLAN FOR TREE REMOVAL SHEETS TP-1 TO TP-35.
 2. NO WORK IS ALLOWED ON THE WEEKENDS IN THE PROPOSED TEMPORARY EASEMENT ON THE EXISTING ASPHALT PAVEMENT OF THE AVERITT EXPRESS SUBDIVISION.
 3. THE CONTRACTOR SHALL MAINTAIN SERVICE TO EXISTING SANITARY SEWERS AT ALL TIMES DURING CONSTRUCTION (N.S.P.I.).
 4. AT NO TIME SHALL THE AVERITT EXPRESS SITE BE LEFT UNATTENDED BY THE CONTRACTOR WITHOUT EXISTING, PROPOSED OR TEMPORARY FENCING IN PLACE.
- * NO SEPARATE PAY ITEM (N.S.P.I.)

LEGEND
 FULL SIZE (22" x 34") 1" = 10' VERTICAL
 HALF SIZE (11" x 17") 1" = 20' VERTICAL

PROPOSED SANITARY SEWER LINE	
EXISTING SANITARY SEWER LINE	
EXISTING WATER LINE	
EXISTING GAS LINE	
PROPERTY LINE	
EXISTING WIRE FENCE	
EFFECTIVE 100-YR FLOOD PLAIN	
EDGE OF ASPHALT	
EXISTING EASEMENT LINE	
PROPOSED EASEMENT LINE	
EXISTING OVERHEAD ELECTRIC LINE & POLE	
EXISTING WATER METER	
EXISTING FIRE HYDRANT	

12-9-16

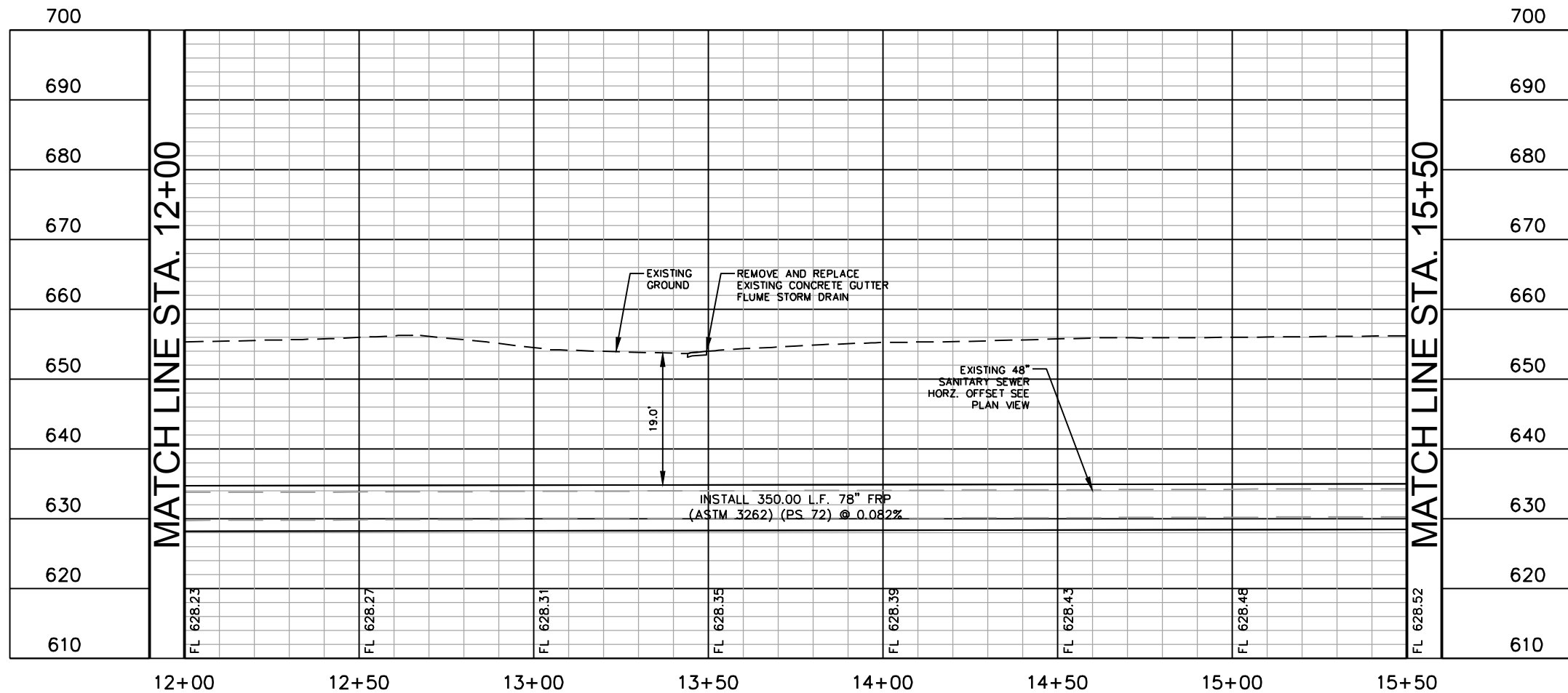
FREESE & NICHOLS
 4040 Broadway Street, Suite 600
 San Antonio, Texas 78209-6350
 Phone - (210) 298-3800
 Fax - (210) 298-3801
 Texas Registered Engineering Firm F-2144

No.	Revision	By	Date
ADDENDUM 1		DTB	11/11/2016
ADDENDUM 3		DTB	12/05/2016
ADDENDUM 4		DTB	12/09/2016

SAN ANTONIO WATER SYSTEM

E19: SEGUIN TO NACOGDOCHES ROAD - SEGMENT 1
 SHEET
78-INCH SANITARY SEWER PLAN & PROFILE STA. 12+00 TO 15+50

DATE: NOVEMBER 2016	SAWS PROJECT NO. 15-4506	SHEET NO. C4
DESIGN: RWR	FNI PROJECT NO. KMH16157	
DRAWN: DDH		
CHECKED: DTB		



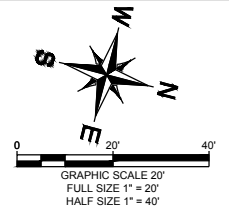
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1063402
3714 BINZ ENGLEMAN RD
LAS VARIAS PUBLIC FACILITY CORP
NCB 17487 BLK 1 LOT 8
ARTISAN SALADO CREEK PHASE II NEW ACCT FOR 2007
- PLAT 9571/25-26

**FORT SAM
HOUSTON
FREEDOM PARK**

501820
UNITED STATES GOVERNMENT
NCB 12175 BLK
LOT TR-B1

!! WARNING !!
CONTRACTOR IS TO VERIFY
PRESENCE AND EXACT LOCATION
OF ALL UTILITIES PRIOR TO
CONSTRUCTION.

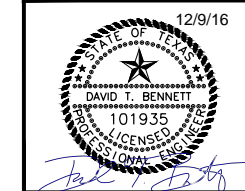
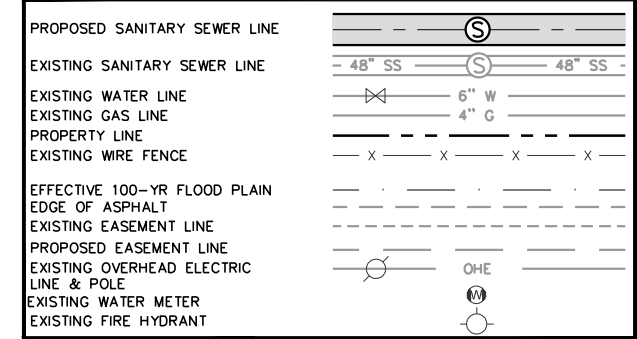


- NOTES:
1. INSTALL TEMPORARY CHAIN-LINK SECURITY FENCE AND GATE CONNECT TO EXISTING SECURITY FENCE AND ISOLATE CONSTRUCTION AREA FROM FORT SAM HOUSTON FOR DURATION OF CONSTRUCTION. SEE DETAILS ON SHEET C68, AND ACCESS AND STAGING ON G20.
 2. REFERENCE TREE PROTECTION PLAN FOR TREE REMOVAL SHEETS TP-1 TO TP-35.
 3. AT NO TIME SHALL THE AVERITT EXPRESS SITE BE LEFT UNATTENDED BY THE CONTRACTOR WITHOUT EXISTING PROPOSED OR TEMPORARY FENCING IN PLACE.
 4. CONTRACTOR TO REMOVE TEMPORARY CONSTRUCTION FENCING UPON COMPLETION OF CONSTRUCTION AND RESTORE PERMANENT FENCE TO ORIGINAL CONDITION.
 5. FOR CONTRACTOR ACCESS AND STAGING SEE SHEET C20.
 6. THE CONTRACTOR SHALL MAINTAIN SERVICE TO EXISTING SANITARY SEWERS AT ALL TIMES DURING CONSTRUCTION (N.S.P.I.).

