



W-6 UPPER SEGMENT: HWY 90 TO SW MILITARY DRIVE SEWER MAIN PROJECT

Solicitation Number: CO-00317

Job No.: 19-4519

ADDENDUM 1

March 10, 2020

To Respondent of Record:

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

RESPONSES TO QUESTIONS

Q1: In the Supplementary Instructions to Respondents Paragraph C. Required Experience the reference for prior experience is for “wastewater pipeline installations via tunnel construction methods are a primary business focus and service”. Would larger diameter tunneling projects that do not include the installation of pipelines qualify as required experience?

Response: *Experience performing large tunnels will be reviewed and considered but during evaluation may not be scored as high as past performance with similar scope to the subject project.*

Reminder, Respondents submitting a proposal for this RFCSP should clearly demonstrate, completely and sufficiently, that wastewater pipeline installations via tunnel construction methods are a primary business focus and service.

Reminder, SAWS in its sole discretion will determine whether a submitted project by Respondent is suitably comparable to the work in this RFCSP.

Q2: Can the required experience components be provided by different members of the same bidding Team?

Response: *Yes, however, regarding the prime contractor, a minimum of two (2) of the three (3) projects provided must have been performed by proposed Key Personnel (Project Manager, Project Engineer, Lead Surveyor, Quality Assurance and Quality Control Lead, Project Scheduler, Project Superintendent, Tunneling Superintendent(s), Tunnel Boring Machine (TBM) Operators, and Safety Manager). Also, if the prime contractor is relying on elements of it’s sub-contractors to meet the experience requirements for this project, SAWS retains sole discretion regarding whether or not the contractor team sufficiently meets the experience requirements for the project.*

Q3: If we are unable to attend the geotechnical core sample viewing on March 19th, will we be able to schedule a different time to view them?

Response: *No. At this time there are no other scheduled visits.*

Q4: Can you please confirm that we are registered for the pre-proposal meeting?

Response: *There is no need to pre-register for the meeting. Please be sure to arrive on time, or you will not be allowed to sign in.*

Q5: Can I invite two of my colleagues to join me for this pre-proposal meeting?

Response: *Yes. There is no limit on the number of attendees.*

Q6: Also, were there any other details about where the meeting will be held?

Response: *The Mandatory Pre-Proposal Meeting will be held at San Antonio Water System (SAWS) Headquarters, 2800 US Hwy N, Customer Service Building (Tower 2), Conference Room CR-145, San Antonio, Texas 78212.*

Q7: Is there anything we need to complete in order to attend? Please advise.

Response: *No. There is nothing to be completed prior to the meeting. Please be sure to arrive on time or you will not be allowed to sign in.*

Q8: I am having trouble finding the standard specifications for this project. In particular, I am looking for 03300 – Cast in Place Concrete. This is called on in the published W-6 specifications, but it is not contained within. Can you point me in the right direction or advise if this will be added in an addendum.

Response: *Contractors are directed to the City of San Antonio (CoSA) Standard Specifications for Construction-June 2008 (<https://www.sanantonio.gov/PublicWorks/Current-Vendor-Resources/Standard-Specifications-and-Details>). CoSA Item 300 – Concrete is to be used in lieu of the 03300 – Cast in place Concrete references. References to 03300 – Cast in place Concrete will be edited from the specifications and replaced with CoSA Item 300 – Concrete.*

Q9: Due to the complex nature of the bid proposal structure and the significant scope of the project, we are requesting that the proposal submittal date be extended by 4 weeks to May 8, 2020. The additional time will allow Contractors to submit a more detailed and responsive proposal.

Response: *This project is an urgent capacity constraint, in the SAWS system, and time is of the essence. However, SAWS is taking this request under advisement, in consideration of several similar requests made. Final determination regarding a possible time extension, and the date of said possible extension, to be forthcoming by Friday March 13, 2020.*

Q10: Due to the complexity of this project and the effort it will take to carefully evaluate the plans and specifications in order to prepare the RFCSP, we ask that you consider a one-time extension on the bid date to May 8, 2020. The level of effort to put forth this submission detailing the plans and methods, including pricing and solicitation of SMWB participation will take some time. In order to set firm dates for this procurement, we kindly ask that you consider a one-time extension now instead of several shorter extensions near the proposal due date. This allows Contractors the ability to plan and schedule review dates and Subcontractor close out with a firm bid date.

Response: *See the response provided to Question 9 (above).*

Q11: The current bid date for the project is April 10th. That is Good Friday. That week is very difficult for travel. Many suppliers, subs etc. may be off that week. Please consider a different date for the bid.

Response: *See the response provided to Question 9 (above).*

Q12: Taking into account the amount of bid items to estimate, the large amount of documents to review and the extend of the WBE good faith effort, would SAWS kindly grant a month extension to the bid day of the SAWS Solicitation No. CO-00317?

Response: *See the response provided to Question 9 (above).*

CHANGES TO SPECIFICATIONS

1. Remove and Replace the Price Proposal with the Price Proposal included in this Addendum. The revised documents should be used by Respondents submitting a proposal for this project.
 - Quantity and Unit for line item 27 to be replaced with “1” and “LS” (Lump Sum)
 - Quantity for line item 57 - 853A Extra Depth (>6’ Tee Base Fiberglass Manhole, Miter (12’ Diameter): Replace “46” with the following: “47”
 - Line items 60 through 65
 - 60 – Replace “857A” with the following: “857”
 - 61 – Replace “857A” with the following: “857”
 - 63 – Replace “857A” with the following: “857”
 - 64 – Replace “857A” with the following: “857”
 - 65 – Replace “857A” with the following: “857”
 - Item no. 116 “SP100B TBM Mobilization (Max 5% of Items 1 to 106)” to be replaced with the following: “100B TBM Mobilization (Max 5% of Items 1 to 106)”.
 - Item no. 117 “100.1 Mobilization (Max 2% of Items 1 to 106)” to be replaced with the following: “100 Mobilization (Max 2% of items 1 to 106)”
 - Item no. 118 “101.1 Preparing Right-of-Way Mobilization (Max 1% of Items 1 to 106)” to be replaced with the following: “101 Preparing Right-of-Way (Max 1% of Items 1 to 106)”
2. Revise Supplemental Condition, Section 8.6:

Remove 8.6.2 in its entirety, the contract duration is provided in the Price Proposal and Proposal Certification sections of this RFCSP.

The statement in the paragraphs below to be replaced currently read as follows:

8.6.4 Upon achieving Substantial Completion, Contractor shall pay liquidated damages in the amount of \$5,000 per calendar day past the Final Completion milestone date established in paragraph 8.6.2.

The above statement is to be replaced with the following:

8.6.4 Upon achieving Substantial Completion, Contractor shall pay liquidated damages in the amount of \$5,000 per calendar day past the contract end date.

3. Revise Special Conditions to include the additional language, as follows:

Add the following Paragraphs after SC.20.

SC 21. PROJECT SITE VIDEO

Project site video is available for viewing by prospective Respondents and has been made available for informational purposes only. SAWS will require the execution of a SAWS disclaimer form by the Respondent, and once obtained by SAWS, will be provided a link to access the videos. The video disclaimer form (attached) should be submitted to Florinda Gonzales via email at Florinda.Gonzales@saws.org.

SC 22. GEOTECHNICAL DATA REPORT FOR OPEN-CUT AND HWY 90 BORES

In regard to the open-cut and Hwy 90 bore installation portions of the project, a Geotechnical Data Report has been developed for SAWS on this project and has been made available for Contractors for informational purposes only. SAWS will require the execution of a SAWS disclaimer form by the potential Respondents as a condition of and prior to the release of the report. The Geotechnical Data Report for Open-Cut and Trenchless Installations is only intended to encompass the open-cut portions of the project and the Hwy. 90 bores. To complete the disclaimer form and obtain the report, please go to the following link on SAWS website: https://www.saws.org/business_center/ContractSol/

Find this project, select “More”, then Geotechnical Data Report Open-cut and Trenchless Installations.

SC. 23 SPECIAL CONSTRUCTION CONDITIONS FOR THE LEON CREEK GREENWAY.

Special project procedures are required from the Contractor as specified herein. The Contractor shall implement and maintain the special project procedures outlined below, pursuant to Joint Use Agreement: W-6 Upper Segment: Hwy 90 to SW Military Drive Sewer Main, SAWS Job

Number 19-4519, at the appropriate time, prior to and during performance of the work.

- A. Contractor shall complete the work in a manner that does not unreasonably impact the Leon Creek Greenway including impact to recreational activities, park reservations, use of park and trail amenities, vegetation and pedestrian and vehicular access.
- B. Contractor will specifically comply with all applicable environmental laws regarding environmental protection of the Leon Creek and surrounding land.
- C. Contractor will restore the park improvements to the extent disturbed by contractors, to its prior condition.
- D. At the conclusion of the Project, equipment and debris will be removed by Contractor and Contractor will restore the site, to the extent disturbed by Contractor, to the same condition as prior to the commencement of work on the Project including, but not limited to, grading, tree plantings, and establishing grass with a native grass mix, to be approved in advance by CITY.
- E. Following notice to Contractor and reasonable opportunity to cure, CITY shall have the right and authority to halt any activity within the Properties and require the removal of Contractor, its employees, agents, consultants, contractors, and/or subcontractors off the Properties should any of the requirements of this Joint Use Agreement not be met.
- F. Absent CITY consent and except as otherwise provided herein below, Contractor shall not use the Properties for purposes of staging and material storage. Contractor shall seek CITY approval in advance of any onsite storage, not to be unreasonably withheld. Contractor will be allowed to only have materials that will be installed within 48 hours of arriving on site. Any materials in excess of this amount must be stored off-site (outside of limits of construction/Properties) at no additional cost to SAWS.
- G. All tree and vegetative trimming and removal planning shall be done in coordination with COSA Parks and Recreation Department. A certified and licensed arborist must be onsite at times of tree and vegetative trimming and removal operations. All trees not shown to be removed within the construction limits shall be protected. Contractor shall adhere to COSA Standard Specifications for Tree Protection requirements. Contractor shall coordinate with COSA Arborist office to identify preferred access routes that preserve native vegetation. Contractor shall document any pre-existing tree damage or tree health problems with photographs and in Contractor's pre-construction video.
- H. 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 Leon 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 crossings during storm events and for extended periods thereafter. Contractor shall coordinate with SAWS to determine whether Contractor may return to work onsite after a heavy rain event / park closure.
- I. Contractor's employees shall only be allowed to park their personally owned vehicles in areas allowed and approved by CITY.

4. Revise Special Provisions to the Technical Specifications - SP 100A Mobilization, as follows:

100.3 PAYMENTS

The statement to be replaced currently reads as follows:

*The following shall be added to paragraph 100.3 – PAYMENTS:
The contract amount for Mobilization shall not exceed seven (7) percent of the total contract amount.*

The above statement is to be replaced with the following:

The following shall be added to paragraph 100.3 – PAYMENTS:

The contract amount for Mobilization, excluding TBM Mobilization, shall not exceed two (2) percent of the contract amount, outlined by Subtotal A of the Price Proposal

5. Revise Special Provisions to the Technical Specifications - SP 857 Fiberglass Reinforced Pipe for Large Diameter Sanitary Sewer, as follows:

857.6 TESTING

The statement to be replaced currently reads as follows:

The Statement to be replaced currently reads as follows:

2.d. Infiltration/Exfiltration Test: The total exfiltration, as determined by a hydrostatic head test, must not exceed 50 gallons per inch of diameter per mile of main per 24 hours, at a minimum test head of 2 feet above the crown of the main at an upstream manhole. The Contractor shall use an infiltration test in lieu of an exfiltration test when mains are installed below the ground water level. In such cases, the total exfiltration, as determined by a hydrostatic head test, must not exceed 50 gallons per inch diameter per mile of main 24 hours at a minimum test head of 2 feet above the crown of the main at an upstream manhole, or at least 2 feet above the existing groundwater level, whichever is greater. For construction work occurring within a 25-year floodplain, the infiltration or exfiltration must not exceed 10 gallons per inch diameter per mile of main per 24 hours at the same minimum test head as stated in the previous sentence. If the quantity of infiltration or exfiltration exceeds the maximum quantity specified, the Contractor shall propose to the Engineer, and receive approval therefrom, all necessary remedial action, solely at the Contractor's own cost, in order to reduce the infiltration or exfiltration to an amount within the limits specified herein.

The above statement is to be replaced with the following:

2.d. Infiltration/Exfiltration Test: The total exfiltration, as determined by a hydrostatic head test, must not exceed 10 gallons per inch of diameter per mile of main per 24 hours, at a minimum test head of 2 feet above the crown of the main at an upstream manhole. The Contractor shall use an infiltration test in lieu of an exfiltration test when mains are installed below the ground water level. In such cases, the total exfiltration, as determined by a hydrostatic head test, must not exceed 10 gallons per inch diameter per mile of main 24 hours at a minimum test head of 2 feet above the crown of the main at an upstream manhole, or at least 2 feet above the existing groundwater level, whichever is greater. If the quantity of infiltration or exfiltration exceeds the maximum quantity specified, the Contractor shall propose to the Engineer, and receive approval therefrom, all necessary remedial action, solely at the Contractor's own cost, in order to reduce the infiltration or exfiltration to an amount within the limits specified herein.

The above statement is to be replaced with the following paragraphs:

The Statement to be replaced currently reads as follows:

2.d. Infiltration/Exfiltration Test: The total exfiltration, as determined by a hydrostatic head test, must not exceed 50 gallons per inch of diameter per mile of main per 24 hours, at a minimum test head of 2 feet above the crown of the main at an upstream manhole. The Contractor shall use an infiltration test in lieu of an exfiltration test when mains are installed below the ground water level. In such cases, the total exfiltration, as determined by a hydrostatic head test, must not exceed 50 gallons per inch diameter per mile of main 24 hours at a minimum test head of 2 feet above the crown of the main at an upstream manhole, or at least 2 feet above the existing groundwater level, whichever is greater. For construction work occurring within a 25-year floodplain, the infiltration or exfiltration must not exceed 10 gallons per inch diameter per mile of main per 24 hours at the same minimum test head as stated in the previous sentence. If the quantity of infiltration or exfiltration exceeds the maximum quantity specified, the Contractor shall propose to the Engineer, and receive approval therefrom, all necessary remedial action, solely at the Contractor's own cost, in order to reduce the infiltration or exfiltration to an amount within the limits specified herein.

The above statement is to be replaced with the following:

2.d. Infiltration/Exfiltration Test: In the event that a low pressure air test cannot be performed an infiltration/exfiltration test will be performed in accordance with TCEQ 217.57 (a) (2).

6. Revise Special Specification SS 00100B – TBM Mobilization, as follows:

100B.3 - PAYMENTS

The statement to be replaced currently reads as follows:

Total Mobilization of TBM(s) shall not exceed five (5) percent of the total bid price for the project.

The above statement is to be replaced with the following:

Total Mobilization of TBM(s) shall not exceed five (5) percent of the contract amount, outlined by Subtotal A of the Price Proposal.

7. Insert the Special Specification - SS 01130 Escrow Bid Documents, attached.

8. Revise Special Specification – SS 01500 Construction Facilities and Temporary Controls, as follows:

The Statement to be replaced currently reads as follows:

1.04.B.1 The OWNER has submitted to CPS Energy a request for temporary power at all shaft locations, unless identified otherwise in the Contract Documents. The temporary construction power that has been requested is based on general electrical requirements for similar tunneling operations and is not based on the exact tunneling equipment anticipated to be used by the CONTRACTOR. CONTRACTOR shall provide CPS with the power requirements associated with the equipment proposed for the project and the requested locations for power to be provided for the CPS Energy request to be submitted for processing. CPS Energy will take approximately nine (9) months to construct all base power supply.

The above statement is to be replaced with the following:

1.04.B.1 The OWNER has submitted to CPS Energy a request for temporary power at all shaft locations, unless identified otherwise in the Contract Documents. The temporary construction power that has been requested is based on general electrical requirements for similar tunneling operations and is not based on the exact tunneling equipment anticipated to be used by the CONTRACTOR. CONTRACTOR shall provide CPS with the power requirements associated with the equipment proposed for the project and the requested locations for power to be provided for the CPS Energy request to be submitted for processing. CPS Energy will take approximately nine (9) months, from the time the Contractor submits the power requirements to CPS, to construct all base power supply. Submittal of the power requirements shall occur within the timeframe specified in the Special Conditions

CHANGES TO PLANS

1. Remove the following plan sheets in their entirety and replace them with the attached, revised plan sheets. (Revisions made from the original sheets are depicted by revision clouds around the changed portions.)
- Sheet G6 - OVERALL QUANTITIES - Revise and replace sheet in its entirety.
 - Quantity for line item 57 - 853A Extra Depth (>6' Tee Base Fiberglass Manhole, Miter (12' Diameter) "46" with the following: "47"
 - Item no. 60 through 65
 - 60 - "857A" with the following: "857"
 - 61 - "857A" with the following: "857"
 - 63 - "857A" with the following: "857"
 - 64 - "857A" with the following: "857"
 - 65 - "857A" with the following: "857"
 - Item no. 117 "100.1 Mobilization (Max 2% of Items 1 to 106)" with the following: "100 Mobilization (Max 2% of items 1 to 106)"

- Item no. 118 “101 Mobilization (Max 1% of Items 1 to 106)” with the following: “100 Mobilization (Max 1% of Items 1 to 106)”
- Sheet C1 - 104-INCH SANITARY SEWER PLAN & PROFILE- Revise and replace sheet in its entirety.
 - Label of manhole top rim elevation for Manhole A1 Miter - “MH TOP = 644.9” with the following: “MH TOP = 645.8”
 - Quantity for line item 853A Extra Depth (>6’ Tee Base Fiberglass Manhole, Miter (12’ Diameter) “45.28” with the following: “46.18”.
 - Quantity for line item 857A 104-inch FRP (ASTM D-3262) (SN 72) Sanitary Sewer Line (22’-25’ Depth) “857A” with the following: “857”.
 - Quantity for line item 857A 104-inch FRP (ASTM D-3262) (SN 72) Sanitary Sewer Line (25’-30’ Depth) “857A” with the following: “857”.
 - Quantity for line item 857A 104-inch FRP (ASTM D-3262) (SN 72) Sanitary Sewer Line (30’-35’ Depth) “857A” with the following: “857”.
- Sheet C7 - 104-INCH SANITARY SEWER PLAN & PROFILE – Revise and replace sheet in its entirety.
 - Label of shaft top rim elevation for Prop. Pearsall Shaft (SH A2) - “SHAFT TOP = 717.6” with the following: “SHAFT TOP = 717.8”.
- Sheet C16 - 104-INCH SANITARY SEWER PLAN & PROFILE – Revise and replace sheet in its entirety.
 - Label of shaft top rim elevation for Prop. Merry Oaks Shaft (SH A3) - “SHAFT TOP = 718.2” with the following: “SHAFT TOP = 718.7”.
- Sheet C49 - 104-INCH SANITARY SEWER PLAN & PROFILE – Revise and replace sheet in its entirety.
 - Add callout for future 30-inch FRP stubout for odor control “Install 30” FRP Pipe stubout for future odor control, FL=739.57”.
 - Label of shaft top rim elevation for Prop. Hotel Shaft (SH A5) - “SHAFT TOP = 745.1” with the following: “SHAFT TOP = 745.3”.
- Sheet C67- 104-INCH SANITARY SEWER PLAN & PROFILE – Revise and replace sheet in its entirety.
 - Add callout for future 30-inch FRP stubout for odor control “Install 30” FRP Pipe stubout for future odor control, FL=677.11”.
 - Label of shaft top rim elevation for Solids Handling Shaft (SH A6) - “MH TOP = 650.78” with the following: “SHAFT TOP = 682.8”.
 - Label of shaft top rim elevation for Prop. W-1 Connection Shaft (SH A7) - “SHAFT TOP = 682.6” with the following: “SHAFT TOP = 682.8”.
- Sheet C72- 60-INCH SANITARY SEWER PLAN & PROFILE - Revise and replace sheet in its entirety.
 - Label of shaft top rim elevation for Prop. Ballpark Shaft (SH A8)- “SHAFT TOP = 701.13” with the following: “SHAFT TOP = 701.24”.
- Sheet C74- 60-INCH SANITARY SEWER PLAN & PROFILE - Revise and replace sheet in its entirety
 - Quantity for line item 857A 60-inch FRP (ASTM D-3262) (SN 72) Sanitary Sewer Line (25’-30’ Depth) “857A” with the following: “857”.
- Sheet C75 - 78-INCH SANITARY SEWER PLAN & PROFILE - Revise and replace sheet in its entirety
 - Profile which includes slopes and flowline elevations.
 - Property Owner label “Mahmoud Diab Rafati and Nizar Musa Rafati NCB 13951 Called 29.591 Acres Doc. No. 20182046882, O.P.R. Recorded 12/18/2018” with the following: “Bobcat Trucking, Inc. NCB 13951 Called 29.591 Acres No. 20190245623 O.P.R. Recorded 12/04/2019.”
 - Quantity for line item 857A 78-inch FRP (ASTM D-3262) (SN 72) Sanitary Sewer Line (30’-35’ Depth) “857A” with the following: “857”.
 - Quantity for line item 857A 78-inch FRP (ASTM D-3262) (SN 72) Sanitary Sewer Line (35’-40’ Depth) “857A” with the following: “857”.
 - Label of shaft top rim elevation for Prop. W-1 Connection Shaft (SH A7) - “SHAFT TOP = 682.6” with the following: “SHAFT TOP = 682.8”.

- Sheet C80 – 15-INCH SANITARY SEWER PLAN & PROFILE LINE E - Revise and replace sheet in its entirety
 - Label of shaft top rim elevation for Prop. Ballpark Shaft (SH A8)- “SHAFT TOP = 701.13” with the following: “SHAFT TOP = 701.24”.
- Sheet C83 – SANITARY SEWER PLAN & PROFILE LINE H AND LINE I - Revise and replace sheet in its entirety
 - Label of manhole top rim elevation for Manhole A1 Miter - “MH TOP = 644.9” with the following: “MH TOP = 645.8”
- Sheet C86A- SEWER GENERAL DETAILS (SHEET 2 OF 3)- Revise and replace Detail 1 in its entirety.
- Sheet S1 - STRUCTURAL NOTES - Delete Note D. under ‘Cast-in-place Concrete’ section in its entirety.
- Sheets S8 – STRUTURAL TYPICAL DETAISL VI - Revise and replace sheet in its entirety.
 - Detail 2- Revise callouts for the pipe coupling detail as shown.
- Sheet S12 - SHAFT #2 (PEARSALL SHAFT) - UPPER LEVEL SLAB PLAN AT EL 717.56' - Revise and replace sheet in its entirety.
 - Revise Elevation callouts “EL 717.56” with the following: “EL 717.75” at three locations.
- Sheets S13 - SHAFT #2 (PEARSALL SHAFT) - SECTION I:
 - Replace Plan Notes 1,2 and 3 in its entirety with the following revised Notes 1,2 and 3
 “Notes:
 1. INDIVIDUAL POLYMER CONCRETE PIECES /SECTIONS USED FOR CONSTRUCTING THE FLOW CHANNEL AT THE BASE OF THE SHAFT SHALL BE DOWELED TOGETHER AND GROUTED IN PLACE TO ENSURE THE BASE OF THE CHANNEL ACTS AS A UNIT WITH SMOOTH SURFACES WITH NO VISIBLE SEAMS OR JOINTS.
 2. POLYMER CONCRETE MFR SHALL DESIGN AND INSTALL ADHESIVE DOWELS OR OTHER MEANS OF ANCHORAGE FROM POLYMER CONCRETRE SECTIONS AT THE FLOW CHANNEL INTO THE BASE CONCRETE TO RESIST BUOYANT FORCES ASSUMING HEAD PRESSURE AT GRADE.
 3. PIPE SECTION DOES NOT REPRESENT TRUE PROFILE DUE TO THE LOCATION OF SECTION CUT. SEE PLANS FOR PIPE DIA AND PLAN RADIUS INFO.”
 - Revise shaft depth dimension from “92'-7 1/4”” with the following: “92'-9 3/4””.
- Sheet S14 - SHAFT #2 (PEARSALL SHAFT) - SECTION II: Revise and replace sheet in its entirety.
 - Section 1- Add reinforcement callouts as shown on the revised drawings.
- Sheet S15 - SHAFT #2 (PEARSALL SHAFT) - ENLARGED SECTION II:
 - Replace Notes 1 in its entirety with the following:
 “Note:
 1. PIPE SECTION DOES NOT REPRESENT TRUE PROFILE DUE TO THE LOCATION OF SECTION CUT. SEE PLANS FOR PIPE DIA AND PLAN RADIUS INFO.”
- Sheet S19 - SHAFT #3 (MERRY OAKS SHAFT) - UPPER LEVEL SLAB PLAN AT EL 718.20' - Revise and replace sheet in its entirety.
 - Revise Elevation callouts “EL 718.20” with the following: “EL 718.68” at three locations
- Sheet S20 - SHAFT #3 (MERRY OAKS SHAFT) - SECTION I
 - Replace Note No. 1 and 2 in its entirety with the following revised Note 1 and 2:
 “1. INDIVIDUAL POLYMER CONCRETE PIECES /SECTIONS USED FOR CONSTRUCTING THE FLOW CHANNEL AT THE BASE OF THE SHAFT SHALL BE DOWELED TOGETHER AND GROUTED IN PLACE TO ENSURE THE BASE OF THE CHANNEL ACTS AS A UNIT WITH SMOOTH SURFACES WITH NO VISIBLE SEAMS OR JOINTS.
 2. POLYMER CONCRETE MFR SHALL DESIGN AND INSTALL ADHESIVE DOWELS OR OTHER MEANS OF ANCHORAGE FROM POLYMER CONCRETRE SECTIONS AT THE FLOW

CHANNEL INTO THE BASE CONCRETE TO RESIST BUOYANT FORCES ASSUMING HEAD PRESSURE AT GRADE”.

- Revise shaft depth dimension from “89’-0 5/8”” with the following: “89’-6 1/8””.
- Sheets S21- SHAFT #3 (MERRY OAKS SHAFT) - ENLARGED SECTION I
 - Delete size and spacing callout for the reinforcing bars at the cast-in-place concrete foundation slab in its entirety and add the following box note below the section: “Note: SEE S14 FOR ADDN’L REINF INFO NOT SHOWN”.
- Sheet S22 - SHAFT #3 (MERRY OAKS SHAFT) - ENLARGED SECTION II
 - Delete size and spacing callout for the reinforcing bars at the cast-in-place concrete foundation slab in its entirety and add the following box note below the section: “Note: SEE S14 FOR ADDN’L REINF INFO NOT SHOWN”.
- Sheet S23 - SHAFT #4 (WATER TOWER SHAFT) - LOWER LEVEL PLAN AT EL 622.25’
 - Revise the following callout: “HALF PIPE SECTION EMBEDDED IN CHANNEL – SEE DWG S-11” with the following: “HALF PIPE SECTION EMBEDDED IN CHANNEL – SEE DWG S24”.
- Sheet S26 - SHAFT #4 (WATER TOWER SHAFT) - SECTION I
 - Replace Note No. 1 and 2 in its entirety with the following revised Note 1 and 2:
“1. INDIVIDUAL POLYMER CONCRETE PIECES /SECTIONS USED FOR CONSTRUCTING THE FLOW CHANNEL AT THE BASE OF THE SHAFT SHALL BE DOWELED TOGETHER AND GROUTED IN PLACE TO ENSURE THE BASE OF THE CHANNEL ACTS AS A UNIT WITH SMOOTH SURFACES WITH NO VISIBLE SEAMS OR JOINTS.
2. POLYMER CONCRETE MFR SHALL DESIGN AND INSTALL ADHESIVE DOWELS OR OTHER MEANS OF ANCHORAGE FROM POLYMER CONCRETRE SECTIONS AT THE FLOW CHANNEL INTO THE BASE CONCRETE TO RESIST BUOYANT FORCES ASSUMING HEAD PRESSURE AT GRADE”.
- Sheet S27 - SHAFT #4 (WATER TOWER SHAFT) - ENLARGED SECTION I
 - Delete size and spacing callout for the reinforcing bars at the cast-in-place concrete foundation slab in its entirety and add the following box note below the section: “Note: SEE S14 FOR ADDN’L REINF INFO NOT SHOWN”.
- Sheet S28 - SHAFT #4 (WATER TOWER SHAFT) - ENLARGED SECTION II
 - Delete size and spacing callout for the reinforcing bars at the cast-in-place concrete foundation slab in its entirety and add the following box note below the section: “Note: SEE S14 FOR ADDN’L REINF INFO NOT SHOWN”.
- Sheet S29 - SHAFT #5 (HOTEL SHAFT) - LOWER LEVEL PLAN AT EL 632.99’:
 - Revise the reference to sheet in the callouts at two locations from “S28” with the following: “S30”.
- Sheet S31 - SHAFT #5 (HOTEL SHAFT) - UPPER LEVEL SLAB PLAN AT EL 745.04’, -- Revise and replace sheet in its entirety.
 - Revise Elevation callouts “EL 745.04” to the following: “EL 7747.33” at three locations.
- Sheet S32 - SHAFT #5 (HOTEL SHAFT) - SECTION I:
 - Replace Plan Notes 1,2 and 3 in its entirety with the following revised Notes 1,2 and 3
“Notes:
1. INDIVIDUAL POLYMER CONCRETE PIECES /SECTIONS USED FOR CONSTRUCTING THE FLOW CHANNEL AT THE BASE OF THE SHAFT SHALL BE DOWELED TOGETHER AND GROUTED IN PLACE TO ENSURE THE BASE OF THE CHANNEL ACTS AS A UNIT WITH SMOOTH SURFACES WITH NO VISIBLE SEAMS OR JOINTS.
2. POLYMER CONCRETE MFR SHALL DESIGN AND INSTALL ADHESIVE DOWELS OR OTHER MEANS OF ANCHORAGE FROM POLYMER CONCRETRE SECTIONS AT THE FLOW

CHANNEL INTO THE BASE CONCRETE TO RESIST BUOYANT FORCES ASSUMING HEAD PRESSURE AT GRADE.

3. PIPE SECTION DOES NOT REPRESENT TRUE PROFILE DUE TO THE LOCATION OF SECTION CUT. SEE PLANS FOR PIPE DIA AND PLAN RADIUS INFO”.

- Revise shaft depth dimension from “92’-7 ¼”” to the following: “92’-9 ¾””.
- Sheet S33 - SHAFT #5 (HOTEL SHAFT) - ENLARGED SECTION I
 - Delete size and spacing callout for the reinforcing bars at the cast-in-place concrete foundation slab in its entirety and add the following box note below the section: “Note: SEE S14 FOR ADDN’L REINF INFO NOT SHOWN”.
- Sheet S34 - SHAFT #5 (HOTEL SHAFT) - ENLARGED SECTION II:
 - Replace Notes 1 in its entirety with the following:
“Note:
1. PIPE SECTION DOES NOT REPRESENT TRUE PROFILE DUE TO THE LOCATION OF SECTION CUT. SEE PLANS FOR PIPE DIA AND PLAN RADIUS INFO.”
 - Revise reference in the boxed note from ‘1/S33’ with the following: ‘1/S14.
- Sheet S36 - SHAFT #6 (SOLIDS HANDLING SHAFT) & 7 (W-1 CONNECTION SHAFT) - SECTION I-
Revise and replace sheet in its entirety.
 - Delete callout that reads “Concrete Construction joint” at one location.
 - Replace the Notes 1 and 2 per attached drawing.
- Sheet S39 - SHAFT #6 (SOLIDS HANDLING SHAFT) - LOWER LEVEL PLAN AT EL 653.72’:
 - Revise the callout on Detail 2 “8” POLYMER CONC WALL” with the following: “POLYMER CONCRETE RISER STRUCTURE”.
- Sheet S40 - SHAFT #6 (SOLIDS HANDLING SHAFT) - UPPER LEVEL SLAB PLAN AT EL 682.61’ -Revise and replace sheet in its entirety.
 - Revise Elevation callouts “EL 682.61” with the following: “EL 682.75” at two locations
 - Add the top of concrete elevation the slab “TOC EL=682.75”.
- Sheet S41 - SHAFT #6 (SOLIDS HANDLING SHAFT) - SECTION I
 - Replace Note No. 1 and 2 in its entirety with the following revised Note 1 and 2:
“1. INDIVIDUAL POLYMER CONCRETE PIECES /SECTIONS USED FOR CONSTRUCTING THE FLOW CHANNEL AT THE BASE OF THE SHAFT SHALL BE DOWELED TOGETHER AND GROUTED IN PLACE TO ENSURE THE BASE OF THE CHANNEL ACTS AS A UNIT WITH SMOOTH SURFACES WITH NO VISIBLE SEAMS OR JOINTS.
2. POLYMER CONCRETE MFR SHALL DESIGN AND INSTALL ADHESIVE DOWELS OR OTHER MEANS OF ANCHORAGE FROM POLYMER CONCRETRE SECTIONS AT THE FLOW CHANNEL INTO THE BASE CONCRETE TO RESIST BUOYANT FORCES ASSUMING HEAD PRESSURE AT GRADE”.
 - Revise shaft depth dimension from “28’-11 3/8”” with the following: “29’-1””.
 - Revise the title on Detail 2 as follows:
“GATE COLUMN REINFORCING DETAIL” with the following: “GATE FRAME SUPPORT COLUMN DETAIL”.
- Sheet S42 - SHAFT #6 (SOLIDS HANDLING SHAFT) - SECTION II, - Revise and Replace sheet in its entirety.
 - Delete all reinforcement callout for the concrete foundation slab and add the following new note:
“Note: SEE S14 FOR ADDN’L REINF INFO NOT SHOWN”.
- Sheet S43 - SHAFT #6 (SOLIDS HANDLING SHAFT) - ENLARGED SECTION I
 - Delete size and spacing callout for the reinforcing bars at the cast-in-place concrete foundation slab in its entirety and add the following box note below the section: “Note: SEE S14 FOR ADDN’L REINF INFO NOT SHOWN”.

- Sheet S45 - SHAFT #7 (W-1 CONNECTION SHAFT) - LOWER LEVEL PLAN AT EL 653.72':
 - Add 6-ft concrete encasement around the 104" Dia. pipe adjacent to the riser structure.
- Sheet S47 - SHAFT #7 (W-1 CONNECTION SHAFT) - UPPER LEVEL SLAB PLAN AT EL 682.61', - Revise and replace sheet in its entirety.
 - Revise Elevation callouts "EL 682.61" with the following: "EL 682.75" at three locations
 - Delete note for thickness of slab at one location.
- Sheet S49 - SHAFT #7 (W-1 CONNECTION SHAFT) - ENLARGED SECTION I, - Revise and replace the sheet in its entirety.
 - Delete all reinforcement callout for the concrete foundation slab and add a new note as below "Note: SEE S14 FOR ADDN'L REINF INFO NOT SHOWN".
- Sheet S48 - SHAFT #7 (W-1 CONNECTION SHAFT) - SECTION I
 - Replace Note No. 1 and 2 in its entirety with the following revised Note 1 and 2:
 1. INDIVIDUAL POLYMER CONCRETE PIECES /SECTIONS USED FOR CONSTRUCTING THE FLOW CHANNEL AT THE BASE OF THE SHAFT SHALL BE DOWELED TOGETHER AND GROUTED IN PLACE TO ENSURE THE BASE OF THE CHANNEL ACTS AS A UNIT WITH SMOOTH SURFACES WITH NO VISIBLE SEAMS OR JOINTS.
 2. POLYMER CONCRETE MFR SHALL DESIGN AND INSTALL ADHESIVE DOWELS OR OTHER MEANS OF ANCHORAGE FROM POLYMER CONCRETRE SECTIONS AT THE FLOW CHANNEL INTO THE BASE CONCRETE TO RESIST BUOYANT FORCES ASSUMING HEAD PRESSURE AT GRADE.
 - Revise shaft depth dimension from "43'-0 3/4'" with the following "43'-2 3/8'".
- Sheet S50 - SHAFT #7 (W-1 CONNECTION SHAFT) - ENLARGED SECTION II
 - Delete size and spacing callout for the reinforcing bars at the cast-in-place concrete foundation slab in its entirety and add the following box note below the section: "Note: SEE S14 FOR ADDN'L REINF INFO NOT SHOWN".
- Sheet S51 - SHAFT #8 (BALLPARK SHAFT) - LOWER LEVEL PLAN AT EL 649.15':
 - Add Flow Line Elevation callout at the center of pipe inside the shaft to read: "FL. EL. 647.15"
- Sheet S52 - SHAFT #8 (BALLPARK SHAFT) - LOWER LEVEL PLAN AT EL 657.48', - Revise and replace sheet in its entirety.
 - Add note for radiused smooth edges at the flow channel.
- Sheet S53 - SHAFT #8 (BALLPARK SHAFT) - VORTEX INLET PLAN:
 - Delete the following callout on Detail 3: "Turn Buckle"
- Sheet S54 - SHAFT #8 (BALLPARK SHAFT) - UPPER LEVEL SLAB PLAN AT EL 701.13' - Revise and replace sheet in its entirety.
 - Revise Elevation callouts "EL 701.13" with the following: "EL 701.24" at two locations.
 - Add note for removable slab sections on the plan at two locations.
- Sheet S55 - SHAFT #8 (BALLPARK SHAFT) - SECTION I, - Revise and replace sheet in its entirety.
 - Revise note for embedded energy dissipator at the vortex drop as shown.
 - Revise note No. and 1 and 2 as per attached drawings.
 - Revise shaft depth as shown
- Sheet S56 - SHAFT #8 (BALLPARK SHAFT) - SECTION II:
 - Add Straps to anchor 60-inch vortex drop pipe at two locations equally spaced and add the following callout for the Straps:
 - "1/S6, Typ of 2"

- Revise shaft depth dimension from “45’-7 ¾”” to the following “45’-9 1/8””.
- Sheet S57 - SHAFT #8 (BALLPARK SHAFT) - ENLARGED SECTION
 - Delete size and spacing callout for the reinforcing bars at the cast-in-place concrete foundation slab in its entirety and add the following box note below the section: “Note: SEE S14 FOR ADDN’L REINF INFO NOT SHOWN”
- Sheet S58 - SHAFT #8 (BALLPARK SHAFT) - SECTIONS AND DETAILS - Revise and replace sheet in its entirety.
 - Detail 1: Clarify vortex inlet pipe size as shown.

CLARIFICATIONS

1. The estimated cost, originally noted on the on February 24, 2020, has been revised to \$180,533,100.

END OF ADDENDUM 1

This Addendum is 50 pages in its entirety, including attachments.

Attachments:

- Video Disclaimer Form (1 page)
- Price Proposal (4 pages)
- Special Specification – SS 01130 Escrow Bid Documents (3 pages)
- Plan Sheets (G6, C1, C7, C16, C49, C67, C72, C74, C75, C80, C83, C86A, S8, S12, S14, S19, S31, S36, S40, S42, S47, S49, S52, S54, S55, & S58)

 Jeffrey A. Farnsworth
 Kimley-Horn and Associates, Inc.



VIDEO DISCLAIMER FORM

The video being provided through the file transfer protocol (FTP) site is for the Request for Interest – W-6 Upper Segment: Hwy 90 to SW Military Drive Sewer Main Project. Since the video was recorded, some views may have changed. The video is being made available for the sole purpose of providing background information that may assist Respondents in preparing their response to this RFCSP. SAWS makes no representations about the accuracy of this information and disclaims any responsibility for its use.

The FTP details will be provided upon return of this completed form to Florinda Gonzales, Interim Contract Administrator, via email to: florinda.gonzales@saws.org

Firm / Vendor Name

Prime Contractor? Yes ____ No ____

Representative's Printed Name / Title

Signature

Typed/Printed Firm Name

Date: _____

PRICE PROPOSAL

PROPOSAL OF _____, a corporation

a partnership consisting of

an individual doing business as

THE SAN ANTONIO WATER SYSTEM:

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

(PLEASE SEE ATTACHED PDF LIST OF BID ITEMS)

TBM and Project 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.**

RESPONDENT'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 PROPOSAL.