ESTIMATED QUANTITIES			
ITEM	DESCRIPTION	UNIT	QUANTITY
507.1	CHAIN-LINK WIRE FENCE - (6 FT. HIGH) (REMOVE/INSTALL)	LF	95
507.2	CHAIN-LINK WIRE FENCE - (6 FT. HIGH) (REMOVE/INSTALL)	LF	95
C72/1	WROUGHT IRON FENCE (REMOVE/INSTALL)	LF	73
C68/1	FORT SAM HOUSTON TEMPORARY CHAIN-LINK SECURITY FENCE	LF	270
C68/1	FORT SAM HOUSTON TEMPORARY SECURITY GATE	EA	1
550.1	TRENCH EXCAVATION SAFETY PROTECTION	LF	135
857	78-INCH FRP (ASTM D-3262) (PS 72) SANITARY SEWER LINE (25' TO 30')	LF	135
853	FIBER-REINFORCED SANITARY SEWER MANHOLE - TEE BASE FIBERGLASS MANHOLE, MITER	EA	1
853	FIBER-REINFORCED SANITARY SEWER MANHOLE - TEE BASE FIBERGLASS MANHOLE, EXTRA DEPTH (>6')	VF	23
853	FIBER-REINFORCED SANITARY SEWER DROP MANHOLE - TEE BASE FIBERGLASS MANHOLE, MITER	EA	1
853	FIBER-REINFORCED SANITARY SEWER MANHOLE - TEE BASE FIBERGLASS MANHOLE, MITER W/DROP EXTRA DEPTH (>6')	VF	22
02345	MICROTUNNELING - (96") INCLUSIVE OF CASING	LF	265
02349	78-INCH FRP (ASTM D-3262) (PS 72) CARRIER PIPE (INSTALL)	LF	265
866.3	SEWER MAIN POST TELEVISION INSPECTION (30" OR LARGER)	LF	400

* NO SEPARATE PAY ITEM (N.S.P.I.)
FULL SIZE (22" x 34")
1" = 10' VERTICAL
HALF SIZE (11" x 17")
1" = 20' VERTICAL

LEGEND



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Texas Registered Engineering Firm F-2144

No.	Revision	By	Date
ADDENDUM 1		DTB	11/11/2016
ADDENDUM 3		DTB	12/05/2016
ADDENDUM 4		DTB	12/09/2016

**E19: SEGUIN TO
NACOGDOCHES ROAD -
SEGMENT 1**
SHEET
**78-INCH SANITARY SEWER
PLAN & PROFILE STA.
15+50 TO 19+50**

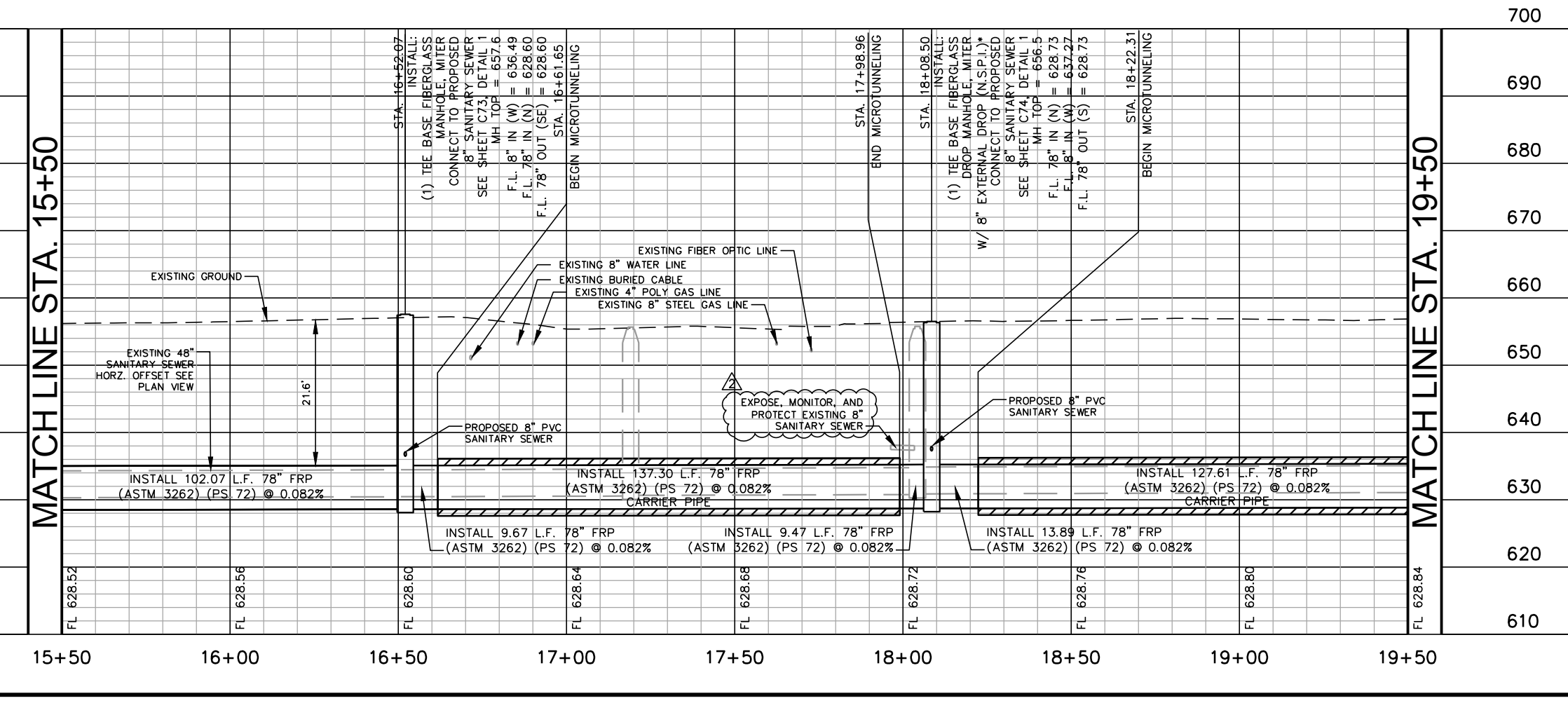
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NOVEMBER 2016	15-4506	C5
DESIGN:	FNI PROJECT NO.	
RWR	KMH16157	
DRAWN:		
DDH		
CHECKED:		
DTB		

MATCHLINE STA. 15+50

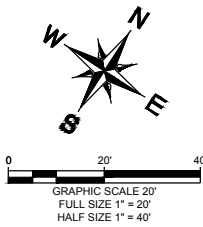
MATCHLINE STA. 19+50

!! WARNING !!
EXISTING OVERHEAD LINE

!! WARNING !!
EXISTING GAS LINE

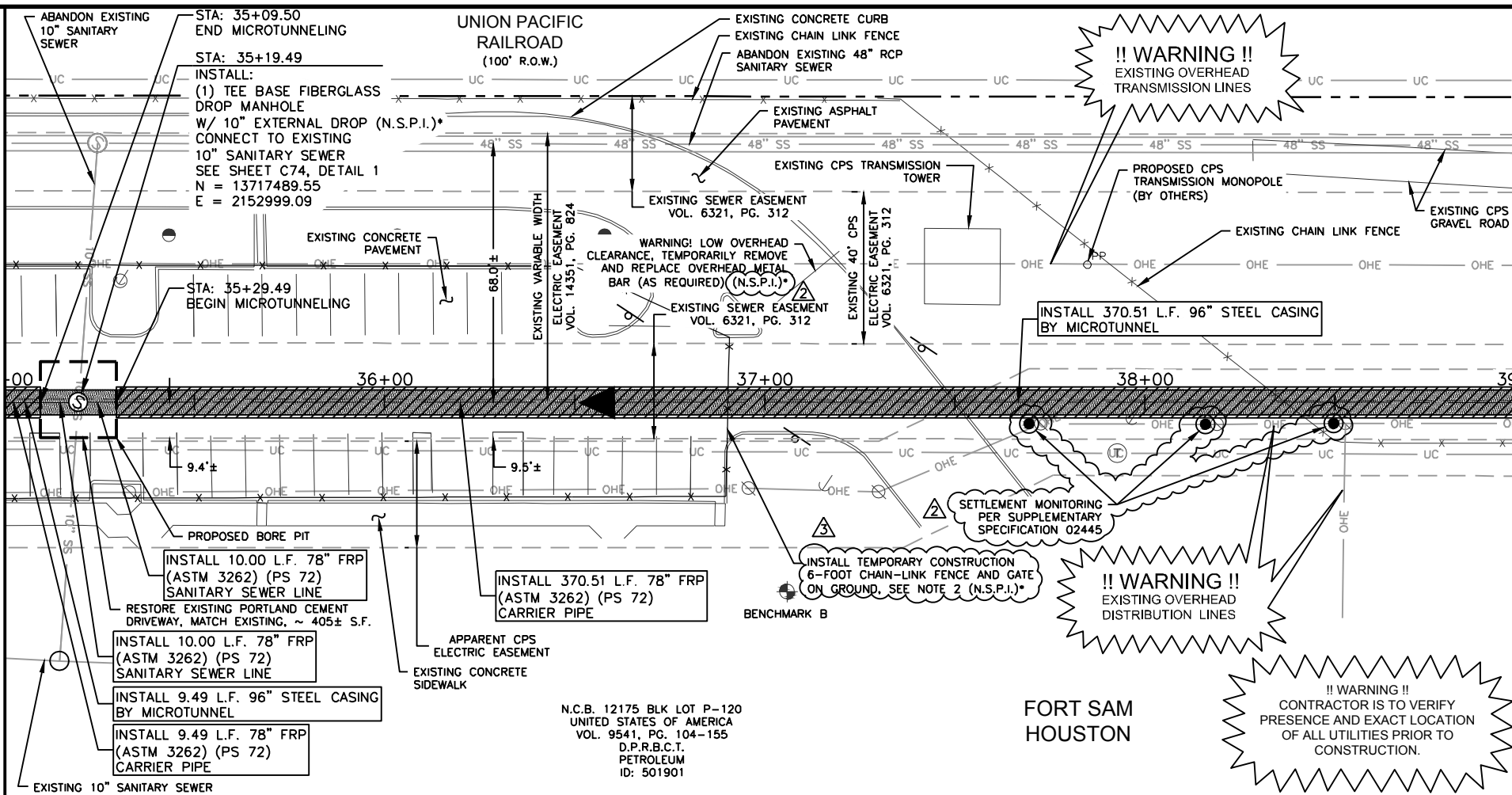


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DRAWN: DWG: N:\PROJECTS\15-4506\15-4506-01.DWG
DATE: 12/20/16 10:52 AM



MATCHLINE STA. 35+00

MATCHLINE STA. 39+00



ESTIMATED QUANTITIES			
ITEM	DESCRIPTION	UNIT	QUANTITY
C69/3	FORT SAM CONCRETE PAVEMENT REPLACEMENT (UNKNOWN THICKNESS)	SF	405
550.1	TRENCH EXCAVATION SAFETY PROTECTION	LF	29
857	78-INCH FRP (ASTM D-3262) (PS 72) SANITARY SEWER LINE (30' TO 35')	LF	29
853	FIBER-REINFORCED SANITARY SEWER DROP MANHOLE - TEE BASE FIBERGLASS MANHOLE, MITER	EA	1
853	FIBER-REINFORCED SANITARY SEWER MANHOLE - TEE BASE FIBERGLASS MANHOLE, MITER W/DROP EXTRA DEPTH (>6')	VF	25
02345	MICROTUNNELING - (96") INCLUSIVE OF CASING	LF	371
02349	78-INCH FRP (ASTM D-3262) (PS 72) CARRIER PIPE (INSTALL)	LF	371
866.3	SEWER MAIN POST TELEVISION INSPECTION (30" OR LARGER)	LF	400

- NOTES:
- REFERENCE TREE PROTECTION PLAN FOR TREE REMOVAL SHEETS TP-1 TO TP-35
 - CONTRACTOR TO REMOVE TEMPORARY CONSTRUCTION FENCING UPON COMPLETION OF CONSTRUCTION. AT NO TIME SHALL THE AVERITT EXPRESS SITE BE LEFT UNATTENDED BY THE CONTRACTOR WITHOUT EXISTING, PROPOSED OR TEMPORARY FENCING IN PLACE.
 - FOR CONTRACTOR ACCESS AND STAGING SEE SHEET C20
 - CONTRACTOR TO COORDINATE WITH CPS REGARDING ANY POTENTIAL CPS CONSTRUCTION OF REPLACING OVERHEAD TRANSMISSION TOWERS THAT MAY BE ONGOING DURING SEWER LINE CONSTRUCTION.
 - THE CONTRACTOR SHALL MAINTAIN SERVICE TO EXISTING SANITARY SEWERS AT ALL TIMES DURING CONSTRUCTION (N.S.P.I.).

!! WARNING !!
EXISTING OVERHEAD DISTRIBUTION LINES

!! WARNING !!
CONTRACTOR IS TO VERIFY PRESENCE AND EXACT LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.

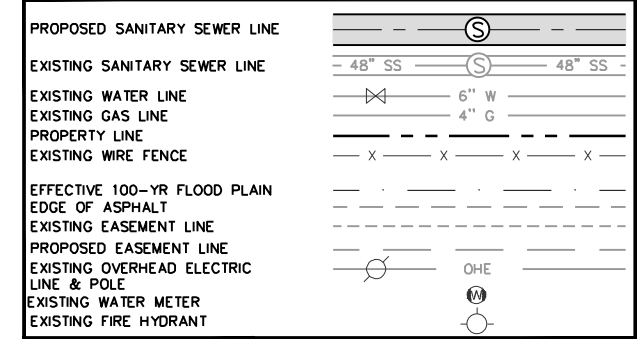
N.C.B. 12175 BLK LOT P-120
UNITED STATES OF AMERICA
VOL. 9541, PG. 104-155
D.P.R.B.C.I.
PETROLEUM
ID: 501901

LEGEND

NO SEPARATE PAY ITEM (N.S.P.I.)

FULL SIZE (22" x 34") 1" = 10' VERTICAL

HALF SIZE (11" x 17") 1" = 20' VERTICAL



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Phone - (210) 298-3800
Fax - (210) 298-3801

No.	Revision	By	Date
ADDENDUM 1		DTB	11/11/2016
ADDENDUM 3		DTB	12/05/2016
ADDENDUM 4		DTB	12/09/2016

E19: SEGUIN TO NACOGDOCHES ROAD - SEGMENT 1

SHEET

78-INCH SANITARY SEWER PLAN & PROFILE STA. 35+00 TO 39+00

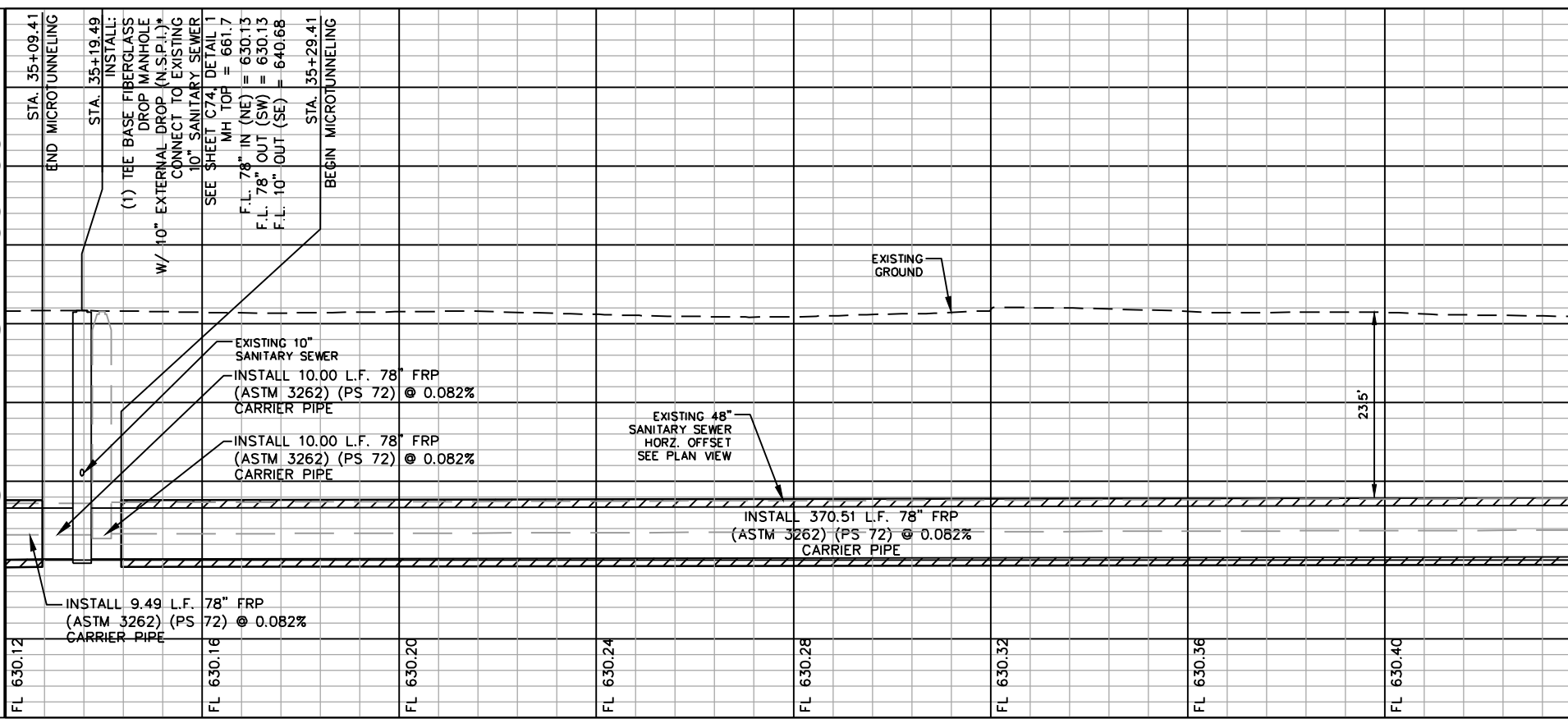
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DRAWN: DDH		
CHECKED: DTB		

700

700

MATCHLINE STA. 35+00

MATCHLINE STA. 39+00



35+00 35+50 36+00 36+50 37+00 37+50 38+00 38+50 39+00

PLOTTED BY: JESSICA DOVERE 12/20/16 1:58 PM
DWG NAME: SANANTIOUWATER/E19/SS-PROJ1.DWG
USER: JSD

PIPELINE CROSSING AGREEMENT

Mile Post: 252.29, Austin Subdivision
Location: San Antonio, Bexar County, Texas

THIS AGREEMENT (“Agreement”) is made and entered into as of November 30, 2016 (“Effective Date”) by and between **UNION PACIFIC RAILROAD COMPANY**, a Delaware corporation, (“Licensor”) and **SAN ANTONIO WATER SYSTEM**, to be addressed at 2800 US 281 North, San Antonio, Texas 78212 (“Licensee”).

IT IS MUTUALLY AGREED BY AND BETWEEN THE PARTIES HERETO AS FOLLOWS:

Article 1. LICENSOR GRANTS RIGHT.

In consideration of the license fee to be paid by the Licensee and in further consideration of the covenants and agreements herein contained to be by the Licensee kept, observed and performed, the Licensor hereby grants to the Licensee the right to construct and thereafter, during the term hereof, to maintain and operate

one 78 inch encased pipeline for transporting and conveying wastewater only

across Licensor's track(s) and property (the “Pipeline”) in the location shown and in conformity with the dimensions and specifications indicated on the print dated 9/6/16 and marked **Exhibit A**, attached hereto and hereby made a part hereof. Under no circumstances shall Licensee modify the use of the Pipeline for a purpose other than transporting and conveying sanitary sewage, and the Pipeline shall not be used to convey any other substance, any fiber optic cable, or for any other use, whether such use is currently technologically possible, or whether such use may come into existence during the life of this Agreement.

For the purposes of Exhibit A, Licensee acknowledges that if it or its contractor provides to Railroad digital imagery depicting the Pipeline crossing, Licensee authorizes Railroad to use the Digital Imagery in preparing the print attached as an exhibit hereto. Licensee represents and warrants that through a license or otherwise, it has the right to use the Digital Imagery and to permit Railroad to use the Digital Imagery in said manner.

Article 2. LICENSE FEE.

Upon execution of this Agreement, the Licensee shall pay to the Licensor a one-time License Fee of **Eight Thousand Three Hundred Dollars (\$8,300.00)**.

Article 3. CONSTRUCTION, MAINTENANCE AND OPERATION.

The grant of right herein made to the Licensee is subject to each and all of the terms, provisions, conditions, limitations and covenants set forth herein and in **Exhibit B**, attached hereto and hereby made a part hereof.

Article 4. DEFINITION OF LICENSEE.

For purposes of this Agreement, all references in this Agreement to the Licensee shall include the Licensee's contractors, subcontractors, officers, agents and employees, and others acting under its or their authority. If a contractor is hired by the Licensee for any work performed on the Pipeline (including initial construction and subsequent relocation or maintenance and repair work), then the Licensee shall provide a copy of this Agreement to its contractor and require its contractor to comply with all the terms and provisions hereof relating to the work to be performed. Any contractor or subcontractor shall be deemed an agent of Licensee for the purpose of this Agreement, and Licensee shall require such contractor or subcontractor to release, defend and indemnify Licensor to the same extent and under the same terms and conditions as Licensee is required to release, defend and indemnify Licensor herein.

Article 5. INSURANCE.

A. During the life of the License, Licensee shall fully comply with the insurance requirements described in **Exhibit C**.

B. Failure to maintain insurance as required shall entitle, but not require, Licensor to terminate this License immediately.

C. If the Licensee is subject to statute(s) limiting its insurance liability and/or limiting its ability to obtain insurance in compliance with **Exhibit C** of this license, those statutes shall apply.