The Respondent offers to construct the Project in accordance with the Contract Documents for the contract price, and to complete the Project within **1217** calendar days after the start date, as set forth in the Authorization to Proceed. **The Respondent understands and accepts the provisions of the contract Documents relating to liquidated damages of the project if not completed on time.**

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

W-6 Upper Segment: Hwy 90 to SW Military Drive Sewer Main Project

GENERAL PRICE PROPOSAL ITEMS						
LINE NO.	ITEM NO.	ITEM DESCRIPTION	QUANTITY:	UNIT	UNIT PRICE	PROPOSAL COST:
1	103.1	REMOVE CONCRETE CURB (COSA SPEC)	60	LF	\$	\$
2	103.4	REMOVE MISCELLANEOUS CONCRETE	813	SF	\$	\$
3	C85A (1)	INSTALL TEMPORARY CHAIN-LINK WIRE FENCE	150	LF	\$	\$
4	C85A (2)	INSTALL CONCRETE COSA TRAIL	89	SY	\$	\$
5	C85	24' CANTILEVER MANUAL SLIDE GATE	7	EA	\$	\$
6	C85B	REMOVE AND RELOCATE JBSA PERIMETER FENCE	365	LF	\$	\$
7	104 6015	REMOVE CONC (SIDEWALKS) (TXDOT SPEC)	456	SY	\$	\$
8	104 6017	REMOVE CONC (DRIVEWAYS) (TXDOT SPEC)	675	SY	\$	\$
9	104 6021	REMOVE CONC (CURB) (TXDOT SPEC)	1,615	LF	\$	\$
10	105 6014	REMOVING STAB BASE & ASPH PAV (7"-12")	295	SY	\$	\$
11	200.1	FLEXIBLE BASE (6-INCH COMPACTED DEPTH) (COSA SPEC)	6,015	SY	\$	\$
12	203.1	TACK COAT (COSA SPEC)	694	GAL	\$	\$
13	205.2	HOT MIX ASPHALTIC PAVEMENT - TYPE B (10" COMPACTED DEPTH) (COSA SPEC)	61	SY	\$	\$
14	205.4	HOT MIX ASPHALTIC PAVEMENT - TYPE D (2" COMPACTED DEPTH) (COSA SPEC)	6,936	SY	\$	\$
15	208.1	SALVAGING, HAULING & STOCKPILING RECLAIMABLE ASPHALTIC PAVEMENT (2" DEPTH) (COSA SPEC)	6,720	SY	\$	\$
16	209.1	CONCRETE PAVEMENT (12-INCH THICK) (COSA SPEC)	6,015	SY	\$	\$
17	300	ONE COURSE SURFACE TREATMENT (TXDOT SPEC)	970	SY	\$	\$
18	305 6002	SALVAGING, HAULING, AND STOCKPILING RECLAIMABLE ASPHALTIC PAVEMENT (2" DEPTH) (TXDOT SPEC)	1,645	SY	\$	\$
19	305 6003	SALVAGING, HAULING, AND STOCKPILING RECLAIMABLE ASPHALTIC PAVEMENT (4" DEPTH) (TXDOT SPEC)	1,940	SY	\$	\$
20	340	HOT MIX ASPHALTIC PAVEMENT - TYPE D (4-INCH COMPACTED DEPTH) (TXDOT SPEC)	970	SY	\$	\$
21	340 6272	TACK COAT (TXDOT SPEC)	167	GAL	\$	\$
22	341 6029	D-GR HMA TY-C SAC-A PG76-22 (2" COMPACTED DEPTH) (TXDOT SPEC)	185	TN	\$	\$
23	401	FLOWABLE FILL (TXDOT SPEC)	1,471	CY	\$	\$
24	464 6003	RC PIPE (CL III) (24-INCH) (TXDOT SPEC)	20	LF	\$	\$
25	467 6359	SET (TY II) (24-INCH) (RCP) (4:1) (P) (TXDOT SPEC)	4	EA	\$	\$
26	500.1	CONCRETE CURB (COSA SPEC)	60	LF	\$	\$
27	502 6025	BARRICADES, SIGNS, AND TRAFFIC HANDLING (TXDOT SPEC)	1	LS	\$	\$
28	529 6002	CONC CURB (TY II) (TXDOT SPEC)	1,184	LF	\$	\$
29	529 6025	CONC CURB (TY III) (TXDOT SPEC)	238	LF	\$	\$
30	530 6004	DRIVEWAYS (CONC) (TXDOT SPEC)	1,979	SY	\$	\$
31	531 6002	CONC SIDEWALKS (5-INCH) (TXDOT SPEC)	421	SY	\$	\$
32	SP540	TEMPORARY EROSION, SEDIMENT, AND WATER POLLUTION PREVENTION AND CONTROL (COSA SPEC)	1	LS	\$	\$
33	540.7	CONSTRUCTION PERIMETER FENCE (COSA SPEC)	13,850	LF	\$	\$
34	550.1	TRENCH EXCAVATION SAFETY PROTECTION (COSA SPEC)	1,132	LF	\$	\$
35	636 6001	ALUMINUM SIGNS (TY A) (TXDOT SPEC)	14	EA	\$	\$
36	644 6068	RELOCATE SM RD SN SUP&AM TY 10BWG (TXDOT SPEC)	2	EA	\$	\$
37	SWPPP	STORM WATER POLLUTION PREVENTION PLAN	1	LS	\$	\$
38	845	GATE, FENCING, AND PROPERTY MARKER DETAILS	2,140	LF	\$	\$
39	848A	8-INCH PVC GRAVITY SANITARY SEWER PIPE (ASTM 2241) (10'-14' DEPTH)	10	LF	\$	\$
40	848A	8-INCH PVC GRAVITY SANITARY SEWER PIPE (ASTM 2241) (14'-18' DEPTH)	57	LF	\$	\$
41	848A	8-INCH PVC GRAVITY SANITARY SEWER PIPE (ASTM 2241) (18'-22' DEPTH)	13	LF	\$	\$
42	848A	12-INCH PVC GRAVITY SANITARY SEWER PIPE (ASTM 2241) (6'-10' DEPTH)	48	LF	\$	\$
43	848A	12-INCH PVC GRAVITY SANITARY SEWER PIPE (ASTM 2241) (10'-14' DEPTH)	55	LF	\$	\$
44	848A	12-INCH PVC GRAVITY SANITARY SEWER PIPE (ASTM 2241) (14'-18' DEPTH)	152	LF	\$	\$
45	848A	12-INCH PVC GRAVITY SANITARY SEWER PIPE (ASTM 2241) (18'-22' DEPTH)	89	LF	\$	\$
46	848A	12-INCH PVC GRAVITY SANITARY SEWER PIPE (ASTM 2241) (22'-26' DEPTH)	92	LF	\$	\$
47	848A	15-INCH PVC GRAVITY SANITARY SEWER PIPE (ASTM F679, 46 PSI) (10'-14' DEPTH)	70	LF	\$	\$
48	848A	24-INCH PVC GRAVITY SANITARY SEWER PIPE (ASTM F679) (6'-10' DEPTH)	38	LF	\$	\$
49	848A	24-INCH PVC GRAVITY SANITARY SEWER PIPE (ASTM F679) (10'-14' DEPTH)	42	LF	\$	\$
50	848B	SANITARY SEWERS - PIPE TESTING AND ACCEPTANCE	1	LS	\$	\$
51	853A	FIBER-REINFORCED SANITARY SEWER MANHOLE (4' DIAMETER)	10	EA	\$	\$
52	853A	FIBER-REINFORCED SANITARY SEWER MANHOLE W/ DROP (4' DIAMETER)	4	EA	\$	\$
53	853A	FIBER-REINFORCED SANITARY SEWER MANHOLE - TEE BASE FIBERGLASS MANHOLE, MITER (5' DIAMETER)	1	EA	\$	\$
54	853A	FIBER-REINFORCED SANITARY SEWER MANHOLE - TEE BASE FIBERGLASS MANHOLE W/ DROP, MITER (12' DIAMETER)	2	EA	\$	\$
55	853A	EXTRA DEPTH (>6') FIBERGLASS MANHOLE, MITER (4' DIAMETER)	135	VF	\$	\$
56	853A	EXTRA DEPTH (>6') TEE BASE FIBERGLASS MANHOLE, MITER (5' DIAMETER)	22	VF	\$	\$
57	853A	EXTRA DEPTH (>6') TEE BASE FIBERGLASS MANHOLE, MITER (12' DIAMETER)	47	VF	\$	\$
58	853B	FIBER-REINFORCED SANITARY SEWER MANHOLES - MANHOLE TESTING AND ACCEPTANCE	1	LS	\$	\$
59	855	RECONSTRUCTION OF EXISTING MANHOLES	1	EA	\$	\$
60	857	60-INCH FRP (ASTM D-3262) (SN 72) SANITARY SEWER LINE (25'-30' DEPTH)	13	LF	\$	\$
61	857	78-INCH FRP (ASTM D-3262) (SN 72) SANITARY SEWER LINE (30'-35' DEPTH)	8	LF	\$	\$
62	857	78-INCH FRP (ASTM D-3262) (SN 72) SANITARY SEWER LINE (35'-40' DEPTH)	300	LF	\$	\$

W-6 Upper Segment: Hwy 90 to SW Military Drive Sewer Main Project

GENERAL PRICE PROPOSAL ITEMS						
LINE NO.	ITEM NO.	ITEM DESCRIPTION	QUANTITY:	UNIT	UNIT PRICE	PROPOSAL COST:
63	857	104-INCH FRP (ASTM D-3262) (SN 72) SANITARY SEWER LINE (22'-25' DEPTH)	40	LF	\$	\$
64	857	104-INCH FRP (ASTM D-3262) (SN 72) SANITARY SEWER LINE (25'-30' DEPTH)	75	LF	\$	\$
65	857	104-INCH FRP (ASTM D-3262) (SN 72) SANITARY SEWER LINE (30'-35' DEPTH)	51	LF	\$	\$
66	SP857	HOBAS PIPE MATERIAL ONLY (60-INCH, 78-INCH, & 104-INCH)	1	LS	\$18,098,685.00	\$18,098,685.00
67	858	CONCRETE ENCASEMENT, CRADLES, SADDLES AND COLLARS	4	CY	\$	\$
68	01520	GEOTECHNICAL INSTRUMENTATION AND MONITORING	1	LS	\$	\$
69	02410	GENERAL TUNNELING REQUIREMENTS HAND MINING (60-INCH FRP SANITARY SEWER)	924	LF	\$	\$
70	02410	GENERAL TUNNELING REQUIREMENTS TBM TUNNELING (104-INCH AND 60-INCH FRP SANITARY SEWER)	27,664	LF	\$	\$
71	02415	EXCAVATION VIA GUIDED BORING OR MICROTUNNEL (36-INCH)	750	LF	\$	\$
72	02415	INSTALLATION OF STEEL CASING PIPE (36-INCH)	750	LF	\$	\$
73	02415	CARRIER PIPE INSTALLED IN BORE/MICROTUNNEL CASING PIPE (8-INCH)	378	LF	\$	\$
74	02415	CARRIER PIPE INSTALLED IN BORE/MICROTUNNEL CASING PIPE (12-INCH)	372	LF	\$	\$
75	02430	INSTALLATION OF PIPE IN TUNNEL (60-INCH FRP (ASTM D-3262) (SN 72) SANITARY SEWER)	2,523	LF	\$	\$
76	02430	INSTALLATION OF PIPE IN TUNNEL (104-INCH FRP (ASTM D-3262) (SN 72) SANITARY SEWER)	26,200	LF	\$	\$
77	02431	ANNULAR BACKFILL FOR CARRIER PIPE (60-INCH FRP (ASTM D-3262) (SN72) SANITARY SEWER)	2,523	LF	\$	\$
78	02431	ANNULAR BACKFILL FOR CARRIER PIPE (104-INCH FRP (ASTM D-3262) (SN72) SANITARY SEWER)	26,130	LF	\$	\$
79	02440	GENERAL SHAFT REQUIREMENTS (W-6 MIDDLE SEGMENT SHAFT)	1	LS	\$	\$
80	02440	GENERAL SHAFT REQUIREMENTS (PEARSALL SHAFT)	1	LS	\$	\$
81	02440	GENERAL SHAFT REQUIREMENTS (MERRY OAKS SHAFT)	1	LS	\$	\$
82	02440	GENERAL SHAFT REQUIREMENTS (WATER TOWER SHAFT)	1	LS	\$	\$
83	02440	GENERAL SHAFT REQUIREMENTS (HOTEL SHAFT)	1	LS	\$	\$
84	02440	GENERAL SHAFT REQUIREMENTS (SOLIDS HANDLING SHAFT)	1	LS	\$	\$
85	02440	GENERAL SHAFT REQUIREMENTS (W-1 CONNECTION SHAFT)	1	LS	\$	\$
86	02440	GENERAL SHAFT REQUIREMENTS (BALLPARK SHAFT)	1	LS	\$	\$
87	02440	GENERAL SHAFT REQUIREMENTS (CALLAGHAN SHAFT)	1	LS	\$	\$
88	02600	POLYMER CONCRETE SANITARY SEWER MANHOLE, DROP (12' DIAMETER) (ALL DEPTHS)	1	EA	\$	\$
89	02610	STEEL CASING - (48-INCH)(0.625-INCH THICK)	167	LF	\$	\$
90	00862	ABANDON - SANITARY SEWER MAIN (54-INCH)	5,533	LF	\$	\$
91	862.1	ABANDON - SANITARY SEWER MAIN (48-INCH)	447	LF	\$	\$
92	862.1	ABANDON - SANITARY SEWER MAIN (15-INCH)	910	LF	\$	\$
93	862.1	ABANDON - SANITARY SEWER MAIN (12-INCH)	526	LF	\$	\$
94	00862	ABANDON - SANITARY SEWER MAIN (10-INCH)	178	LF	\$	\$
95	00862	ABANDON - SANITARY SEWER MAIN (8-INCH)	191	LF	\$	\$
96	864-S1	BYPASS PUMPING SMALL DIAMETER SANITARY SEWERS (<24-INCH)	1	LS	\$	\$
97	864-S2	BYPASS PUMPING LARGE DIAMETER SANITARY SEWERS (≥24-INCH)	1	LS	\$	\$
98	866	SEWER MAIN TELEVISION INSPECTION (8-INCH TO 24-INCH)	3,146	LF	\$	\$
99	866	SEWER MAIN TELEVISION INSPECTION (30-INCH TO 60-INCH)	8,503	LF	\$	\$
100	866	SEWER MAIN TELEVISION INSPECTION (78-INCH TO 104-INCH)	26,672	LF	\$	\$
101	866A	EXISTING SEWER MAIN TELEVISION INSPECTION (8-INCH TO 24-INCH)	1,737	LF	\$	\$
102	866A	EXISTING SEWER MAIN TELEVISION INSPECTION (30-INCH TO 60-INCH)	5,980	LF	\$	\$
103	1100	SLIP-LINING SANITARY SEWERS(SLIPLINE 48" STEEL CASING W/ 24")(10'-14' DEPTH)	167	LF	\$	\$
104	1100	SLIP-LINING SANITARY SEWERS(SLIPLINE EX. 54" W/ 48" STEEL CASING)(10'-14' DEPTH)	160	LF	\$	\$
105	11280	STAINLESS STEEL SLIDE GATES	1	LS	\$	\$
106	11310	PACKAGE METERING MANHOLE	1	LS	\$	\$
SUBTOTAL A (ITEMS 1-106)			\$			
107	100	INTERMEDIATE DEMOBILIZATION BYPASS EQUIPMENT RENTAL	20	MD	\$	\$
108	100	INTERMEDIATE DEMOBILIZATION BYPASS PUMPING FUEL	20	MD	\$	\$
109	100	INTERMEDIATE DEMOBILIZATION BYPASS PUMPING WATCH	20	MD	\$	\$
110	02086	EXCAVATION, CLASSIFICATION, TRANSPORTATION, AND DISPOSAL OF TPH AFFECTED SOIL	13,000	TON	\$	\$
111		W-1 CLEANING AND MAINTENANCE	1	LS		
112	01020	TIME EXTENSION FOR W1-BYPASS	1	AL	\$3,700,000.00	\$3,700,000.00
113	01020	ODOR CONTROL	1	AL	\$1,650,000.00	\$1,650,000.00
114	SC8.7	EARLY COMPLETION BONUS ALLOWANCE	1	AL	\$3,000,000.00	\$3,000,000.00
115	100A	INTERMEDIATE DEMOBILIZATION/REMOBILIZATION (OPEN CUT)	1	EA	\$	\$
SUBTOTAL B (ITEMS 107-115)			\$			
116	100B	TBM MOBILIZATION (MAX 5% OF ITEMS 1 TO 106)	1	LS	\$	\$
117	100	MOBILIZATION (MAX 2% OF ITEMS 1 TO 106)	1	LS	\$	\$
118	101	PREPARING RIGHT-OF-WAY (MAX 1% OF ITEMS 1 TO 106)	1	LS	\$	\$
SUBTOTAL C (ITEMS 116-118)			\$			

TOTAL (SUBTOTAL A+ SUBTOTAL B+ SUBTOTAL C)

\$

PROPOSAL CERTIFICATION

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

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

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

The work called for in this Contract shall commence on the date indicated in the SAWS written Authorization to Proceed. Under no circumstances shall the work commence prior to the date provided for in the SAWS issued, written Authorization to Proceed. Work shall be completed in full within **1217** consecutive calendar days.

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

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

Signed: _____
Company Representative

Company Name

Address

Please return bidder's check to:

Company Name

Address

PART 1 GENERAL

1.01 DESCRIPTION

- A. This section specifies the submittal, use, and disposition of Respondent's (CONTRACTOR's and SUBCONTRACTOR's) Escrow Bid Documentation.
- B. The Escrow Bid Documents provided shall be specific enough that a third party could look at the Escrow Bid Documentation and determine the labor, material, and equipment costs for each Contract Division and Specification Section within the Division. The Escrow Bid Documents should also identify field and home office overhead and profit.
- C. The Owner acknowledges that the Escrow Bid Documents are property of the Respondent and constitute trade secrets and proprietary information, as well as a substantial financial investment, and agrees to safeguard the Escrow Bid Documents to the fullest extent permitted by law, subject to compliance with the Texas Public Information Act.
- D. Escrow Bid Documents will be retained for the duration of the Contract plus the warranty period in a sealed envelope. Escrow Bid Documents will only be unsealed to assist in the negotiation of price adjustments and the settlement of disputes, claims, and contract modifications when a resolution cannot be reached. Escrow Bid Documents will not be used for evaluation of the Respondent's anticipated methods of construction. The Escrow Bid Documents are, and shall always remain, the property of the Respondent, subject to use by the Owner, Owner's Representative, Respondent, or Article X members as provided herein.

1.02 REQUIREMENTS

- A. Respondent shall submit the acknowledgement form, completed and signed, at the time of submittal of proposal package.
- B. The apparent successful Respondent will be notified as soon as practical after an initial evaluation of the proposals. Within three (3) business days after notification, the apparent successful Respondent shall assemble and submit to the Owner a copy of all information and calculations used by the Respondent to determine their price proposal for this project.
- C. The Escrow Bid Documentation shall be accompanied with a notarized certification attached to the outside of the container signed by an individual authorized by the Respondent to execute the proposal, stating that the material in the Escrow Bid Documents constitutes all the documentary information used in the preparation of the proposal and that the Respondent has personally examined the contents of the Escrow Bid Documents container and has found that the documents in the container are complete.
- D. Respondents are encouraged to submit Escrow Bid Documents in their usual cost

estimating format; a standard format is not required. It is not the intention of this article to cause the Respondent extra work during the preparation of the proposal, but to ensure that the Escrow Bid Documents are adequate to understand and interpret the information and calculations used to estimate the cost of the work. Escrow Bid Documents shall clearly itemize the estimated costs for each bid item contained in the Price Proposal.

- E. Pay items shall be broken down into sub-items to detail the cost of components applicable to each. Estimated costs shall be broken down in the Respondent's usual estimate categories such as direct labor, permanent materials, expendable materials, equipment rental or amortization, equipment parts and supplies, maintenance and repair labor, and subcontract cost as appropriate. Major subcontract work shall be detailed. Plant and equipment and indirect costs shall be detailed in the Respondent's usual format. Plant and equipment charges, indirect costs, and markups shall be identified and allocated to each pay item as appropriate.
- F. The Escrow Bid Document shall include all quantity takeoffs; calculations of rates of production and progress; copies of quotes from subcontractors and suppliers; copies of all geotechnical information, including boring logs and reports prepared for the Respondent; and memoranda, narratives, and all other information and adjustments used by the Respondent to arrive at the prices contained in the price proposal.
- G. Contract Documents provided by the Owner should not be included in the Escrow Bid Documents.
- H. For price items totaling less than ten thousand dollars (\$10,000), estimated unit costs are acceptable without a detailed cost estimate, provided that labor, equipment, materials, and subcontractors, as applicable, are included and that indirect costs, contingencies, and markup, as applicable, are also included.
- I. The Escrow Bid Documents shall include a submittal on the Tunnel Boring Machines as it is the primary equipment the Respondent intends to use for excavating the tunnel. This submittal in the Escrow Bid Documents shall include all assumptions regarding machines' performance including advance rate, utilization rate, type and number of disc cutter changes anticipated, estimated duration between disc cutter changes, etc.

1.03 RESOLUTION

- A. The Escrow Bid Documents shall be examined by the Owner, Owner's Representative, Respondent, and Article X members, at any time deemed necessary by either the Owner, Owner's Representative, Respondent, or Article X members, to assist in the negotiation of price adjustments and change orders, or the settlement of disputes.
- B. Examination of the Escrow Bid Documents is subject to the following conditions:

- a. As trade secrets, the Escrow Bid Documents are proprietary and confidential.
- b. Owner, Owner's Representative, and Respondent shall each designate, in writing to the other party a minimum of 10 days prior to examination, representatives who are authorized to examine the Escrow Bid Documents. With the consent of the Owner, Owner's Representative, and Respondent, the Escrow Bid Documents may be examined if required to assist in the settlement of a dispute.

In addition, with notification to the Owner, Owner's Representative, and Respondent, the Escrow Bid Documents may be examined if such examination is necessary for the Article X member to exercise its responsibility to assist in the settlement of a dispute.

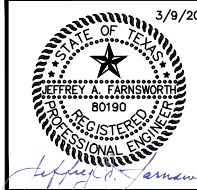
- c. No other person shall have access to the Escrow Bid Documents except those designated above; and
 - d. Access to the Escrow Bid Documents will take place only in the presence of duly designated representatives of the Owner, Owner's Representative, Respondent, and if necessary, Article X members, except that, if the Respondent refuses to be present or to cooperate in any other way in the review of the documents, the Owner, Owner's Representative, and if necessary, Article X members may upon notice to the Respondent, review such documents without the Respondent being present.
- C. No other Proposal Documentation concerning the Respondent's calculation of the bid will be utilized during disputes.
 - D. Upon completion of the examination the Escrow Bid Documents will be resealed and continue to retained by the Owner for the remaining duration of the Contract plus the warranty period.
 - E. Upon completion of the Contract plus the warranty period the documents will be returned to the Respondent unopened in the sealed container.

END OF SECTION

#	ITEM NO.	DESCRIPTION	UNIT	QUANTITY
1	103.1	REMOVE CONCRETE CURB (COSA SPEC)	LF	60
2	103.4	REMOVE MISCELLANEOUS CONCRETE	SF	813
3	C85A (1)	INSTALL TEMPORARY CHAIN-LINK WIRE FENCE	LF	150
4	C85A (2)	INSTALL CONCRETE COSA TRAIL	SY	89
5	C85	24' CANTILEVER MANUAL SLIDE GATE	EA	7
6	C85B	REMOVE AND RELOCATE JBSA PERIMETER FENCE	LF	365
7	104 6015	REMOVE CONC (SIDEWALKS) (TXDOT SPEC)	SY	456
8	104 6017	REMOVE CONC (DRIVEWAYS) (TXDOT SPEC)	SY	675
9	104 6021	REMOVE CONC (CURB) (TXDOT SPEC)	LF	1,615
10	105 6014	REMOVING STAB BASE & ASPH PAV (7'-12")	SY	295
11	200.1	FLEXIBLE BASE (6-INCH COMPACTED DEPTH) (COSA SPEC)	SY	6,015
12	203.1	TACK COAT (COSA SPEC)	GAL	694
13	205.2	HOT MIX ASPHALTIC PAVEMENT - TYPE B (10" COMPACTED DEPTH) (COSA SPEC)	SY	61
14	205.4	HOT MIX ASPHALTIC PAVEMENT - TYPE D (2" COMPACTED DEPTH) (COSA SPEC)	SY	6,936
15	208.1	SALVAGING, HAULING & STOCKPILING RECLAIMABLE ASPHALTIC PAVEMENT (2" DEPTH) (COSA SPEC)	SY	6,720
16	209.1	CONCRETE PAVEMENT (12-INCH THICK) (COSA SPEC)	SY	6,015
17	300	ONE COURSE SURFACE TREATMENT (TXDOT SPEC)	SY	970
18	305 6002	SALVAGING, HAULING, AND STOCKPILING RECLAIMABLE ASPHALTIC PAVEMENT (2" DEPTH) (TXDOT SPEC)	SY	1,645
19	305 6003	SALVAGING, HAULING, AND STOCKPILING RECLAIMABLE ASPHALTIC PAVEMENT (4" DEPTH) (TXDOT SPEC)	SY	1,940
20	340	HOT MIX ASPHALTIC PAVEMENT - TYPE D (4-INCH COMPACTED DEPTH) (TXDOT SPEC)	SY	970
21	340 6272	TACK COAT (TXDOT SPEC)	GAL	167
22	341 6029	D-GR HMA TY-C SAC-A PG76-22 (2" COMPACTED DEPTH) (TXDOT SPEC)	TN	185
23	401	FLOWABLE FILL (TXDOT SPEC)	CY	1,471
24	464 6003	RC PIPE (CL III) (24-INCH) (TXDOT SPEC)	LF	20
25	467 6359	SET (TY II) (24-INCH) (RCP) (4:1) (P) (TXDOT SPEC)	EA	4
26	500.1	CONCRETE CURB (COSA SPEC)	LF	60
27	502 6025	BARRICADES, SIGNS, AND TRAFFIC HANDLING (TXDOT SPEC)	LS	1
28	529 6002	CONC CURB (TY II) (TXDOT SPEC)	LF	1,184
29	529 6025	CONC CURB (TY III) (TXDOT SPEC)	LF	238
30	530 6004	DRIVEWAYS (CONC) (TXDOT SPEC)	SY	1,979
31	531 6002	CONC SIDEWALKS (5-INCH) (TXDOT SPEC)	SY	421
32	SP540	TEMPORARY EROSION, SEDIMENT, AND WATER POLLUTION PREVENTION AND CONTROL (COSA SPEC)	LS	1
33	540.7	CONSTRUCTION PERIMETER FENCE (COSA SPEC)	LF	13,850
34	550.1	TRENCH EXCAVATION SAFETY PROTECTION (COSA SPEC)	LF	1,132
35	636 6001	ALUMINUM SIGNS (TY A) (TXDOT SPEC)	EA	14
36	644 6068	RELOCATE SM RD SN SUP&AM TY 10BWG (TXDOT SPEC)	EA	2
37	SWPPP	STORM WATER POLLUTION PREVENTION PLAN	LS	1
38	845	GATE, FENCING, AND PROPERTY MARKER DETAILS	LF	2,140
39	848A	8-INCH PVC GRAVITY SANITARY SEWER PIPE (ASTM 2241) (10'-14' DEPTH)	LF	10
40	848A	8-INCH PVC GRAVITY SANITARY SEWER PIPE (ASTM 2241) (14'-18' DEPTH)	LF	57
41	848A	8-INCH PVC GRAVITY SANITARY SEWER PIPE (ASTM 2241) (18'-22' DEPTH)	LF	13
42	848A	12-INCH PVC GRAVITY SANITARY SEWER PIPE (ASTM 2241) (6'-10' DEPTH)	LF	48
43	848A	12-INCH PVC GRAVITY SANITARY SEWER PIPE (ASTM 2241) (10'-14' DEPTH)	LF	55
44	848A	12-INCH PVC GRAVITY SANITARY SEWER PIPE (ASTM 2241) (14'-18' DEPTH)	LF	152
45	848A	12-INCH PVC GRAVITY SANITARY SEWER PIPE (ASTM 2241) (18'-22' DEPTH)	LF	89
46	848A	12-INCH PVC GRAVITY SANITARY SEWER PIPE (ASTM 2241) (22'-26' DEPTH)	LF	92
47	848A	15-INCH PVC GRAVITY SANITARY SEWER PIPE (ASTM F679, 46 PSI) (10'-14' DEPTH)	LF	70
48	848A	24-INCH PVC GRAVITY SANITARY SEWER PIPE (ASTM F679) (6'-10' DEPTH)	LF	38
49	848A	24-INCH PVC GRAVITY SANITARY SEWER PIPE (ASTM F679) (10'-14' DEPTH)	LF	42
50	848B	SANITARY SEWERS - PIPE TESTING AND ACCEPTANCE	LS	1
51	853A	FIBER-REINFORCED SANITARY SEWER MANHOLE (4' DIAMETER)	EA	10
52	853A	FIBER-REINFORCED SANITARY SEWER MANHOLE W/ DROP (4' DIAMETER)	EA	4
53	853A	FIBER-REINFORCED SANITARY SEWER MANHOLE - TEE BASE FIBERGLASS MANHOLE, MITER (6' DIAMETER)	EA	1
54	853A	FIBER-REINFORCED SANITARY SEWER MANHOLE - TEE BASE FIBERGLASS MANHOLE W/ DROP, MITER (12' DIAMETER)	EA	2
55	853A	EXTRA DEPTH (>6') FIBERGLASS MANHOLE, MITER (4' DIAMETER)	VF	135
56	853A	EXTRA DEPTH (>6') TEE BASE FIBERGLASS MANHOLE, MITER (5' DIAMETER)	VF	22
57	853A	EXTRA DEPTH (>6') TEE BASE FIBERGLASS MANHOLE, MITER (12' DIAMETER)	VF	47
58	853B	FIBER-REINFORCED SANITARY SEWER MANHOLES - MANHOLE TESTING AND ACCEPTANCE	LS	1
59	855	RECONSTRUCTION OF EXISTING MANHOLES	EA	1
60	857	60-INCH FRP (ASTM D-3262) (SN 72) SANITARY SEWER LINE (25'-30' DEPTH)	LF	13
61	857	78-INCH FRP (ASTM D-3262) (SN 72) SANITARY SEWER LINE (30'-35' DEPTH)	LF	8
62	857	78-INCH FRP (ASTM D-3262) (SN 72) SANITARY SEWER LINE (35'-40' DEPTH)	LF	300
63	857	104-INCH FRP (ASTM D-3262) (SN 72) SANITARY SEWER LINE (22'-25' DEPTH)	LF	40
64	857	104-INCH FRP (ASTM D-3262) (SN 72) SANITARY SEWER LINE (25'-30' DEPTH)	LF	75
65	857	104-INCH FRP (ASTM D-3262) (SN 72) SANITARY SEWER LINE (30'-35' DEPTH)	LF	51
66	SP857	HOBAS PIPE MATERIAL ONLY (60-INCH, 78-INCH, & 104-INCH)	LS	1
67	858	CONCRETE ENCASEMENT, CRADLES, SADDLES AND COLLARS	CY	4
68	01520	GEOTECHNICAL INSTRUMENTATION AND MONITORING	LS	1
69	02410	GENERAL TUNNELING REQUIREMENTS HAND MINING (60-INCH FRP SANITARY SEWER)	LF	924
70	02410	GENERAL TUNNELING REQUIREMENTS TBM TUNNELING (104-INCH AND 60-INCH FRP SANITARY SEWER)	LF	27,664
71	02415	EXCAVATION VIA GUIDED BORING OR MICROTUNNEL (36-INCH)	LF	750
72	02415	INSTALLATION OF STEEL CASING PIPE (36-INCH)	LF	750
73	02415	CARRIER PIPE INSTALLED IN BORE/MICROTUNNEL CASING PIPE (8-INCH)	LF	378
74	02415	CARRIER PIPE INSTALLED IN BORE/MICROTUNNEL CASING PIPE (12-INCH)	LF	372
75	02430	INSTALLATION OF PIPE IN TUNNEL (60-INCH FRP (ASTM D-3262) (SN 72) SANITARY SEWER)	LF	2,523

#	ITEM NO.	DESCRIPTION	UNIT	QUANTITY
76	02430	INSTALLATION OF PIPE IN TUNNEL (104-INCH FRP (ASTM D-3262) (SN 72) SANITARY SEWER)	LF	26,200
77	02431	ANNULAR BACKFILL FOR CARRIER PIPE (60-INCH FRP (ASTM D-3262) (SN72) SANITARY SEWER)	LF	2,523
78	02431	ANNULAR BACKFILL FOR CARRIER PIPE (104-INCH FRP (ASTM D-3262) (SN72) SANITARY SEWER)	LF	26,130
79	02440	GENERAL SHAFT REQUIREMENTS (W-6 MIDDLE SEGMENT SHAFT)	LS	1
80	02440	GENERAL SHAFT REQUIREMENTS (PEARSALL SHAFT)	LS	1
81	02440	GENERAL SHAFT REQUIREMENTS (MERRY OAKS SHAFT)	LS	1
82	02440	GENERAL SHAFT REQUIREMENTS (WATER TOWER SHAFT)	LS	1
83	02440	GENERAL SHAFT REQUIREMENTS (HOTEL SHAFT)	LS	1
84	02440	GENERAL SHAFT REQUIREMENTS (SOLIDS HANDLING SHAFT)	LS	1
85	02440	GENERAL SHAFT REQUIREMENTS (W-1 CONNECTION SHAFT)	LS	1
86	02440	GENERAL SHAFT REQUIREMENTS (BALLPARK SHAFT)	LS	1
87	02440	GENERAL SHAFT REQUIREMENTS (CALLAGHAN SHAFT)	LS	1
88	02600	POLYMER CONCRETE SANITARY SEWER MANHOLE, DROP (12' DIAMETER) (ALL DEPTHS)	EA	1
89	02610	STEEL CASING - (48-INCH)(0.625-INCH THICK)	LF	167
90	862.1	ABANDON - SANITARY SEWER MAIN (54-INCH)	LF	5,533
91	862.1	ABANDON - SANITARY SEWER MAIN (48-INCH)	LF	447
92	862.1	ABANDON - SANITARY SEWER MAIN (15-INCH)	LF	910
93	862.1	ABANDON - SANITARY SEWER MAIN (12-INCH)	LF	526
94	862.1	ABANDON - SANITARY SEWER MAIN (10-INCH)	LF	178
95	862.1	ABANDON - SANITARY SEWER MAIN (8-INCH)	LF	191
96	864-S1	BYPASS PUMPING SMALL DIAMETER SANITARY SEWERS (<24-INCH)	LS	1
97	864-S2	BYPASS PUMPING LARGE DIAMETER SANITARY SEWERS (24-INCH)	LS	1
98	866	SEWER MAIN TELEVISION INSPECTION (8-INCH TO 24-INCH)	LF	3,146
99	866	SEWER MAIN TELEVISION INSPECTION (30-INCH TO 60-INCH)	LF	8,503
100	866	SEWER MAIN TELEVISION INSPECTION (78-INCH TO 104-INCH)	LF	26,672
101	866A	EXISTING SEWER MAIN TELEVISION INSPECTION (8-INCH TO 24-INCH)	LF	1,737
102	866A	EXISTING SEWER MAIN TELEVISION INSPECTION (30-INCH TO 60-INCH)	LF	5,980
103	1100	SLIP-LINING SANITARY SEWERS(SLIPLINE 48" STEEL CASING W/ 24")(10'-14' DEPTH)	LF	167
104	1100	SLIP-LINING SANITARY SEWERS(SLIPLINE EX. 54" W/ 48" STEEL CASING)(10'-14' DEPTH)	LF	160
105	11280	STAINLESS STEEL SLIDE GATES	LS	1
106	11310	PACKAGE METERING MANHOLE	LS	1
107	100	INTERMEDIATE DEMOBILIZATION BYPASS EQUIPMENT RENTAL	MD	20
108	100	INTERMEDIATE DEMOBILIZATION BYPASS PUMPING FUEL	MD	20
109	100	INTERMEDIATE DEMOBILIZATION BYPASS PUMPING WATCH	MD	20
110	02086	EXCAVATION, CLASSIFICATION, TRANSPORTATION, AND DISPOSAL OF TPH AFFECTED SOIL	TON	13,000
111		W-1 CLEANING AND MAINTENANCE	LS	1
112	01020	TIME EXTENSION FOR W-1 BYPASS	AL	1
113	01020	ODOR CONTROL	AL	1
114	SC8.7	EARLY COMPLETION BONUS ALLOWANCE	AL	1
115	100A	INTERMEDIATE DEMOBILIZATION/REMOBILIZATION (OPEN CUT)	EA	1
116	100B	TBM MOBILIZATION (MAX 5% OF ITEMS 1 TO 106)	LS	1
117	100	MOBILIZATION (MAX 2% OF ITEMS 1 TO 106)	LS	1
118	101	PREPARING RIGHT-OF-WAY (MAX 1% OF ITEMS 1 TO 106)	LS	1

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3/9/2020

Kimley»Horn

Texas Registered Firm, No. F-928

601 NW Loop 410 Suite 350 San Antonio, TX 78216
 Tel No. 210-541-9166 Fax No. 210-541-8699

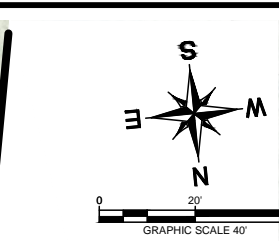
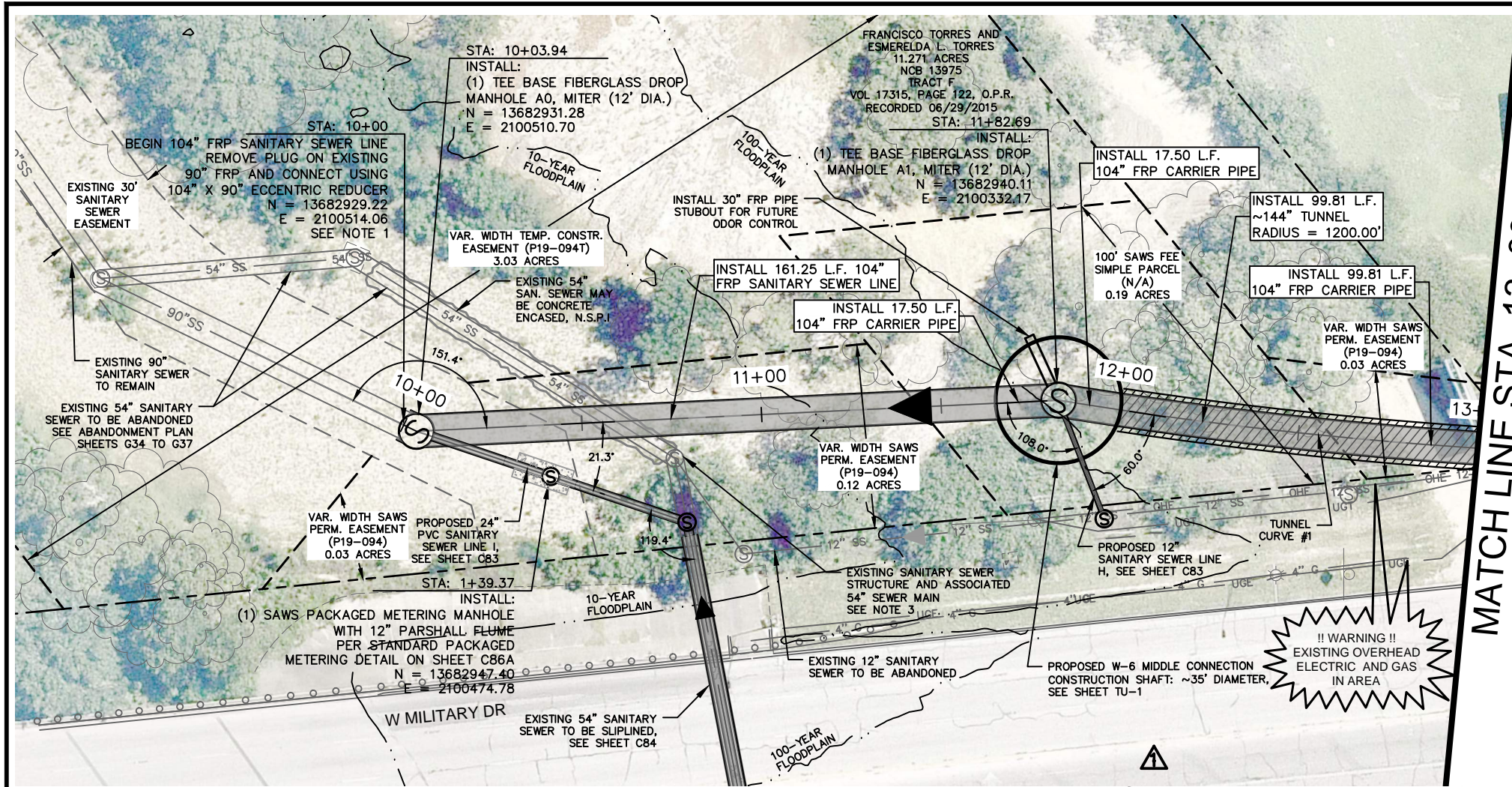
No.	Revision	By	Date
	ADDENDUM NO. 1	JAF	3/9/2020



W-6 UPPER SEGMENT: HWY 90 TO SW MILITARY DR SEWER MAIN

OVERALL QUANTITIES

DATE: MARCH 2020	SAWS PROJECT NO. 19-4519	SHEET NO. G6
DESIGN: JKN	KHA PROJECT NO.	
DRAWN: CRW	068665052	
CHECKED: JAF		



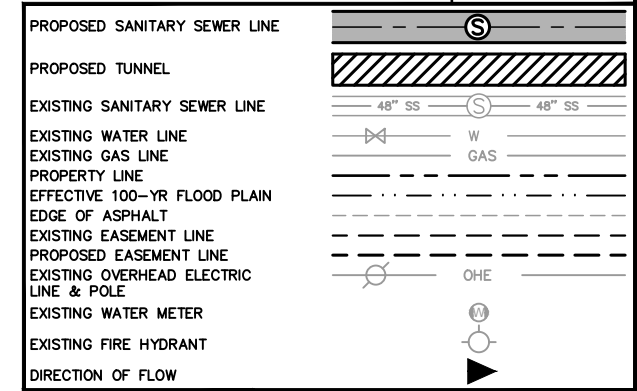
ITEM NO.	DESCRIPTION	UNIT	QUANTITY
550.1	TRENCH EXCAVATION SAFETY PROTECTION (COSA SPEC)	LF	165.19
853A	FIBER-REINFORCED SANITARY SEWER MANHOLE - TEE BASE FIBERGLASS MANHOLE W/ DROP, MITER (12' DIAMETER)	EA	2
853A	EXTRA DEPTH (+6) TEE BASE FIBERGLASS MANHOLE, MITER (22'-25' DEPTH)	VF	46.18
857	104-INCH FRP (ASTM D-3262) (SN 72) SANITARY SEWER LINE (22'-25' DEPTH)	LF	39.39
857	104-INCH FRP (ASTM D-3262) (SN 72) SANITARY SEWER LINE (25'-30' DEPTH)	LF	74.88
857	104-INCH FRP (ASTM D-3262) (SN 72) SANITARY SEWER LINE (30'-35' DEPTH)	LF	50.63
02410	GENERAL TUNNELING REQUIREMENTS TBM TUNNELING (104-INCH AND 60-INCH FRP SANITARY SEWER)	LF	99.81
02430	INSTALLATION OF PIPE IN TUNNEL (104-INCH FRP (ASTM D-3262) (SN 72) SANITARY SEWER)	LF	134.81
02431	ANNULAR BACKFILL FOR CARRIER PIPE (104-INCH FRP (ASTM D-3262) (SN72) SANITARY SEWER)	LF	134.81
02440	GENERAL SHAFT REQUIREMENTS (W-6 MIDDLE SEGMENT SHAFT)	LS	1
866	SEWER MAIN TELEVISION INSPECTION (78-INCH TO 104-INCH)	LF	300

NOTES:

- PRIOR TO COMMENCING PHASE 1 (SEE CONSTRUCTION SEQUENCING SHEET G29), CONTRACTOR SHALL LOCATE W-6 MIDDLE SEGMENT STUBOUT AND VERIFY ELEVATION. CONTRACTOR WILL NOT BE ALLOWED TO PROCEED TO FURTHER PHASES UNTIL THIS STUBOUT ELEVATION IS VERIFIED AND PROVIDED TO SAWS AND DESIGN ENGINEER.
- DUE TO SOIL CONDITIONS BETWEEN STA. 11+83 AND STA. 24+75, THE USE OF PRESSURIZED FACE TUNNELING METHODS, INCLUDING GASKETED PRE-CAST CONCRETE SEGMENTS OR GASKETED LINER PLATE, IS REQUIRED (NSPI). REFERENCE THE GEOTECHNICAL BASELINE REPORT.
- CONTRACTOR TO BE AWARE OF CLOSE PROXIMITY OF EXISTING SANITARY SEWER STRUCTURE AND ASSOCIATED 54" PIPE TO THE PROPOSED 104" PIPE. CONTRACTOR TO UTILIZE INSTALLATION MEANS AT THIS LOCATION TO ENSURE THE INTEGRITY OF THE STRUCTURE AND 54" PIPE SO THAT NO SEWER SPILLS OCCUR. PRIOR TO INSTALLATION OF THE 104" SEWER AT THIS LOCATION, CONTRACTOR SHALL SUBMIT PLAN FOR INSTALLATION FOR REVIEW BY SAWS AND DESIGN ENGINEER.
- FOR CLARITY PURPOSES AND DUE TO THE DISTANCE BETWEEN EXISTING AND PROPOSED UTILITIES, EXISTING UTILITIES ARE ONLY SHOWN ON PROFILE WHERE THEY CROSS THE CENTER LINE ALIGNMENT OF THE PROPOSED PIPE.
- FOR GEOTECHNICAL INSTRUMENTATION AND MONITORING REQUIREMENTS, SEE SHEET TU-1.
- THREE-PHASE POWER WILL BE AVAILABLE FOR INSTALLATION AT SHAFT #1 - W-6 MIDDLE CONNECTION SHAFT. THE USE OF THREE-PHASE IS AT THE SOLE DISCRETION OF THE CONTRACTOR WHO MAY ELECT TO USE ALTERNATE MEANS AND METHODS OF POWER SUPPLY.