D. Licensee hereby acknowledges that it has reviewed the requirements of **Exhibit C**, including without limitation the requirement for Railroad Protective Liability Insurance during construction, maintenance, installation, repair or removal of the pipeline which is the subject of this Agreement.

E. Licensee is allowed to retain (self-insure) in whole or in part any insurance obligation under this Agreement. Any retention shall be for the account of Licensee. If Licensee elects to retain (self-insure) in whole or in part any insurance required by the Agreement Licensee agrees that it shall provide Railroad with the same coverage that would have been provided to it by the required commercial insurance forms had Licensee obtained commercial insurance. For all coverage not retained (not self-insured) Licensee shall furnish Railroad with certificate(s) of insurance, executed by a duly authorized representative of each insurer, showing compliance with the insurance requirements in this Agreement.

Article 6. GUIDELINES FOR ABANDONMENT PROCEDURES ON UPRR RIGHT-OF-WAY

For pipelines, steam tunnels, pipe tunnels and other similar structures that are scheduled for abandonment on the UPRR right-of-way, it is the current standard of the UPRR Structures Department to require the pipeline/structure to be filled with CLSM (Controlled Low-Strength Material). This process is designed to help avoid future subsidence as the line deteriorates after abandonment. The use of low strength CLSM also allows the future removal of CLSM at a later date if deemed necessary.

The following requirements are adapted from *General Notes and Details for Round Steel Pipe Culverts, UPRR plan 680000*

1. The CLSM material shall have an unconfined compressive strength of 50 to 300psi. (Currently, UPRR specifies 300 psi as a standard for abandoned pipeline fill. This strength should provide adequate protection while allowing future removal if necessary.)

2. The mixture shall consist of water, Portland cement, fly ash, and sound fine or coarse aggregate or both.
3. The mix design shall allow adequate flowability without segregation of aggregates.
4. Hardening time is of prime importance and CLSM should develop 50psi in about one hour.
5. The maximum layer of thickness for CLSM shall be 3 feet.
6. Additional layers shall not be placed until the CLSM has lost sufficient moisture (to be walked on without indenting more than 2 inches)*

*In most cases, it will not be possible to check moisture content by the “walking on” procedure above, however a reasonable time should be provided before placing additional layers/lifts.

Additional notes:

1. For pipelines or structures with a depth greater than 3 feet, CLSM shall be placed in lifts.
2. Contractor should verify no voids will be present after filling the structure.
3. Access to fill pipelines shall be from off the UPRR right-of-way if possible. If excavation is required for the fill procedure, excavations shall meet requirements for shoring design.

Article 7. SPECIAL PROVISIONS AND EXISTING STRUCTURE ABANDONMENT CERTIFICATION

Licensee agrees to notify the Railroad Representative and execute the Certification attached as **Exhibit E** and return when it has completed the abandonment of the existing 48 inch sanitary sewer identified under railroad audit number KX26499 on Railroad property. Track and ground monitoring required during construction, minimum casing thickness of one inch, and pipelines to be prominently marked at Railroad right of way limits

Article 8. TERM.

This Agreement shall take effect as of the Effective Date first herein written and shall continue in full force and effect until terminated as herein provided.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed as of the date first herein written.

UNION PACIFIC RAILROAD COMPANY

SAN ANTONIO WATER SYSTEM

By: _____

By: _____

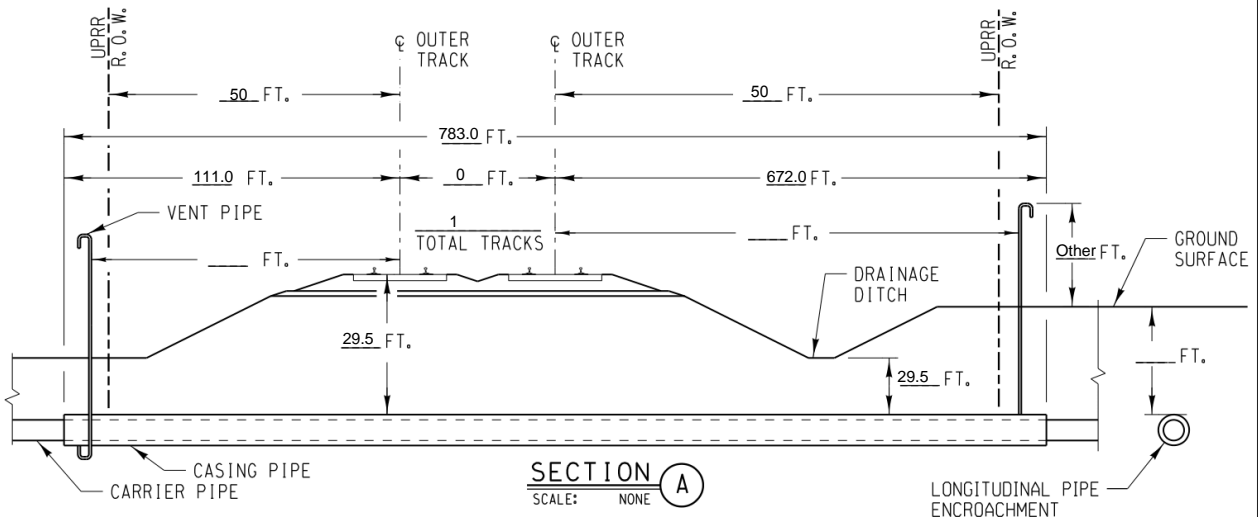
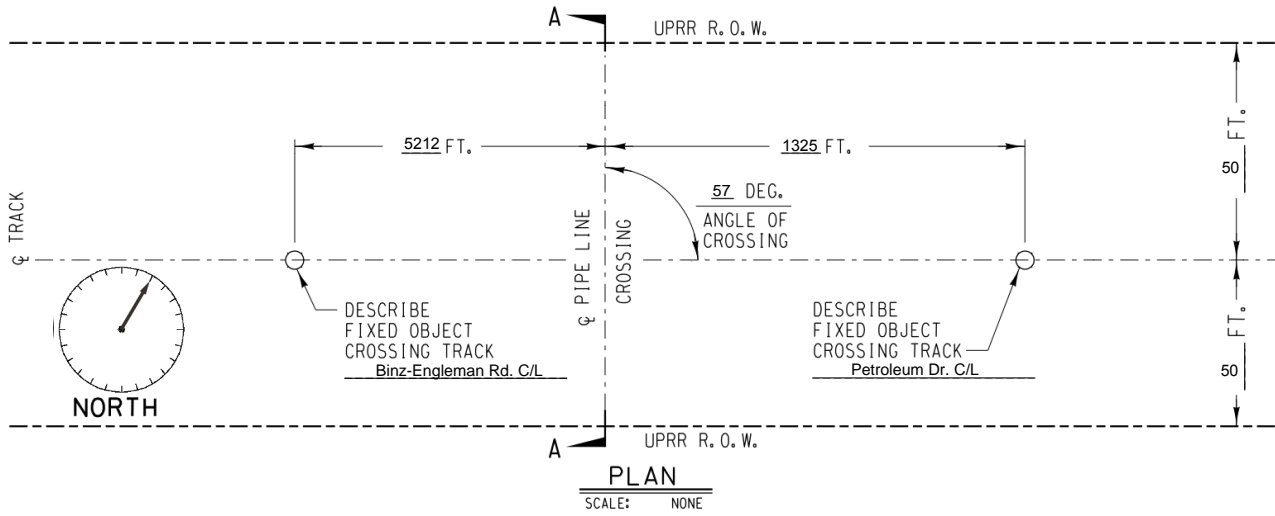
Kylan Crawford
Senior Manager - Real Estate

Name Printed: _____

Title: _____

NON-FLAMMABLE LIQUID PIPELINE

- CROSSING
- ENCROACHMENT
- BOTH



- NOTES:
 1) ALL DIMENSIONS MEASURED PERPENDICULAR TO THE CENTERLINE OF TRACK
 2) REFER TO AREMA VOLUME 1. CHAPTER 1. PART 5. SECTION 5.1

- A) METHOD OF INSTALLATION _____
 B) DIST. FROM CENTERLINE OF TRACK TO PIPE ENCROACHMENT _____
 C) SIGNS PROVIDED? AT MINIMUM SIGNS WILL BE PROVIDED AS STATED ABOVE
 D) CARRIER MATERIAL _____. IF RCP, CLASS V? NA.
 COMMODITY TO BE CONVEYED WASTEWATER.
 OPERATIONAL PRESSURE 0.0 PSI. MAOP 0.0 PSI.
 WALL THICKNESS (INCH)/ SCHEDULE 1.71. DIAMETER 78.0 IN.
 CATHODIC/COATING PROTECTION YES
 E) CASING MATERIAL STEEL PIPE. IF RCP, CLASS V? NA.
 TOTAL LENGTH CASING PIPE: 783.0 FT.
 WALL THICKNESS 1.0 IN. DIAMETER 96.0 IN.
 CATHODIC/COATING PROTECTION YES.
 CASING PIPE IS OPEN AT THE ENDS.
 F) DISTANCE FROM CENTERLINE OF TRACK TO NEAR FACE OF BORING AND JACKING PITS WHEN MEASURED AT RIGHT ANGLES 111.0 AND 672.0.



BUILDING AMERICA®

EXHIBIT "A"

SUBDIVISION: <u>Austin Sub.</u>	
TRACK TYPE: <u>MAINLINE TRACK</u>	
M.P.: <u>252.29</u>	LAT.: <u>29.46416667</u>
E.S.M.: <u>5014+25</u>	LONG.: <u>-98.41416667</u>
NEAREST CITY: <u>SAN ANTONIO</u>	COUNTY: <u>BEXAR</u> STATE: <u>TX</u>
APPLICANT: <u>SAN ANTONIO WATER SYSTEM</u>	
FILE NO.: <u>0301124</u>	DATE: <u>09/06/2016</u>

EXHIBIT B

Section 1. LIMITATION AND SUBORDINATION OF RIGHTS GRANTED.

- A. The foregoing grant of right is subject and subordinate to the prior and continuing right and obligation of the Licensor to use and maintain its entire property including the right and power of the Licensor to construct, maintain, repair, renew, use, operate, change, modify or relocate railroad tracks, signal, communication, fiber optics, or other wirelines, pipelines and other facilities upon, along or across any or all parts of its property, all or any of which may be freely done at any time or times by the Licensor without liability to the Licensee or to any other party for compensation or damages.
- B. The foregoing grant is also subject to all outstanding superior rights (including those in favor of licensees and lessees of the Licensor's property, and others) and the right of the Licensor to renew and extend the same, and is made without covenant of title or for quiet enjoyment.