TUNNEL CURVE #1	
TUNNEL CURVATURE DATA	
PC STA	11+82.69
PT STA	14+88.87
RADIUS	1200'
Δ	14.62'

LEGEND



3/6/2020

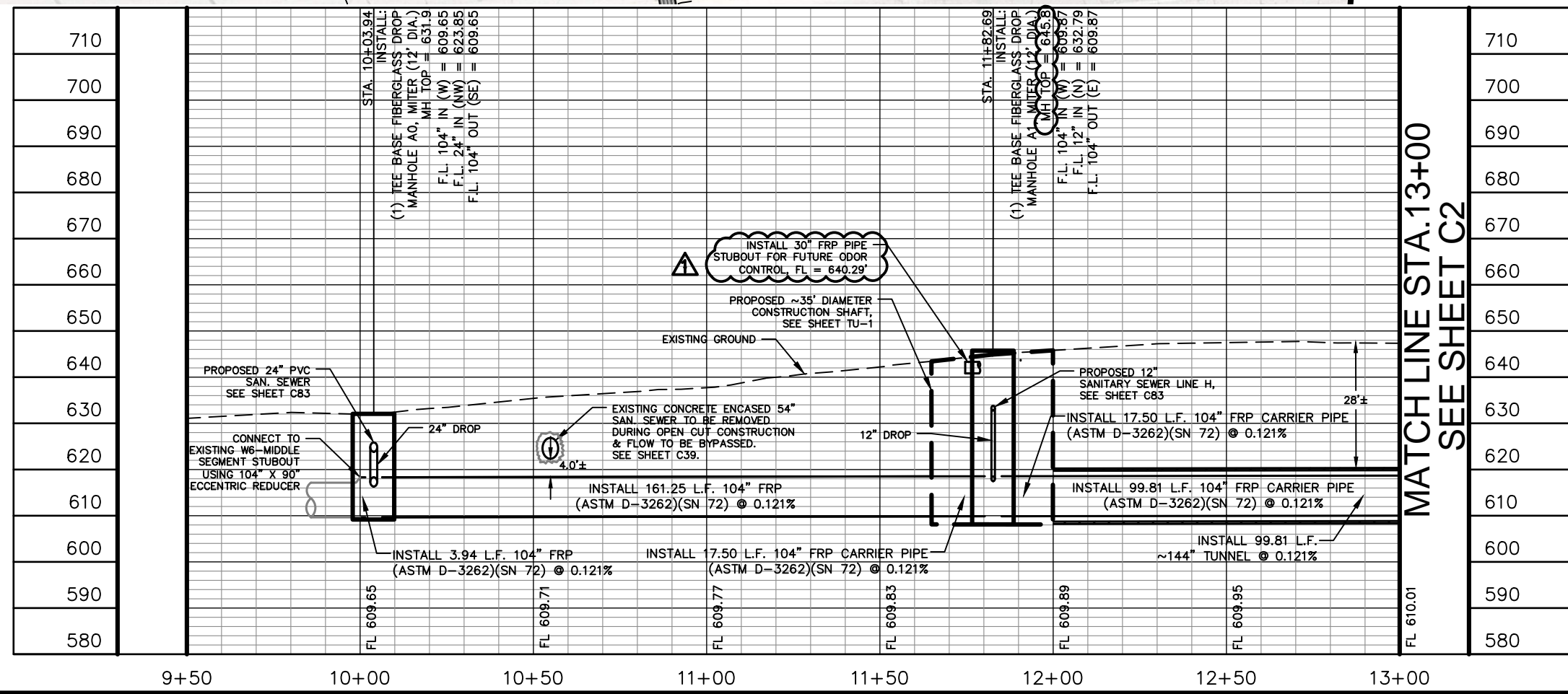
Kimley»Horn
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 601 NW Loop 410 Suite 350 San Antonio, TX 78216
 Tel No. 210-541-9166 Fax No. 210-541-8699

No.	Revision	By	Date
Δ	ADDENDUM NO. 1	JAF	3/6/2020

**W-6 UPPER SEGMENT:
 HWY 90 TO SW MILITARY DR
 SEWER MAIN**

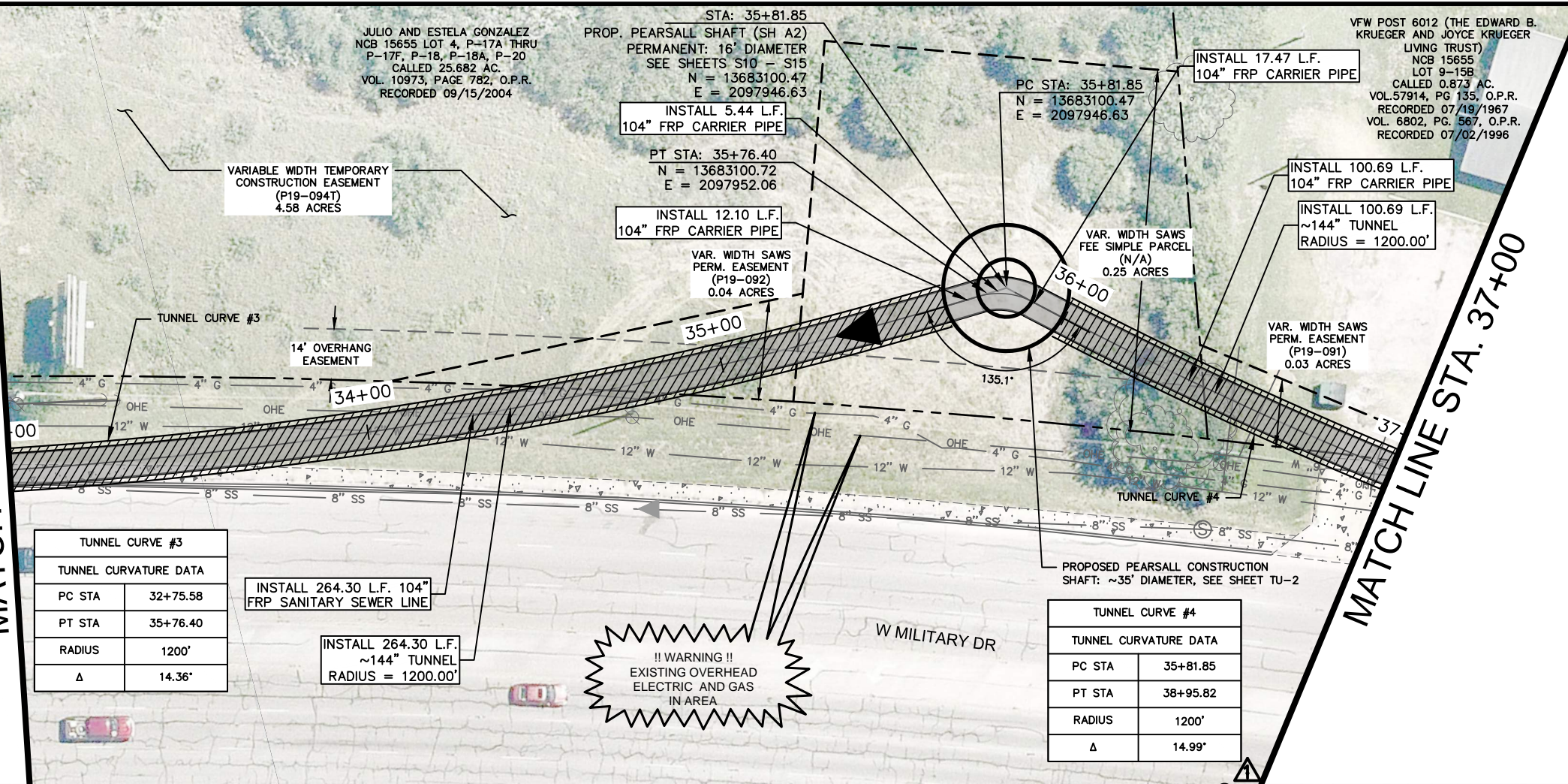
**104-INCH SANITARY
 SEWER PLAN & PROFILE
 STA. 10+00 TO STA.
 13+00**

DATE: MARCH 2020	SAWS PROJECT NO. 19-4519	SHEET NO. C1
DESIGN: JKN	KHA PROJECT NO. 068665052	
DRAWN: CRW		
CHECKED: JAF		



PLOTTED BY: DWG NAME: WILSON CONNER 3/2/2020 1:50 PM
 K:\SNA UTILITIES\068665052\CADD\SHETS\104 INCH SANITARY SEWER PLAN & PROFILE STA. 10+00 TO STA. 13+00.DWG
 3/2/2020 1:54 PM

MATCH LINE STA. 33+00



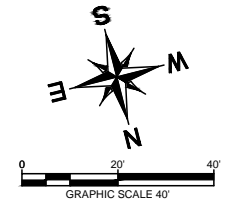
TUNNEL CURVE #3

TUNNEL CURVATURE DATA	
PC STA	32+75.58
PT STA	35+76.40
RADIUS	1200'
Δ	14.36°

TUNNEL CURVE #4

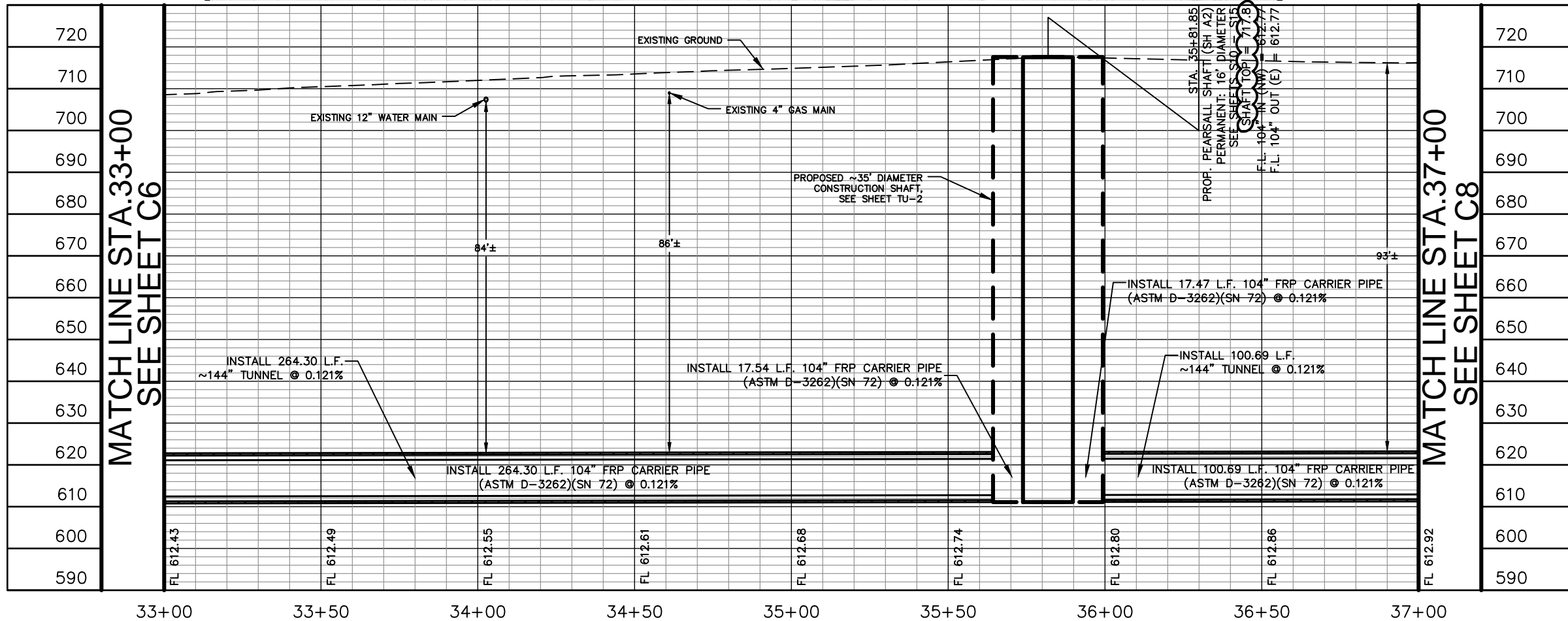
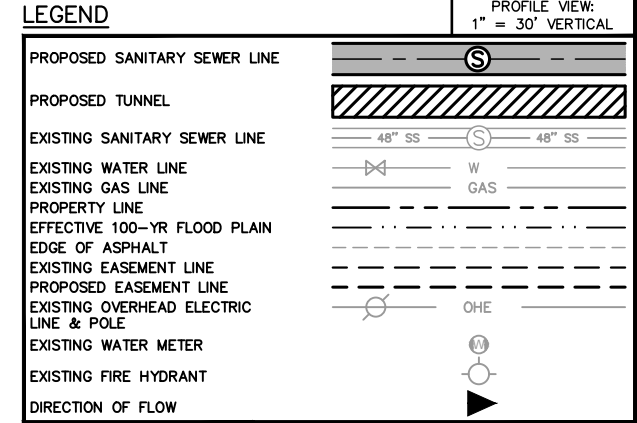
TUNNEL CURVATURE DATA	
PC STA	35+81.85
PT STA	38+95.82
RADIUS	1200'
Δ	14.99°

!! WARNING !!
EXISTING OVERHEAD
ELECTRIC AND GAS
IN AREA



ITEM NO.	DESCRIPTION	UNIT	QUANTITY
02410	GENERAL TUNNELING REQUIREMENTS TBM TUNNELING (104-INCH AND 60-INCH FRP SANITARY SEWER)	LF	365
02430	INSTALLATION OF PIPE IN TUNNEL (104-INCH FRP (ASTM D-3262) (SN 72) SANITARY SEWER)	LF	400
02431	ANNULAR BACKFILL FOR CARRIER PIPE (104-INCH FRP (ASTM D-3262) (SN72) SANITARY SEWER)	LF	365
02440	GENERAL SHAFT REQUIREMENTS (PEARSALL SHAFT)	LS	1
866	SEWER MAIN TELEVISION INSPECTION (78-INCH TO 104-INCH)	LF	400

- NOTES:**
- FOR CLARITY PURPOSES AND DUE TO THE DISTANCE BETWEEN EXISTING AND PROPOSED UTILITIES, EXISTING UTILITIES ARE ONLY SHOWN ON PROFILE WHERE THEY CROSS THE CENTER LINE ALIGNMENT OF THE PROPOSED PIPE.
 - FOR GEOTECHNICAL INSTRUMENTATION AND MONITORING REQUIREMENTS, SEE SHEET TU-2.
 - THREE-PHASE POWER WILL BE AVAILABLE FOR INSTALLATION AT SHAFT #2 - PEARSALL SHAFT. THE USE OF THREE-PHASE IS AT THE SOLE DISCRETION OF THE CONTRACTOR WHO MAY ELECT TO USE ALTERNATE MEANS AND METHODS OF POWER SUPPLY.



3/6/2020

Kimley-Horn
Texas Registered Firm, No. F-928
601 NW Loop 410 Suite 350 San Antonio, TX 78216
Tel No. 210-541-9166 Fax No. 210-541-8699

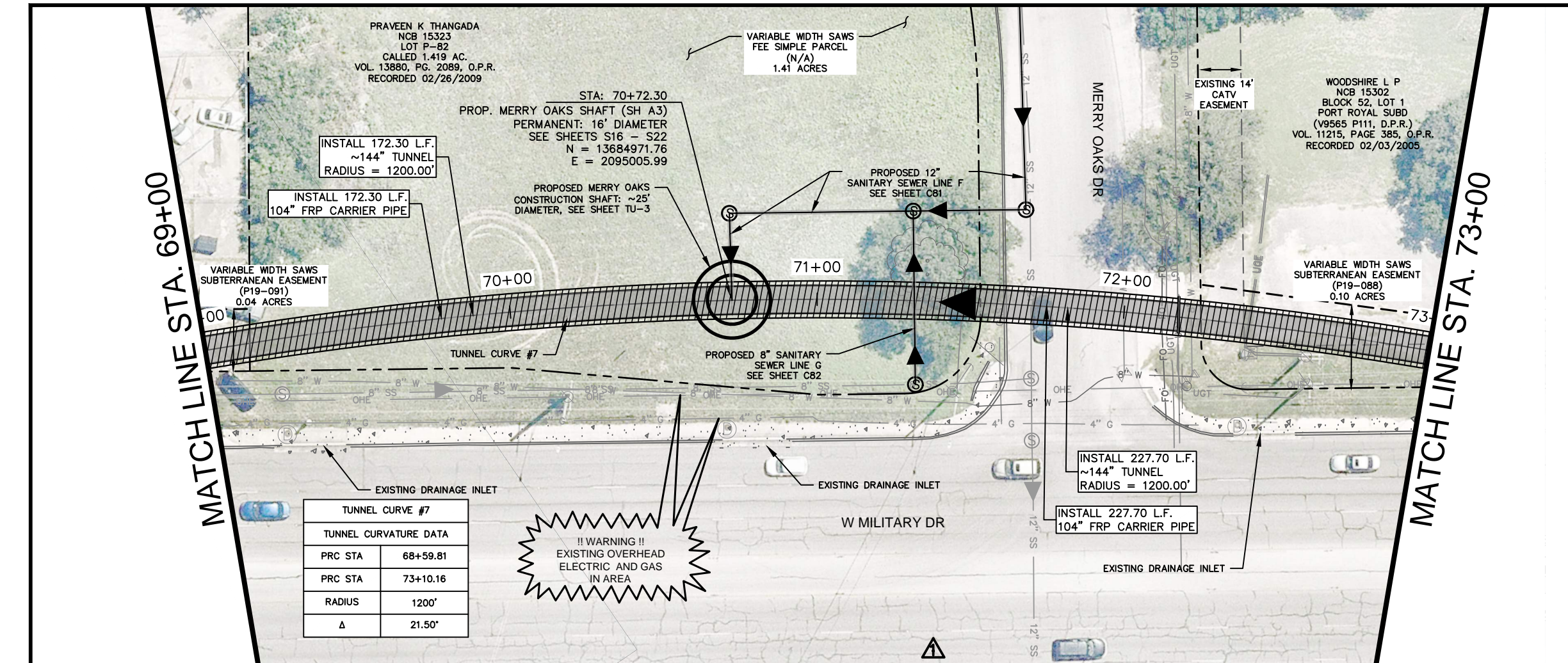
No.	Revision	By	Date
Δ	ADDENDUM NO. 1	JAF	3/6/2020

**W-6 UPPER SEGMENT:
HWY 90 TO SW MILITARY DR
SEWER MAIN**

**104-INCH SANITARY
SEWER PLAN & PROFILE
STA. 33+00 TO STA.
37+00**

DATE: MARCH 2020	SAWS PROJECT NO. 19-4519	SHEET NO. C7
DESIGN: JKN	KHA PROJECT NO. 068665052	
DRAWN: CRW		
CHECKED: JAF		

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TUNNEL CURVE #7	
TUNNEL CURVATURE DATA	
PRC STA	68+59.81
PRC STA	73+10.16
RADIUS	1200'
Δ	21.50'

!! WARNING !!
EXISTING OVERHEAD
ELECTRIC AND GAS
IN AREA

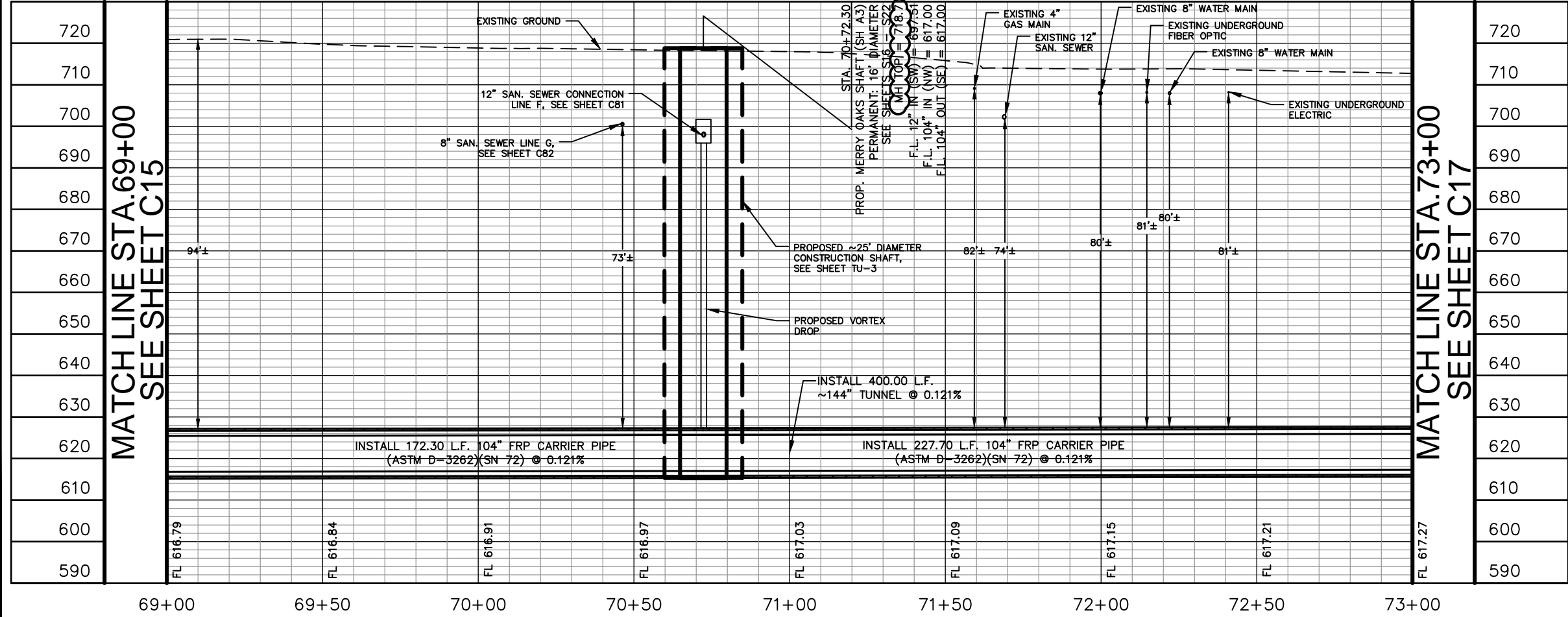
ITEM NO.	DESCRIPTION	UNIT	QUANTITY
02410	GENERAL TUNNELING REQUIREMENTS TBM TUNNELING (104-INCH AND 60-INCH FRP SANITARY SEWER)	LF	400
02430	INSTALLATION OF PIPE IN TUNNEL (104-INCH FRP (ASTM D-3262) (SN 72) SANITARY SEWER)	LF	400
02431	ANNULAR BACKFILL FOR CARRIER PIPE (104-INCH FRP (ASTM D-3262) (SN72) SANITARY SEWER)	LF	400
02440	GENERAL SHAFT REQUIREMENTS (MERRY OAKS SHAFT)	LS	1
866	SEWER MAIN TELEVISION INSPECTION (78-INCH TO 104-INCH)	LF	400

- NOTES:**
- FOR CLARITY PURPOSES AND DUE TO THE DISTANCE BETWEEN EXISTING AND PROPOSED UTILITIES, EXISTING UTILITIES ARE ONLY SHOWN ON PROFILE WHERE THEY CROSS THE CENTER LINE ALIGNMENT OF THE PROPOSED PIPE.
 - FOR GEOTECHNICAL INSTRUMENTATION AND MONITORING REQUIREMENTS, SEE SHEET TU-3.
 - THREE-PHASE POWER WILL BE AVAILABLE FOR INSTALLATION AT SHAFT #3 - MERRY OAKS. THE USE OF THREE-PHASE IS AT THE SOLE DISCRETION OF THE CONTRACTOR WHO MAY ELECT TO USE ALTERNATE MEANS AND METHODS OF POWER SUPPLY.

LEGEND

PROFILE VIEW:
1" = 30' VERTICAL

- PROPOSED SANITARY SEWER LINE
- PROPOSED TUNNEL
- EXISTING SANITARY SEWER LINE
- EXISTING WATER LINE
- EXISTING GAS LINE
- PROPERTY LINE
- 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
- DIRECTION OF FLOW



3/6/2020

Kimley & Horn

Texas Registered Firm, No. F-928

601 NW Loop 410 Suite 350
San Antonio, TX 78216
Tel No. 210-541-9166
Fax No. 210-541-8699

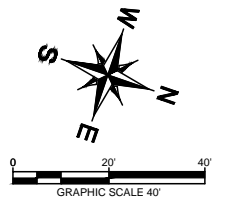
No.	Revision	By	Date
Δ	ADDENDUM NO. 1	JAF	3/6/2020

**W-6 UPPER SEGMENT:
HWY 90 TO SW MILITARY DR
SEWER MAIN**

**104-INCH SANITARY
SEWER PLAN & PROFILE
STA. 69+00 TO STA.
73+00**

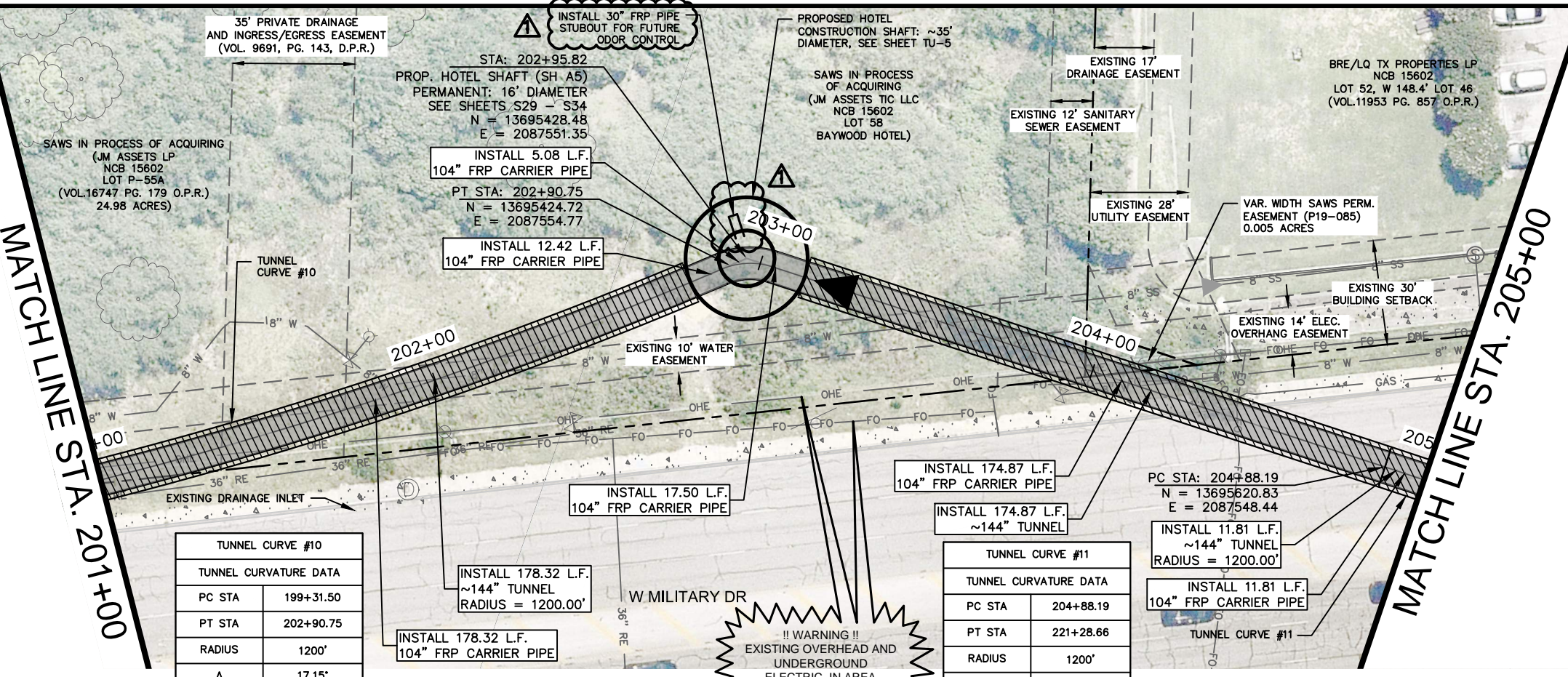
DATE: MARCH 2020	SAWS PROJECT NO. 19-4519	SHEET NO. C16
DESIGN: JKN	KHA PROJECT NO. 068665052	
DRAWN: CRW		
CHECKED: JAF		

PLOTTED BY: WILSON CONNER 3/2/2020 1:33 PM
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 LAST SAVED: 3/2/2020 2:24 PM



ITEM NO.	DESCRIPTION	UNIT	QUANTITY
02410	GENERAL TUNNELING REQUIREMENTS TBM TUNNELING (104-INCH AND 60-INCH FRP SANITARY SEWER)	LF	365
02430	INSTALLATION OF PIPE IN TUNNEL (104-INCH FRP (ASTM D-3262) (SN 72) SANITARY SEWER)	LF	400
02431	ANNULAR BACKFILL FOR CARRIER PIPE (104-INCH FRP (ASTM D-3262) (SN72) SANITARY SEWER)	LF	365
02440	GENERAL SHAFT REQUIREMENTS (HOTEL SHAFT)	LS	1
866	SEWER MAIN TELEVISION INSPECTION (78-INCH TO 104-INCH)	LF	400

- NOTES:**
- FOR GEOTECHNICAL INSTRUMENTATION AND MONITORING REQUIREMENTS, SEE SHEET TU-5.
 - FOR CLARITY PURPOSES AND DUE TO THE DISTANCE BETWEEN EXISTING AND PROPOSED UTILITIES, EXISTING UTILITIES ARE ONLY SHOWN ON PROFILE WHERE THEY CROSS THE CENTER LINE ALIGNMENT OF THE PROPOSED PIPE.
 - THREE-PHASE POWER WILL BE AVAILABLE FOR INSTALLATION AT SHAFT #5 - HOTEL SHAFT. THE USE OF THREE-PHASE IS AT THE SOLE DISCRETION OF THE CONTRACTOR WHO MAY ELECT TO USE ALTERNATE MEANS AND METHODS OF POWER SUPPLY.



TUNNEL CURVE #10

TUNNEL CURVATURE DATA	
PC STA	199+31.50
PT STA	202+90.75
RADIUS	1200'
Δ	17.15°

TUNNEL CURVE #11

TUNNEL CURVATURE DATA	
PC STA	204+88.19
PT STA	221+28.66
RADIUS	1200'
Δ	78.33°

LEGEND

PROFILE VIEW:
1" = 30' VERTICAL

- PROPOSED SANITARY SEWER LINE
- PROPOSED TUNNEL
- EXISTING SANITARY SEWER LINE
- EXISTING WATER LINE
- EXISTING GAS LINE
- PROPERTY LINE
- 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
- DIRECTION OF FLOW

3/6/2020

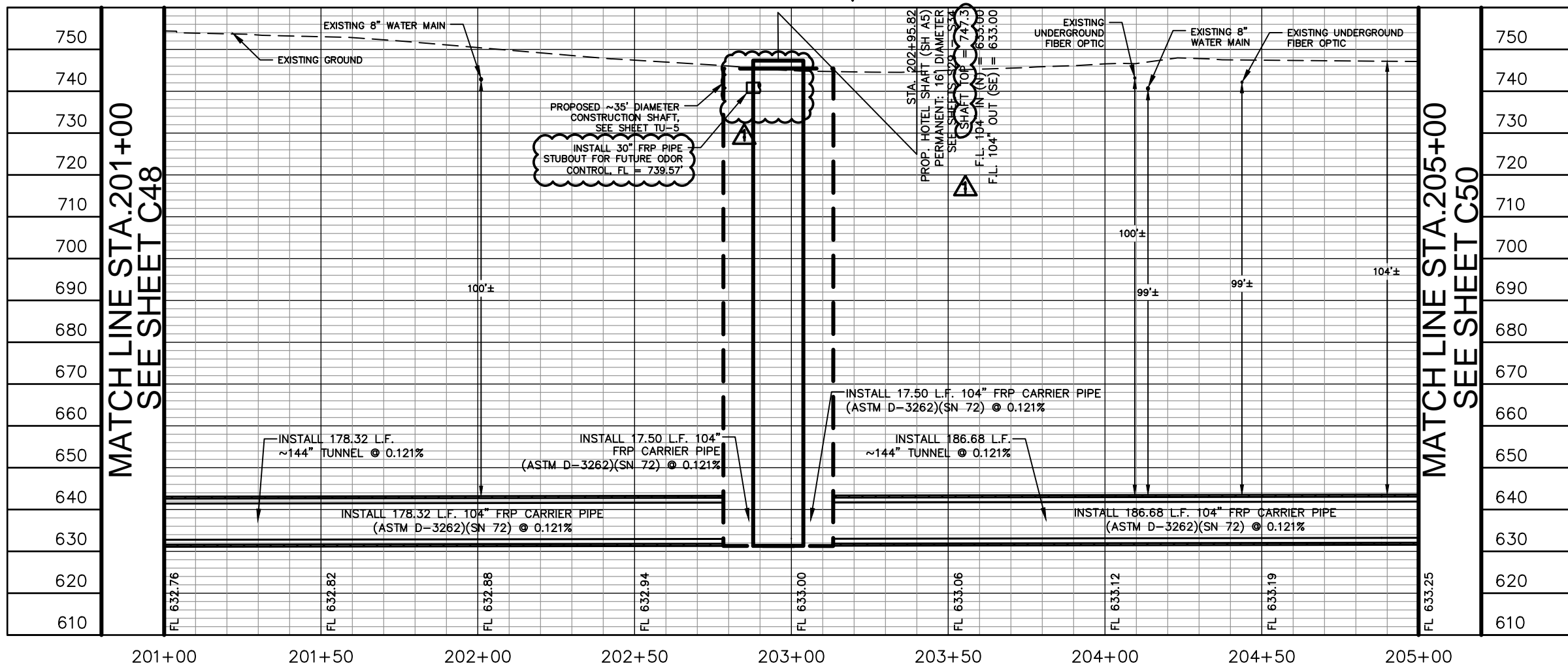
Kimley-Horn
Texas Registered Firm, No. F-928
601 NW Loop 410 Suite 350 San Antonio, TX 78216
Tel No. 210-541-9166 Fax No. 210-541-8699

No.	Revision	By	Date
Δ	ADDENDUM NO. 1	JAF	3/6/2020

**W-6 UPPER SEGMENT:
HWY 90 TO SW MILITARY DR
SEWER MAIN**

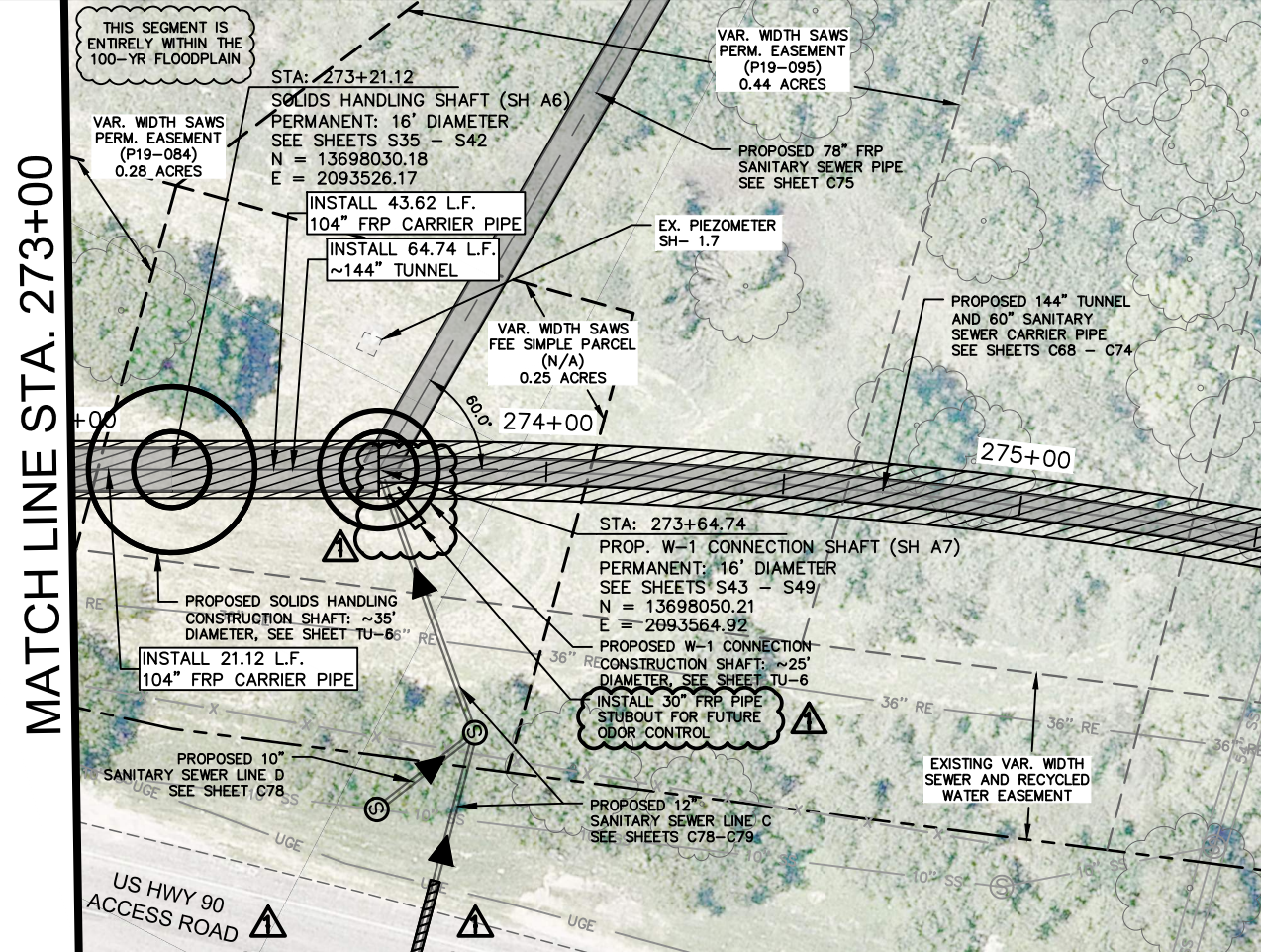
**104-INCH SANITARY
SEWER PLAN & PROFILE
STA. 201+00 TO STA.
205+00**

DATE: MARCH 2020	SAWS PROJECT NO. 19-4519	SHEET NO. C49
DESIGN: JKN	KHA PROJECT NO. 068665052	
DRAWN: CRW		
CHECKED: JAF		

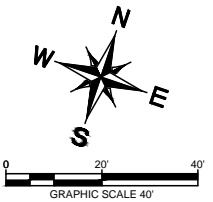


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WILSON CONNER 3/2/2020 2:02 PM
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 3/2/2020 2:02 PM
 PLOTTED BY
 DWG NAME
 LAST SAVED



Station	Profile View	Notes
740		
730		
720		
710		
700		
690		
680		
670		
660		
650		
640		
630		
620		
610		
600		



ITEM NO.	DESCRIPTION	UNIT	QUANTITY
02410	GENERAL TUNNELING REQUIREMENTS TBM TUNNELING (104-INCH AND 60-INCH FRP SANITARY SEWER)	LF	64.74
02430	INSTALLATION OF PIPE IN TUNNEL (104-INCH FRP (ASTM D-3262) (SN 72) SANITARY SEWER)	LF	64.74
02431	ANNULAR BACKFILL FOR CARRIER PIPE (104-INCH FRP (ASTM D-3262) (SN72) SANITARY SEWER)	LF	64.74
02440	GENERAL SHAFT REQUIREMENTS (SOLIDS HANDLING SHAFT)	LS	1
02440	GENERAL SHAFT REQUIREMENTS (W-1 CONNECTION SHAFT)	LS	1
866	SEWER MAIN TELEVISION INSPECTION (78-INCH TO 104-INCH)	LF	64.74

- NOTES:**
1. DUE TO SOIL CONDITIONS BETWEEN STA. 273+65 AND STA. 280+65, THE USE OF PRESSURIZED FACE TUNNELING METHODS, INCLUDING GASKETED PRE-CAST CONCRETE SEGMENTS OR GASKETED LINER PLATE, IS REQUIRED (NSPI). REFERENCE THE GEOTECHNICAL BASELINE REPORT.
 2. FOR GEOTECHNICAL INSTRUMENTATION AND MONITORING REQUIREMENTS, SEE SHEET TU-6.
 3. FOR CLARITY PURPOSES AND DUE TO THE DISTANCE BETWEEN EXISTING AND PROPOSED UTILITIES, EXISTING UTILITIES ARE ONLY SHOWN ON PROFILE WHERE THEY CROSS THE CENTER LINE ALIGNMENT OF THE PROPOSED PIPE.
 4. THREE-PHASE POWER WILL NOT BE AVAILABLE TO SHAFT #6 - SOLIDS HANDLING SHAFT AND SHAFT #7 - W-1 CONNECTION SHAFT. POWER SUPPLY AT THESE SHAFT LOCATIONS IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

LEGEND

PROFILE VIEW:
1" = 30' VERTICAL

- PROPOSED SANITARY SEWER LINE
- PROPOSED TUNNEL
- EXISTING SANITARY SEWER LINE
- EXISTING WATER LINE
- EXISTING GAS LINE
- PROPERTY LINE
- 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
- DIRECTION OF FLOW

3/6/2020

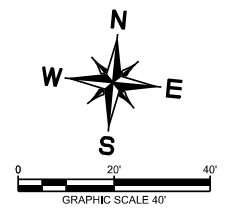
Kimley»Horn
 Texas Registered Firm, No. F-928
 601 NW Loop 410 Suite 350 San Antonio, TX 78216
 Tel No. 210-541-9166 Fax No. 210-541-8699

No.	Revision	By	Date
▲	ADDENDUM NO. 1	JAF	3/6/2020

**W-6 UPPER SEGMENT:
 HWY 90 TO SW MILITARY DR
 SEWER MAIN**

**104-INCH SAN. SEWER
 PLAN & PROFILE
 STA. 273+00 TO STA.
 273+64.74**

DATE: MARCH 2020	SAWS PROJECT NO. 19-4519	SHEET NO. C67
DESIGN: JKN	KHA PROJECT NO. 068665052	
DRAWN: CRW		
CHECKED: JAF		



5757 WEST US HWY 90
CITY OF SAN ANTONIO
NCB 13951
BLCK 1, SE 1212.36' OF LOT
FARAH SUB
(V6400 P79, D.P.R.)
CALLED 43.68 ACRES
VOL. 5640, PG. 1892, O.P.R.
RECORDED 04/29/1993

TUNNEL CURVE #17	
TUNNEL CURVATURE DATA	
PC STA	291+77.92
PT STA	293+18.96
RADIUS	1200'
Δ	6.73°

ITEM NO.	DESCRIPTION	UNIT	QUANTITY
866	SEWER MAIN TELEVISION INSPECTION (30-INCH TO 60-INCH)	LF	400.00
02410	GENERAL TUNNELING REQUIREMENTS HAND MINING (60-INCH FRP (ASTM D-3262) (SN 72) (SANITARY SEWER))	LF	341.27
02410	GENERAL TUNNELING REQUIREMENTS TBM TUNNELING (104-INCH AND 60-INCH FRP (ASTM D-3262) (SN 72) (SANITARY SEWER))	LF	33.73
02430	INSTALLATION OF PIPE IN TUNNEL (60-INCH FRP (ASTM D-3262) (SN 72) (SANITARY SEWER))	LF	400.00
02431	ANNULAR BACKFILL FOR CARRIER PIPE (60-INCH FRP (ASTM D-3262) (SN 72) (SANITARY SEWER))	LF	400.00
02440	GENERAL SHAFT REQUIREMENTS (BALLPARK SHAFT)	LS	1

- NOTES:
- DUE TO SOIL CONDITIONS BETWEEN STA. 273+65 AND STA. 280+65, THE USE OF PRESSURIZED FACE TUNNELING METHODS, INCLUDING GASKETED PRE-CAST CONCRETE SEGMENTS OR GASKETED LINER PLATE, IS REQUIRED (NSPI). REFERENCE THE GEOTECHNICAL BASELINE REPORT.
 - FOR CLARITY PURPOSES AND DUE TO THE DISTANCE BETWEEN EXISTING AND PROPOSED UTILITIES, EXISTING UTILITIES ARE ONLY SHOWN ON PROFILE WHERE THEY CROSS THE CENTER LINE ALIGNMENT OF THE PROPOSED PIPE.
 - FOR GEOTECHNICAL INSTRUMENTATION AND MONITORING REQUIREMENTS, SEE SHEET TU-7.

LEGEND

PROFILE VIEW:
1" = 30' VERTICAL

PROPOSED SANITARY SEWER LINE	
PROPOSED TUNNEL	
EXISTING SANITARY SEWER LINE	
EXISTING WATER LINE	
EXISTING GAS LINE	
EXISTING FIBER OPTIC	
PROPERTY LINE	
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	
DIRECTION OF FLOW	

DALE P. MURPHY
PROFESSIONAL ENGINEER

K. FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING

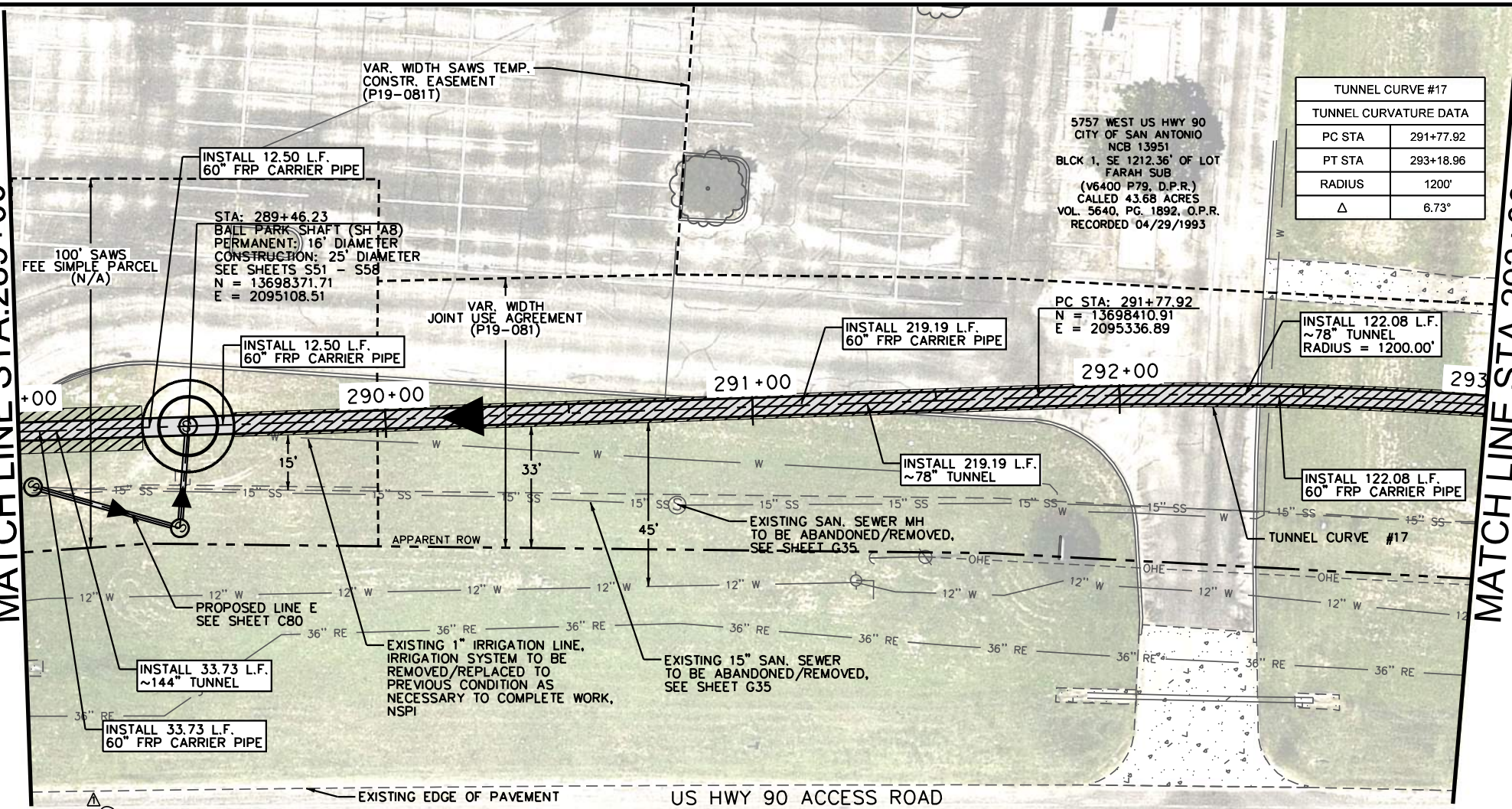
10001 Reunion Place
Suite 404
SAN ANTONIO, Texas 78216
P - 210.491.2391 F - 512.338.1784
TBPE Firm #6535
www.kfriesse.com

No.	Revision	By	Date
1	ADDENDUM NO. 1	DM	3/4/2020

**W-6 UPPER SEGMENT:
HWY 90 TO SW MILITARY DR
SEWER MAIN**

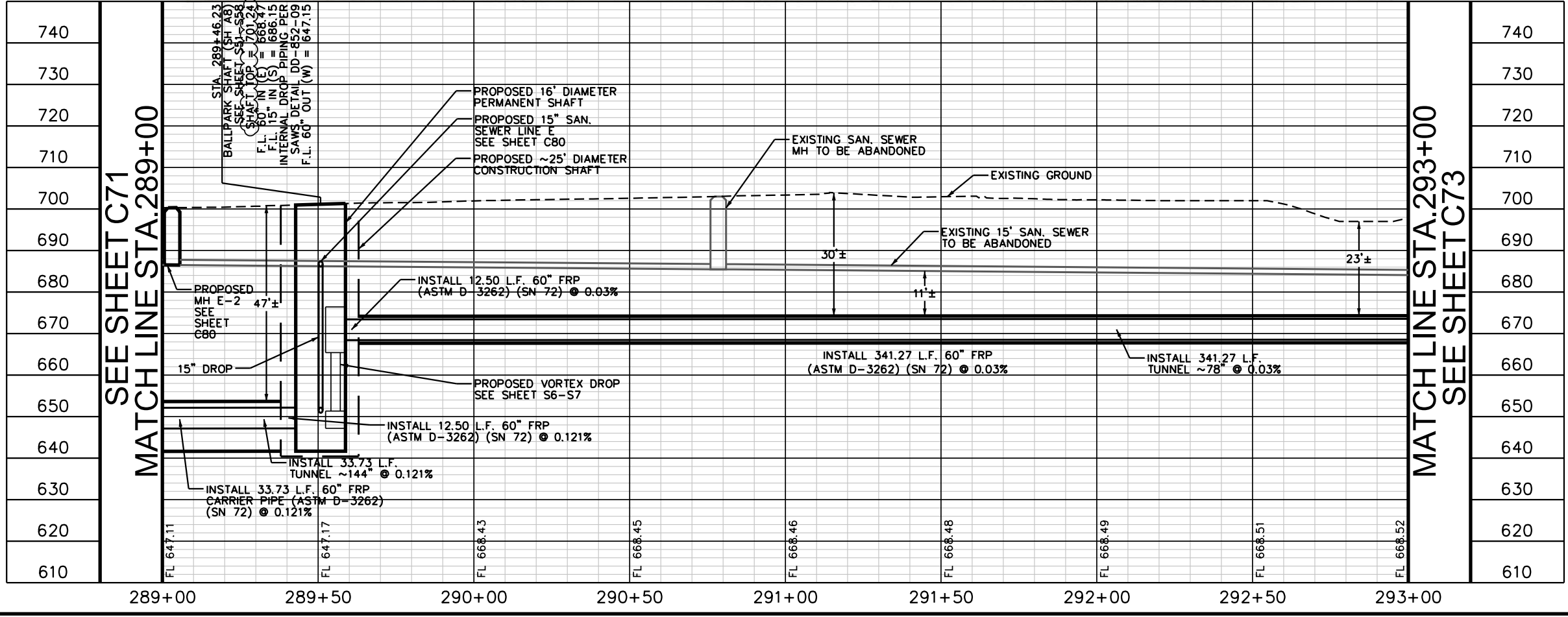
SHEET
**60-INCH SANITARY SEWER
PLAN & PROFILE
STA. 289+00 TO STA.
293+00**

DATE: FEBRUARY 2020	SAWS PROJECT NO. 19-4519	C72
DESIGN: KFA	KHA PROJECT NO. 068665052	
DRAWN: KFA		
CHECKED: KFA		



SEE SHEET C71
MATCH LINE STA. 289+00

MATCH LINE STA. 293+00
SEE SHEET C73



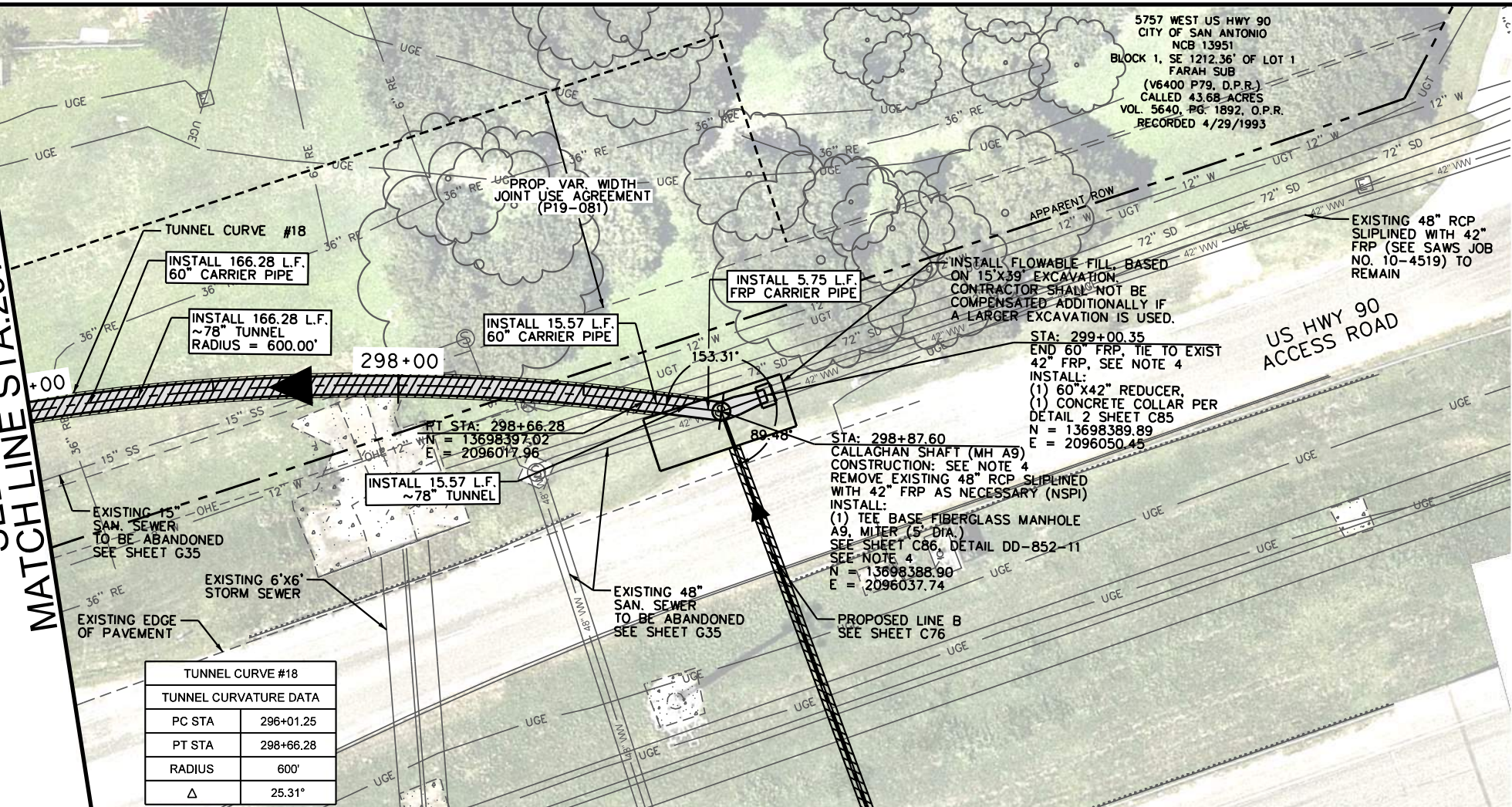
SEE SHEET C71
MATCH LINE STA. 289+00

MATCH LINE STA. 293+00
SEE SHEET C73

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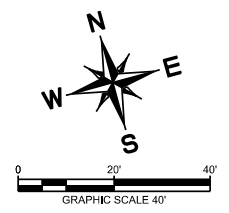
SEE SHEET C73
MATCHLINE STA. 297+00

SEE SHEET C73
MATCHLINE STA. 297+00



TUNNEL CURVE #18	
TUNNEL CURVATURE DATA	
PC STA	296+01.25
PT STA	298+66.28
RADIUS	600'
Δ	25.31°

5757 WEST US HWY 90
CITY OF SAN ANTONIO
NCB 13951
BLOCK 1, SE 1212.36' OF LOT 1
FARAH SUB
(V6400 P79, D.P.R.)
CALLED 43.68 ACRES
VOL. 5640, PG. 1892, O.P.R.
RECORDED 4/29/1993



ITEM NO.	DESCRIPTION	UNIT	QUANTITY
401	FLOWABLE FILL (TXDOT SPEC)	CY	715.00
853A	FIBER-REINFORCED SANITARY SEWER MANHOLE - TEE BASE FIBERGLASS MANHOLE, MITER (5' DIAMETER)	EA	1
863A	EXTRA DEPTH (>6') TEE BASE FIBERGLASS MANHOLE, MITER (5' DIAMETER)	VF	21.4
857	60-INCH FRP (ASTM D-3262) (SN 72) SANITARY SEWER LINE (25'-30' DEPTH)	LF	12.75
858	CONCRETE ENCASMENT CRADLES, SADDLES AND COLLARS	CY	3.10
866	SEWER MAIN TELEVISION INSPECTION (30-INCH TO 60-INCH)	LF	187.60
02410	GENERAL TUNNELING REQUIREMENTS HAND MINING (60-INCH FRP (ASTM D-3262) (SN 72) (SANITARY SEWER))	LF	181.85
02430	INSTALLATION OF PIPE IN TUNNEL (60-INCH FRP (ASTM D-3262) (SN 72) (SANITARY SEWER))	LF	187.60
02431	ANNULAR BACKFILL FOR CARRIER PIPE (60-INCH FRP (ASTM D-3262) (SN72) (SANITARY SEWER))	LF	187.60
02440	GENERAL SHAFT REQUIREMENTS (CALLAGHAN SHAFT)	LS	1

- NOTES:
- FOR CLARITY PURPOSES AND DUE TO THE DISTANCE BETWEEN EXISTING AND PROPOSED UTILITIES, EXISTING UTILITIES ARE ONLY SHOWN ON PROFILE WHERE THEY CROSS THE CENTER LINE ALIGNMENT OF THE PROPOSED PIPE.
 - FOR GEOTECHNICAL INSTRUMENTATION AND MONITORING REQUIREMENTS, SEE SHEET TU-7A.
 - PRIOR TO ANY TUNNEL CONSTRUCTION BETWEEN THE BALLPARK SHAFT AND CALLAGHAN SHAFT, CONTRACTOR TO EXCAVATE AND VERIFY THE PROPOSED TIE IN ELEVATION FOR THE 42".
 - PROPOSED LAYOUT, DESIGN, SHAPE, SIZE AND CONSTRUCTION OF THE CALLAGHAN TUNNEL SHAFT AND ANY SHORING REQUIRED FOR THE PIPELINE CONNECTIONS AND MANHOLE CONSTRUCTION SHALL BE DETERMINED BY THE CONTRACTOR AND SUBMITTED FOR APPROVAL. NOTE THE LIMITED AVAILABLE SPACE BETWEEN THE EXISTING PARALLEL 72-INCH STORM DRAIN AND EXISTING 42-INCH WASTEWATER (SLIPLINED INSIDE 48-INCH RCP). CONTRACTOR SHALL PROTECT THE 72-INCH STORM DRAIN IN PLACE DURING CONSTRUCTION, OR IF REMOVED, SHALL PROVIDE METHODS FOR MAINTAINING EQUIVALENT STORM WATER CAPACITY (NSPI).

LEGEND

PROPOSED SANITARY SEWER LINE

PROPOSED TUNNEL

EXISTING SANITARY SEWER LINE

EXISTING WATER LINE

EXISTING GAS LINE

EXISTING FIBER OPTIC

PROPERTY LINE

EFFECTIVE 100-YR FLOOD PLAIN

EDGE OF ASPHALT

EXISTING EASEMENT LINE

PROPOSED EASEMENT LINE

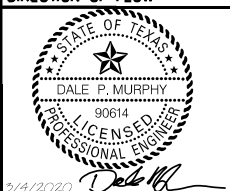
EXISTING OVERHEAD ELECTRIC LINE & POLE

EXISTING WATER METER

EXISTING FIRE HYDRANT

DIRECTION OF FLOW

PROFILE VIEW:
1" = 30' VERTICAL



K. FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING

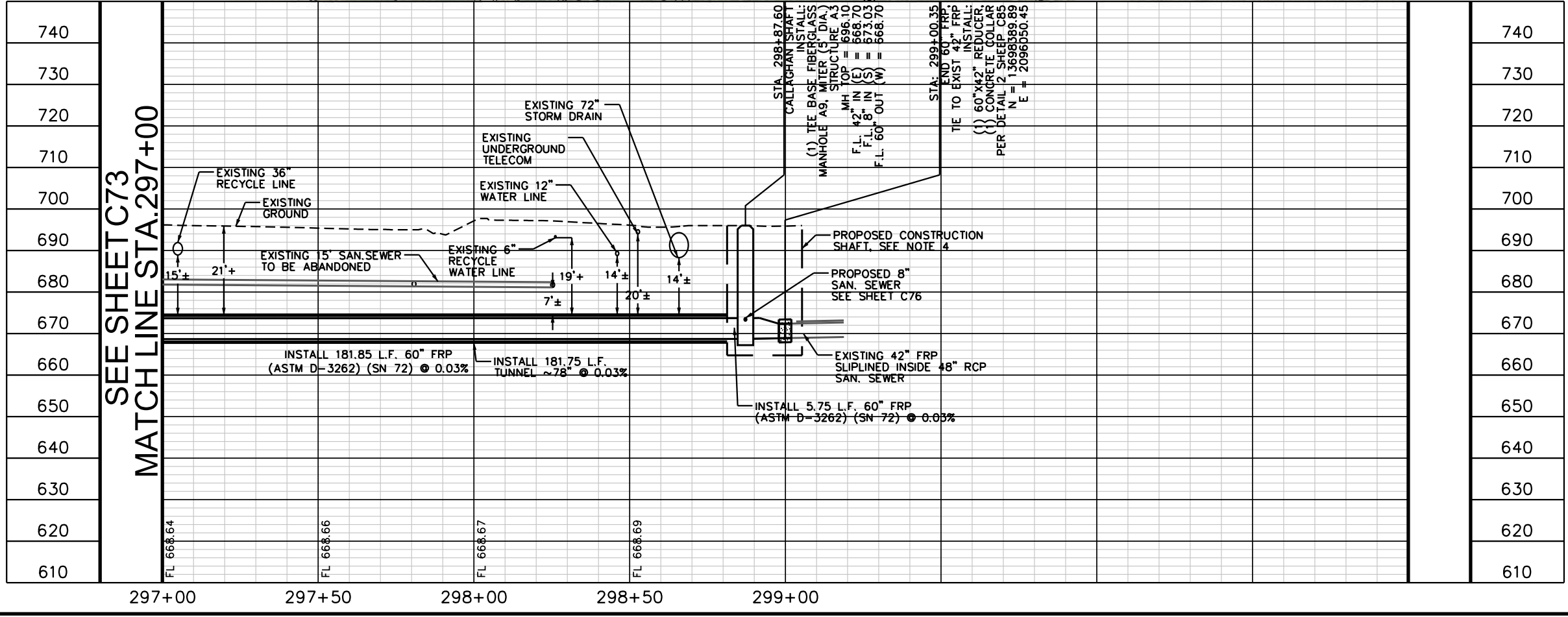
10001 Reunion Place
Suite 404
SAN ANTONIO, Texas 78216
P - 210.491.2391 F - 512.338.1784
TBPE Firm #6535
www.kfriese.com

No.	Revision	By	Date
Δ	ADDENDUM NO. 1	DM	3/4/2020

**W-6 UPPER SEGMENT:
HWY 90 TO SW MILITARY DR
SEWER MAIN**

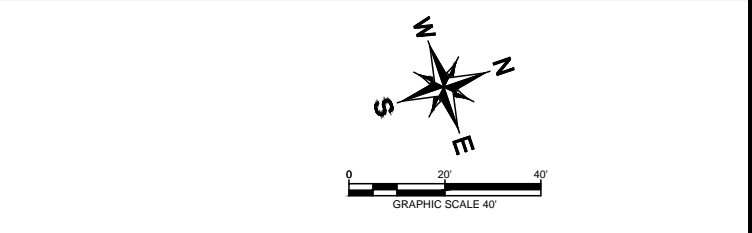
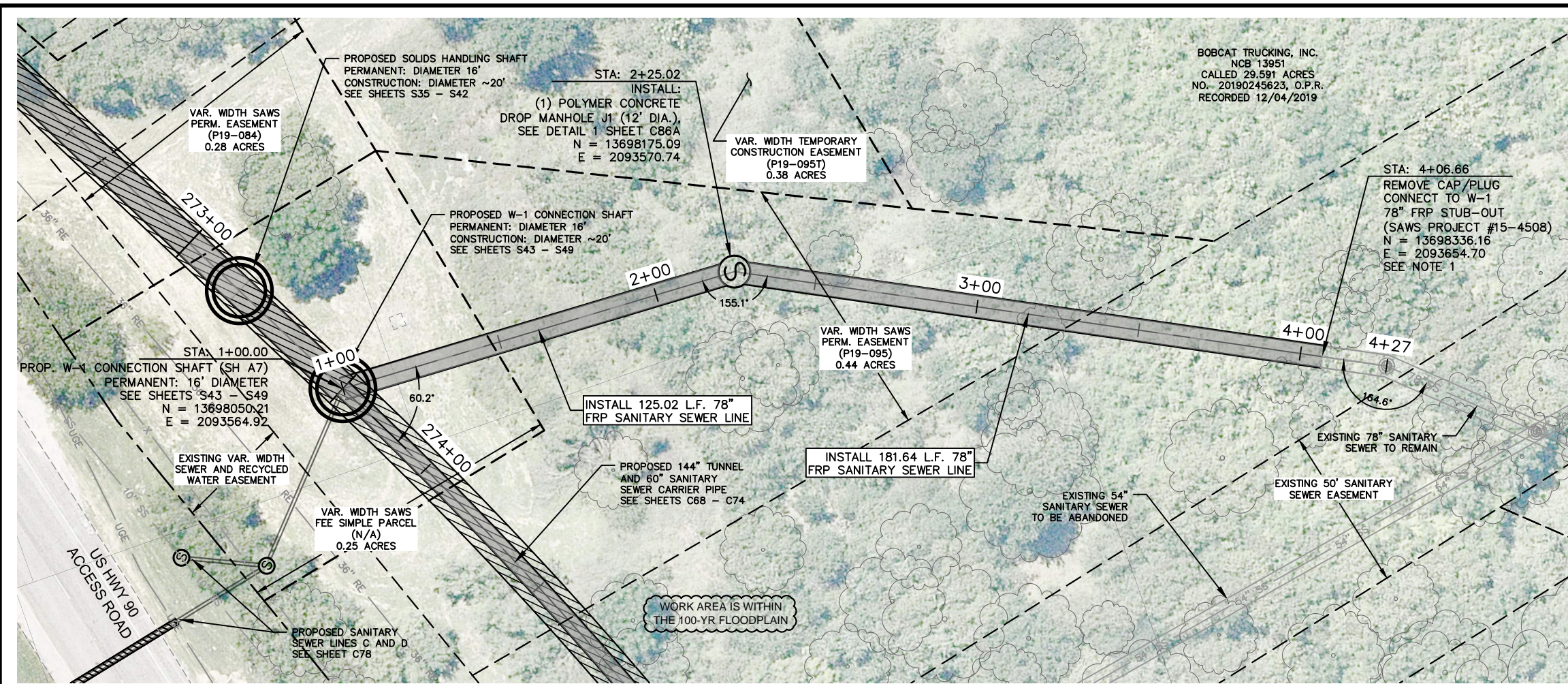
SHEET
60-INCH SANITARY SEWER
PLAN & PROFILE
STA. 297+00 TO STA.
299+00

DATE: FEBRUARY 2020	SAWS PROJECT NO. 19-4519	SHEET NO. C74
DESIGN: KFA	KHA PROJECT NO. 068665052	
DRAWN: KFA		
CHECKED: KFA		



297+00 297+50 298+00 298+50 299+00

740
730
720
710
700
690
680
670
660
650
640
630
620
610



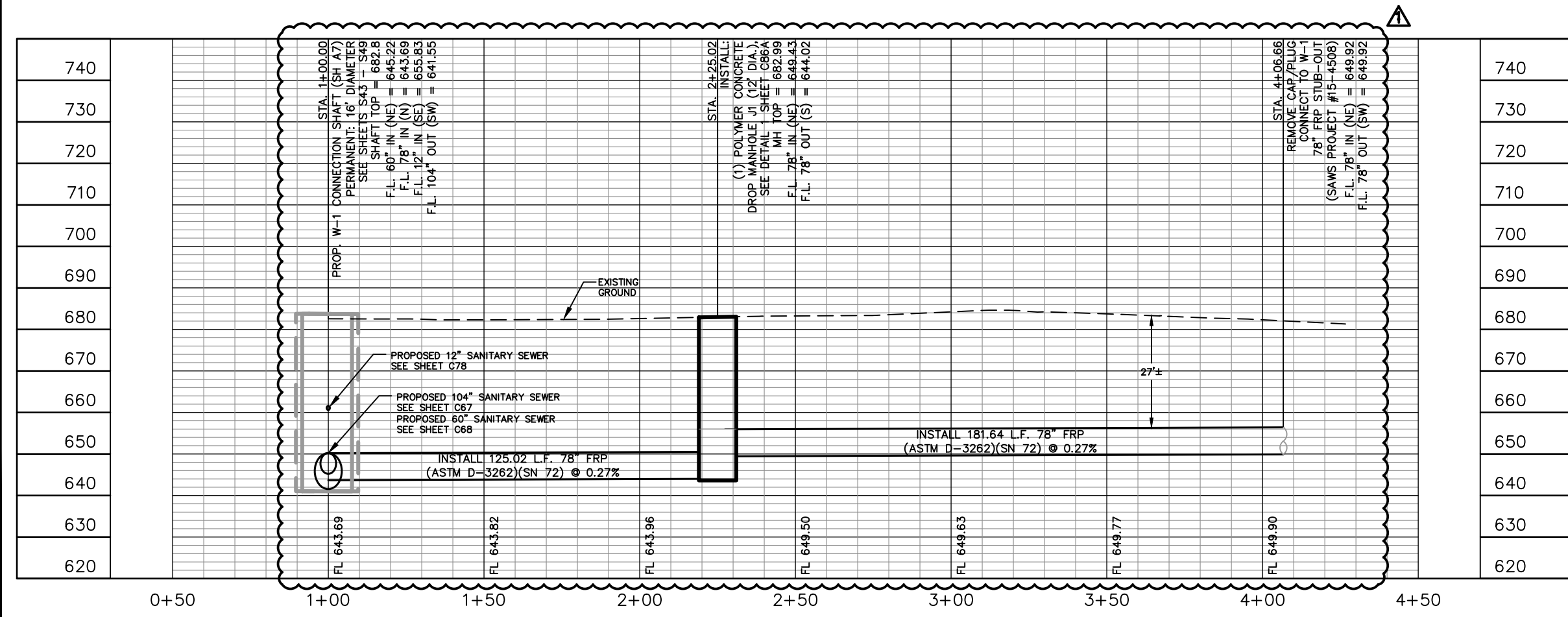
ITEM NO.	DESCRIPTION	UNIT	QUANTITY
550.1	TRENCH EXCAVATION SAFETY PROTECTION (COSA SPEC)	LF	306.66
857	78-INCH FRP (ASTM D-3262) (SN 72) SANITARY SEWER LINE (30'-35' DEPTH)	LF	7.17
857	78-INCH FRP (ASTM D-3262) (SN 72) SANITARY SEWER LINE (35'-40' DEPTH)	LF	299.49
02600	POLYMER CONCRETE SANITARY SEWER MANHOLE, DROP (12' DIAMETER) (ALL DEPTHS)	EA	1
866	SEWER MAIN TELEVISION INSPECTION (78-INCH TO 104-INCH)	LF	306.66

- NOTES:**
- PRIOR TO COMMENCING PHASE 7 (SEE CONSTRUCTION SEQUENCING SHEET G29), CONTRACTOR SHALL LOCATE W-1 SEGMENT STUBOUT AND VERIFY ELEVATION. CONTRACTOR WILL NOT BE ALLOWED TO PROCEED TO FURTHER PHASES UNTIL THIS STUBOUT ELEVATION IS VERIFIED AND PROVIDED TO SAWS AND DESIGN ENGINEER.
 - FOR CLARITY PURPOSES AND DUE TO THE DISTANCE BETWEEN EXISTING AND PROPOSED UTILITIES, EXISTING UTILITIES ARE ONLY SHOWN ON PROFILE WHERE THEY CROSS THE CENTER LINE ALIGNMENT OF THE PROPOSED PIPE.
 - THREE-PHASE POWER WILL NOT BE MADE AVAILABLE TO SHAFT #6 - SOLIDS HANDLING SHAFT AND SHAFT #7 - W-1 CONNECTION SHAFT. POWER SUPPLY AT THESE SHAFT LOCATIONS IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

LEGEND

PROFILE VIEW:
1" = 30' VERTICAL

PROPOSED SANITARY SEWER LINE	
PROPOSED TUNNEL	
EXISTING SANITARY SEWER LINE	
EXISTING WATER LINE	
EXISTING GAS LINE	
PROPERTY LINE	
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	
DIRECTION OF FLOW	



3/6/2020

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No.	Revision	By	Date
▲	ADDENDUM NO. 1	JAF	3/6/2020

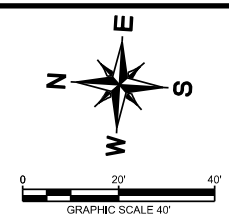
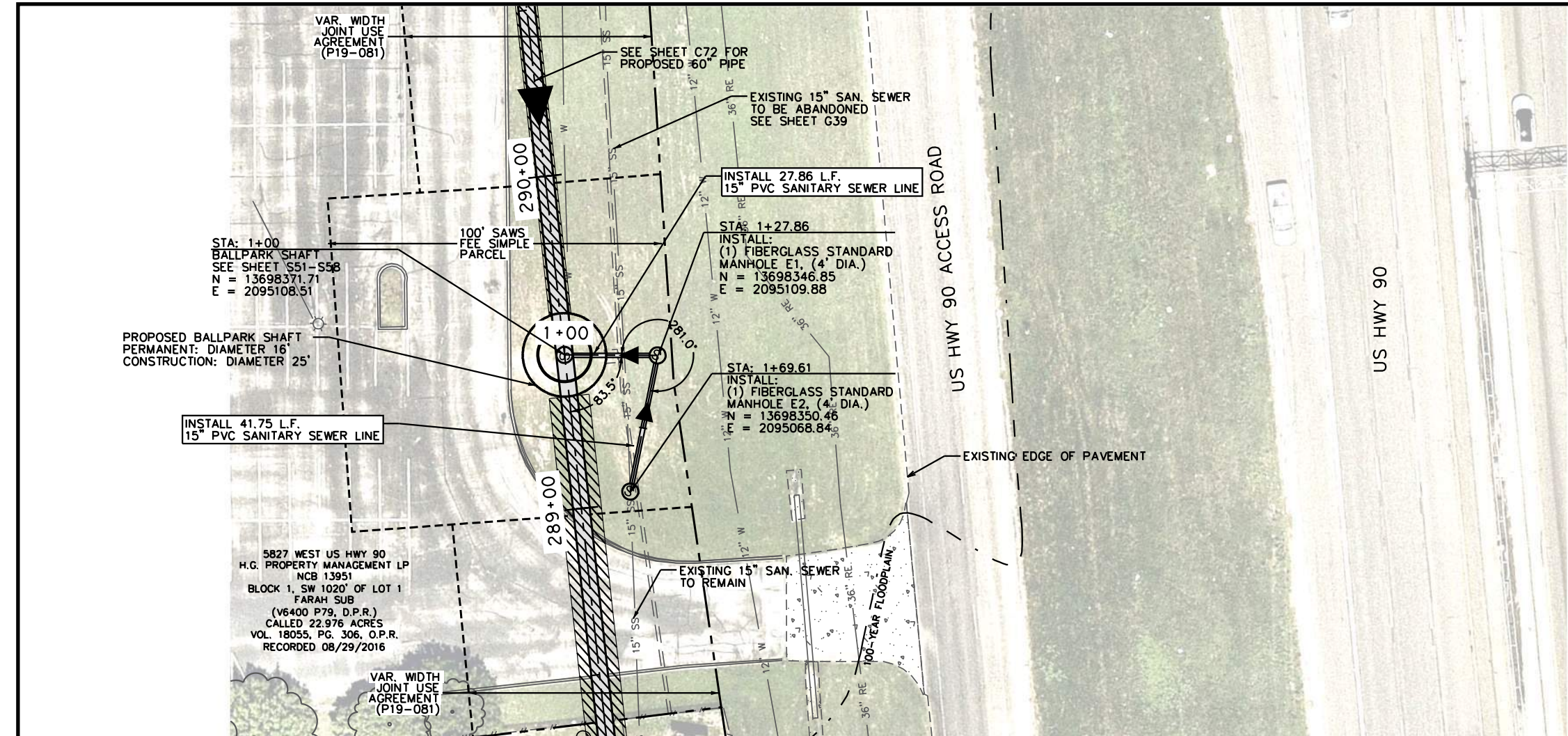
**W-6 UPPER SEGMENT:
HWY 90 TO SW MILITARY DR
SEWER MAIN**

**78-INCH SANITARY SEWER
PLAN & PROFILE STA.
1+00 TO END**

DATE: MARCH 2020	SAWS PROJECT NO. 19-4519	SHEET NO. C75
DESIGN: JKN	KHA PROJECT NO. 068665052	
DRAWN: CRW		
CHECKED: JAF		

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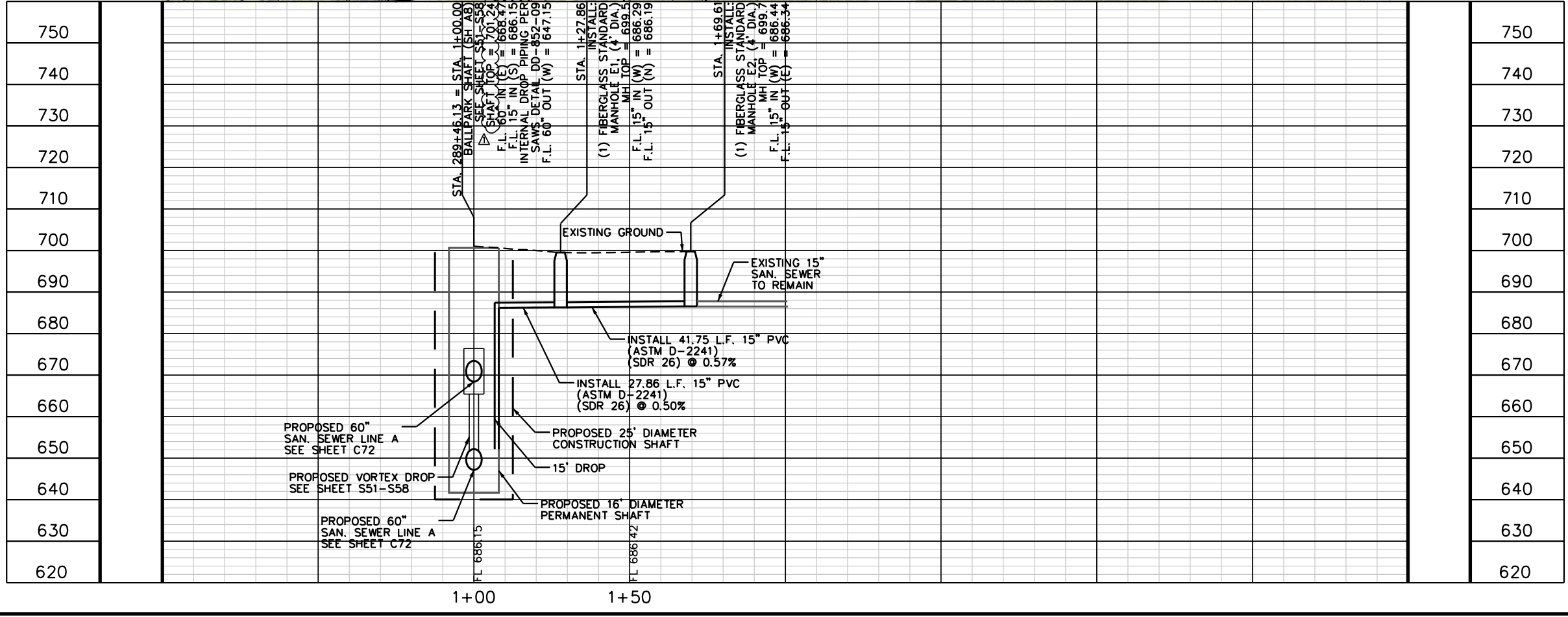
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ITEM NO.	DESCRIPTION	UNIT	QUANTITY
550.1	TRENCH EXCAVATION SAFETY PROTECTION	LF	69.61
848A	15" PVC GRAVITY SANITARY SEWER PIPE (ASTM F679, 46 PSI) (10'-14" DEPTH)	LF	69.61
853A	FIBER-REINFORCED SANITARY SEWER MANHOLE (4' DIAMETER)	EA	2
853A	EXTRA DEPTH MANHOLE (>6') (4' DIAMETER)	VF	14.67
866	SEWER MAIN TELEVISION INSPECTION (8-INCH TO 24-INCH)	LF	69.61

- NOTES:
- FOR CLARITY PURPOSES AND DUE TO THE DISTANCE BETWEEN EXISTING AND PROPOSED UTILITIES, EXISTING UTILITIES ARE ONLY SHOWN ON PROFILE WHERE THEY CROSS THE CENTER LINE ALIGNMENT OF THE PROPOSED PIPE.