Section 2. CONSTRUCTION, MAINTENANCE AND OPERATION.

- A. The Pipeline shall be designed, constructed, operated, maintained, repaired, renewed, modified and/or reconstructed by the Licensee in strict conformity with (i) Licensor's current standards and specifications ("UP Specifications"), except for variances approved in advance in writing by the Licensor's Assistant Vice President Engineering – Design, or his authorized representative; (ii) such other additional safety standards as the Licensor, in its sole discretion, elects to require, including, without limitation, American Railway Engineering and Maintenance-of-Way Association ("AREMA") standards and guidelines (collectively, "UP Additional Requirements"), and (iii) all applicable laws, rules and regulations ("Laws"). If there is any conflict between the requirements of any Law and the UP Specifications or the UP Additional Requirements, the most restrictive will apply.
- B. All work performed on property of the Licensor in connection with the design, construction, maintenance, repair, renewal, modification or reconstruction of the Pipeline shall be done to the satisfaction of the Licensor.
- C. Prior to the commencement of any work in connection with the design, construction, maintenance, repair, renewal, modification, relocation, reconstruction or removal of the Pipeline from Licensor's property, the Licensee shall submit to the Licensor plans setting out the method and manner of handling the work, including the shoring and cribbing, if any, required to protect the Licensor's operations, and shall not proceed with the work until such plans have been approved by the Licensor's Assistant Vice President Engineering Design, or his authorized representative, and then the work shall be done to the satisfaction of the Licensor's Assistant Vice President Engineering Design or his authorized representative. The Licensor shall have the right, if it so elects, to provide such support as it may deem necessary for the safety of its track or tracks during the time of construction, maintenance, repair, renewal, modification, relocation, reconstruction or removal of the Pipeline, and, in the event the Licensor provides such support, the Licensee shall pay to the Licensor, within fifteen (15) days after bills shall have been rendered therefore, all expenses incurred by the Licensor in connection therewith, which expenses shall

include all assignable costs.

- D. The Licensee shall keep and maintain the soil over the Pipeline thoroughly compacted and the grade even with the adjacent surface of the ground.
- E. In the prosecution of any work covered by this Agreement, Licensee shall secure any and all necessary permits and shall comply with all applicable federal, state and local laws, regulations and enactments affecting the work including, without limitation, all applicable Federal Railroad Administration regulations.

Section 3. NOTICE OF COMMENCEMENT OF WORK / LICENSOR REPRESENTATIVE / SUPERVISION / FLAGGING / SAFETY.

- A. If an emergency should arise requiring immediate attention, the Licensee shall provide as much notice as practicable to Licensor before commencing any work. In all other situations, the Licensee shall notify the Licensor at least ten (10) days (or such other time as the Licensor may allow) in advance of the commencement of any work upon property of the Licensor in connection with the construction, maintenance, repair, renewal, modification, reconstruction, relocation or removal of the Pipeline. All such work shall be prosecuted diligently to completion. The Licensee will coordinate its initial, and any subsequent work with the following employee of Licensor or his or her duly authorized representative (hereinafter "Licensor Representative" or "Railroad Representative"):

PEDERSON, Jason M.
MANAGER OF TRACK MAINTENANCE
210/8 825-0362
jpederso@up.com
8555 E LOOP 1604 S
ADKINS, TX 78101

ALCALA, Mario
MANAGER OF SIGNAL MAINTENANCE
210/8 200-3505
malcala@up.com
1711 QUINTANA RD MSM Office
San Antonio, TX 78211

- B. Licensee, at its own expense, shall adequately police and supervise all work to be performed. The responsibility of Licensee for safe conduct and adequate policing and supervision of work shall not be lessened or otherwise affected by Licensor's approval of plans and specifications involving the work, or by Licensor's collaboration in performance of any work, or by the presence at the work site of a Licensor Representative, or by compliance by Licensee with any requests or recommendations made by the Licensor Representative.
- C. At the request of Licensor, Licensee shall remove from Licensor's property any employee who fails to conform to the instructions of the Licensor Representative in connection with the work on Licensor's property. Licensee shall indemnify Licensor against any claims arising from the removal of any such employee from Licensor's property.
- D. Licensee shall notify the Licensor Representative at least ten (10) working days in advance of proposed performance of any work in which any person or equipment will be within twenty-five (25) feet of any track, or will be near enough to any track that any equipment extension (such as, but not limited to, a crane boom) will reach to within twenty-five (25) feet of any track. No work of any kind shall be performed, and no person, equipment, machinery, tool(s), material(s), vehicle(s), or thing(s) shall be located, operated, placed, or stored within twenty-five (25) feet of any of Licensor's track(s) at any time, for any reason, unless and until a railroad flagman is provided to watch for trains. Upon receipt of such ten (10) day notice, the Licensor

Representative will determine and inform Licensee whether a flagman need be present and whether any special protective or safety measures need to be implemented. If flagging or other special protective or safety measures are performed by Licensor, Licensor will bill Licensee for such expenses incurred by Licensor, unless Licensor and a federal, state or local governmental entity have agreed that Licensor is to bill such expenses to the federal, state or local governmental entity. If Licensor will be sending the bills to Licensee, Licensee shall pay such bills within thirty (30) days of receipt of billing. If Licensor performs any flagging, or other special protective or safety measures are performed by Licensor, Licensee agrees that Licensee is not relieved of any of responsibilities or liabilities set forth in this Agreement.

- E. The rate of pay per hour for each flagman will be the prevailing hourly rate in effect for an eight-hour day for the class of flagmen used during regularly assigned hours and overtime in accordance with Labor Agreements and Schedules in effect at the time the work is performed. In addition to the cost of such labor, a composite charge for vacation, holiday, health and welfare, supplemental sickness, Railroad Retirement and unemployment compensation, supplemental pension, Employees Liability and Property Damage and Administration will be included, computed on actual payroll. The composite charge will be the prevailing composite charge in effect at the time the work is performed. One and one-half times the current hourly rate is paid for overtime, Saturdays and Sundays, and two and one-half times current hourly rate for holidays. Wage rates are subject to change, at any time, by law or by agreement between Licensor and its employees, and may be retroactive as a result of negotiations or a ruling of an authorized governmental agency. Additional charges on labor are also subject to change. If the wage rate or additional charges are changed, Licensee (or the governmental entity, as applicable) shall pay on the basis of the new rates and charges.
- F. Reimbursement to Licensor will be required covering the full eight-hour day during which any flagman is furnished, unless the flagman can be assigned to other railroad work during a portion of such day, in which event reimbursement will not be required for the portion of the day during which the flagman is engaged in other railroad work. Reimbursement will also be required for any day not actually worked by the flagman following the flagman's assignment to work on the project for which Licensor is required to pay the flagman and which could not reasonably be avoided by Licensor by assignment of such flagman to other work, even though Licensee may not be working during such time. When it becomes necessary for Licensor to bulletin and assign an employee to a flagging position in compliance with union collective bargaining agreements, Licensee must provide Licensor a minimum of five (5) days notice prior to the cessation of the need for a flagman. If five (5) days notice of cessation is not given, Licensee will still be required to pay flagging charges for the five (5) day notice period required by union agreement to be given to the employee, even though flagging is not required for that period. An additional ten (10) days notice must then be given to Licensor if flagging services are needed again after such five day cessation notice has been given to Licensor.
- G. Safety of personnel, property, rail operations and the public is of paramount importance in the prosecution of the work performed by Licensee or its contractor. Licensee shall be responsible for initiating, maintaining and supervising all safety, operations and programs in connection with the work. Licensee and its contractor shall at a minimum comply with Licensor's safety standards listed in **Exhibit D**, hereto attached, to ensure uniformity with the safety standards followed by Licensor's own forces. As a part of Licensee's safety responsibilities, Licensee shall notify Licensor if it determines that any of Licensor's safety standards are contrary to good safety practices. Licensee and its contractor shall furnish copies of **Exhibit D** to each of its employees before they enter the job site.

- H. Without limitation of the provisions of paragraph G above, Licensee shall keep the job site free from safety and health hazards and ensure that their employees are competent and adequately trained in all safety and health aspects of the job.
- I. Licensee shall have proper first aid supplies available on the job site so that prompt first aid services may be provided to any person injured on the job site. Prompt notification shall be given to Licensor of any U.S. Occupational Safety and Health Administration reportable injuries. Licensee shall have a non-delegable duty to control its employees while they are on the job site or any other property of Licensor, and to be certain they do not use, be under the influence of, or have in their possession any alcoholic beverage, drug or other substance that may inhibit the safe performance of any work.
- J. If and when requested by Licensor, Licensee shall deliver to Licensor a copy of its safety plan for conducting the work (the "Safety Plan"). Licensor shall have the right, but not the obligation, to require Licensee to correct any deficiencies in the Safety Plan. The terms of this Agreement shall control if there are any inconsistencies between this Agreement and the Safety Plan.

Section 4. LICENSEE TO BEAR ENTIRE EXPENSE.

The Licensee shall bear the entire cost and expense incurred in connection with the design, construction, maintenance, repair and renewal and any and all modification, revision, relocation, removal or reconstruction of the Pipeline, including any and all expense which may be incurred by the Licensor in connection therewith for supervision, inspection, flagging, or otherwise.

Section 5. REINFORCEMENT, RELOCATION OR REMOVAL OF PIPELINE.

- A. The license herein granted is subject to the needs and requirements of the Licensor in the safe and efficient operation of its railroad and in the improvement and use of its property. The Licensee shall, at the sole expense of the Licensee, reinforce or otherwise modify the Pipeline, or move all or any portion of the Pipeline to such new location, or remove the Pipeline from the Licensor's property, as the Licensor may designate, whenever, in the furtherance of its needs and requirements, the Licensor, at its sole election, finds such action necessary or desirable.
- B. All the terms, conditions and stipulations herein expressed with reference to the Pipeline on property of the Licensor in the location hereinbefore described shall, so far as the Pipeline remains on the property, apply to the Pipeline as modified, changed or relocated within the contemplation of this section.