5827 WEST US HWY 90
H.G. PROPERTY MANAGEMENT LP
NCB 13951
BLOCK 1, SW 1020' OF LOT 1
FARAH SUB
(V6400 P79, D.P.R.)
CALLED 22.976 ACRES
VOL. 18055, PG. 306, O.P.R.
RECORDED 08/29/2016



LEGEND

PROPOSED SANITARY SEWER LINE:

PROPOSED TUNNEL:

EXISTING SANITARY SEWER LINE:

EXISTING WATER LINE:

EXISTING GAS LINE:

EXISTING FIBER OPTIC:

PROPERTY LINE:

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:

DIRECTION OF FLOW:

PROFILE VIEW:
1" = 30' VERTICAL

DALE P. MURPHY
PROFESSIONAL ENGINEER

K. FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING

10001 Reunion Place
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TBPE Firm #6535
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No.	Revision	By	Date
1	ADDENDUM NO. 1	DM	3/4/2020

SAN ANTONIO
WATER
SYSTEM

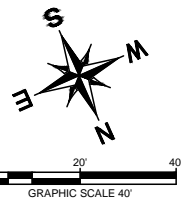
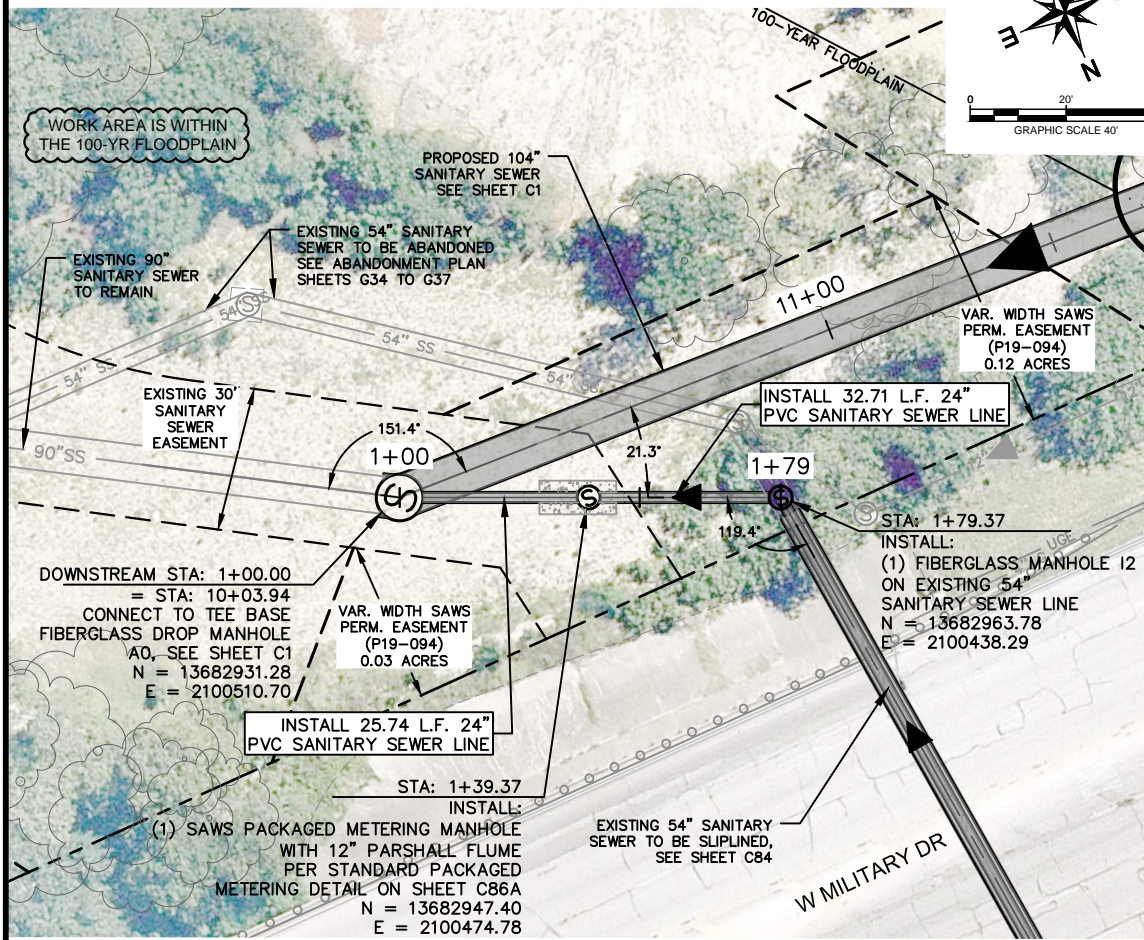
**W-6 UPPER SEGMENT:
HWY 90 TO SW MILITARY DR
SEWER MAIN**

SHEET

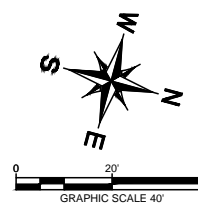
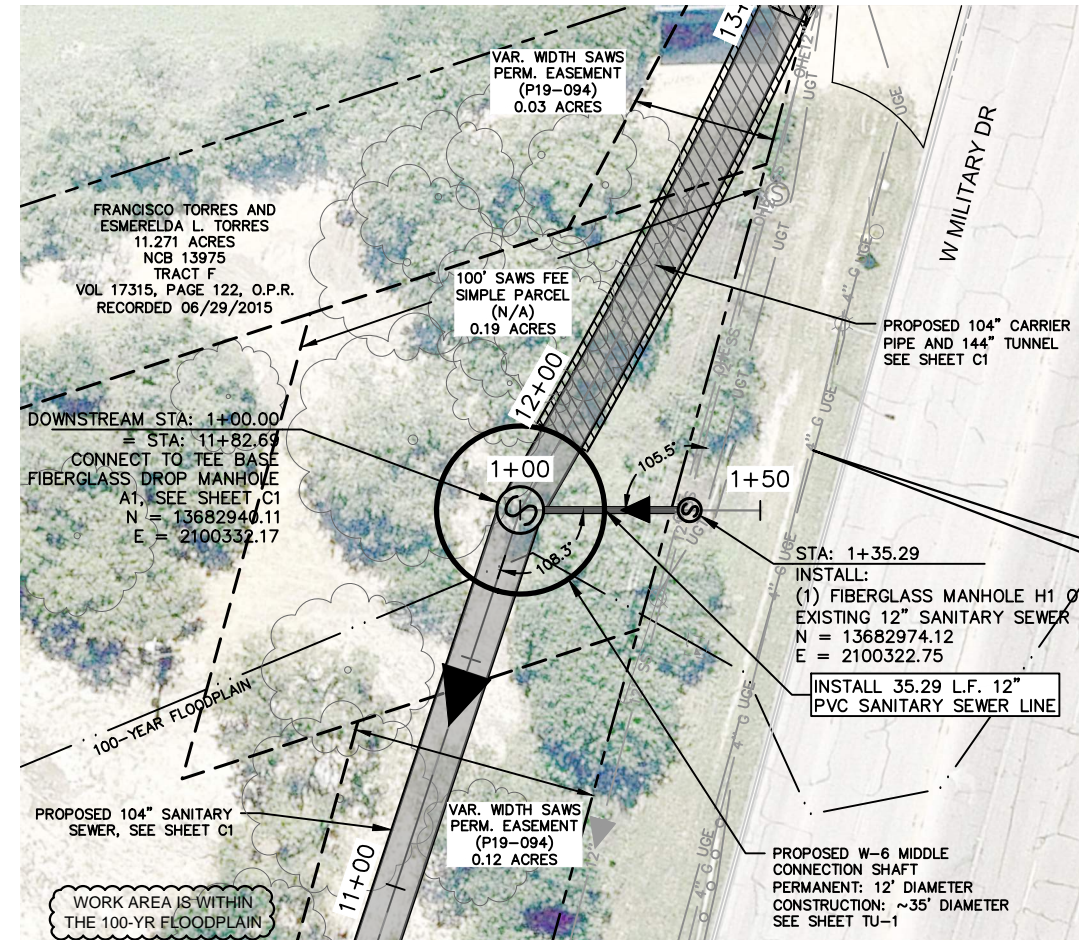
15-INCH SANITARY SEWER
PLAN & PROFILE LINE E
STA. 1+00 TO END

DATE:	SAWS PROJECT NO.	SHEET NO.
FEBRUARY 2020	19-4519	C80
DESIGN: KFA	KHA PROJECT NO.	
DRAWN: KFA	068665052	
CHECKED: KFA		

LINE I



LINE H

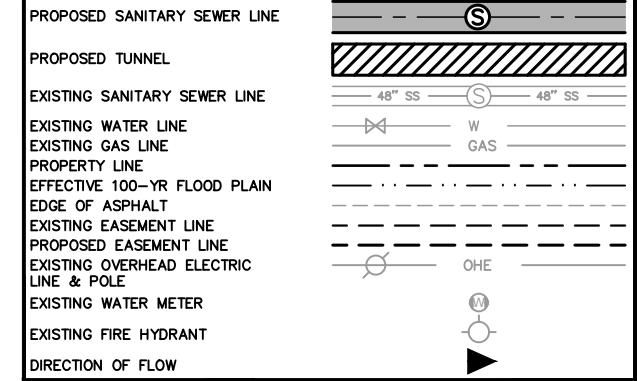


ITEM NO.	DESCRIPTION	UNIT	QUANTITY
550.1	TRENCH EXCAVATION SAFETY PROTECTION (COSA SPEC)	LF	97.16
848A	12" INCH PVC GRAVITY SANITARY SEWER PIPE (ASTM 2241) (6'-10" DEPTH)	LF	8.28
848A	12" INCH PVC GRAVITY SANITARY SEWER PIPE (ASTM 2241) (10'-14" DEPTH)	LF	27.01
848A	24" INCH PVC GRAVITY SANITARY SEWER PIPE (ASTM F679) (6'-10" DEPTH)	LF	37.89
848A	24" INCH PVC GRAVITY SANITARY SEWER PIPE (ASTM F679) (10'-14" DEPTH)	LF	41.48
853A	FIBER-REINFORCED SANITARY SEWER MANHOLE (4' DIAMETER)	EA	2
853A	EXTRA DEPTH (>6') FIBERGLASS MANHOLE, MITER (4' DIAMETER)	VF	20.7
866	SEWER MAIN TELEVISION INSPECTION (8-INCH TO 24-INCH)	LF	114.66
11310	PACKAGE METERING MANHOLE	LS	1

!! WARNING !!
EXISTING UNDERGROUND ELECTRIC IN AREA

- NOTES:
- FOR CLARITY PURPOSES AND DUE TO THE DISTANCE BETWEEN EXISTING AND PROPOSED UTILITIES, EXISTING UTILITIES ARE ONLY SHOWN ON PROFILE WHERE THEY CROSS THE CENTER LINE ALIGNMENT OF THE PROPOSED PIPE.
 - PRIOR TO EXCAVATION FOR THE INSTALLATION OF MANHOLE H1, THE UG LINE IN CLOSE PROXIMITY TO THE EXCAVATION SHALL BE LOCATED AND PROTECTED.

LEGEND
PROFILE VIEW:
1" = 30' VERTICAL



700	DOWNSTREAM STA: 1+00.00 = STA: 10+03.94 CONNECT TO TEE BASE FIBERGLASS DROP MANHOLE A0, SEE SHEET C1 MH TOP = 631.90 F.L. 104" IN (W) = 609.65 F.L. 24" IN (NW) = 623.85 F.L. 104" OUT (SE) = 609.65	700
690		690
680		680
670		670
660	STA: 1+39.37 INSTALL: (1) SAWS PACKAGED METERING MANHOLE WITH 12" PARSHALL FLUME PER STANDARD PACKAGED METERING DETAIL ON SHEET C86A MH TOP = 634.26 F.L. 24" IN (NW) = 624.15 F.L. 24" OUT (SE) = 624.05	660
650		650
640		640
630	EXISTING GROUND	630
620	PROPOSED 104" SANITARY SEWER, SEE SHEET C1	620
610	EXISTING 54" SAN. SEWER	610
600	INSTALL 32.71 L.F. 24" PVC (ASTM 679) (SDR 26) @ 0.50%	600
590	PROPOSED DROP MANHOLE	590
580	INSTALL 25.74 L.F. 24" PVC (ASTM 679) (SDR 26) @ 0.50%	580

700	DOWNSTREAM STA: 1+00.00 = STA: 11+82.69 CONNECT TO TEE BASE FIBERGLASS DROP MANHOLE A1, SEE SHEET C1 MH TOP = 635.98 F.L. 104" IN (W) = 609.87 F.L. 12" IN (N) = 632.79 F.L. 104" OUT (E) = 609.87	700
690		690
680		680
670		670
660	STA: 1+35.29 INSTALL: (1) FIBERGLASS MANHOLE H1 ON EXISTING 12" SANITARY SEWER MH TOP = 642.92 F.L. 12" IN (W) = 633.60 F.L. 14" OUT (S) = 633.50	660
650		650
640	EXISTING GROUND	640
630	PROPOSED DROP MANHOLE	630
620	PROPOSED 104" SANITARY SEWER, SEE SHEET C1	620
610	EXISTING 12" SANITARY SEWER	610
600	INSTALL 35.29 L.F. 12" PVC (ASTM 679) (SDR 26) @ 2.00%	600
590		590
580		580

3/6/2020

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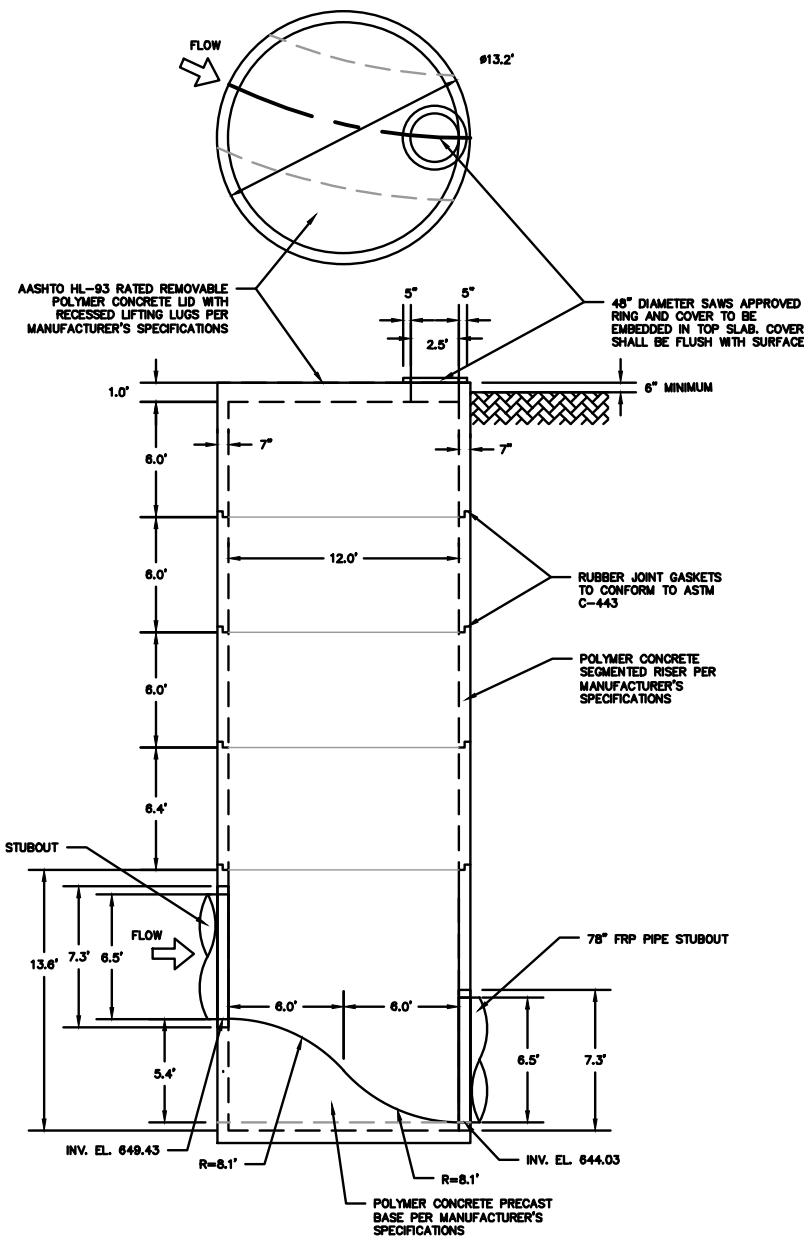
No.	Revision	By	Date
1	ADDENDUM NO. 1	JAF	3/6/2020

**W-6 UPPER SEGMENT:
HWY 90 TO SW MILITARY DR
SEWER MAIN**

**SANITARY SEWER PLAN &
PROFILE LINE H AND LINE I**

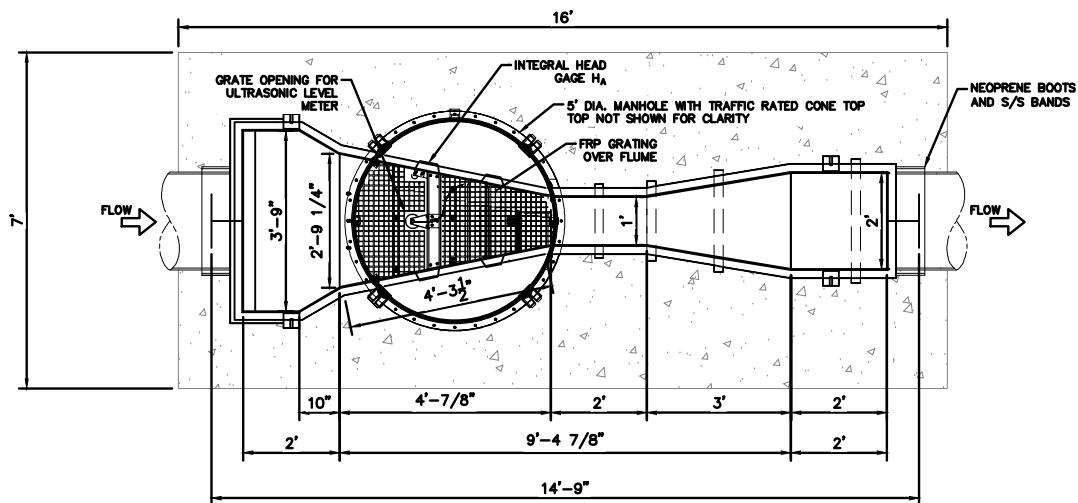
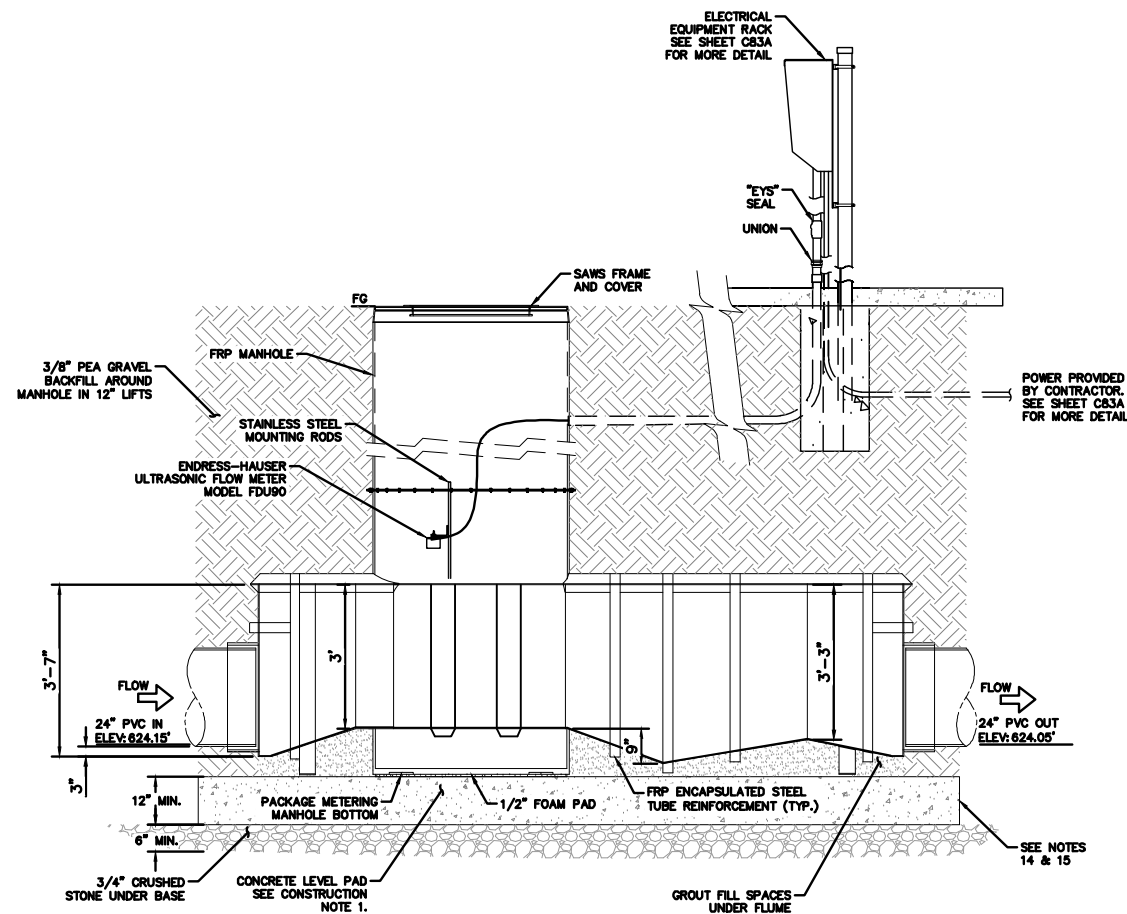
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DESIGN: JKN	KHA PROJECT NO. 068665052	
DRAWN: CRW		
CHECKED: JAF		

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 DATE: 3/6/2020 2:09 PM
 K:\SANITARY SEWER CONNECTIONS PLAN & PROFILE.DWG
 WILSON CONNER



1 12-FOOT DIAMETER POLYMER CONCRETE DROP MANHOLE
SCALE: NTS

- NOTES:**
- POLYMER CONCRETE MANHOLE SHALL BE DESIGNED BY POLYMER CONCRETE MANUFACTURER PER SPECIAL SPECIFICATION 02600.

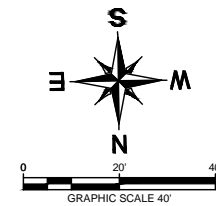


2 PACKAGED METERING MANHOLE
SCALE: NTS

- NOTES:**
- MATERIAL SHALL BE FRP (FIBERGLASS REINFORCED PLASTIC).
 - NEOPRENE BOOTS SHALL BE SECURED WITH STAINLESS STEEL BANDS.
 - MINIMUM GLASS CONTENT SHALL BE 30%, EXCLUSIVE OF RESIN RICH SURFACES.
 - MANHOLE BARREL THICKNESS SHALL BE A MINIMUM 1/2" FRP THICK.
 - THE HEAD GAGE (CENTIMETERS & HUNDREDTHS OF A FOOT) IS MOLDED INTO THE SIDE OF THE FLUME.
 - ALL BOLTS, NUTS AND WASHERS ARE TYPE 304 STAINLESS STEEL.
 - STIFFENERS ACROSS TOP OF FLUME SHALL BE 1/4"x2"x2" FRP ANGLES.
 - POLYESTER RESIN: STYPOL C1-12-0022 POLYESTER
 - CATALYST: CADOX M-50a VR
 - CONTRACTOR SHALL ENSURE THAT CONCRETE PAD IS COMPLETELY LEVEL AND INSTALLED PER SPECIFICATION 11310.
 - THE PARSHALL FLUME SHALL BE PARALLEL WITH THE BOTTOM OF THE METER STATION ± 1/16".
 - METER STATION SHALL BE CONNECTED TO THE SANITARY SEWER LINES WITH A FERNCO TYPE COUPLING USING STAINLESS STEEL BANDS.
 - METER STATION INTERIOR SHALL BE COATED WITH WHITE GEL-COAT. THE EXTERIOR SHALL HAVE AN ULTRAVIOLET PROTECTIVE COATING.
 - 5' INSIDE DIAMETER FIBERGLASS METERING MANHOLE AS SHOWN. MANHOLE TOP SHALL BE H-20 TRAFFIC LOADING RATED PER PACKAGED METERING MANHOLE MANUFACTURER AND SHALL INCLUDE STANDARD SJRA FRAME AND COVER. THE PACKAGE METERING MANHOLE, INTEGRATED PARSHALL FLUME, AND ASSOCIATED LEVEL CONCRETE PAD SHALL BE DESIGNED FOR ALL LOADS, INCLUDING SURCHARGE PRESSURES FROM ADJACENT STRUCTURES. SHOP DRAWINGS SHALL INCLUDE WRITTEN CONFIRMATION THAT THE PACKAGE METERING MANHOLE, INTEGRATED PARSHALL FLUME, AND ASSOCIATED LEVEL CONCRETE PAD DESIGNS ACCOUNT FOR THESE LOADS AND ARE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF TEXAS.
 - THE PACKAGE METERING MANHOLE, INTEGRATED PARSHALL FLUME, AND ASSOCIATED LEVEL CONCRETE PAD SHALL BE DESIGNED TO RESIST A BUOYANCY FORCE ASSUMING THE WATER TABLE IS AT THE SURFACE WHILE MAINTAINING A 1.5 FACTOR OF SAFETY.
 - METER STATION SHALL HAVE A MINIMUM OF FOUR LIFTING EYES CAST INTO THE STRUCTURE. EACH SHALL BE CAPABLE OF SUPPORTING THE WEIGHT OF THE STRUCTURE.
 - MINIMUM FRP WALL THICKNESS SHALL BE 1.38".
 - BOTTOM PLATE MINIMUM THICKNESS SHALL BE 1.38".

		Kimley»Horn Texas Registered Firm, No. F-928 601 NW Loop 410 Suite 350 San Antonio, TX 78216 Tel No. 210-541-9166 Fax No. 210-541-8699	
No.	Revision	By	Date
▲	ADDENDUM NO. 1	JAF	3/8/2020
		W-6 UPPER SEGMENT: HWY 90 TO SW MILITARY DR SEWER MAIN	
DATE: MARCH 2020 DESIGN: JKN DRAWN: CRW CHECKED: JAF		SAWS PROJECT NO. 19-4519 KHA PROJECT NO. 068665052	
		SHEET NO. C86A	

PLOTTED BY: DWG NAME: JAF
 DWG NO: 210-541-8699
 DATE: 3/8/2020 2:18 PM
 K:\SNA UTILITIES\06866505\CAD\SHETS\036A SEWER GENERAL DETAILS (SHEET 2 OF 3).DWG
 3/8/2020 2:18 PM



ESTIMATED QUANTITIES			
ITEM NO.	DESCRIPTION	UNIT	QUANTITY
C85	24' CANTILEVER MANUAL SLIDE GATE	EA	2
104 6021	REMOVE CONC (CURB) (TXDOT SPEC)	LF	75
200.1	FLEXIBLE BASE (6-INCH COMPACTED DEPTH) (COSA SPEC)	SY	1150
209.1	CONCRETE PAVEMENT (12-INCH THICK) (COSA SPEC)	SY	1150
305 6002	SALVAGING, HAULING, AND STOCKPILING RECLAIMABLE ASPHALTIC PAVEMENT (2' DEPTH) (TXDOT SPEC)	SY	100
340 6272	TACK COAT (TXDOT SPEC)	GAL	10
341 6029	D-GR HMA TY-C SAC-A PG76-22 (2" COMPACTED DEPTH) (TXDOT SPEC)	TN	11
529 6002	CONC CURB (TY II) (TXDOT SPEC)	LF	27
530 6004	DRIVEWAYS (CONC) (TXDOT SPEC)	SY	97
636 6001	ALUMINUM SIGNS (TY A) (TXDOT SPEC)	EA	4
845	GATE, FENCING, AND PROPERTY MARKER DETAILS	LF	345

NOTES

- ALL DIMENSIONS AND COORDINATES ARE TO EDGE OF PAVEMENT INSIDE OF CURB UNLESS OTHERWISE SHOWN ON PLANS.
- PROPOSED BOLLARDS (NSPI) SHALL BE PLACED IN A MANNER THAT DOES NOT CONFLICT WITH EXISTING OR PROPOSED UTILITIES.
- CONTRACTOR SHALL ENSURE THAT FACILITY SITE REMAINS SECURE AT ALL TIMES. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INSTALL TEMPORARY FENCING AND OTHER PRECAUTIONARY MEASURES, AS NECESSARY DURING CONSTRUCTION, UNTIL PERMANENT FENCING IS INSTALLED AND SITE IS SECURED. NSPI.
- IT IS THE CONTRACTORS RESPONSIBILITY TO RESTORE ALL AFFECTED AREAS DURING CONSTRUCTION, THAT ARE NOT IMPROVED TO EXISTING CONDITIONS. NSPI.
- PROPOSED CANTILEVER MANUAL SLIDE GATE DIMENSIONS VARY FROM DETAILS 1-3 ON SHEET C85. CONTRACTOR SHALL INSTALL APPROPRIATE SIGNAGE ON GATE.
- REFER TO TREE PRESERVATION PLAN AND TREE PROTECTION NOTES IN SHEETS TP1 THROUGH TP21.
- REFERENCE EASEMENT SHEETS G22-G28 FOR SPECIFIC USE OF EACH EASEMENT.
- CONTRACTOR SHALL REFERENCE CPS SPECIAL CONDITIONS FOR REQUIREMENTS FOR 3-PHASE POWER.
- EACH SITE SHALL HAVE SITE IDENTIFICATION AND STANDARD NO TRESPASSING SIGNAGE. SIGNS SHALL BE PROVIDED AS A SUBMITTAL PRIOR TO FABRICATIONS. SIGNS SHALL BE CONSTRUCTED CONFORMING TO TXDOT-SS DMS-D9-7110 AND DMS-D9-7120, OR ASTM B 209. SIGN FACES SHALL BE FULLY REFLECTORIZED WITH MATERIAL CONFORMING TO TXDOT-SS DMS-D9-8300 OR ASTM D 4956. SITE IDENTIFICATION SIGNAGE SHALL INCLUDE "W-6 UPPER SEGMENT - SITE # - MH ID: #".
- REFER TO EROSION CONTROL SHEET EC1 - EC12 FOR EROSION CONTROL MEASURES AND SITE RESTORATION.
- FG = FINISHED GROUND ELEVATION
ME = MATCH EXISTING GROUND

LEGEND

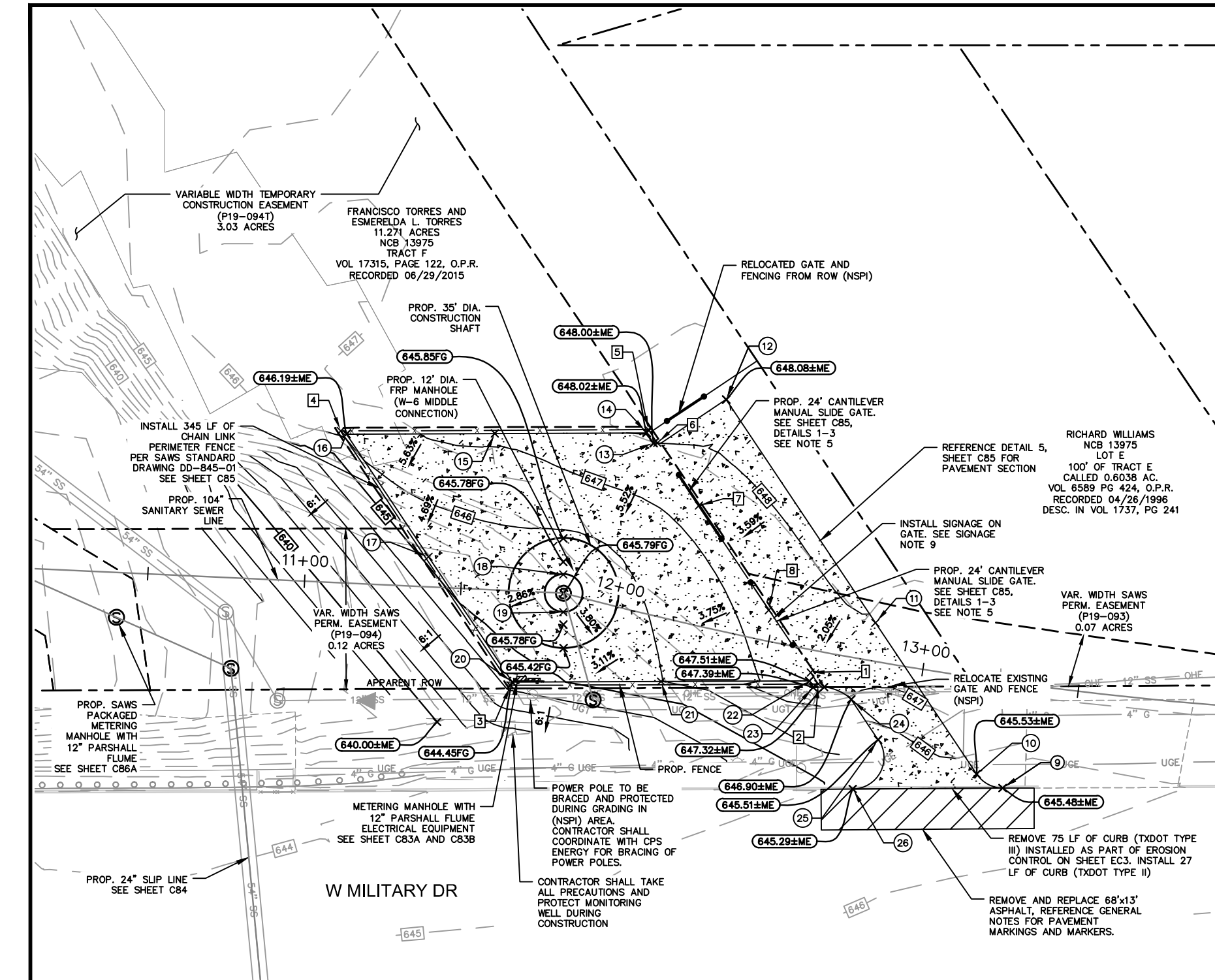
PROPOSED MAJOR CONTOUR	
PROPOSED MINOR CONTOUR	
PROPOSED CONCRETE PAVEMENT	
PROPOSED TEMPORARY CONSTRUCTION EASEMENT	
EXISTING OVERHEAD ELECTRIC LINE AND POLE	
EXISTING PROPERTY LINE	
EXISTING CURB AND GUTTER	
EXISTING GUARDRAILING	
EXISTING MINOR	
EXISTING MAJOR	
EXISTING SIGN	
EXISTING LIGHTPOLE	
EXISTING SANITARY SEWER LINE	
EXISTING WATER LINE	
EXISTING GAS LINE	
PROPERTY LINE	
EXISTING WATER METER	
EXISTING FIRE HYDRANT	

(X) PAVING COORDINATE TABLE

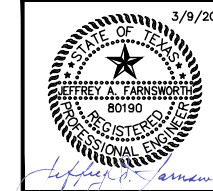
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10	13682998.17	2100200.47	PC OF 10' RADIUS
11	13682949.80	2100232.62	EDGE OF PAVEMENT
12	13682878.44	2100280.07	EDGE OF PAVEMENT
13	13682892.26	2100303.30	EDGE OF PAVEMENT
14	13682888.99	2100305.47	EDGE OF PAVEMENT
15	13682889.07	2100353.91	EDGE OF PAVEMENT
16	13682889.15	2100401.21	EDGE OF PAVEMENT
17	13682928.35	2100375.16	EDGE OF PAVEMENT
18	13682934.11	2100332.16	PC OF 8' RADIUS
19	13682946.11	2100332.22	PC OF 8' RADIUS
20	13682968.44	2100348.52	EDGE OF PAVEMENT
21	13682968.35	2100301.09	EDGE OF PAVEMENT
22	13682968.28	2100253.81	EDGE OF PAVEMENT
23	13682970.28	2100252.57	PC OF 16' RADIUS
24	13682974.20	2100240.43	PT OF 16' RADIUS
25	13682987.15	2100231.84	PC OF 10' RADIUS
26	13683002.78	2100240.04	PT OF 10' RADIUS

(X) FENCING COORDINATE TABLE

Point #	Northing	Easting	Description
1	13682965.63	2100253.33	FENCE CORNER
2	13682969.28	2100250.91	FENCE CORNER
3	13682969.44	2100349.05	FENCE CORNER
4	13682888.15	2100403.07	FENCE CORNER
5	13682887.99	2100304.93	FENCE CORNER
6	13682892.26	2100302.07	FENCE CORNER
7	13682912.21	2100288.85	FENCE CORNER
8	13682945.68	2100266.67	FENCE CORNER



PLOTTED BY: WILSON, CONNER 3/9/2020 10:18 AM
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 DATE: 3/9/2020 10:18 AM
 USER: WILSON, CONNER



3/9/2020

Kimley»Horn

Texas Registered Firm, No. F-928

601 NW Loop 410 Suite 350 San Antonio, TX 78216
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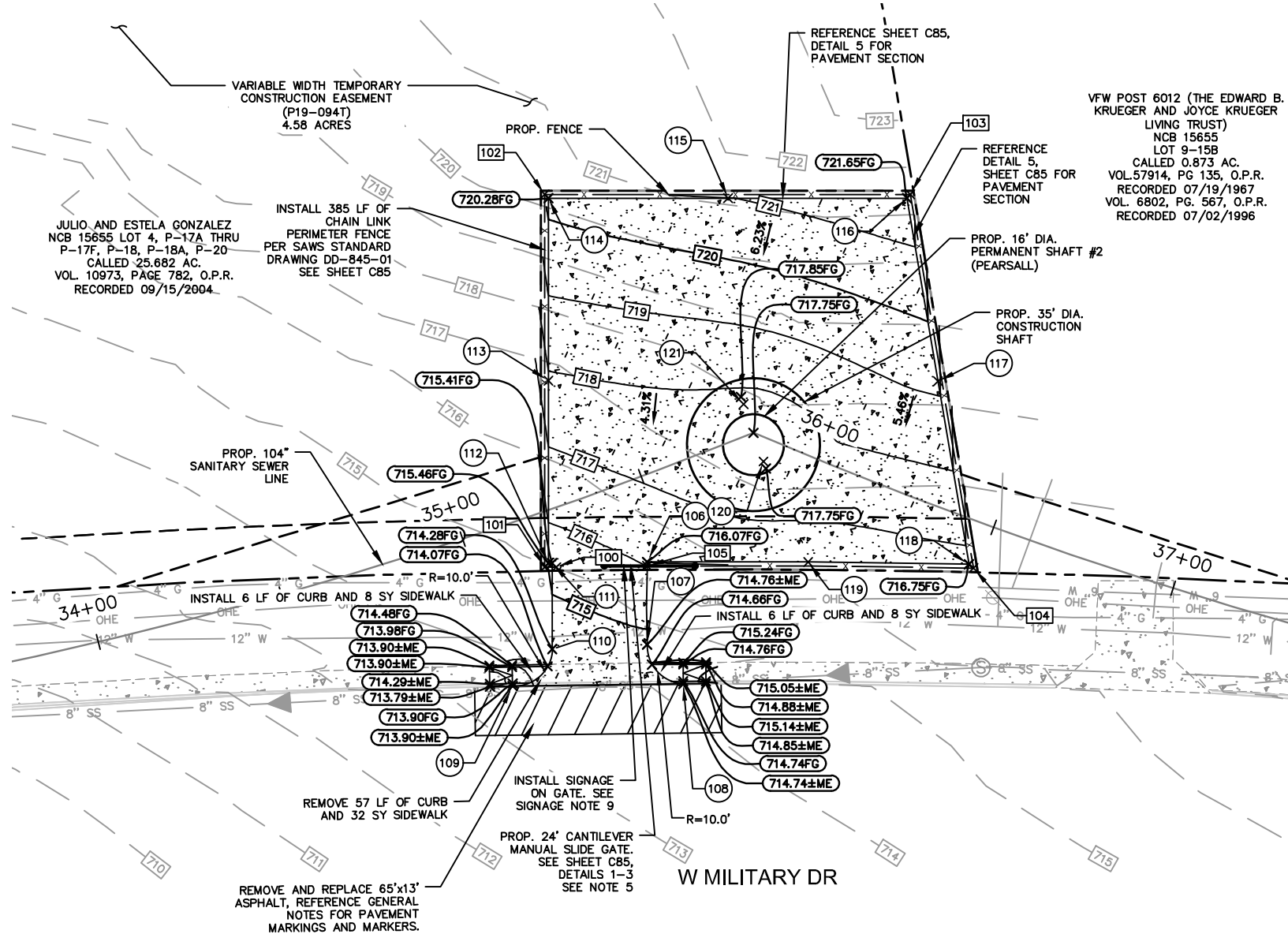
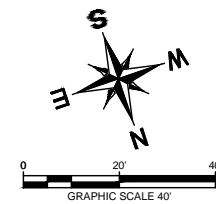
No.	Revision	By	Date
A	ADDENDUM NO. 1	JAF	3/9/2020

W-6 UPPER SEGMENT: HWY 90 TO SW MILITARY DR SEWER MAIN

SITE LAYOUT SHAFT #1 (W-6 MIDDLE CONNECTION)

SAN ANTONIO WATER SYSTEM

DATE: MARCH 2020	SAWS PROJECT NO. 19-4519	SHEET NO. C87
DESIGN: JKN	KHA PROJECT NO. 068665052	
DRAWN: CRW		
CHECKED: JAF		



VARIABLE WIDTH TEMPORARY CONSTRUCTION EASEMENT (P19-094T) 4.58 ACRES

PROF. FENCE

INSTALL 385 LF OF CHAIN LINK PERIMETER FENCE PER SAWS STANDARD DRAWING DD-845-01 SEE SHEET C85

JULIO AND ESTELA GONZALEZ NCB 15655 LOT 4, P-17A THRU P-17F, P-18, P-18A, P-20 CALLED 25.682 AC. VOL. 10973, PAGE 782, O.P.R. RECORDED 09/15/2004.

REFERENCE SHEET C85, DETAIL 5 FOR PAVEMENT SECTION

VFW POST 6012 (THE EDWARD B. KRUEGER AND JOYCE KRUEGER LIVING TRUST) NCB 15655 LOT 9-15B AC. CALLED 0.873 AC. VOL. 57914, PG. 135, O.P.R. RECORDED 07/19/1967 VOL. 6802, PG. 567, O.P.R. RECORDED 07/02/1996

REFERENCE DETAIL 5, SHEET C85 FOR PAVEMENT SECTION

PROP. 16" DIA. PERMANENT SHAFT #2 (PEARSALL)

PROP. 35" DIA. CONSTRUCTION SHAFT

PROP. 104" SANITARY SEWER LINE

INSTALL 6 LF OF CURB AND 8 SY SIDEWALK

REMOVE 57 LF OF CURB AND 32 SY SIDEWALK

REMOVE AND REPLACE 65'x13' ASPHALT, REFERENCE GENERAL NOTES FOR PAVEMENT MARKINGS AND MARKERS.

INSTALL SIGNAGE ON GATE. SEE SIGNAGE NOTE 9

PROP. 24' CANTILEVER MANUAL SLIDE GATE. SEE SHEET C85, DETAILS 1-3 SEE NOTE 5

W MILITARY DR

NOTES

- ALL DIMENSIONS AND COORDINATES ARE TO EDGE OF PAVEMENT INSIDE OF CURB UNLESS OTHERWISE SHOWN ON PLANS.
- PROPOSED BOLLARDS (NSPI) SHALL BE PLACED IN A MANNER THAT DOES NOT CONFLICT WITH EXISTING OR PROPOSED UTILITIES.
- CONTRACTOR SHALL ENSURE THAT FACILITY SITE REMAINS SECURE AT ALL TIMES. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INSTALL TEMPORARY FENCING AND OTHER PRECAUTIONARY MEASURES, AS NECESSARY DURING CONSTRUCTION, UNTIL PERMANENT FENCING IS INSTALLED AND SITE IS SECURED. NSPI.
- IT IS THE CONTRACTORS RESPONSIBILITY TO RESTORE ALL AFFECTED AREAS DURING CONSTRUCTION, THAT ARE NOT IMPROVED TO EXISTING CONDITIONS. NSPI.
- PROPOSED CANTILEVER MANUAL SLIDE GATE DIMENSIONS VARY FROM DETAILS 1-3 ON SHEET C85. CONTRACTOR SHALL INSTALL APPROPRIATE SIGNAGE ON GATE.
- REFER TO TREE PRESERVATION PLAN AND TREE PROTECTION NOTES IN SHEETS TP1 THROUGH TP19.
- REFERENCE EASEMENT SHEETS G22-G28 FOR SPECIFIC USE OF EACH EASEMENT.
- CONTRACTOR SHALL REFERENCE OPS SPECIAL CONDITIONS FOR REQUIREMENTS FOR 3-PHASE POWER.
- EACH SITE SHALL HAVE SITE IDENTIFICATION AND STANDARD NO TRESPASSING SIGNAGE. SIGNS SHALL BE PROVIDED AS A SUBMITTAL PRIOR TO FABRICATIONS. SIGNS SHALL BE CONSTRUCTED CONFORMING TO TXDOT-SS DMS-D9-7110 AND DMS-D9-7120, OR ASTM B 209. SIGN FACES SHALL BE FULLY REFLECTORIZED WITH MATERIAL CONFORMING TO TXDOT-SS DMS-D9-8300 OR ASTM D 4956. SITE IDENTIFICATION SIGNAGE SHALL INCLUDE "W-6 UPPER SEGMENT - SITE # - MH ID: #".
- REFER TO EROSION CONTROL SHEET EC1 - EC12 FOR EROSION CONTROL MEASURES AND SITE RESTORATION.
- FG = FINISHED GROUND ELEVATION
ME = MATCH EXISTING GROUND

ESTIMATED QUANTITIES			
ITEM NO.	DESCRIPTION	UNIT	QUANTITY
C85	24' CANTILEVER MANUAL SLIDE GATE	EA	1
104 6015	REMOVE CONC (SIDEWALKS) (TXDOT SPEC)	SY	32
104 6021	REMOVE CONC (CURB) (TXDOT SPEC)	LF	57
200.1	FLEXIBLE BASE (6-INCH COMPACTED DEPTH) (COSA SPEC)	SY	1085
209.1	CONCRETE PAVEMENT (12-INCH THICK) (COSA SPEC)	SY	1085
305 6002	SALVAGING, HAULING, AND STOCKPILING RECLAIMABLE ASPHALTIC PAVEMENT (2" DEPTH) (TXDOT SPEC)	SY	95
340 6272	TACK COAT (TXDOT SPEC)	GAL	10
341 6029	D-GR HMA TY-C SAC-A PG76-22 (2" COMPACTED DEPTH) (TXDOT SPEC)	TN	10.5
529 6002	CONC CURB (TY II) (TXDOT SPEC)	LF	12
530 6004	DRIVEWAYS (CONC) (TXDOT SPEC)	SY	70
531 6002	CONC SIDEWALKS (5-INCH) (TXDOT SPEC)	SY	16
636 6001	ALUMINUM SIGNS (TY A) (TXDOT SPEC)	EA	2
845	GATE, FENCING, AND PROPERTY MARKER DETAILS	LF	385

PAVING COORDINATE TABLE			
Point #	Northing	Easting	Description
106	13683123.45	2097984.37	EDGE OF PAVEMENT
107	13683144.05	2097991.51	PC OF 5' RADIUS
108	13683157.01	2097985.92	PT OF 5' RADIUS
109	13683142.76	2098028.67	PT OF 5' RADIUS
110	13683136.99	2098015.60	PC OF 5' RADIUS
111	13683115.55	2098008.19	EDGE OF PAVEMENT
112	13683115.24	2098009.13	EDGE OF PAVEMENT
113	13683069.71	2097993.32	EDGE OF PAVEMENT
114	13683024.19	2097977.53	EDGE OF PAVEMENT
115	13683039.73	2097932.72	EDGE OF PAVEMENT
116	13683055.23	2097888.06	EDGE OF PAVEMENT
117	13683103.57	2097896.17	EDGE OF PAVEMENT
118	13683151.91	2097904.29	EDGE OF PAVEMENT
119	13683137.42	2097944.20	EDGE OF PAVEMENT
120	13683108.47	2097946.67	PC OF 8' RADIUS
121	13683092.47	2097946.67	PC OF 8' RADIUS

FENCING COORDINATE TABLE			
Point #	Northing	Easting	Description
100	13683116.88	2098007.49	FENCE CORNER
101	13683115.88	2098010.41	FENCE CORNER
102	13683022.91	2097978.15	FENCE CORNER
103	13683054.57	2097886.93	FENCE CORNER
104	13683153.27	2097903.50	FENCE CORNER
105	13683124.44	2097984.72	FENCE CORNER

LEGEND

PROPOSED MAJOR CONTOUR
 PROPOSED MINOR CONTOUR
 PROPOSED CONCRETE PAVEMENT
 PROPOSED TEMPORARY CONSTRUCTION EASEMENT
 EXISTING OVERHEAD ELECTRIC LINE AND POLE
 EXISTING PROPERTY LINE
 EXISTING CURB AND GUTTER
 EXISTING GUARDRAILING
 EXISTING MINOR
 EXISTING MAJOR
 EXISTING SIGN
 EXISTING LIGHTPOLE
 EXISTING SANITARY SEWER LINE
 EXISTING WATER LINE
 EXISTING GAS LINE
 PROPERTY LINE
 EXISTING WATER METER
 EXISTING FIRE HYDRANT

3/9/2020

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 Tel No. 210-541-9166 Fax No. 210-541-8699

No.	Revision	By	Date
A	ADDENDUM NO. 1	JAF	3/9/2020

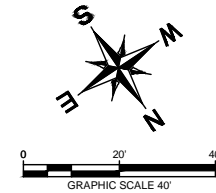
W-6 UPPER SEGMENT:
 HWY 90 TO SW MILITARY DR
 SEWER MAIN

SAN ANTONIO WATER SYSTEM

SITE LAYOUT
 SHAFT #2
 (PEARSALL RD)

DATE: MARCH 2020	SAWS PROJECT NO. 19-4519	SHEET NO. C88
DESIGN: JKN	KHA PROJECT NO. 068665052	
DRAWN: CRW		
CHECKED: JAF		

PLOTTED BY: WILSON, CONNER 3/9/2020 10:20 AM
 K:\SNA UTILITIES\068665052\CADD\SHEETS\SHAFT SITE LAYOUT.DWG
 DATE: 3/9/2020 10:20 AM



ESTIMATED QUANTITIES			
ITEM NO.	DESCRIPTION	UNIT	QUANTITY
C85	24" CANTILEVER MANUAL SLIDE GATE	EA	1
104 6021	REMOVE CONC (CURB) (TXDOT SPEC)	LF	46
200.1	FLEXIBLE BASE (6-INCH COMPACTED DEPTH) (COSA SPEC)	SY	1260
209.1	CONCRETE PAVEMENT (12-INCH THICK) (COSA SPEC)	SY	1260
530 6004	DRIVEWAYS (CONC) (TXDOT SPEC)	SY	33
636 6001	ALUMINUM SIGNS (TY A) (TXDOT SPEC)	EA	2
845	GATE, FENCING, AND PROPERTY MARKER DETAILS	LF	405

NOTES

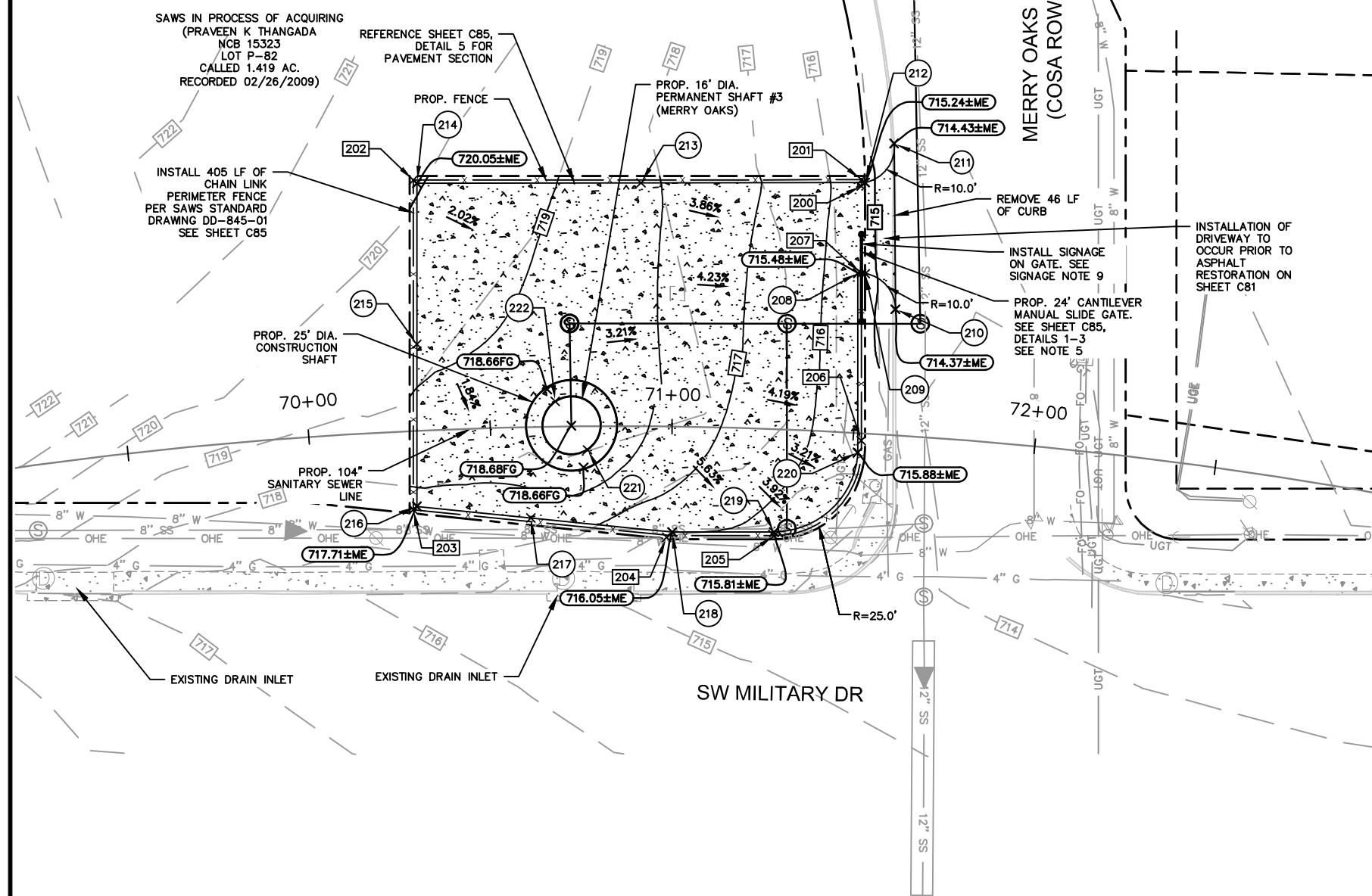
- ALL DIMENSIONS AND COORDINATES ARE TO EDGE OF PAVEMENT INSIDE OF CURB UNLESS OTHERWISE SHOWN ON PLANS.
- PROPOSED BOLLARDS (NSPI) SHALL BE PLACED IN A MANNER THAT DOES NOT CONFLICT WITH EXISTING OR PROPOSED UTILITIES.
- CONTRACTOR SHALL ENSURE THAT FACILITY SITE REMAINS SECURE AT ALL TIMES. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INSTALL TEMPORARY FENCING AND OTHER PRECAUTIONARY MEASURES, AS NECESSARY DURING CONSTRUCTION, UNTIL PERMANENT FENCING IS INSTALLED AND SITE IS SECURED. NSPI.
- IT IS THE CONTRACTORS RESPONSIBILITY TO RESTORE ALL AFFECTED AREAS DURING CONSTRUCTION, THAT ARE NOT IMPROVED TO EXISTING CONDITIONS. NSPI.
- PROPOSED CANTILEVER MANUAL SLIDE GATE DIMENSIONS VARY FROM DETAILS 1-3 ON SHEET C85. CONTRACTOR SHALL INSTALL APPROPRIATE SIGNAGE ON GATE.
- REFER TO TREE PRESERVATION PLAN AND TREE PROTECTION NOTES IN SHEETS TP1 THROUGH TP19.
- REFERENCE EASEMENT SHEETS G22-G28 FOR SPECIFIC USE OF EACH EASEMENT.
- CONTRACTOR SHALL REFERENCE CPS SPECIAL CONDITIONS FOR REQUIREMENTS FOR 3-PHASE POWER.
- EACH SITE SHALL HAVE SITE IDENTIFICATION AND STANDARD NO TRESPASSING SIGNAGE. SIGNS SHALL BE PROVIDED AS A SUBMITTAL PRIOR TO FABRICATIONS. SIGNS SHALL BE CONSTRUCTED CONFORMING TO TXDOT-SS DMS-D9-7110 AND DMS-D9-7120, OR ASTM B 209. SIGN FACES SHALL BE FULLY REFLECTORIZED WITH MATERIAL CONFORMING TO TXDOT-SS DMS-D9-8300 OR ASTM D 4956. SITE IDENTIFICATION SIGNAGE SHALL INCLUDE "W-6 UPPER SEGMENT - SITE # - MH ID: #".
- REFER TO EROSION CONTROL SHEET EC1 - EC12 FOR EROSION CONTROL MEASURES AND SITE RESTORATION.
- FG = FINISHED GROUND ELEVATION
ME = MATCH EXISTING GROUND

FENCING COORDINATE TABLE

Point #	Northing	Easting	Description
200	13684961.04	2094902.90	FENCE CORNER
201	13684959.59	2094901.91	FENCE CORNER
202	13684891.23	2095004.56	FENCE CORNER
203	13684966.69	2095054.89	FENCE CORNER
204	13685011.68	2095001.13	FENCE CORNER
205	13685027.76	2094976.31	FENCE CORNER
206	13685019.31	2094941.79	FENCE CORNER
207	13684981.02	2094916.19	FENCE CORNER

PAVING COORDINATE TABLE

Point #	Northing	Easting	Description
208	13684980.42	2094916.99	EDGE OF PAVEMENT
209	13684981.69	2094915.39	PT OF 10' RADIUS
210	13684994.46	2094913.91	PT OF 10' RADIUS
211	13684956.29	2094888.87	PT OF 10' RADIUS
212	13684960.80	2094901.50	PT OF 10' RADIUS
213	13684926.64	2094952.85	EDGE OF PAVEMENT
214	13684892.49	2095004.17	EDGE OF PAVEMENT
215	13684929.34	2095028.77	EDGE OF PAVEMENT
216	13684966.50	2095053.56	EDGE OF PAVEMENT
217	13684986.53	2095029.23	EDGE OF PAVEMENT
218	13685011.38	2094999.04	EDGE OF PAVEMENT
219	13685026.93	2094975.75	PC OF 25' RADIUS
220	13685021.49	2094944.48	PC OF 25' RADIUS
221	13684979.59	2095005.87	PC OF 8' RADIUS
222	13684963.59	2095005.87	PC OF 8' RADIUS



LEGEND

PROPOSED MAJOR CONTOUR	
PROPOSED MINOR CONTOUR	
PROPOSED CONCRETE PAVEMENT	
PROPOSED TEMPORARY CONSTRUCTION EASEMENT	
EXISTING OVERHEAD ELECTRIC LINE AND POLE	
EXISTING PROPERTY LINE	
EXISTING CURB AND GUTTER	
EXISTING GUARDRAILING	
EXISTING MINOR	
EXISTING MAJOR	
EXISTING SIGN	
EXISTING LIGHTPOLE	
EXISTING SANITARY SEWER LINE	
EXISTING WATER LINE	
EXISTING GAS LINE	
PROPERTY LINE	
EXISTING WATER METER	
EXISTING FIRE HYDRANT	

3/9/2020

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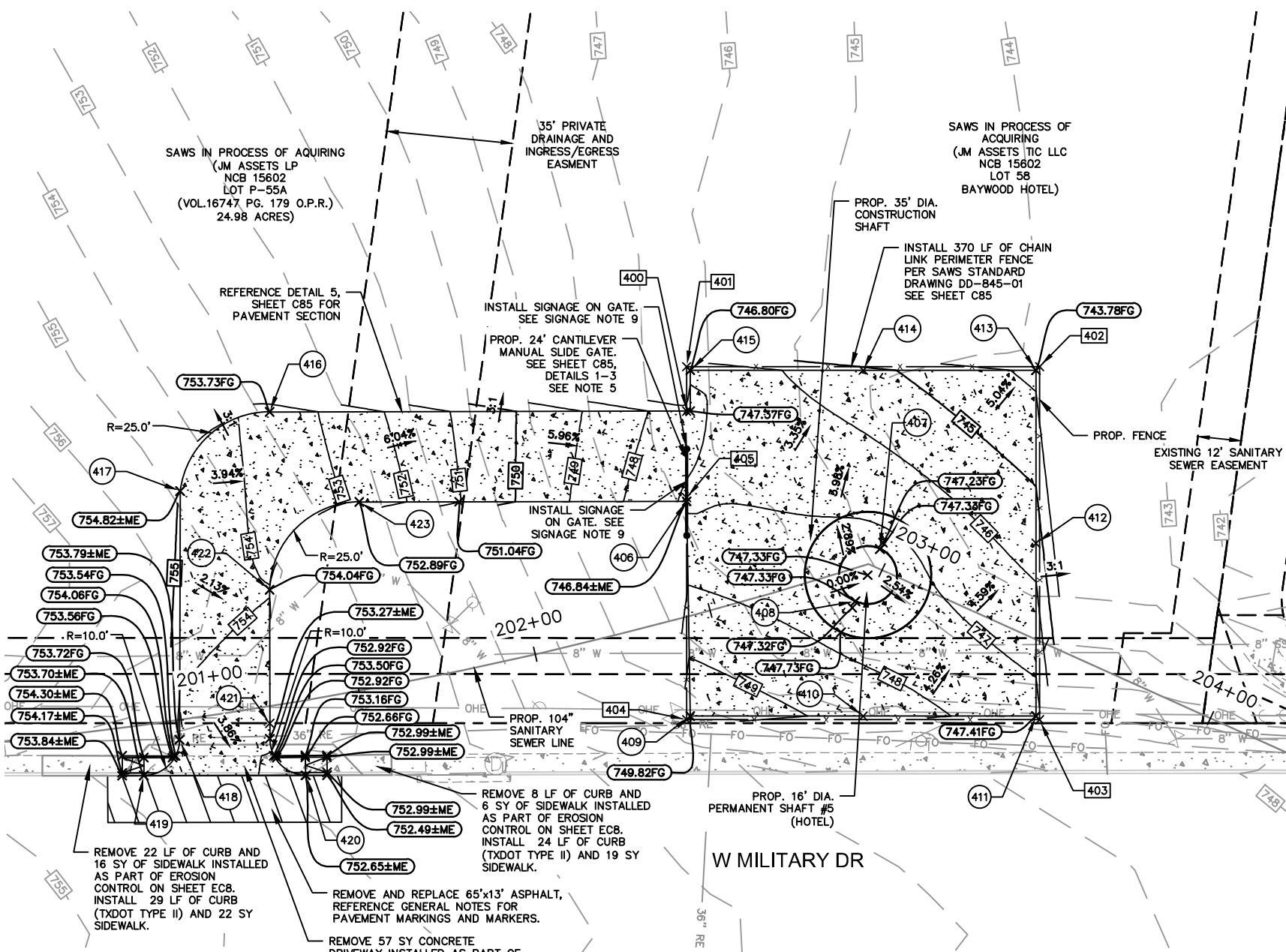
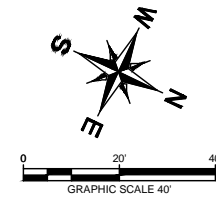
No.	Revision	By	Date
A	ADDENDUM NO. 1	JAF	3/9/2020

W-6 UPPER SEGMENT:
HWY 90 TO SW MILITARY DR
SEWER MAIN

SAN ANTONIO WATER SYSTEM

**SITE LAYOUT
SHAFT #3
(MERRY OAKS)**

DATE: MARCH 2020	SAWS PROJECT NO. 19-4519	SHEET NO. C89
DESIGN: JKN	KHA PROJECT NO. 068665052	
DRAWN: CRW		
CHECKED: JAF		

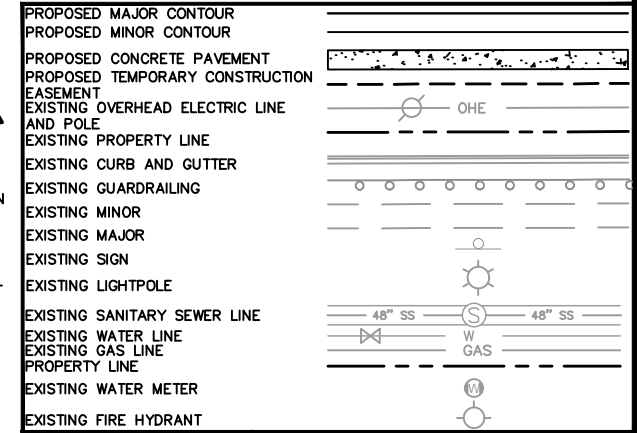


ESTIMATED QUANTITIES			
ITEM NO.	DESCRIPTION	UNIT	QUANTITY
C85	24' CANTILEVER MANUAL SLIDE GATE	EA	1
104 6015	REMOVE CONC (SIDEWALKS) (TXDOT SPEC)	SY	22
104 6017	REMOVE CONC (DRIVEWAYS) (TXDOT SPEC)	SY	57
104 6021	REMOVE CONC (CURB) (TXDOT SPEC)	LF	30
200.1	FLEXIBLE BASE (6-INCH COMPACTED DEPTH) (COSA SPEC)	SY	1010
209.1	CONCRETE PAVEMENT (12-INCH THICK) (COSA SPEC)	SY	1010
305 6002	SALVAGING, HAULING, AND STOCKPILING RECLAIMABLE ASPHALTIC PAVEMENT (2" DEPTH) (TXDOT SPEC)	SY	95
340 6272	TACK COAT (TXDOT SPEC)	GAL	10
341 6029	D-GR HMA TY-C SAC-A PG76-22 (2" COMPACTED DEPTH) (TXDOT SPEC)	TN	10.5
529 6002	CONC CURB (TY II) (TXDOT SPEC)	LF	53
530 6004	DRIVEWAYS (CONC) (TXDOT SPEC)	SY	609
531 6002	CONC SIDEWALKS (6-INCH) (TXDOT SPEC)	SY	41
636 6001	ALUMINUM SIGNS (TY A) (TXDOT SPEC)	EA	2
845	GATE, FENCING, AND PROPERTY MARKER DETAILS	LF	370

NOTES

- ALL DIMENSIONS AND COORDINATES ARE TO EDGE OF PAVEMENT INSIDE OF CURB UNLESS OTHERWISE SHOWN ON PLANS.
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- CONTRACTOR SHALL ENSURE THAT FACILITY SITE REMAINS SECURE AT ALL TIMES. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INSTALL TEMPORARY FENCING AND OTHER PRECAUTIONARY MEASURES, AS NECESSARY DURING CONSTRUCTION, UNTIL PERMANENT FENCING IS INSTALLED AND SITE IS SECURED. NSPI.
- IT IS THE CONTRACTORS RESPONSIBILITY TO RESTORE ALL AFFECTED AREAS DURING CONSTRUCTION, THAT ARE NOT IMPROVED TO EXISTING CONDITIONS. NSPI.
- PROPOSED CANTILEVER MANUAL SLIDE GATE DIMENSIONS VARY FROM DETAILS 1-3 ON SHEET C85. CONTRACTOR SHALL INSTALL APPROPRIATE SIGNAGE ON GATE.
- REFER TO TREE PRESERVATION PLAN AND TREE PROTECTION NOTES IN SHEETS TP1 THROUGH TP19.
- REFERENCE EASEMENT SHEETS G22-G28 FOR SPECIFIC USE OF EACH EASEMENT.
- CONTRACTOR SHALL REFERENCE CPS SPECIAL CONDITIONS FOR REQUIREMENTS FOR 3-PHASE POWER.
- EACH SITE SHALL HAVE SITE IDENTIFICATION AND STANDARD NO TRESPASSING SIGNAGE. SIGNS SHALL BE PROVIDED AS A SUBMITTAL PRIOR TO FABRICATIONS. SIGNS SHALL BE CONSTRUCTED CONFORMING TO TXDOT-SS DMS-D9-7110 AND DMS-D9-7120, OR ASTM B 209. SIGN FACES SHALL BE FULLY REFLECTORIZED WITH MATERIAL CONFORMING TO TXDOT-SS DMS-D9-8300 OR ASTM D 4956. SITE IDENTIFICATION SIGNAGE SHALL INCLUDE "W-6 UPPER SEGMENT - SITE # - MH ID: #".
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ME = MATCH EXISTING GROUND

LEGEND



FENCING COORDINATE TABLE

Point #	Northing	Easting	Description
400	13695364.77	2087534.34	FENCE CORNER
401	13695359.53	2087523.17	FENCE CORNER
402	13695448.26	2087481.56	FENCE CORNER
403	13695489.87	2087570.29	FENCE CORNER
404	13695401.14	2087611.90	FENCE CORNER
405	13695374.93	2087556.09	FENCE CORNER

PAVING COORDINATE TABLE

Point #	Northing	Easting	Description
406	13695375.40	2087557.02	EDGE OF PAVEMENT
407	13695429.62	2087546.25	PC OF 8' RADIUS
408	13695429.62	2087562.25	PC OF 8' RADIUS
409	13695401.62	2087610.57	EDGE OF PAVEMENT
410	13695445.08	2087590.19	EDGE OF PAVEMENT
411	13695488.54	2087569.81	EDGE OF PAVEMENT
412	13695468.16	2087526.37	EDGE OF PAVEMENT
413	13695447.78	2087482.89	EDGE OF PAVEMENT
414	13695404.34	2087503.26	EDGE OF PAVEMENT
415	13695360.86	2087523.65	EDGE OF PAVEMENT
416	13695260.03	2087583.70	PT OF 25' RADIUS
417	13695246.88	2087614.12	PC OF 25' RADIUS
418	13695276.02	2087676.71	PC OF 10' RADIUS
419	13695271.28	2087689.97	PT OF 10' RADIUS
420	13695312.07	2087670.74	PT OF 10' RADIUS
421	13695296.79	2087661.94	PC OF 10' RADIUS
422	13695280.99	2087628.39	PC OF 25' RADIUS
423	13695293.18	2087595.77	PT OF 25' RADIUS

3/9/2020

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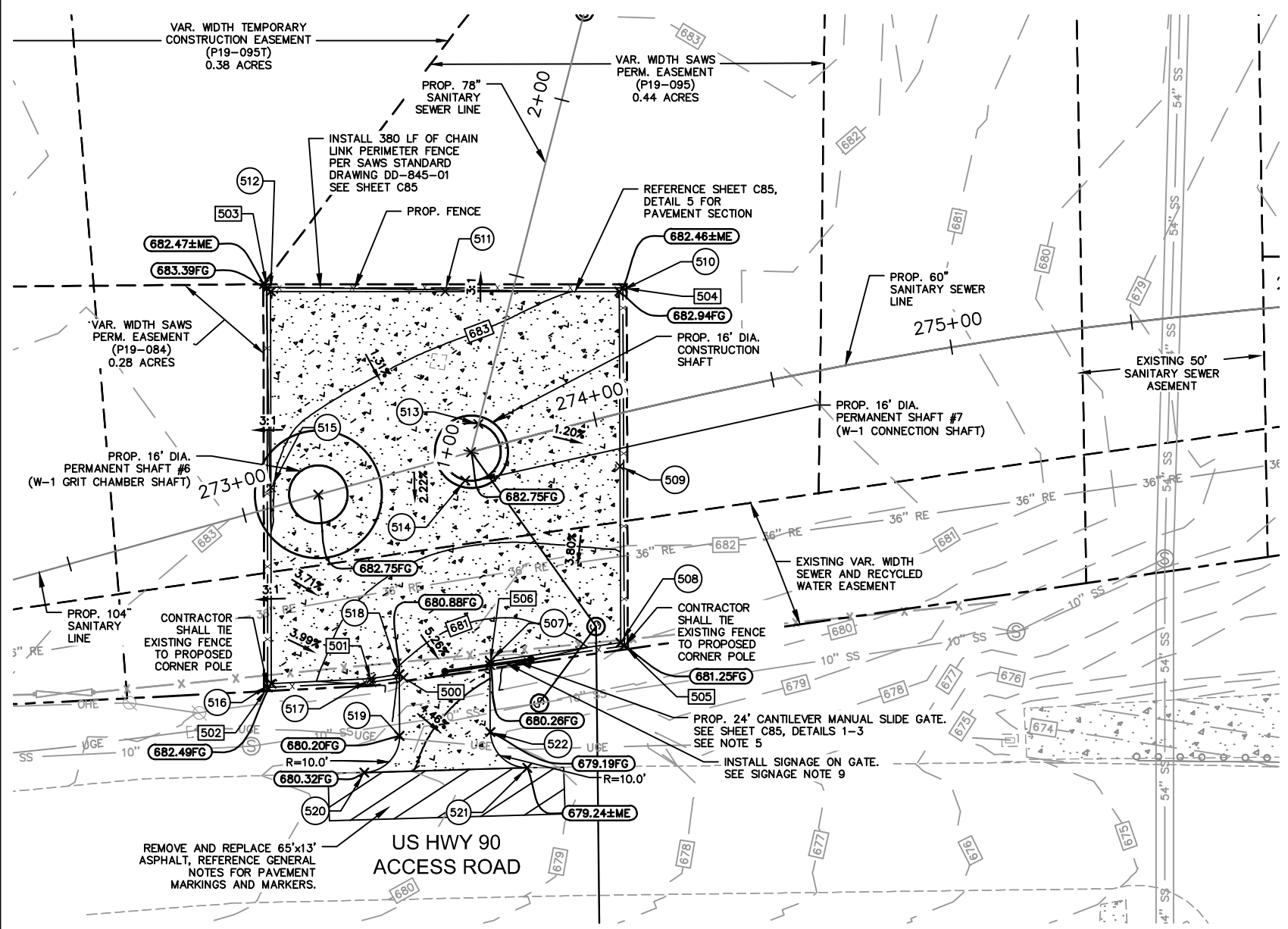
No.	Revision	By	Date
A	ADDENDUM NO. 1	JAF	3/9/2020

**W-6 UPPER SEGMENT:
HWY 90 TO SW MILITARY DR
SEWER MAIN**

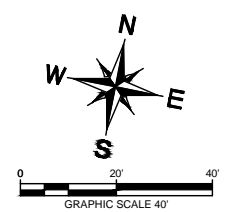
**SITE LAYOUT SHAFT
#5 (HOTEL)**

DATE: MARCH 2020	SAWS PROJECT NO. 19-4519	SHEET NO. C91
DESIGN: JKN	KHA PROJECT NO. 068665052	
DRAWN: CRW		
CHECKED: JAF		

PLOTTED BY: WILSON, CONNER 3/9/2020 10:25 AM
 DWG NAME: K:\S\A UTILITIES\068665052\CAD\SHEETS\SHAFT SITE LAYOUT.DWG
 DATE PLOTTED: 3/9/2020 10:25 AM



ESTIMATED QUANTITIES			
ITEM NO.	DESCRIPTION	UNIT	QUANTITY
C85	24' CANTILEVER MANUAL SLIDE GATE	EA	1
200.1	FLEXIBLE BASE (6-INCH COMPACTED DEPTH) (COSA SPEC)	SY	1060
209.1	CONCRETE PAVEMENT (12-INCH THICK) (COSA SPEC)	SY	1060
305 6002	SALVAGING, HAULING, AND STOCKPILING RECLAIMABLE ASPHALTIC PAVEMENT (2" DEPTH) (TXDOT SPEC)	SY	95
340 6272	TACK COAT (TXDOT SPEC)	GAL	10
341 6029	D-GR HMA TY-C SAC-A PG76-22 (2" COMPACTED DEPTH) (TXDOT SPEC)	TN	10.5
530 6004	DRIVEWAYS (CONC) (TXDOT SPEC)	SY	85
636 6001	ALUMINUM SIGNS (TY A) (TXDOT SPEC)	EA	2
845	GATE, FENCING, AND PROPERTY MARKER DETAILS	LF	380



NOTES

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- IT IS THE CONTRACTORS RESPONSIBILITY TO RESTORE ALL AFFECTED AREAS DURING CONSTRUCTION, THAT ARE NOT IMPROVED TO EXISTING CONDITIONS. NSPI.
- PROPOSED CANTILEVER MANUAL SLIDE GATE DIMENSIONS VARY FROM DETAILS 1-3 ON SHEET C85. CONTRACTOR SHALL INSTALL APPROPRIATE SIGNAGE ON GATE.
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- FG = FINISHED GROUND ELEVATION
ME = MATCH EXISTING GROUND

LEGEND

PROPOSED MAJOR CONTOUR	
PROPOSED MINOR CONTOUR	
PROPOSED CONCRETE PAVEMENT	
PROPOSED TEMPORARY CONSTRUCTION EASEMENT	
EXISTING OVERHEAD ELECTRIC LINE AND POLE	
EXISTING PROPERTY LINE	
EXISTING CURB AND GUTTER	
EXISTING GUARDRAILING	
EXISTING MINOR	
EXISTING MAJOR	
EXISTING SIGN	
EXISTING LIGHTPOLE	
EXISTING SANITARY SEWER LINE	
EXISTING WATER LINE	
EXISTING GAS LINE	
PROPERTY LINE	
EXISTING WATER METER	
EXISTING FIRE HYDRANT	

Point #	Northing	Easting	Description
500	13697985.72	2093559.37	FENCE CORNER
501	13697982.70	2093551.05	FENCE CORNER
502	13697975.44	2093523.38	FENCE CORNER
503	13698082.95	2093500.76	FENCE CORNER
504	13698102.92	2093596.58	FENCE CORNER
505	13698006.64	2093617.00	FENCE CORNER
506	13697993.91	2093581.93	FENCE CORNER

Point #	Northing	Easting	Description
507	13697994.90	2093581.72	EDGE OF PAVEMENT
508	13698007.28	2093615.84	EDGE OF PAVEMENT
509	13698054.72	2093605.78	EDGE OF PAVEMENT
510	13698101.73	2093595.81	EDGE OF PAVEMENT
511	13698091.96	2093548.89	EDGE OF PAVEMENT
512	13698082.18	2093501.95	EDGE OF PAVEMENT
513	13698058.20	2093565.29	PC OF 8' RADIUS
514	13698042.21	2093564.92	PC OF 8' RADIUS
515	13698029.48	2093513.03	EDGE OF PAVEMENT
516	13697976.67	2093524.15	EDGE OF PAVEMENT
517	13697983.66	2093550.75	EDGE OF PAVEMENT
518	13697986.37	2093558.06	EDGE OF PAVEMENT
519	13697969.82	2093561.55	PC OF 5' RADIUS
520	13697957.93	2093554.14	PT OF 5' RADIUS
521	13697968.36	2093597.73	PT OF 5' RADIUS
522	13697975.93	2093585.78	PC OF 5' RADIUS

3/9/2020

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No.	Revision	By	Date
A	ADDENDUM NO. 1	JAF	3/9/2020

**W-6 UPPER SEGMENT:
HWY 90 TO SW MILITARY DR
SEWER MAIN**

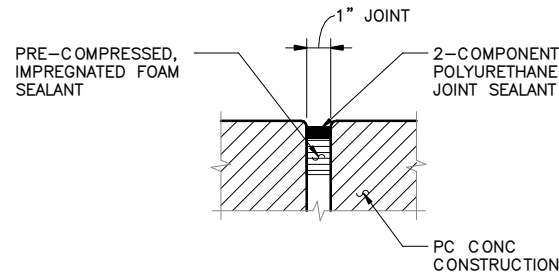
**SITE LAYOUT SHAFT #6
(SOLIDS HANDLING) & #7
(W-1 CONNECTION)**

DATE: MARCH 2020	SAWS PROJECT NO. 19-4519	SHEET NO. C92
DESIGN: JKN	KHA PROJECT NO. 068665052	
DRAWN: CRW		
CHECKED: JAF		

PLOTTED BY: WILSON, CONNER 3/9/2020 10:29 AM
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 DATE PLOTTED: 3/9/2020 10:29 AM

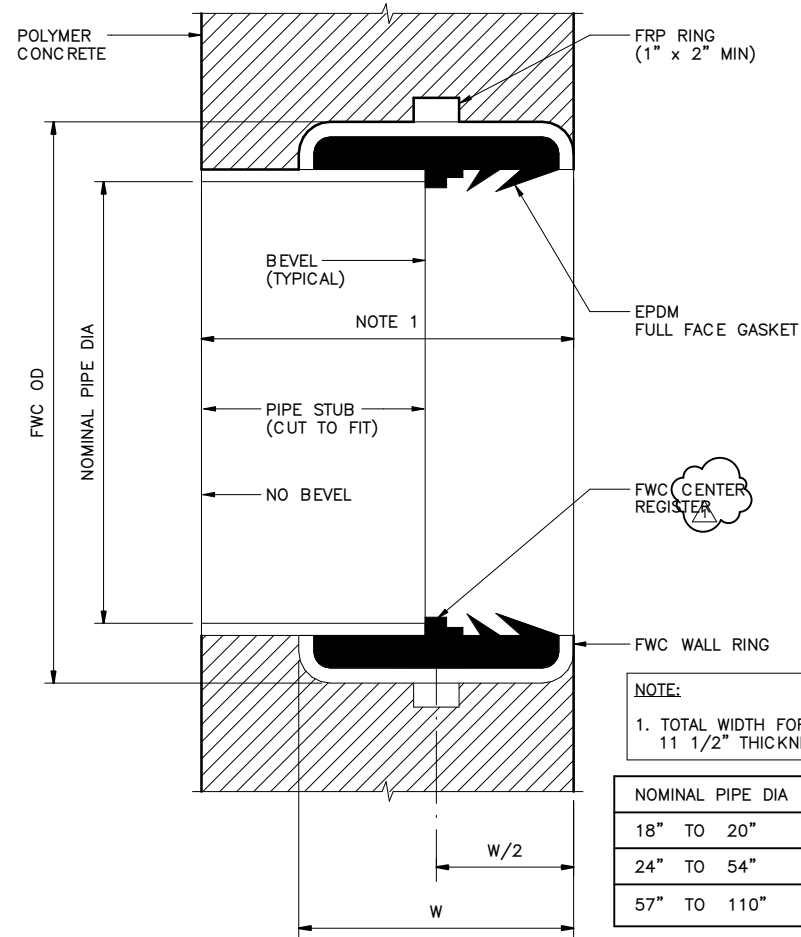
PRE-COMPRESSED FOAM SEALANT:

1. PRE-COMPRESSED FOAM SEALANT SHALL BE A PREFORMED EXPANDING FOAM SEALANT PRODUCED BY IMPREGNATING PERMANENTLY ELASTIC, HIGH-DENSITY, OPEN-CELL POLYURETHANE FOAM WITH WATER-BASED, POLYMER-MODIFIED ASPHALT. MATERIAL SHALL BE PRECOMPRESSED TO 20% OF THE MATERIAL'S ORIGINAL UNCOMPRESSED DIMENSION.
2. ALL JOINT SURFACES SHALL BE FREE FROM GROSS IRREGULARITIES, LOOSE PARTICLES, FOREIGN MATTER SUCH AS DIRT, DUST, ICE, SNOW, OR WATER, COATINGS SUCH AS OIL, GREASE, OR CURING COMPOUND RESIDUES, AND ANY OTHER FOREIGN MATTER THAT MAY PREVENT BOND. CLEANING AND PREPARATION OF JOINT SURFACES SHALL BE ACCOMPLISHED BY MECHANICAL MEANS.
3. MIX AND APPLY EPOXY PRIMER TO THE JOINT SURFACES AND INSTALL EXPANSION JOINT SEALS PER MANUFACTURER'S INSTRUCTIONS.
4. EXPANSION JOINT SEALS SHALL BE "SUBMERSEAL" SYSTEM BY EMSEAL JOINT SYSTEMS, LTD. OR APPROVED EQUAL.