Section 6. NO INTERFERENCE WITH LICENSOR'S OPERATION.

- A. The Pipeline and all parts thereof within and outside of the limits of the property of the Licensor shall be designed, constructed and, at all times, maintained, repaired, renewed and operated in such manner as to cause no interference whatsoever with the constant, continuous and uninterrupted use of the tracks, property and facilities of the Licensor and nothing shall be done or suffered to be done by the Licensee at any time that would in any manner impair the safety thereof.
- B. Explosives or other highly flammable substances shall not be stored on Licensor's property without the prior written approval of Licensor.

- C. No additional vehicular crossings (including temporary haul roads) or pedestrian crossings over Licensor's trackage shall be installed or used by Licensor or its contractors without the prior written permission of Licensor.
- D. When not in use, any machinery and materials of Licensee or its contractors shall be kept at least fifty (50) feet from the centerline of Licensor's nearest track.
- E. Operations of Licensor and work performed by Licensor's personnel may cause delays in the work to be performed by Licensee. Licensee accepts this risk and agrees that Licensor shall have no liability to Licensee or any other person or entity for any such delays. Licensee shall coordinate its activities with those of Licensor and third parties so as to avoid interference with railroad operations. The safe operation of Licensor's train movements and other activities by Licensor take precedence over any work to be performed by Licensee.

Section 7. PROTECTION OF FIBER OPTIC CABLE SYSTEMS.

- A. Fiber optic cable systems may be buried on the Licensor's property. Protection of the fiber optic cable systems is of extreme importance since any break could disrupt service to users resulting in business interruption and loss of revenue and profits. Licensee shall telephone the Licensor during normal business hours (7:00 a.m. to 9:00 p.m. Central Time, Monday through Friday, except for holidays) at 1-800-336-9193 (also a 24-hour, 7-day number for emergency calls) to determine if fiber optic cable is buried anywhere on the Licensor's premises to be used by the Licensee. If it is, Licensee will telephone the telecommunications company(ies) involved, arrange for a cable locator, make arrangements for relocation or other protection of the fiber optic cable, all at Licensee's expense, and will commence no work on the Licensor's property until all such protection or relocation has been accomplished. Licensee shall indemnify and hold the Licensor harmless from and against all costs, liability and expense whatsoever (including, without limitation, attorneys' fees, court costs and expenses) arising out of or caused in any way by Licensee's failure to comply with the provisions of this paragraph.
- B. IN ADDITION TO OTHER INDEMNITY PROVISIONS IN THIS AGREEMENT, THE LICENSEE SHALL, TO THE EXTENT ALLOWED BY LAW AND THE TEXAS CONSTITUTION WITHOUT THE CREATION OF A SINKING FUND, AND SHALL CAUSE ITS CONTRACTOR TO, RELEASE, INDEMNIFY, DEFEND AND HOLD THE LICENSOR HARMLESS FROM AND AGAINST ALL COSTS, LIABILITY AND EXPENSE WHATSOEVER (INCLUDING, WITHOUT LIMITATION, ATTORNEYS' FEES, COURT COSTS AND EXPENSES) CAUSED BY THE NEGLIGENCE OF THE LICENSEE, ITS CONTRACTORS, AGENTS AND/OR EMPLOYEES, RESULTING IN (1) ANY DAMAGE TO OR DESTRUCTION OF ANY TELECOMMUNICATIONS SYSTEM ON LICENSOR'S PROPERTY, AND/OR (2) ANY INJURY TO OR DEATH OF ANY PERSON EMPLOYED BY OR ON BEHALF OF ANY TELECOMMUNICATIONS COMPANY, AND/OR ITS CONTRACTOR, AGENTS AND/OR EMPLOYEES, ON LICENSOR'S PROPERTY, EXCEPT IF SUCH COSTS, LIABILITY OR EXPENSES ARE CAUSED SOLELY BY THE DIRECT ACTIVE NEGLIGENCE OF THE LICENSOR. LICENSEE FURTHER AGREES THAT IT SHALL NOT HAVE OR SEEK RECOURSE AGAINST LICENSOR FOR ANY CLAIM OR CAUSE OF ACTION FOR ALLEGED LOSS OF PROFITS OR REVENUE OR LOSS OF SERVICE OR OTHER CONSEQUENTIAL DAMAGE TO A TELECOMMUNICATION COMPANY USING LICENSOR'S PROPERTY OR A CUSTOMER OR USER OF SERVICES OF THE FIBER OPTIC CABLE ON LICENSOR'S PROPERTY.**

Section 8. CLAIMS AND LIENS FOR LABOR AND MATERIAL; TAXES.

- A. The Licensee shall fully pay for all materials joined or affixed to and labor performed upon property of the Licensor in connection with the construction, maintenance, repair, renewal, modification or reconstruction of the Pipeline, and shall not permit or suffer any mechanic's or materialman's lien of any kind or nature to be enforced against the property for any work done or materials furnished thereon at the instance or request or on behalf of the Licensee. The Licensee shall indemnify and hold harmless the Licensor against and from any and all liens, claims, demands, costs and expenses of whatsoever nature in any way connected with or growing out of such work done, labor performed, or materials furnished.
- B. The Licensee shall promptly pay or discharge all taxes, charges and assessments levied upon, in respect to, or on account of the Pipeline, to prevent the same from becoming a charge or lien upon property of the Licensor, and so that the taxes, charges and assessments levied upon or in respect to such property shall not be increased because of the location, construction or maintenance of the Pipeline or any improvement, appliance or fixture connected therewith placed upon such property, or on account of the Licensee's interest therein. Where such tax, charge or assessment may not be separately made or assessed to the Licensee but shall be included in the assessment of the property of the Licensor, then the Licensee shall pay to the Licensor an equitable proportion of such taxes determined by the value of the Licensee's property upon property of the Licensor as compared with the entire value of such property.

Section 9. RESTORATION OF LICENSOR'S PROPERTY.

In the event the Licensee in any manner moves or disturbs any of the property of the Licensor in connection with the construction, maintenance, repair, renewal, modification, reconstruction, relocation or removal of the Pipeline, then in that event the Licensee shall, as soon as possible and at Licensee's sole expense, restore such property to the same condition as the same were before such property was moved or disturbed, and the Licensee shall indemnify and hold harmless the Licensor, its officers, agents and employees, against and from any and all liability, loss, damages, claims, demands, costs and expenses of whatsoever nature, including court costs and attorneys' fees, which may result from injury to or death of persons whomsoever, or damage to or loss or destruction of property whatsoever, when such injury, death, damage, loss or destruction grows out of or arises from the moving or disturbance of any other property of the Licensor.

Section 10. INDEMNITY.

- A. As used in this Section, "Licensor" includes other railroad companies using the Licensor's property at or near the location of the Licensee's installation and their officers, agents, and employees; "Loss" includes loss, damage, claims, demands, actions, causes of action, penalties, costs, and expenses of whatsoever nature, including court costs and attorneys' fees, which may result from: (a) injury to or death of persons whomsoever (including the Licensor's officers, agents, and employees, the Licensee's officers, agents, and employees, as well as any other person); and/or (b) damage to or loss or destruction of property whatsoever (including Licensee's property, damage to the roadbed, tracks, equipment, or other property of the Licensor, or property in its care or custody).
- B. AS A MAJOR INDUCEMENT AND IN CONSIDERATION OF THE LICENSE AND PERMISSION HEREIN GRANTED, TO THE FULLEST EXTENT PERMITTED BY LAW, THE LICENSEE SHALL, TO THE EXTENT ALLOWED BY LAW AND THE**

TEXAS CONSTITUTION WITHOUT THE CREATION OF A SINKING FUND, AND SHALL CAUSE ITS CONTRACTOR TO, RELEASE, INDEMNIFY, DEFEND AND HOLD HARMLESS THE LICENSOR FROM ANY LOSS OF ANY KIND, NATURE OR DESCRIPTION ARISING OUT OF, RESULTING FROM OR RELATED TO (IN WHOLE OR IN PART):

1. THE PROSECUTION OF ANY WORK CONTEMPLATED BY THIS AGREEMENT INCLUDING THE INSTALLATION, CONSTRUCTION, MAINTENANCE, REPAIR, RENEWAL, MODIFICATION, RECONSTRUCTION, RELOCATION, OR REMOVAL OF THE PIPELINE OR ANY PART THEREOF;

2. ANY RIGHTS OR INTERESTS GRANTED PURSUANT TO THIS LICENSE;

3. THE PRESENCE, OPERATION, OR USE OF THE PIPELINE OR CONTENTS ESCAPING THEREFROM;

4. THE ENVIRONMENTAL STATUS OF THE PROPERTY CAUSED BY OR CONTRIBUTED TO BY LICENSEE;

5. ANY ACT OR OMISSION OF LICENSEE OR LICENSEE'S OFFICERS, AGENTS, INVITEES, EMPLOYEES, OR CONTRACTORS OR ANYONE DIRECTLY OR INDIRECTLY EMPLOYED BY ANY OF THEM, OR ANYONE THEY CONTROL OR EXERCISE CONTROL OVER; OR

6. LICENSEE'S BREACH OF THIS AGREEMENT,

EXCEPT WHERE THE LOSS IS CAUSED BY THE SOLE DIRECT AND ACTIVE NEGLIGENCE OF THE LICENSOR, AS DETERMINED IN A FINAL JUDGMENT BY A COURT OF COMPETENT JURISDICTION, IT BEING THE INTENTION OF THE PARTIES THAT THE ABOVE INDEMNITY WILL OTHERWISE APPLY TO LOSSES CAUSED BY OR ARISING FROM, IN WHOLE OR IN PART, LICENSOR'S NEGLIGENCE.

C. Upon written notice from Licensor, Licensee agrees to assume the defense of any lawsuit or proceeding brought against any indemnitee by any entity, relating to any matter covered by this License for which Licensee has an obligation to assume liability for and/or save and hold harmless any indemnitee. Licensee shall pay all costs incident to such defense, including, but not limited to, reasonable attorney's fees, investigators' fees, litigation and appeal expenses, settlement payments and amounts paid in satisfaction of judgments.

Section 11. REMOVAL OF PIPELINE UPON TERMINATION OF AGREEMENT.

Prior to the termination of this Agreement howsoever, the Licensee shall, at Licensee's sole expense, remove the Pipeline from those portions of the property not occupied by the roadbed and track or tracks of the Licensor and shall restore, to the satisfaction of the Licensor, such portions of such property to as good a condition as they were in at the time of the construction of the Pipeline. If the Licensee fails to do the foregoing, the Licensor may, but is not obligated, to perform such work of removal and restoration at the cost and expense of the Licensee. In the event of the removal by the Licensor of the property of the Licensee and of the restoration of the roadbed and property as herein provided, the Licensor shall in no manner be liable to the Licensee for any damage sustained by the

Licensee for or on account thereof, and such removal and restoration shall in no manner prejudice or impair any right of action for damages, or otherwise, that the Licensor may have against the Licensee.

Section 12. WAIVER OF BREACH.

The waiver by the Licensor of the breach of any condition, covenant or agreement herein contained to be kept, observed and performed by the Licensee shall in no way impair the right of the Licensor to avail itself of any remedy for any subsequent breach thereof.

Section 13. TERMINATION.

- A. If the Licensee does not use the right herein granted or the Pipeline for one (1) year, or if the Licensee continues in default in the performance of any covenant or agreement herein contained for a period of thirty (30) days after written notice from the Licensor to the Licensee specifying such default, the Licensor may, at its option, forthwith immediately terminate this Agreement by written notice.
- B. In addition to the provisions of subparagraph (a) above, this Agreement may be terminated by written notice given by either party hereto to the other on any date in such notice stated, not less, however, than thirty (30) days subsequent to the date upon which such notice shall be given.
- C. Notice of default and notice of termination may be served personally upon the Licensee or by mailing to the last known address of the Licensee. Termination of this Agreement for any reason shall not affect any of the rights or obligations of the parties hereto which may have accrued, or liabilities, accrued or otherwise, which may have arisen prior thereto.

Section 14. AGREEMENT NOT TO BE ASSIGNED.

The Licensee shall not assign this Agreement, in whole or in part, or any rights herein granted, without the written consent of the Licensor, and it is agreed that any transfer or assignment or attempted transfer or assignment of this Agreement or any of the rights herein granted, whether voluntary, by operation of law, or otherwise, without such consent in writing, shall be absolutely void and, at the option of the Licensor, shall terminate this Agreement.

Section 15. SUCCESSORS AND ASSIGNS.

Subject to the provisions of Section 14 hereof, this Agreement shall be binding upon and inure to the benefit of the parties hereto, their heirs, executors, administrators, successors and assigns.

Section 16. SEVERABILITY.

Any provision of this Agreement which is determined by a court of competent jurisdiction to be invalid or unenforceable shall be invalid or unenforceable only to the extent of such determination, which shall not invalidate or otherwise render ineffective any other provision of this Agreement.

EXHIBIT C
Union Pacific Railroad Company
Contract Insurance Requirements

Licensee shall, at its sole cost and expense, procure and maintain during the life of this Agreement (except as otherwise provided in this Agreement) the following insurance coverage:

A. Commercial General Liability insurance. Commercial general liability (CGL) with a limit of not less than \$2,000,000 each occurrence and an aggregate limit of not less than \$4,000,000. CGL insurance must be written on ISO occurrence form CG 00 01 12 04 (or a substitute form providing equivalent coverage).

The policy must also contain the following endorsement, WHICH MUST BE STATED ON THE CERTIFICATE OF INSURANCE: “Contractual Liability Railroads” ISO form CG 24 17 10 01 (or a substitute form providing equivalent coverage) showing “Union Pacific Railroad Company Property” as the Designated Job Site.

B. Business Automobile Coverage insurance. Business auto coverage written on ISO form CA 00 01 10 01 (or a substitute form providing equivalent liability coverage) with a limit of not less \$2,000,000 for each accident, and coverage must include liability arising out of any auto (including owned, hired, and non-owned autos).

The policy must contain the following endorsements, WHICH MUST BE STATED ON THE CERTIFICATE OF INSURANCE: “Coverage For Certain Operations In Connection With Railroads” ISO form CA 20 70 10 01 (or a substitute form providing equivalent coverage) showing “Union Pacific Property” as the Designated Job Site.

C. Workers Compensation and Employers Liability insurance. Coverage must include but not be limited to:

Licensee’s statutory liability under the workers' compensation laws of the state(s) affected by this Agreement.

Employers' Liability (Part B) with limits of at least \$500,000 each accident, \$500,000 disease policy limit \$500,000 each employee.

If Licensee is self-insured, evidence of state approval and excess workers compensation coverage must be provided. Coverage must include liability arising out of the U. S. Longshoremen's and Harbor Workers' Act, the Jones Act, and the Outer Continental Shelf Land Act, if applicable.

D. Railroad Protective Liability insurance. Licensee must maintain “Railroad Protective Liability” insurance written on ISO occurrence form CG 00 35 12 04 (or a substitute form providing equivalent coverage) on behalf of Railroad only as named insured, with a limit of not less than \$2,000,000 per occurrence and an aggregate of \$6,000,000.

The definition of “JOB LOCATION” and “WORK” on the declaration page of the policy shall refer to this Agreement and shall describe all WORK or OPERATIONS performed under this agreement

E. Umbrella or Excess insurance. If Licensee utilizes umbrella or excess policies, and these policies must “follow form” and afford no less coverage than the primary policy.

Other Requirements

F. All policy(ies) required above (except worker’s compensation and employers liability) must include Railroad as “Additional Insured” using ISO Additional Insured Endorsements CG 20 26, and CA 20 48 (or substitute forms providing equivalent coverage). The coverage provided to Railroad as additional insured shall, to the extent provided under ISO Additional Insured Endorsement CG 20 26, and CA 20 48 provide coverage for Railroad’s negligence whether sole or partial, active or passive, and shall not be limited by Licensee’s liability under the indemnity provisions of this Agreement.

G. Punitive damages exclusion, if any, must be deleted (and the deletion indicated on the certificate of insurance), unless (a) insurance coverage may not lawfully be obtained for any punitive damages that may arise under this agreement, or (b) all punitive damages are prohibited by all states in which this agreement will be performed.

H. Licensee waives all rights of recovery, and its insurers also waive all rights of subrogation of damages against Railroad and its agents, officers, directors and employees for damages covered by the workers compensation and employers liability or commercial umbrella or excess liability obtained by Licensee required in this agreement, where permitted by law This waiver must be stated on the certificate of insurance.

I. All insurance policies must be written by a reputable insurance company acceptable to Railroad or with a current Best's Insurance Guide Rating of A- and Class VII or better, and authorized to do business in the state(s) in which the work is to be performed.

J. The fact that insurance is obtained by Licensee or by Railroad on behalf of Licensee will not be deemed to release or diminish the liability of Licensee, including, without limitation, liability under the indemnity provisions of this Agreement. Damages recoverable by Railroad from Licensee or any third party will not be limited by the amount of the required insurance coverage.

EXHIBIT D
SAFETY STANDARDS

MINIMUM SAFETY REQUIREMENTS

The term "employees" as used herein refer to all employees of Licensee or its contractors, subcontractors, or agents, as well as any subcontractor or agent of any Licensee.

I. Clothing

- A. All employees of Licensee will be suitably dressed to perform their duties safely and in a manner that will not interfere with their vision, hearing, or free use of their hands or feet.

Specifically, Licensee's employees must wear:

- (i) Waist-length shirts with sleeves.
 - (ii) Trousers that cover the entire leg. If flare-legged trousers are worn, the trouser bottoms must be tied to prevent catching.
 - (iii) Footwear that covers their ankles and has a defined heel. Employees working on bridges are required to wear safety-toed footwear that conforms to the American National Standards Institute (ANSI) and FRA footwear requirements.
- B. Employees shall not wear boots (other than work boots), sandals, canvas-type shoes, or other shoes that have thin soles or heels that are higher than normal.
- C. Employees must not wear loose or ragged clothing, neckties, finger rings, or other loose jewelry while operating or working on machinery.

II. Personal Protective Equipment

Licensee shall require its employee to wear personal protective equipment as specified by Railroad rules, regulations, or recommended or requested by the Railroad Representative.

- (i) Hard hat that meets the American National Standard (ANSI) Z89.1 – latest revision. Hard hats should be affixed with Licensee's company logo or name.
- (ii) Eye protection that meets American National Standard (ANSI) for occupational and educational eye and face protection, Z87.1 – latest revision. Additional eye protection must be provided to meet specific job situations such as welding, grinding, etc.
- (iii) Hearing protection, which affords enough attenuation to give protection from noise levels that will be occurring on the job site. Hearing protection, in the form of plugs or muffs, must be worn when employees are within:
 - 100 feet of a locomotive or roadway/work equipment
 - 15 feet of power operated tools
 - 150 feet of jet blowers or pile drivers

- 150 feet of retarders in use (when within 10 feet, employees must wear dual ear protection – plugs and muffs)
- (iv) Other types of personal protective equipment, such as respirators, fall protection equipment, and face shields, must be worn as recommended or requested by the Railroad Representative.

III. On Track Safety

Licensee and its contractor are responsible for compliance with the Federal Railroad Administration's Roadway Worker Protection regulations – 49CFR214, Subpart C and Railroad's On-Track Safety rules. Under 49CFR214, Subpart C, railroad contractors are responsible for the training of their employees on such regulations. In addition to the instructions contained in Roadway Worker Protection regulations, all employees must:

- (i) Maintain a minimum distance of at least twenty-five (25) feet to any track unless the Railroad Representative is present to authorize movements.
- (ii) Wear an orange, reflectorized work wear approved by the Railroad Representative.
- (iii) Participate in a job briefing that will specify the type of On-Track Safety for the type of work being performed. Licensee must take special note of limits of track authority, which tracks may or may not be fouled, and clearing the track. Licensee will also receive special instructions relating to the work zone around machines and minimum distances between machines while working or traveling.

IV. Equipment

- A. It is the responsibility of Licensee to ensure that all equipment is in a safe condition to operate. If, in the opinion of the Railroad Representative, any of Licensee's equipment is unsafe for use, Licensee shall remove such equipment from Railroad's property. In addition, Licensee must ensure that the operators of all equipment are properly trained and competent in the safe operation of the equipment. In addition, operators must be:
 - Familiar and comply with Railroad's rules on lockout/tagout of equipment.
 - Trained in and comply with the applicable operating rules if operating any hy-rail equipment on-track.
 - Trained in and comply with the applicable air brake rules if operating any equipment that moves rail cars or any other rail bound equipment.
- B. All self-propelled equipment must be equipped with a first-aid kit, fire extinguisher, and audible back-up warning device.
- C. Unless otherwise authorized by the Railroad Representative, all equipment must be parked a minimum of twenty-five (25) feet from any track. Before leaving any equipment unattended, the operator must stop the engine and properly secure the equipment against movement.
- D. Cranes must be equipped with three orange cones that will be used to mark the working area of the crane and the minimum clearances to overhead powerlines.