TYPICAL EXPANSION JOINT SEAL DETAIL

SCALE: NO SCALE

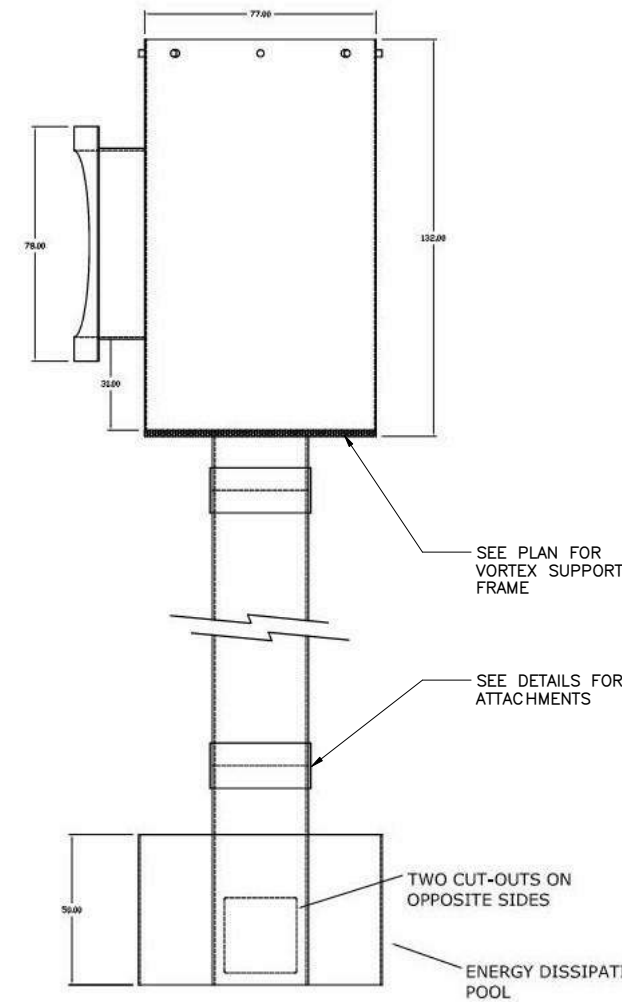


NOTE:
1. TOTAL WIDTH FOR STRUCTURE WALLS GREATER THAN 11 1/2" THICKNESS. (AT CONTRACTOR'S OPTION)

NOMINAL PIPE DIA	FWC "W" (APPROX)
18" TO 20"	8" (200 MM)
24" TO 54"	10" (250 MM)
57" TO 110"	11 1/2" (290 MM)

TYPICAL FWC COUPLING WALL FITTING DETAIL

SCALE: NO SCALE

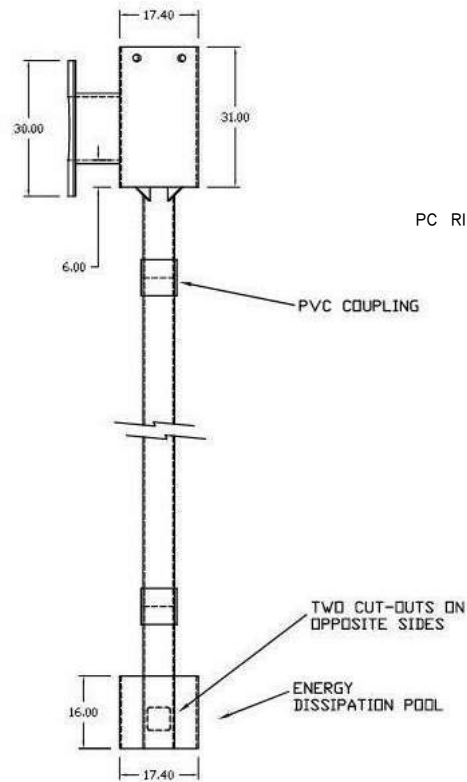


NAME	MATERIAL	PROPERTIES
VORTEX FORM	1/2" PVC SHEET	O.D. 77.0"
VORTEX SHAFT	30" CIOD PVC PIPE AWWA C905	O.D. 32.0"
VORTEX EDP	1/2" PVC SHEET	O.D. 77.0"

SHAFT #8 VORTEX INLET DETAIL

SCALE: NO SCALE

- NOTES:**
1. VORTEX DESIGNED BY IPEX INC.
 2. VORTEX DESIGNED FOR 31.4 MGD PEAK FLOW
 3. VORTEX APPROXIMATE DRY WEIGHT OF 4,400 LBS
 4. FIELD VERIFY ALL DIMENSIONS AND FLOW ELEVATIONS

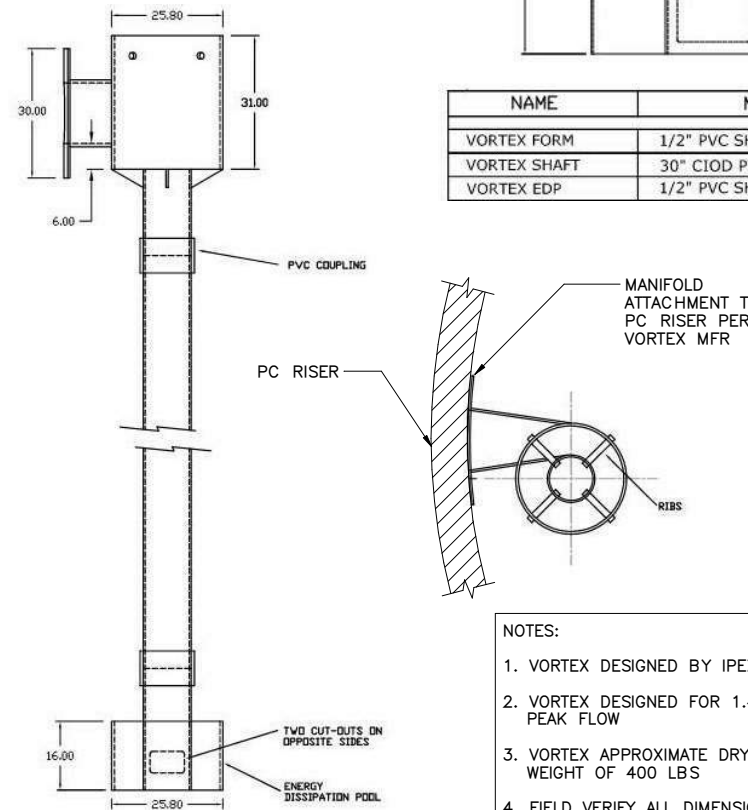


NAME	MATERIAL	PROPERTIES
VORTEX FORM	16" CIOD PVC PIPE AWWA C905	O.D. 17.4"
VORTEX SHAFT	6" CIOD PVC PIPE AWWA C900	O.D. 6.9"
VORTEX EDP	16" CIOD PVC PIPE AWWA C905	O.D. 17.4"

SHAFT #3 VORTEX INLET DETAIL

SCALE: NO SCALE

- NOTES:**
1. VORTEX DESIGNED BY IPEX INC
 2. VORTEX DESIGNED FOR 0.65 MGD PEAK FLOW
 3. VORTEX APPROXIMATE DRY WEIGHT OF 400 LBS
 4. FIELD VERIFY ALL DIMENSIONS AND FLOW ELEVATIONS

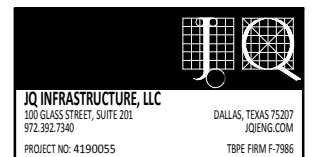
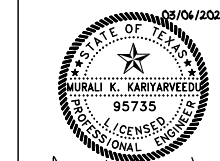


NAME	MATERIAL	PROPERTIES
VORTEX FORM	24" CIOD PVC PIPE AWWA C905	O.D. 25.8"
VORTEX SHAFT	10" CIOD PVC PIPE AWWA C900	O.D. 11.1"
VORTEX EDP	24" CIOD PVC PIPE AWWA C905	O.D. 25.8"

SHAFT #7 VORTEX INLET DETAIL

SCALE: NO SCALE

- NOTES:**
1. VORTEX DESIGNED BY IPEX INC.
 2. VORTEX DESIGNED FOR 1.42 MGD PEAK FLOW
 3. VORTEX APPROXIMATE DRY WEIGHT OF 400 LBS
 4. FIELD VERIFY ALL DIMENSIONS AND FLOW ELEVATIONS



No.	Revision	By	Date
ADDENDUM NO 1		MKK	03/06/20

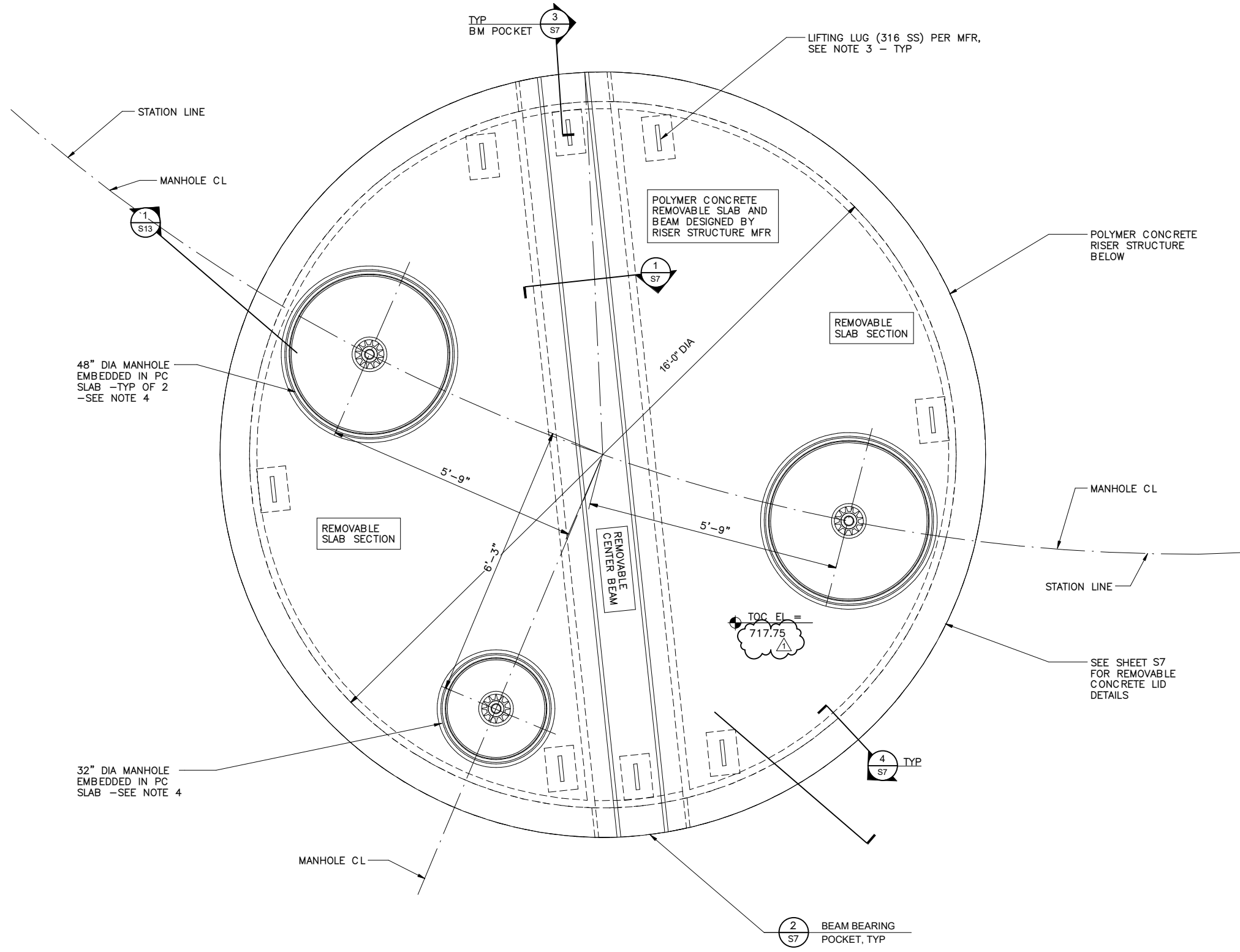


W-6 UPPER SEGMENT:
HWY 90 TO SW MILITARY DR

STRUCTURAL TYPICAL DETAILS VI

DATE:	SAWS PROJECT NO.	SHEET NO.
FEBRUARY 2020		S8
DESIGN:	KHA PROJECT NO.	
CD		
DRAWN:	068665052	
LAS		
CHECKED:		
MK		

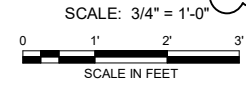
THE SCALE INDICATED ON THE DRAWINGS IS FOR A FULL SIZE DRAWING (22x34). ADJUST SCALE FOR HALF SIZE DRAWINGS (11x17).
0" 1"
BAR IS ONE INCH ON FULL SIZE DRAWING.



NOTES:

1. REMOVABLE POLYMER CONCRETE LID SHALL BE DESIGNED BY PC MFR FOR SPECIFIED DESIGN LOADS PER SPEC SECTION SS 02600.
2. COORDINATE EMBEDDED FRAMES FOR MANHOLE WITH PC MFR.
3. PROVIDE RECESSED LIFTING LUGS DESIGNED BY PC MFR TO ALLOW FOR REMOVAL OF EACH SECTION OF THE LID AS SHOWN.
4. MANHOLES SHALL BE PER SAWS STANDARDS. REFER TO SAWS MANHOLE DETAILS FOR ADDITIONAL INFO.
5. TOC EL = TOP OF STRUCTURAL CONCRETE, POLYMER CONCRETE ELEVATION, UNO.

**SHAFT #2 (PEARSALL SHAFT) - UPPER LEVEL
SLAB PLAN AT EL 717.75**



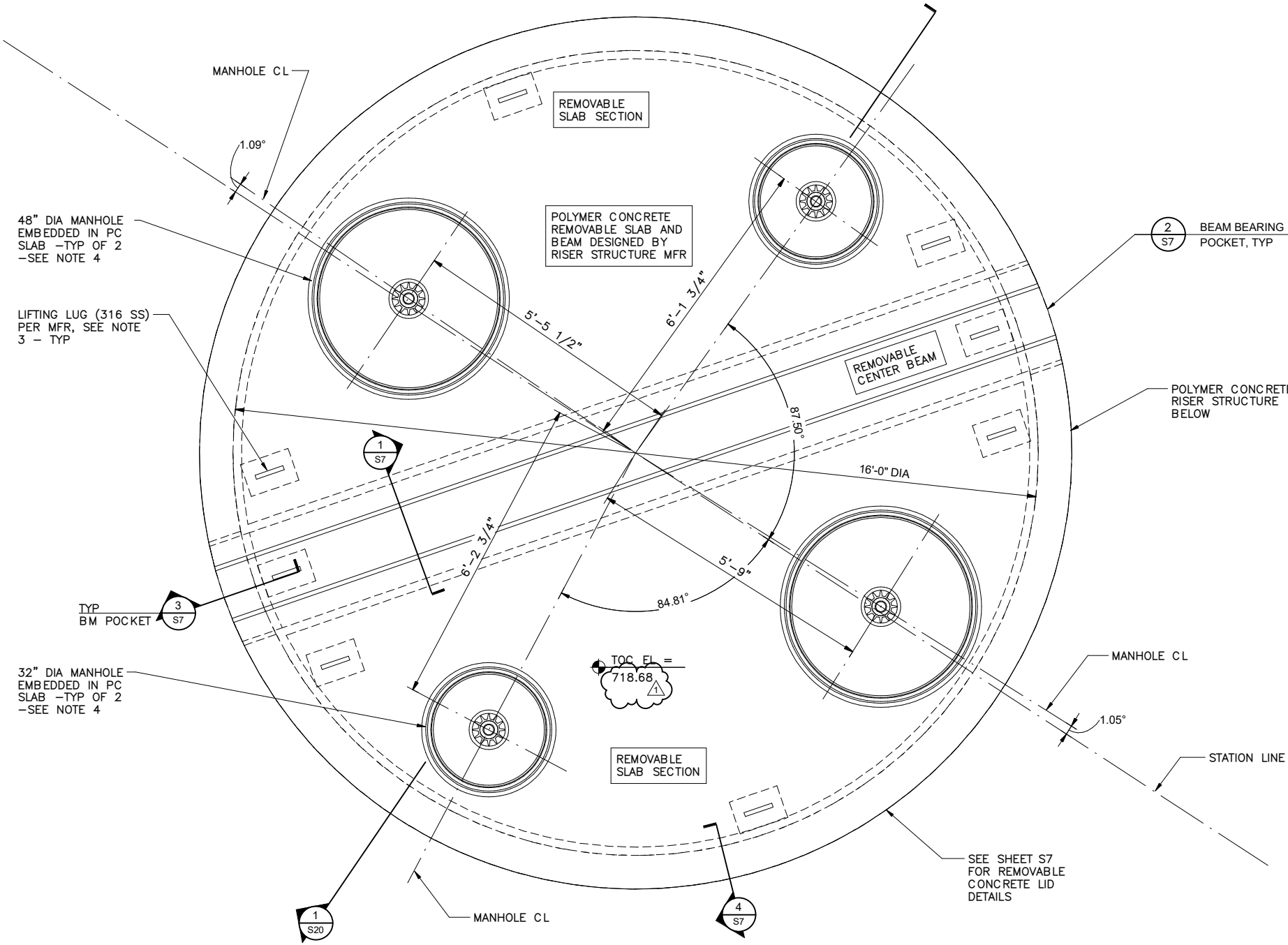
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No.	Revision	By	Date
1	ADDENDUM NO 1	MKK	03/06/20

	W-6 UPPER SEGMENT: HWY 90 TO SW MILITARY DR SHAFT #2 (PEARSALL SHAFT) - UPPER LEVEL SLAB PLAN AT EL 717.75
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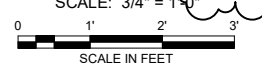
THE SCALE INDICATED ON THE DRAWINGS IS FOR A FULL SIZE DRAWING (22x34). ADJUST SCALE FOR HALF SIZE DRAWINGS (11x17). BAR IS ONE INCH ON FULL SIZE DRAWING.	DATE: FEBRUARY 2020	SAWS PROJECT NO.	SHEET NO. S12
	DESIGN: CD	KHA PROJECT NO.	
	CHECKED: MK	068665052	

PLOTTED BY: JAS
 DWG NAME: S12.SVD
 3/20/20 10:03 AM
 C:\Users\jsho\OneDrive\Bentley\Bentley Project\4190055\SAWS W-6 - RVT2 - jsho\jsho.dwg



SHAFT #3 (MERRY OAKS SHAFT) - UPPER LEVEL

LID PLAN AT EL 718.68'



NOTES:

1. REMOVABLE POLYMER CONCRETE LID SHALL BE DESIGNED BY PC MFR FOR SPECIFIED DESIGN LOADS PER SPEC SECTION SS 02600.
2. COORDINATE EMBEDDED FRAMES FOR MANHOLE WITH PC MFR.
3. PROVIDE RECESSED LIFTING LUGS DESIGNED BY PC MFR TO ALLOW FOR REMOVAL OF EACH SECTION OF THE LID AS SHOWN.
4. MANHOLES SHALL BE PER SAWS STANDARDS. REFER TO SAWS MANHOLE DETAILS FOR ADDITIONAL INFO.
5. TOC EL = TOP OF STRUCTURAL CONCRETE, POLYMER CONCRETE ELEVATION, UNO.

IQ INFRASTRUCTURE, LLC
400 GLASS STREET, SUITE 201
972.392.7340
DALLAS, TEXAS 75207
IQENG.COM
PROJECT NO: 4190055 T&E FIRM F-7986

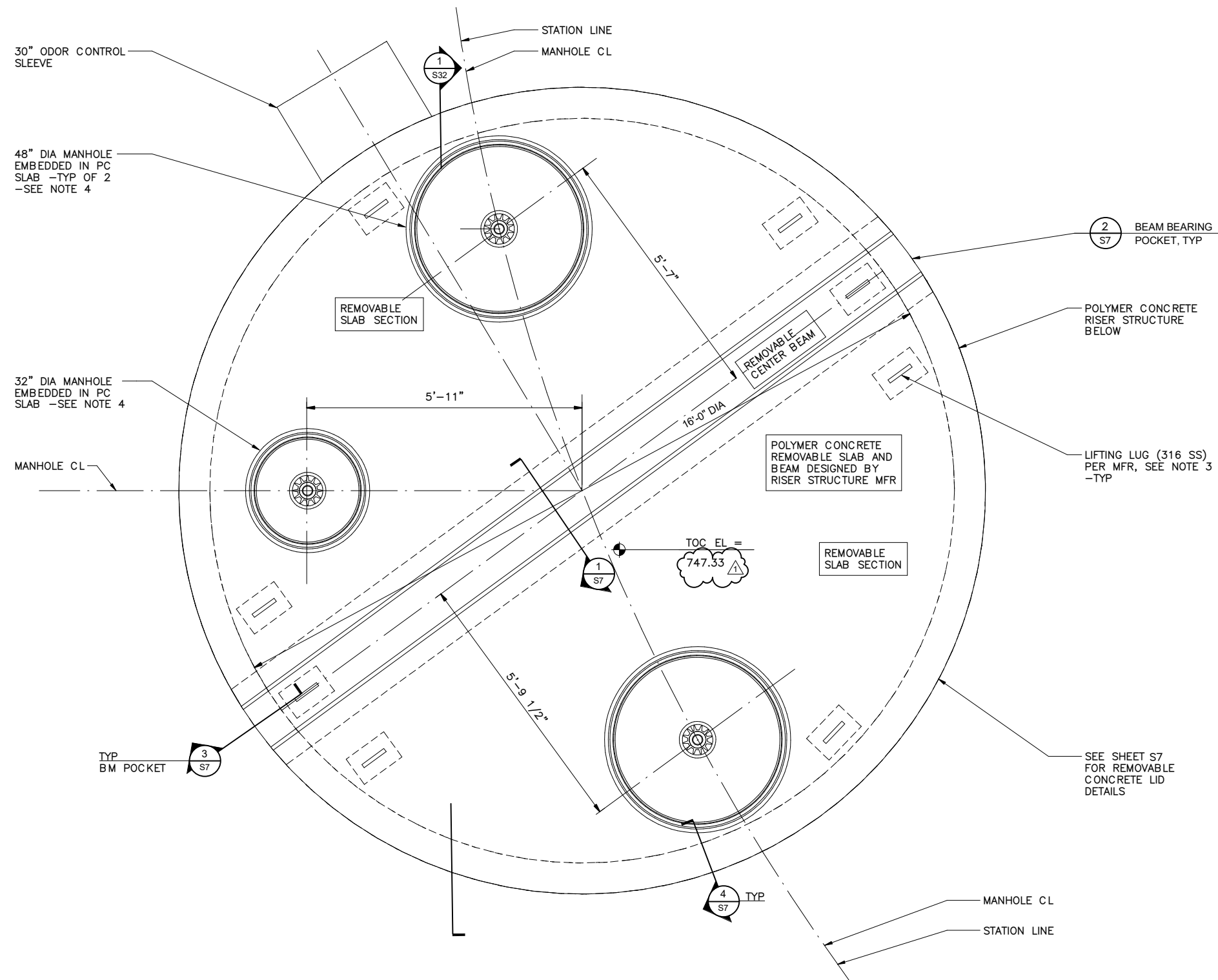
No.	Revision	By	Date
▲	ADDENDUM NO 1	MKK	03/06/20

**W-6 UPPER SEGMENT:
HWY 90 TO SW MILITARY DR**

**SHAFT #3 (MERRY OAKS
SHAFT) - UPPER LEVEL SLAB
PLAN AT EL 718.68'**

THE SCALE INDICATED ON THE DRAWINGS IS FOR A FULL SIZE DRAWING (22x34). ADJUST SCALE FOR HALF SIZE DRAWINGS (11x17). BAR IS ONE INCH ON FULL SIZE DRAWING.	DATE: FEBRUARY 2020	SAWS PROJECT NO.	S19
	DESIGN: CD	KHA PROJECT NO.	
	DRAWN: LAS	068665052	
CHECKED: MK			

PLOTTED BY: JENNY L. JENKINS
 DWG NAME: S19.SVD
 3/20/20 10:03 AM
 C:\Users\jenkins\Documents\Drawings\2020\4190055\SAWS W-6 - RVT2 - jenkins@iqeng.com.rvt



SHAFT #5 (HOTEL SHAFT) - UPPER LEVEL LID

PLAN AT EL 747.33'

SCALE: 3/4" = 1'-0"



SCALE IN FEET

NOTES:

1. REMOVABLE POLYMER CONCRETE LID SHALL BE DESIGNED BY PC MFR FOR SPECIFIED DESIGN LOADS PER SPEC SECTION SS 02600.
2. COORDINATE EMBEDDED FRAMES FOR MANHOLE WITH PC MFR.
3. PROVIDE RECESSED LIFTING LUGS DESIGNED BY PC MFR TO ALLOW FOR REMOVAL OF EACH SECTION OF THE LID AS SHOWN.
4. MANHOLES SHALL BE PER SAWS STANDARDS. REFER TO SAWS MANHOLE DETAILS FOR ADDITIONAL INFO.
5. TOC EL = TOP OF STRUCTURAL CONCRETE, POLYMER CONCRETE ELEVATION, UNO.

03/04/2020

Murali K. Kariyaveedu
95735
LICENSED PROFESSIONAL ENGINEER
STATE OF TEXAS

JQ INFRASTRUCTURE, LLC
400 GLASS STREET, SUITE 201
972.392.7340
PROJECT NO: 4190055

DALLAS, TEXAS 75207
JQENG.COM
TBP# FIRM F-7986

No.	Revision	By	Date
1	ADDENDUM NO 1	MKK	03/06/20

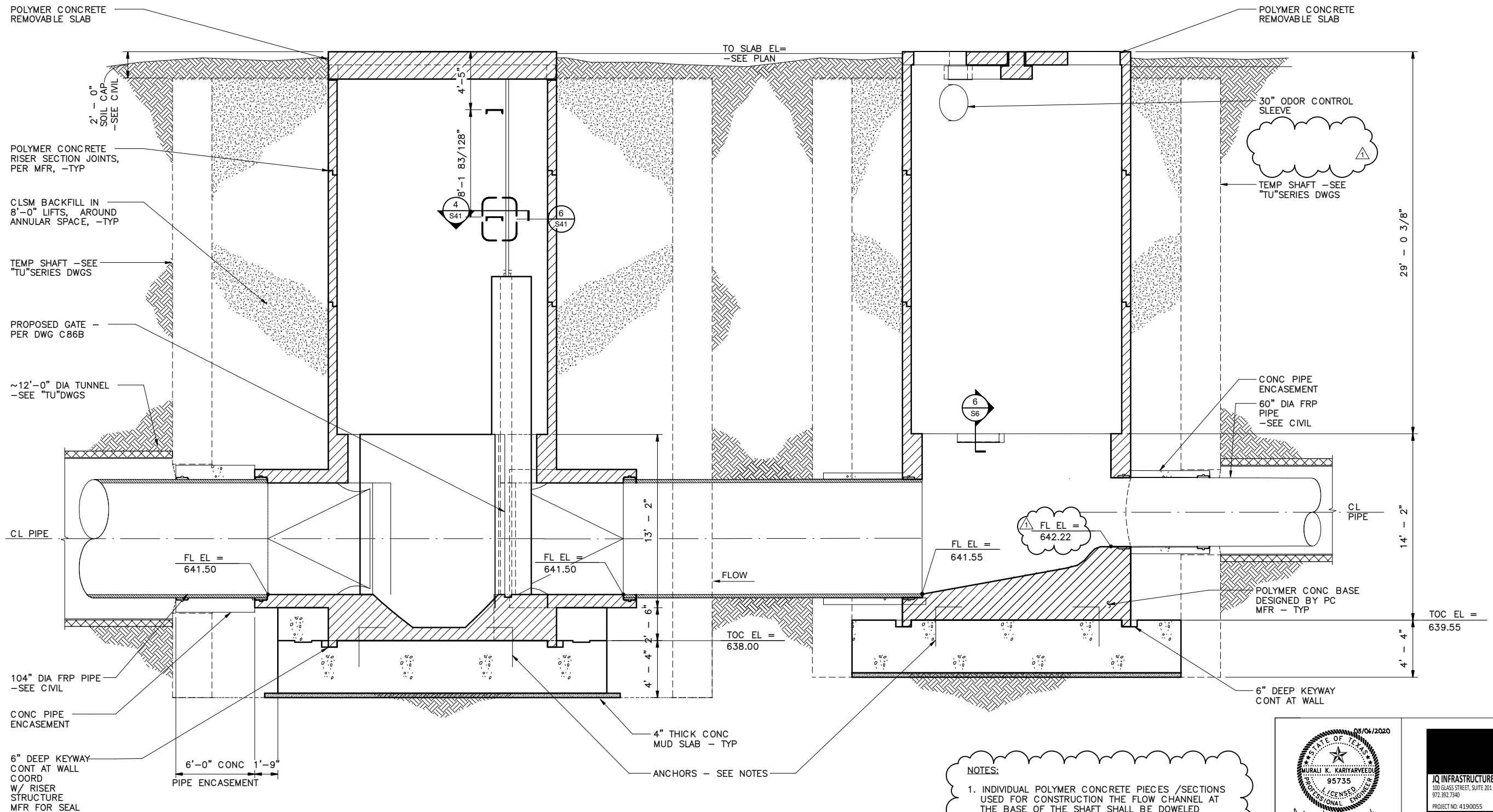
SAN ANTONIO WATER SYSTEM

W-6 UPPER SEGMENT:
HWY 90 TO SW MILITARY DR

SHAFT #5 (HOTEL SHAFT) - UPPER LEVEL LID PLAN AT EL 747.33'

THE SCALE INDICATED ON THE DRAWINGS IS FOR A FULL SIZE DRAWING (22x34). ADJUST SCALE FOR HALF SIZE DRAWINGS (11x17). BAR IS ONE INCH ON FULL SIZE DRAWING.	DATE: FEBRUARY 2020	SAWS PROJECT NO.	S31
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CHECKED: MK			

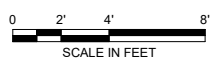
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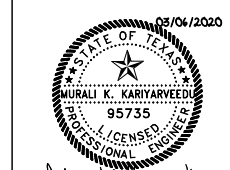
NOTE:
SEE S43 FOR ADDN'L
INFO NOT SHOWN

**SHAFT #6 (SOLIDS
HANDLING SHAFT) & SHAFT
#7 (W-1 CONNECTION
SHAFT) - SECTION AT 104"
DIA PIPE**

SCALE: 1/4" = 1'-0"



- NOTES:**
- INDIVIDUAL POLYMER CONCRETE PIECES /SECTIONS USED FOR CONSTRUCTION THE FLOW CHANNEL AT THE BASE OF THE SHAFT SHALL BE DOWELED TOGETHER AND GROUTED IN PLACE TO ENSURE THE BASE OF THE CHANNEL ACTS AS A UNIT WITH SMOOTH SURFACES WITH NO VISIBLE SEAMS OR JOINTS.
 - POLYMER CONCRETE MFR SHALL DESIGN AND INSTALL ADHESIVE DOWELS OR OTHER MEANS OF ANCHORAGE FROM POLYMER CONCRETE SECTIONS AT THE FLOW CHANNEL INTO THE BASE CONCRETE TO RESIST BUOYANT FORCES ASSUMING HEAD PRESSURE AT GRADE.



No.	Revision	By	Date
1	ADDENDUM NO 1	MKK	03/06/20

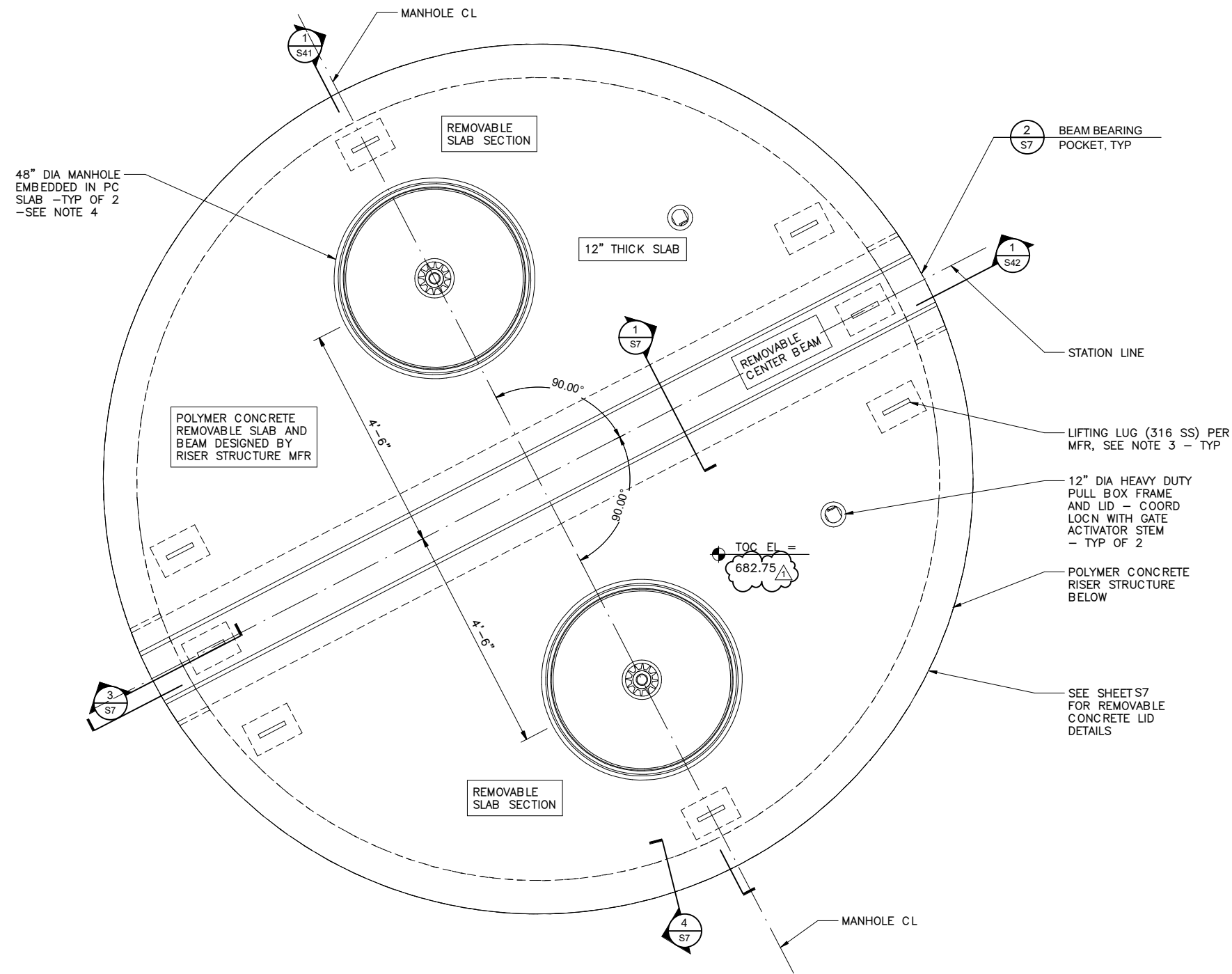


W-6 UPPER SEGMENT:
HWY 90 TO SW MILITARY DR
**SHAFT #6 (SOLIDS HANDLING
SHAFT) & 7 (W-1
CONNECTION SHAFT) -
SECTION I**

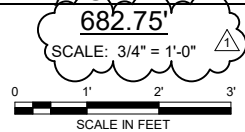
DATE: FEBRUARY 2020	SAWS PROJECT NO.	SHEET NO. S36
DESIGN: CD	KHA PROJECT NO.	
DRAWN: LAS	068665052	
CHECKED: MK		

THE SCALE INDICATED ON THE DRAWINGS IS FOR A FULL SIZE DRAWING (22x34). ADJUST SCALE FOR HALF SIZE DRAWINGS (11x17).
0" 1"
BAR IS ONE INCH ON FULL SIZE DRAWING.

PLOTTED BY: C:\Users\shao\Public\Drawings\Revit\19-0100055\SAWS W-6 - RVT12_jas@iqeng.com.rvt
 DWG NAME: 3/3/2020 1:00:57 PM
 3/3/2020 1:00:57 PM



SHAFT #6 AT STATION 273+21.12 (SOLIDS HANDLING SHAFT) - UPPER LEVEL PLAN AT EL



NOTES:

1. REMOVABLE POLYMER CONCRETE LID SHALL BE DESIGNED BY PC MFR FOR SPECIFIED DESIGN LOADS PER SPEC SECTION SS 02600.
2. COORDINATE EMBEDDED FRAMES FOR MANHOLE WITH PC MFR.
3. PROVIDE RECESSED LIFTING LUGS DESIGNED BY PC MFR TO ALLOW FOR REMOVAL OF EACH SECTION OF THE LID AS SHOWN.
4. MANHOLES SHALL BE PER SAWS STANDARDS. REFER TO SAWS MANHOLE DETAILS FOR ADDITIONAL INFO.
5. TOC EL = TOP OF STRUCTURAL CONCRETE, POLYMER CONCRETE ELEVATION, UNO.