V. General Safety Requirements

- A. Licensee shall ensure that all waste is properly disposed of in accordance with applicable federal and state regulations.
- B. Licensee shall ensure that all employees participate in and comply with a job briefing conducted by the Railroad Representative, if applicable. During this briefing, the Railroad Representative will specify safe work procedures, (including On-Track Safety) and the potential hazards of the job. If any employee has any questions or concerns about the work, the employee must voice them during the job briefing. Additional job briefings will be conducted during the work as conditions, work procedures, or personnel change.
- C. All track work performed by Licensee meets the minimum safety requirements established by the Federal Railroad Administration's Track Safety Standards 49CFR213.
- D. All employees comply with the following safety procedures when working around any railroad track:
 - (i) Always be on the alert for moving equipment. Employees must always expect movement on any track, at any time, in either direction.
 - (ii) Do not step or walk on the top of the rail, frog, switches, guard rails, or other track components.
 - (iii) In passing around the ends of standing cars, engines, roadway machines or work equipment, leave at least 20 feet between yourself and the end of the equipment. Do not go between pieces of equipment of the opening is less than one car length (50 feet).
 - (iv) Avoid walking or standing on a track unless so authorized by the employee in charge.
 - (v) Before stepping over or crossing tracks, look in both directions first.
 - (vi) Do not sit on, lie under, or cross between cars except as required in the performance of your duties and only when track and equipment have been protected against movement.
- E. All employees must comply with all federal and state regulations concerning workplace safety.

EXHIBIT E

CERTIFICATION OF FACILITY REMOVAL/ABANDONMENT

UNION PACIFIC RAILROAD COMPANY, a Delaware corporation, or their predecessors in interest (if any), and **SAN ANTONIO WATER SYSTEM**, or their predecessors in interest, have heretofore entered into an agreement dated August 5, 1969, bearing Railroad Company Audit No. KX26499 covering a 48 inch sanitary sewer pipeline crossing in San Antonio, Bexar County, Texas.

SAN ANTONIO WATER SYSTEM certifies that the facilities have been removed and that the utility crossing, including any appurtenances thereto, is no longer physically present on the subject property. Certification shall be made by execution and return of this letter, where indicated below, by an authorized corporate officer. Once received, the underlying agreement will be terminated and any currently outstanding bills will be cancelled. Termination of the agreement shall not otherwise affect any of the rights, obligations or liabilities of the parties, accrued or otherwise, which may have arisen prior to the effective date of termination of the agreement. If the facilities have been abandoned but not removed, the agreement may not be terminated either until removal, or until a plan for abandonment has been approved by Union Pacific.

Executed this _____ day of _____, 20____.

UNION PACIFIC RAILROAD COMPANY

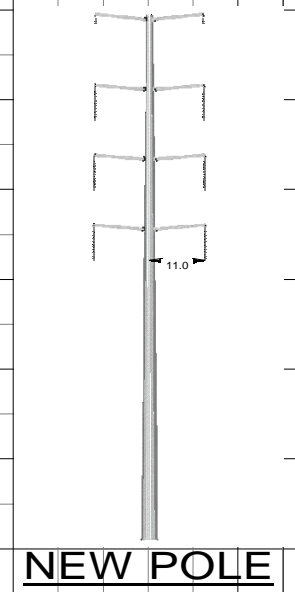
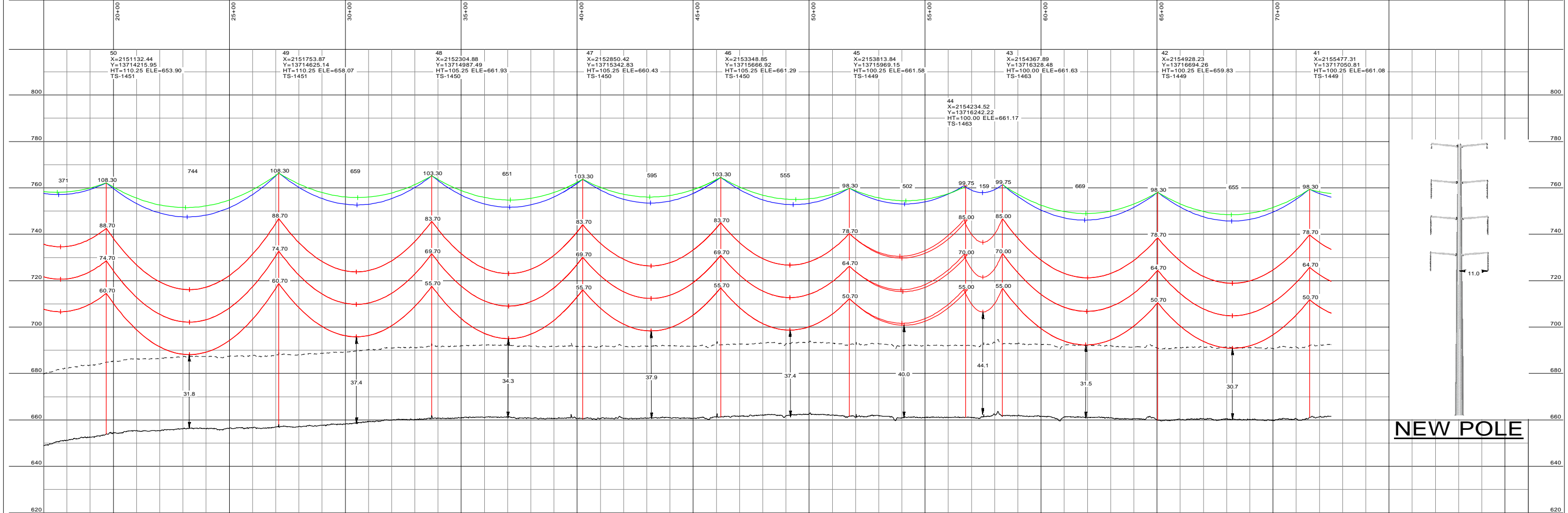
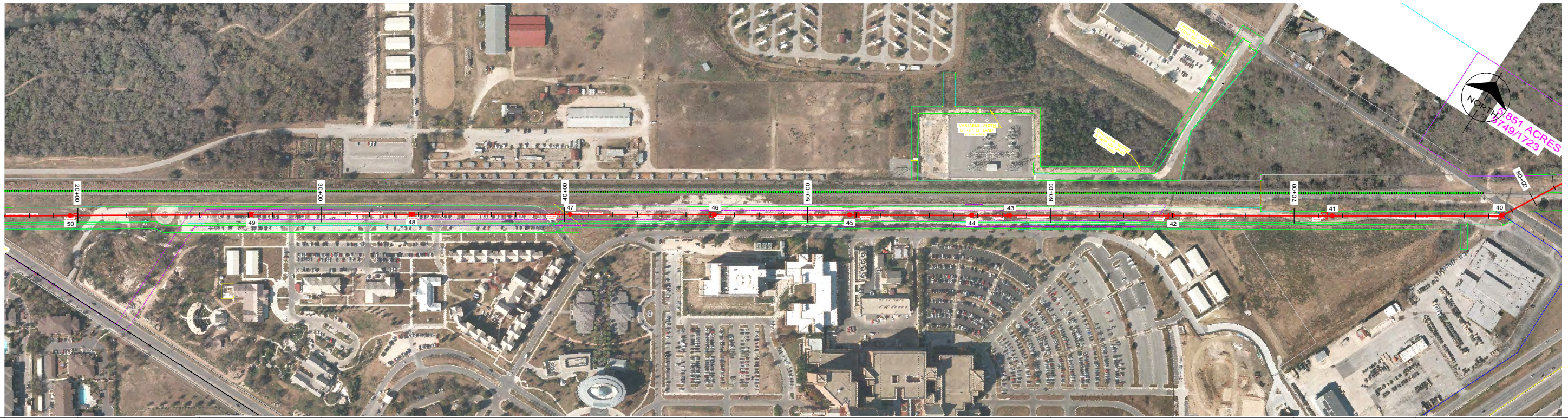
SAN ANTONIO WATER SYSTEM

By: _____

Daniel Peters
Manager II - Real Estate

By: _____

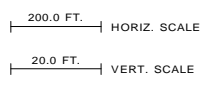
Title: _____



NEW POLE

WIRE LEGEND

—	795 ACSSS/TW "DRAKE"
—	OPGW S1-50/61/668
—	3/8" EHS SHIELD WIRE



CPS ENERGY
SAN ANTONIO, TEXAS

DRAWN:	R. HEARD	DATE:	11/28/2016
CHECKED:	R. HEARD	SCALE:	AS SHOWN
APPROVED:	R. HEARD	SHEET:	1 OF 1
SYSTEM	I.D.	DRAWING NO.	CODE
T	0164		17

COLISEUM TO KIRBY
138KV REBUILT
PHASE 1
NEW CONSTRUCTION

PROPRIETARY
CONFIDENTIAL - COMPETITIVE MATTERS

CONTRACTOR'S BID PACKET CHECKLIST:
E19 Segment 1 Project
SAWS Job No. 15-4506
SAWS Solicitation No. CO-00104-DW
Rev. 12/09/16

Items to be included for Submittal with Bid:

- Bid proposal signature page and Acknowledgement of All Addendums
(See Addendum 4)
- Bid proposal General Bid Items (See Addendum 4)
- Proposal Certification; page PC-1
- Bid Bond/Cashier's Check
- Statement on President's Executive Orders – Page IB 6 or 7
- Good Faith Effort Plan
- Conflict of Interest Questionnaire - Form CIQ (*Rev. 11/30/2015*)
- Proof of Insurability (Letter from Insurer or Sample Certificate of Insurance)
- Company Information Packet
- Statement regarding ability to complete the project
- Baseline schedule in Microsoft Project Format – refer to Supplemental Conditions
- Record of Performance Forms (See Addendum 3)
- W-9
- Financial Statement