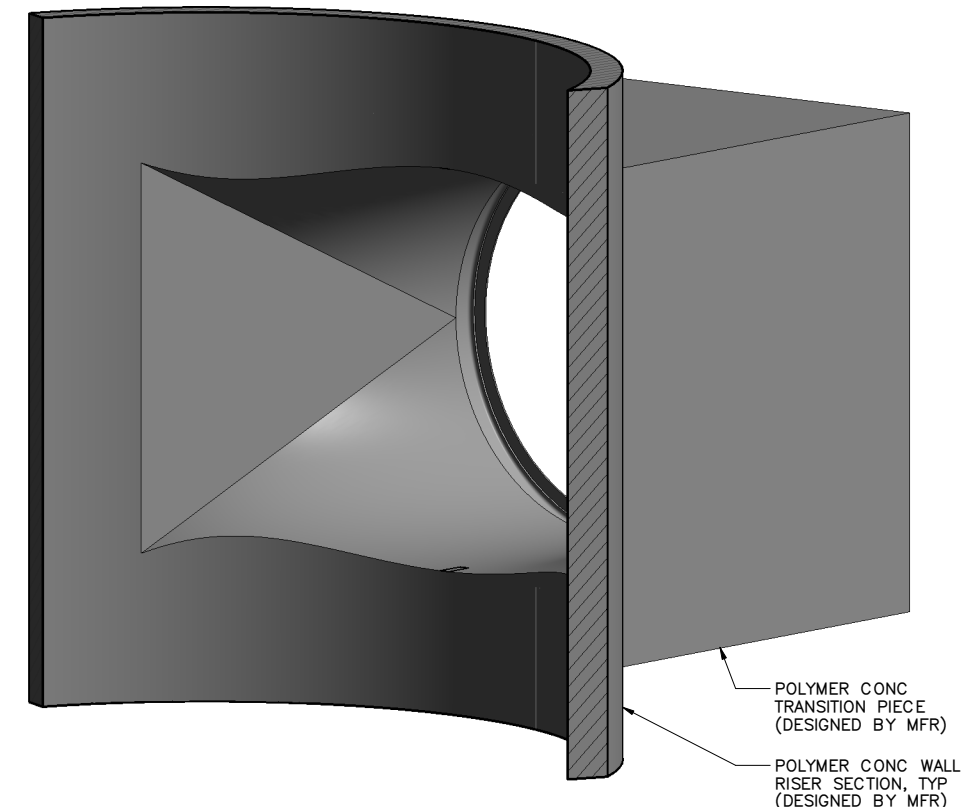
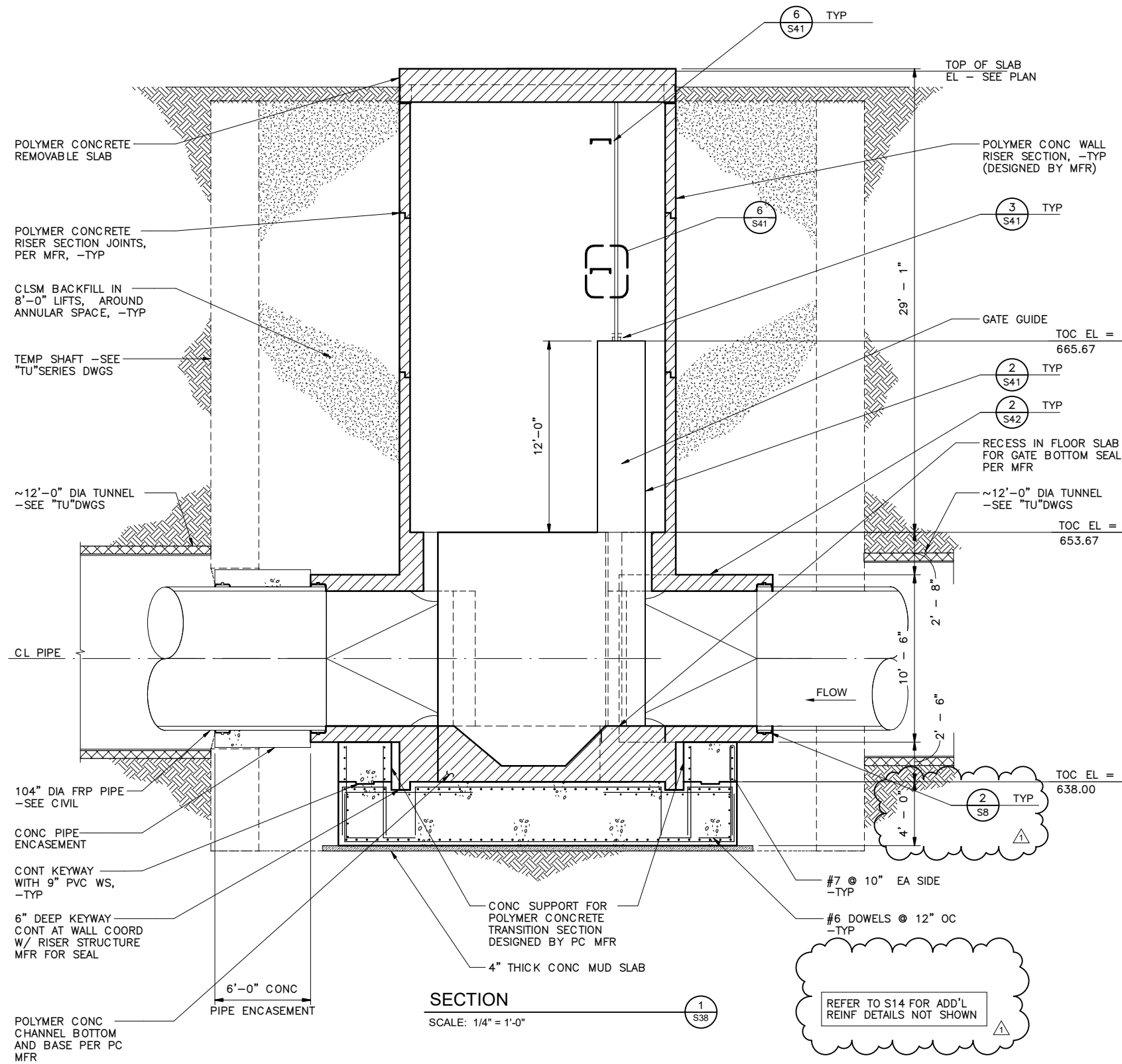
<p>JQ INFRASTRUCTURE, LLC 400 GLASS STREET, SUITE 201 972.392.7340 PROJECT NO: 4190055</p>	<p>DALLAS, TEXAS 75207 JQIENG.COM TBP# FIRM F-7986</p>

No.	Revision	By	Date
1	ADDENDUM NO 1	MKK	03/06/20

	<p>W-6 UPPER SEGMENT: HWY 90 TO SW MILITARY DR</p> <p>SHAFT #6 (SOLIDS HANDLING SHAFT) - UPPER LEVEL SLAB PLAN AT EL 682.75'</p>
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THE SCALE INDICATED ON THE DRAWINGS IS FOR A FULL SIZE DRAWING (22x34). ADJUST SCALE FOR HALF SIZE DRAWINGS (11x17). BAR IS ONE INCH ON FULL SIZE DRAWING.	DATE: FEBRUARY 2020	SAWS PROJECT NO.	SHEET NO. S40
	DESIGN: CD	KHA PROJECT NO.	
	DRAWN: LAS	068665052	
	CHECKED: MK		

PLOTTED BY: JQIENG
 DWG NAME: 202007140307.PLT
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 3/20/20 10:03 AM



ISOMETRIC OF TRANSITION PIECE
SCALE: NO SCALE

SECTION
SCALE: 1/4" = 1'-0"

REFER TO S14 FOR ADD'L REINF DETAILS NOT SHOWN

PLOTTED BY: JQI
 DWG NAME: S42.SVD
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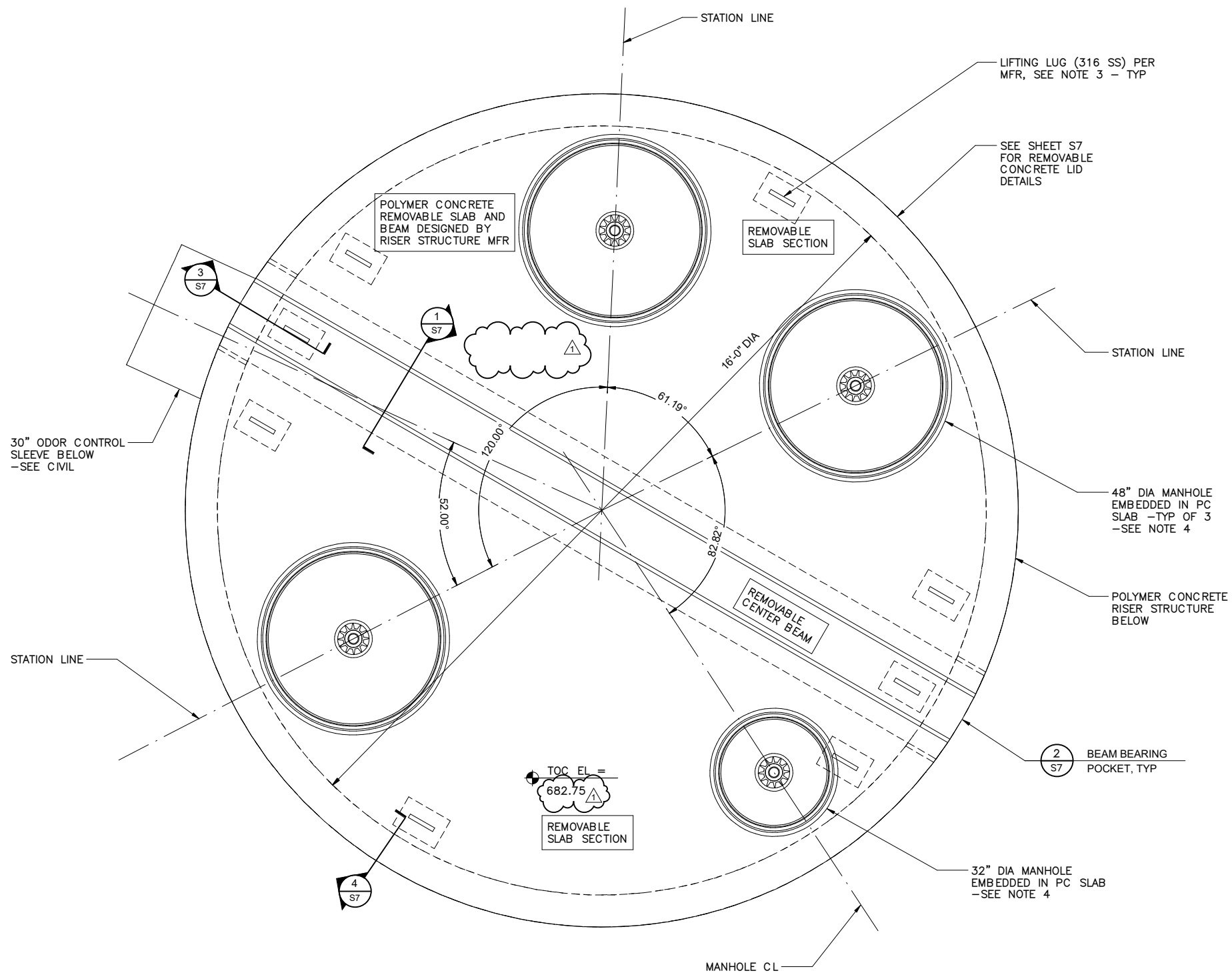
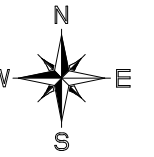
No.	Revision	By	Date
1	ADDENDUM NO 1	MKK	03/06/20

SAN ANTONIO WATER SYSTEM

**W-6 UPPER SEGMENT:
HWY 90 TO SW MILITARY DR**

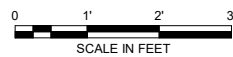
SHAFT #6 (SOLIDS HANDLING SHAFT) - SECTION II

THE SCALE INDICATED ON THE DRAWINGS IS FOR A FULL SIZE DRAWING (22x34). ADJUST SCALE FOR HALF SIZE DRAWINGS (11x17). BAR IS ONE INCH ON FULL SIZE DRAWING.	DATE: FEBRUARY 2020	SAWS PROJECT NO.	S42 SHEET NO.
	DESIGN: CD	KHA PROJECT NO.	
	DRAWN: LAS	068665052	
CHECKED: MK			



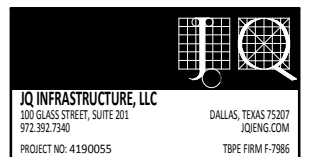
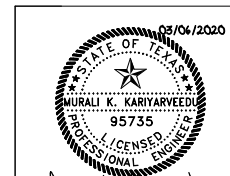
**SHAFT #7 (W-1 CONNECTION SHAFT) - UPPER
LEVEL PLAN ANT EL 682.75'**

SCALE: 3/4" = 1'-0"



NOTES:

1. REMOVABLE POLYMER CONCRETE LID SHALL BE DESIGNED BY PC MFR FOR SPECIFIED DESIGN LOADS PER SPEC SECTION SS 02600.
2. COORDINATE EMBEDDED FRAMES FOR MANHOLE WITH PC MFR.
3. PROVIDE RECESSED LIFTING LUGS DESIGNED BY PC MFR TO ALLOW FOR REMOVAL OF EACH SECTION OF THE LID AS SHOWN.
4. MANHOLES SHALL BE PER SAWS STANDARDS. REFER TO SAWS MANHOLE DETAILS FOR ADDITIONAL INFO.
5. TOC EL = TOP OF STRUCTURAL CONCRETE, POLYMER CONCRETE ELEVATION, UNO.



No.	Revision	By	Date
1	ADDENDUM NO 1	MKK	03/06/20

W-6 UPPER SEGMENT:
HWY 90 TO SW MILITARY DR

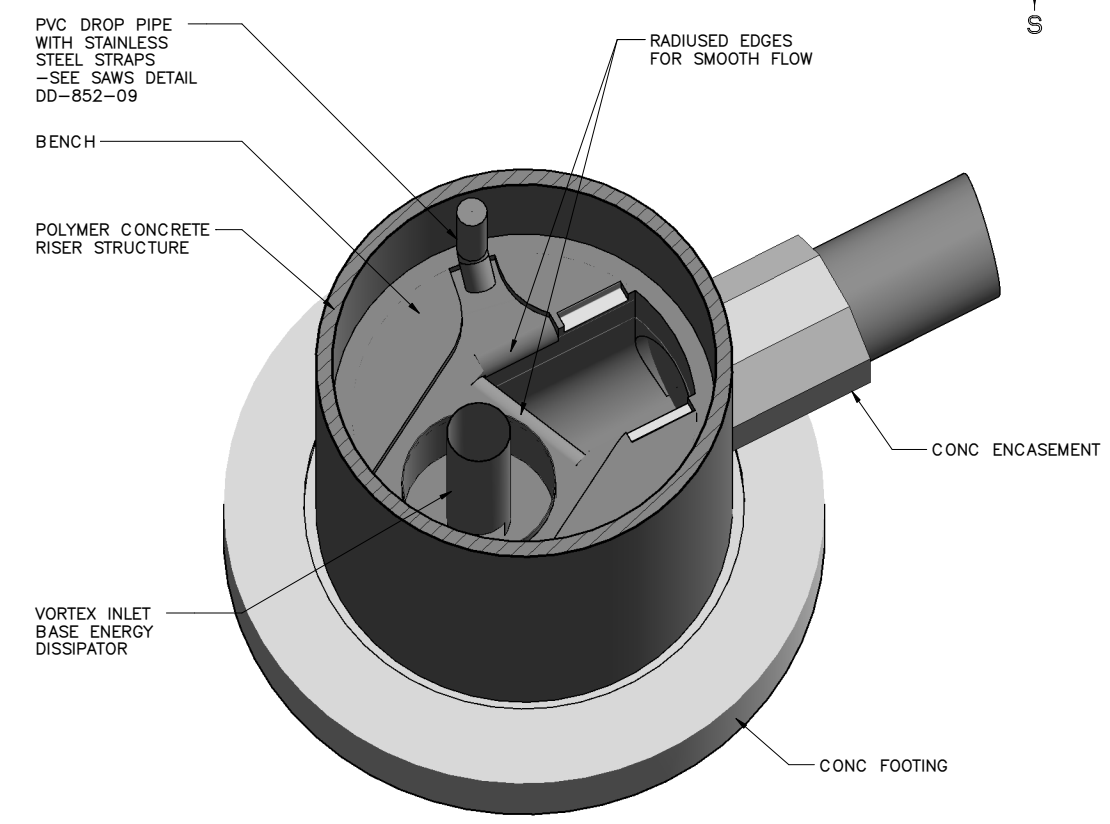
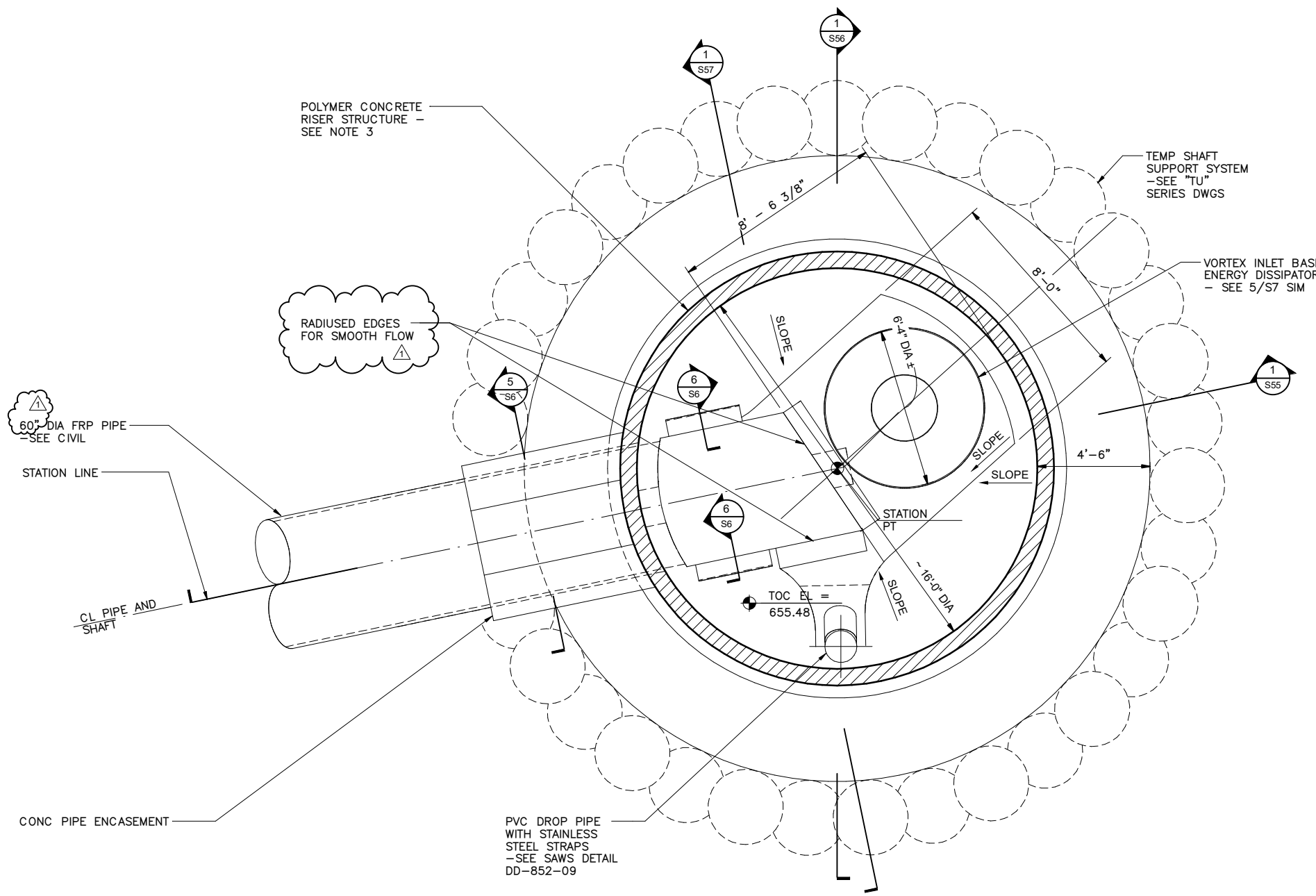
SHAFT #7 (W-1 CONNECTION SHAFT) - UPPER LEVEL SLAB PLAN AT EL 682.75'



DATE: FEBRUARY 2020	SAWS PROJECT NO.	SHEET NO. S47
DESIGN: CD	KHA PROJECT NO.	
CHECKED: MK	068665052	

THE SCALE INDICATED ON THE DRAWINGS IS FOR A FULL SIZE DRAWING (22x34). ADJUST SCALE FOR HALF SIZE DRAWINGS (11x17).
0" 1"
BAR IS ONE INCH ON FULL SIZE DRAWING.

PLOTTED BY: JQI
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 3/2/2020 10:07 AM



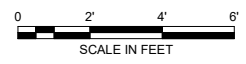
BALLPARK SHAFT 3D

SCALE: NO SCALE

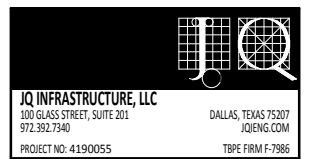
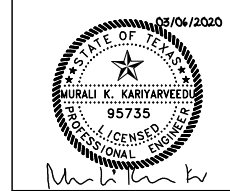
2

**SHAFT #8 (BALLPARK SHAFT) - LOWER LEVEL
PLAN AT EL 657.48'**

SCALE: 3/8" = 1'-0"



- NOTES:**
1. COORDINATE WITH CIVIL DRAWINGS FOR ADDITIONAL INFORMATION ON STATIONING AND FLOW ELEVATIONS OF PIPES.
 2. SEE "TU" DRAWINGS FOR TEMP SHAFT SUPPORT SYSTEM AND TUNNELS
 3. POLYMER CONCRETE RISER SECTIONS SHALL BE DESIGNED BY APPROVED POLYMER CONCRETE MANUFACTURER ENGAGED BY CONTRACTOR. REFER TO SPEC SECTION SS 02600 FOR ADDITIONAL INFORMATION.



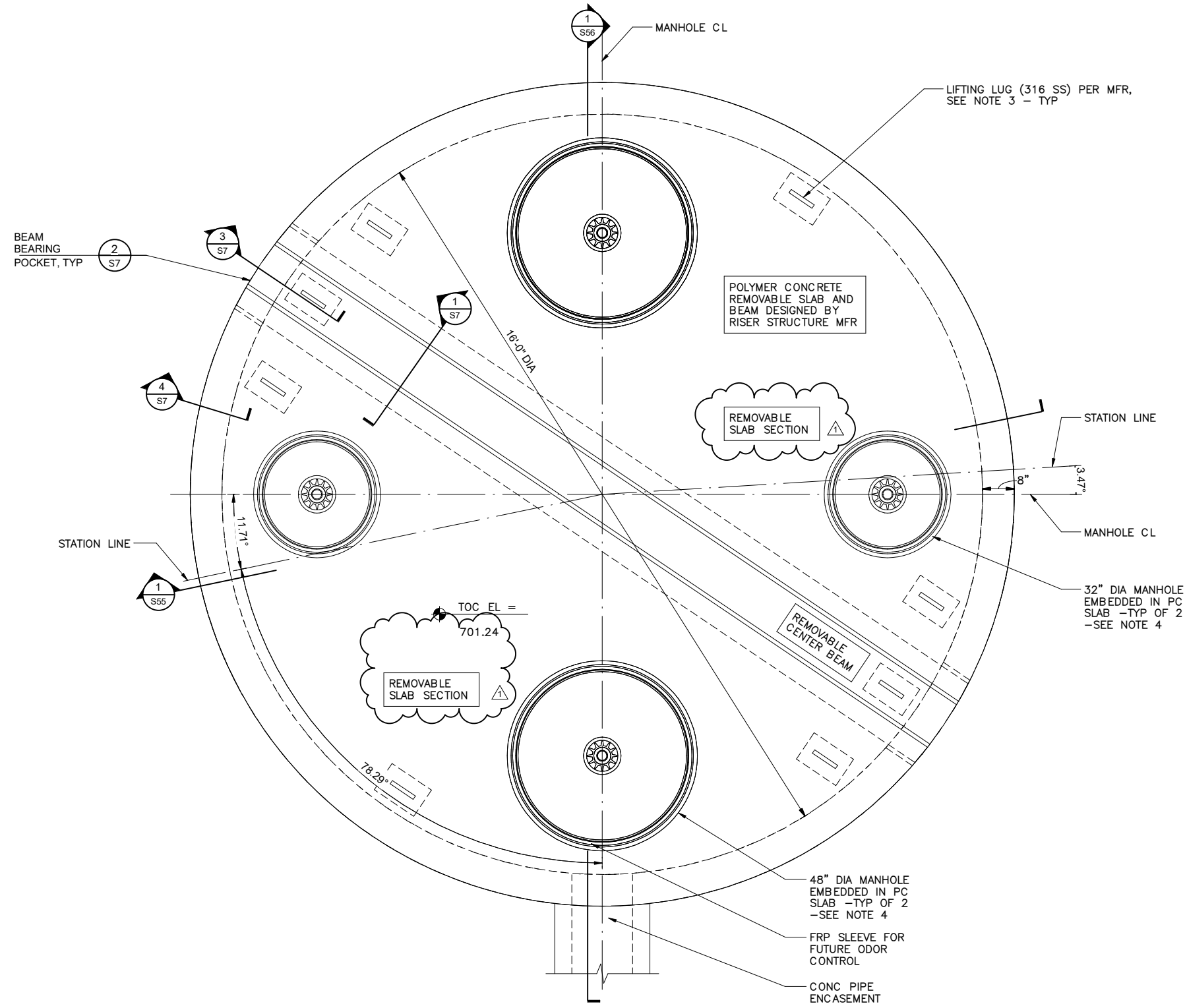
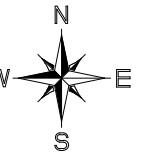
No.	Revision	By	Date
1	ADDENDUM NO 1	MKK	03/06/20



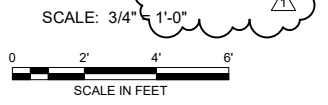
W-6 UPPER SEGMENT:
HWY 90 TO SW MILITARY DR
**SHAFT #8 (BALLPARK SHAFT)
- LOWER LEVEL PLAN AT EL
657.48'**

THE SCALE INDICATED ON THE DRAWINGS IS FOR A FULL SIZE DRAWING (22x34). ADJUST SCALE FOR HALF SIZE DRAWINGS (11x17). BAR IS ONE INCH ON FULL SIZE DRAWING.	DATE: FEBRUARY 2020	SAWS PROJECT NO.	SHEET NO. S52
	DESIGN: CD	KHA PROJECT NO.	
	DRAWN: LAS	068665052	
	CHECKED: MK		

PLOTTED BY: JGJ
 DWG NAME: S52.SVD
 3/20/20 10:09 AM
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**SHAFT #8 (BALLPARK SHAFT) - UPPER LEVEL
PLAN AT EL 701.24'**



- NOTES:
1. REMOVABLE POLYMER CONCRETE LID SHALL BE DESIGNED BY PC MFR FOR SPECIFIED DESIGN LOADS PER SPEC SECTION SS 02600.
 2. COORDINATE EMBEDDED FRAMES FOR MANHOLE WITH PC MFR.
 3. PROVIDE RECESSED LIFTING LUGS DESIGNED BY PC MFR TO ALLOW FOR REMOVAL OF EACH SECTION OF THE LID AS SHOWN.
 4. MANHOLES SHALL BE PER SAWS STANDARDS. REFER TO SAWS MANHOLE DETAILS FOR ADDITIONAL INFO.
 5. TOC EL = TOP OF STRUCTURAL CONCRETE, POLYMER CONCRETE ELEVATION, UNO.

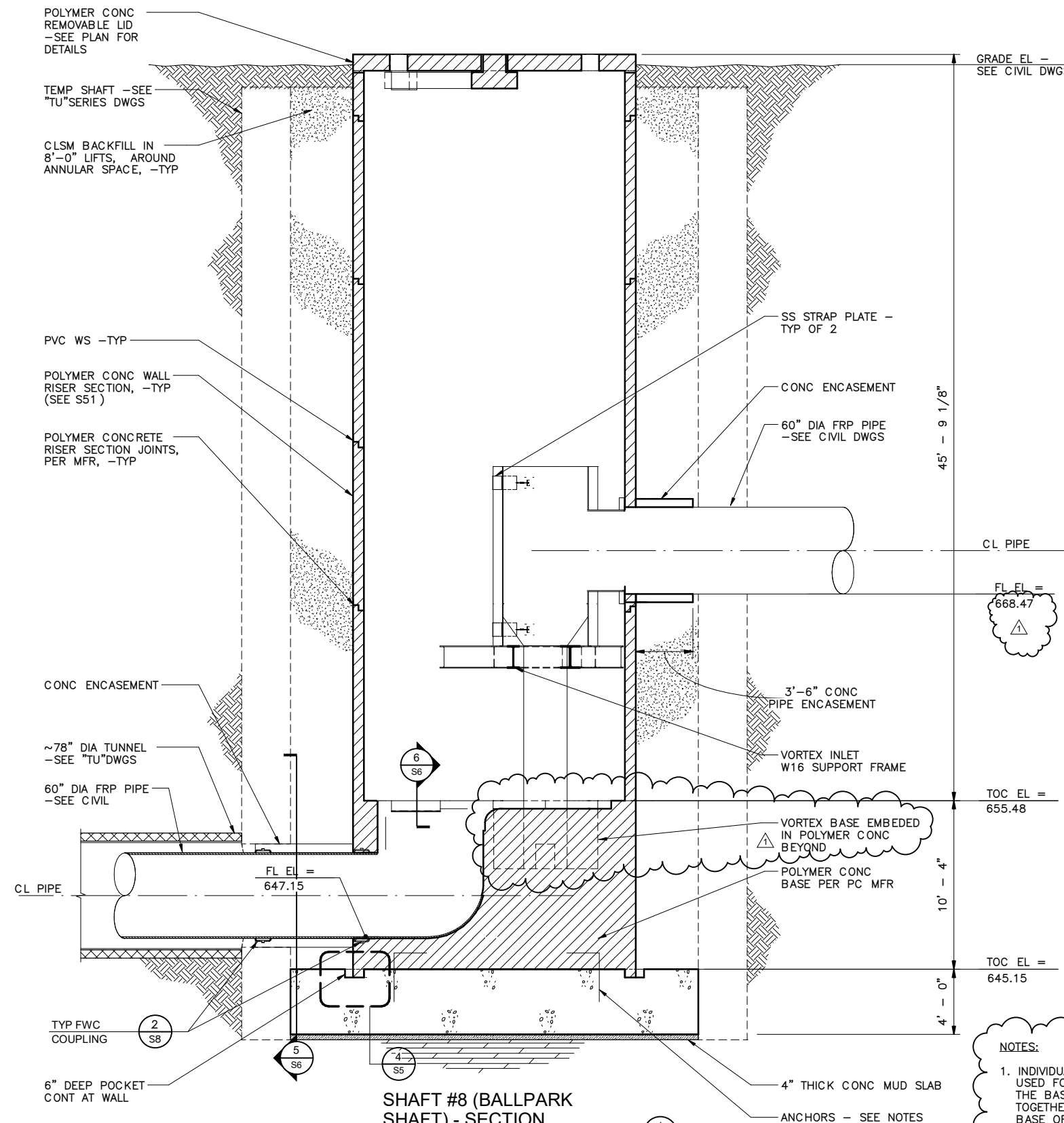
No.	Revision	By	Date
1	ADDENDUM NO 1	MKK	03/06/20

**W-6 UPPER SEGMENT:
HWY 90 TO SW MILITARY DR**

**SHAFT #8 (BALLPARK SHAFT)
- UPPER LEVEL SLAB PLAN
AT EL 701.24'**

THE SCALE INDICATED ON THE DRAWINGS IS FOR A FULL SIZE DRAWING (22x34). ADJUST SCALE FOR HALF SIZE DRAWINGS (11x17). BAR IS ONE INCH ON FULL SIZE DRAWING.	DATE: FEBRUARY 2020	SAWS PROJECT NO.	S54 SHEET NO.
	DESIGN: CD	KHA PROJECT NO.	
	DRAWN: LAS	068665052	
CHECKED: MK			

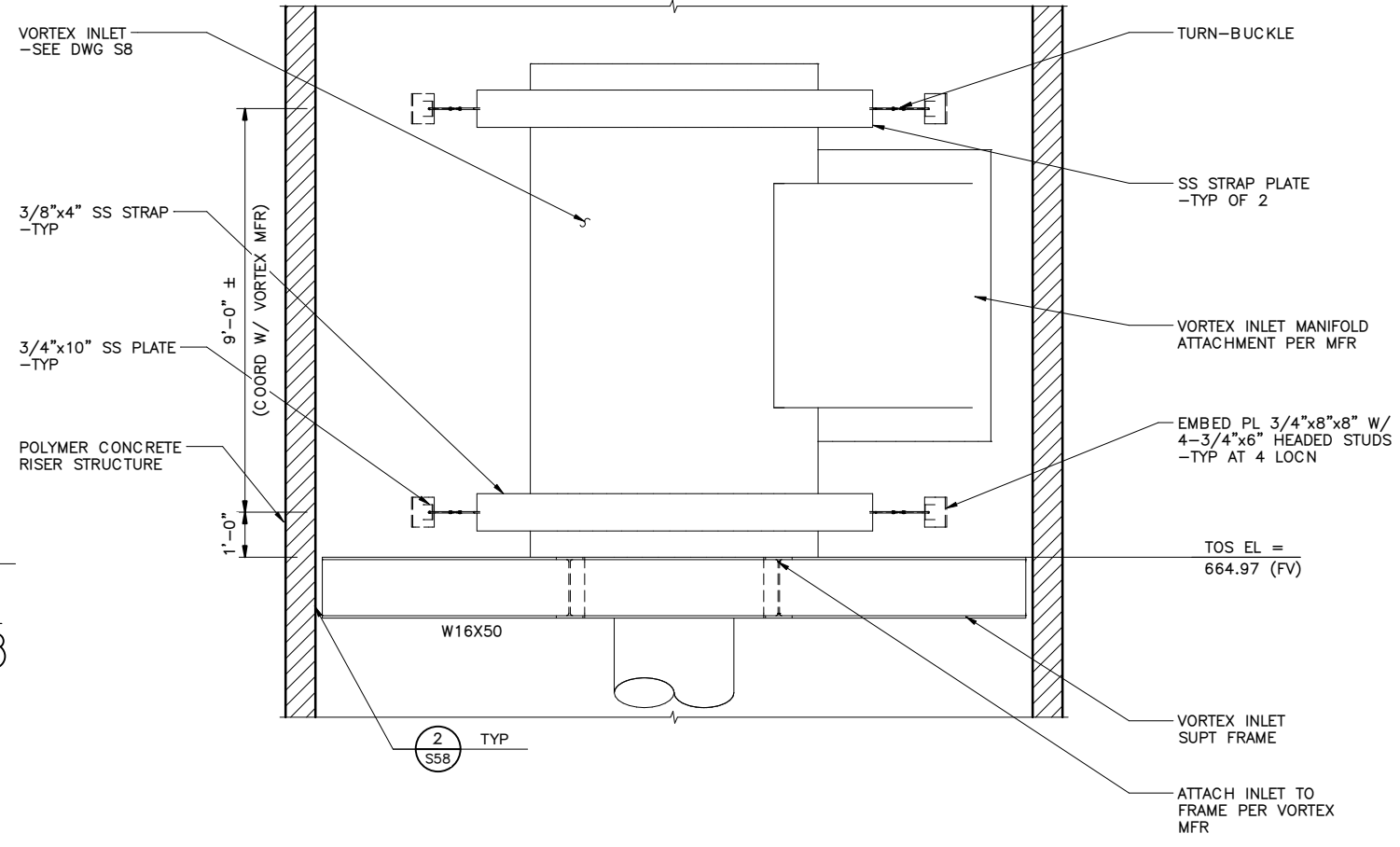
PLOTTED BY: C:\Users\shoib\OneDrive\Bentley\Bentl\19-0190055\SAWS W-6 - RVT12_jaseng\jqeng.com.rvt
 DWG NAME: 3/3/2020 10:01:17 AM
 PLOT DATE: 3/3/2020 10:01:17 AM



SHAFT #8 (BALLPARK SHAFT) - SECTION

SCALE: 1/4" = 1'-0"
 0 2' 4' 8'
 SCALE IN FEET

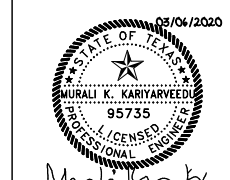
NOTE:
 SEE 1/S57'OR
 ADDN'L REINF INFO



VORTEX INLET ELEVATION

SCALE: 1/2" = 1'-0"
 0 1' 2' 4'
 SCALE IN FEET

- NOTES:**
- INDIVIDUAL POLYMER CONCRETE PIECES /SECTIONS USED FOR CONSTRUCTION THE FLOW CHANNEL AT THE BASE OF THE SHAFT SHALL BE DOWELED TOGETHER AND GROUTED IN PLACE TO ENSURE THE BASE OF THE CHANNEL ACTS AS A UNIT WITH SMOOTH SURFACES WITH NO VISIBLE SEAMS OR JOINTS.
 - POLYMER CONCRETE MFR SHALL DESIGN AND INSTALL ADHESIVE DOWELS OR OTHER MEANS OF ANCHORAGE FROM POLYMER CONCRETE SECTIONS AT THE FLOW CHANNEL INTO THE BASE CONCRETE TO RESIST BUOYANT FORCES ASSUMING HEAD PRESSURE AT GRADE.
 - INSTALL SUPPORT FOR VORTEX DROP PIPE AT 1'-6" ON EACH SIDE OF COUPLING AND AT A MAX SPACING OF 10'-0"
 - CONCRETE ENCASEMENT SHALL BE A SUBSIDIARY OF SHAFT CONSTRUCTION COST.



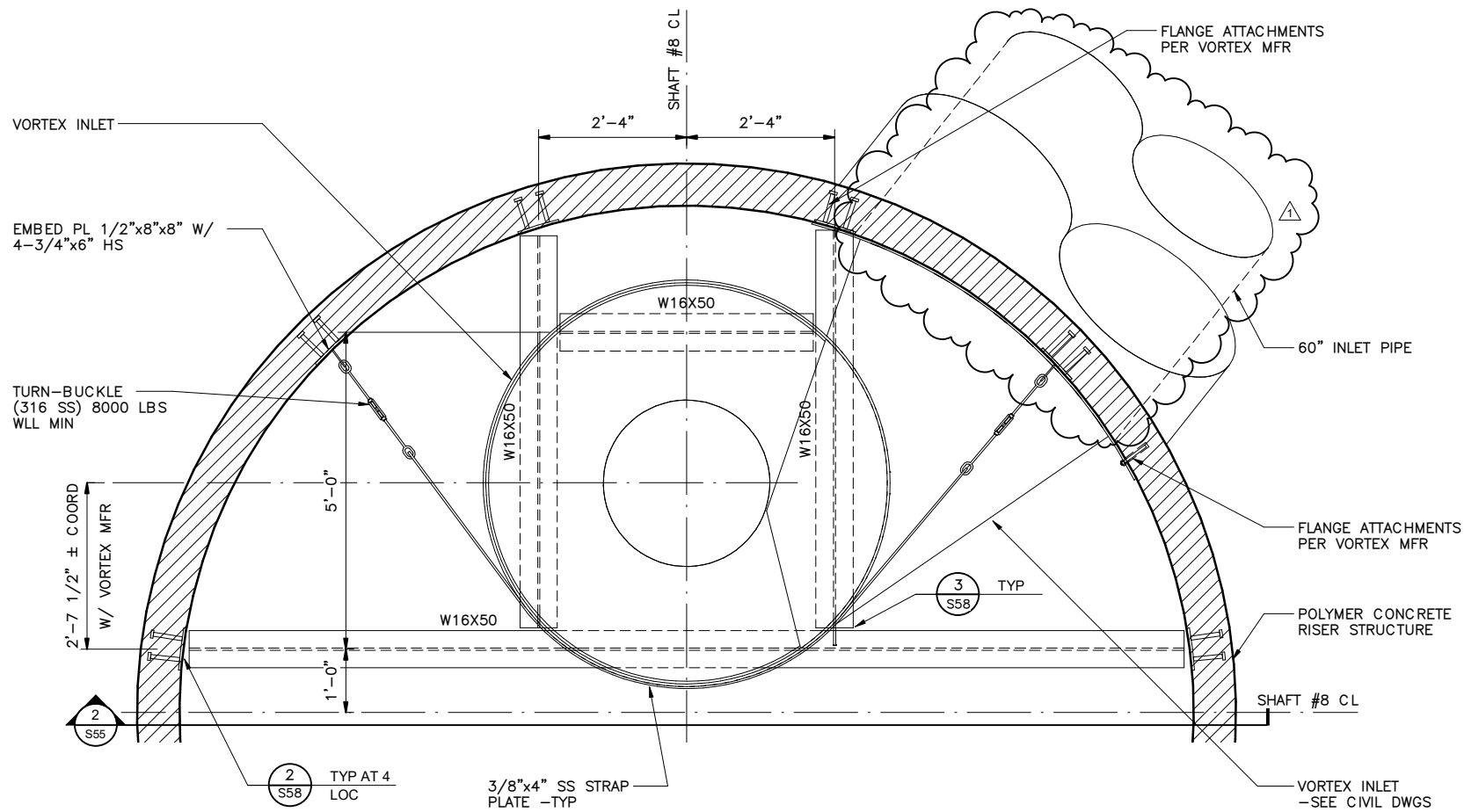
No.	Revision	By	Date
1	ADDENDUM NO 1	MKK	03/06/20



W-6 UPPER SEGMENT:
 HWY 90 TO SW MILITARY DR
**SHAFT #8 (BALLPARK SHAFT)
 - SECTION I**

DATE: FEBRUARY 2020	SAWS PROJECT NO.	SHEET NO. S55
DESIGN: CD	KHA PROJECT NO.	
DRAWN: LAS	068665052	
CHECKED: MK		

PLOTTED BY: C:\Users\shoib\OneDrive\Documents\19-0100055\SAWS W-6 - RVT2 - jacob@iqeng.com.rvt
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 DWG NAME: 2013A1.DWG

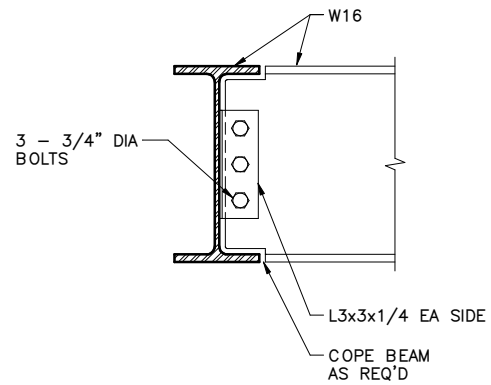


NOTE:
ALL METALS SHALL BE 316 SS

**SHAFT #8 VORTEX INLET
SUPPORT FRAMING PLAN**

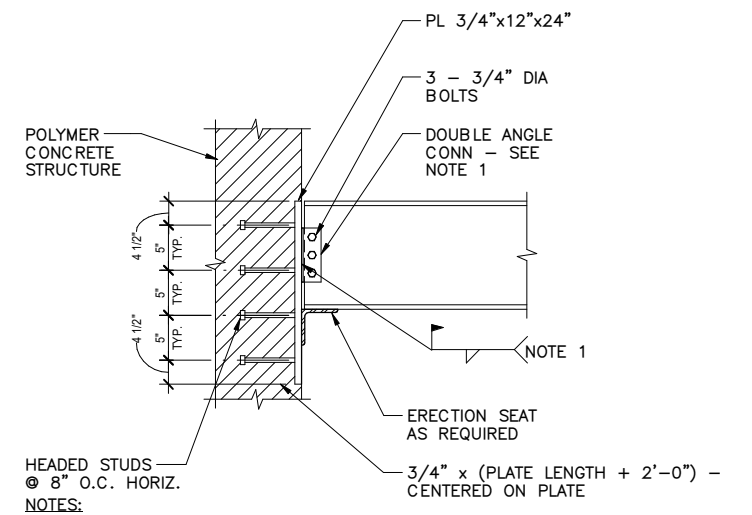
SCALE: 3/4" = 1'-0"

 SCALE IN FEET



BEAM FRAMING DETAIL

SCALE: 1 1/2" = 1'-0"



- NOTES:
1. DOUBLE ANGLE CONNECTION SHALL BE DESIGNED BY THE CONTRACTOR FOR A REACTION OF 25 KIPS (SERVICE) .
 2. HEADED STUDS SHALL BE 7/8" DIA. x 0'-6".
 3. PROVIDE ADDITIONAL PLATE LENGTH IF REQUIRED FOR ERECTION SEAT.
 4. ALL METALS SHALL BE 316SS.

**TYPICAL STEEL BEAM TO
CONCRETE CONNECTION
DETAIL**

SCALE: NO SCALE

PLOTTED BY: JQI
 DWG NAME: S58
 DATE: 03/06/2020

JQ INFRASTRUCTURE, LLC
 400 GLASS STREET, SUITE 201
 972.392.7340
 PROJECT NO: 4190055

No.	Revision	By	Date
1	ADDENDUM NO 1	MKK	03/06/20

**W-6 UPPER SEGMENT:
HWY 90 TO SW MILITARY DR**

**SHAFT #8 (BALLPARK SHAFT)
- SECTIONS AND DETAILS**

THE SCALE INDICATED ON THE DRAWINGS IS FOR A FULL SIZE DRAWING (22x34). ADJUST SCALE FOR HALF SIZE DRAWINGS (11x17). BAR IS ONE INCH ON FULL SIZE DRAWING.	DATE: FEBRUARY 2020	SAWS PROJECT NO.	S58
	DESIGN: CD	KHA PROJECT NO.	
	DRAWN: LAS	068665052	
CHECKED: MK			