

**ENVIRONMENTAL SPECIFICATIONS FOR
THE WASTE MANAGEMENT PLAN**

For Blanco Road (Jackson Keller to Hildebrand)
San Antonio, Bexar County, Texas
WBS# 40-00004
Environmental Project Code: 01-582C7-033CIP1

* * *

Prepared by:

**City of San Antonio
Capital Improvement Management Services
Environmental Management Division
San Antonio, Texas**

* * *

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SPECIAL ENVIRONMENTAL SPECIFICATIONS

Introduction

As part of the 2007-2012 Bond Program, Proposition I, the City of San Antonio (City), San Antonio Water System (SAWS), and City Public Service (CPS) are in the process of constructing drainage (storm water), sanitary sewer, water, gas, street and sidewalk improvements along Blanco Road. For the purpose of this bid document, the project and specifications have been divided into two segments: 1) **Base Bid** from STA 76+00 to 107+76.79 (El Monte to the Olmos Creek) and 2) **Alternative Bid** STA 18+29.52 to 42+00 (San Francisco to Edison). [See Figure 1].

From May to November 2010, an environmental site investigation was performed by the City of San Antonio's environmental consultant, to determine the presence or absence of impacted media from known or suspect historical releases in the vicinities of adjacent fueling stations, automotive body shops, dry cleaners, etc. within the project limits (Blanco, from Hildebrand to Jackson Keller). Results of this investigation identified several areas of known impacted soils within the project area. However, for the purpose of this bid document, eight (8) areas of concern (AOC) were identified in the **Base Bid** and fifteen (15) in the **Alternate Bid**, totaling twenty three (23) areas of concern (see Figures 2 through 16), where affected soils and groundwater may be potentially encountered. *Please note, the areas of concern listed in these specifications do not correlate with the areas of concern identified in the Environmental Consultant's Phase II Environmental Site Assessment (ESA). For clarifications purposes, the figures exhibits showing the areas of concern in these specifications supersede the areas of concern depicted in the Phase II ESA report.*

A review of the subsurface investigations and final design plans dated December 2011, revealed several areas where subsurface soils have been impacted by metals, hydrocarbons and semi-volatile organic compounds. For the purpose of this project, The Contractor shall make every effort to reuse impacted soils at the station limits described in these specifications. Excess soils from the areas identified in Table 1 and not reused on the project are classified as Class 2 non-hazardous soils, based on the laboratory results and should be disposed of to a TCEQ authorized landfill. In the event, that the Contractor cannot reuse the impacted soils, the Contractor will be required to provide documentation to support this justification.

Soils excavated from areas not addressed in this document and that do not exhibit signs of contamination (i.e., odor, discoloration, visual observation of fuel, etc.) shall be handled as non-impacted material and staged separately

from suspect impacted soils. Soils from the suspected impacted areas identified in this document will require management in accordance with a Waste Management Plan (WMP) to be prepared by the Contractor's Environmental Consultant.

Construction practices must comply with all applicable regulations concerning the prevention of stormwater pollution, as detailed in City's Storm Water Pollution Prevention Plan (SWP3) Manual. New fill materials, such as topsoil, to be placed in City right-of-way (ROW) shall be obtained from a certified clean source outside the project limits. The Contractor shall provide documentation to the City's inspector to support this requirement.

Decontamination of equipment must be conducted prior to moving from a suspected impacted area to a non-impacted area. It is highly recommended to start first with the non-impacted areas and to move to the potentially impacted areas. The Contractor shall be required to document decontamination procedures and waste generated as part of decontaminating of heavy equipment and trucks. Soils from potentially impacted areas shall not be tracked on roadways. Any soils tracked onto roadways shall be immediately removed.

Appropriate decontamination shall be conducted within a designated area where it is possible to contain and collect decontamination-generated fluids and solids. These decontamination wastes shall be placed into appropriate containers for characterization and profiling prior to final disposal. The Contractor may, at their discretion, place the decontamination waste with the suspect impacted soil.

Copies of the subsurface investigation report titled "Phase II Environmental Site Assessment for Blanco Road (Jackson Keller to Hildebrand)," dated September, 2011, is available for review and may be obtained from the CIMS Environmental Project Manager, Ms. Lety Arzate at (210) 207-1408 or by email at: Leticia.Arzate@sanantonio.gov. **Only electronic copies will be provided.**

**ITEM 110
ENVIRONMENTAL AND SAFETY CONCERNS
HANDLING OF IMPACTED MEDIA**

110.1 DESCRIPTION

This item consists of the evaluation, management, transportation, and disposal of excavated impacted soils; site safety and hazardous materials training; development and implementation of a Site Specific Health and Safety Plan and a Waste Management Plan, in accordance with the specification requirements outlined below.

ITEM 110.2 MANAGEMENT, TRANSPORTATION AND DISPOSAL OF IMPACTED SOILS

Soils at locations identified in Table 1 "Environmental Project Data Summary" may contain or have the potential to contain hydrocarbons, heavy metals and semi-volatile organic compounds (SVOCs) contamination. Tables 2A through 2W provide the maximum detected contaminant concentrations associated with the impacted locations for each area of concern. Management of the affected soil shall be governed at a minimum by the following management procedures and guidelines.

The Contractor's environmental consultant will be responsible for providing environmental oversight and air monitoring activities for their construction workers in *the affected areas at any proposed depth of the improvements*. The environmental consultant will be on-site to perform air monitoring activities for workers working between station numbers outlined in this document. It is the Contractor's responsibility to ensure that environmental oversight is provided during construction.

The purpose of the monitoring is to assess the potential vapors or dust arising from construction activities and potential exposure to construction workers in the affected areas. Additionally, the City or its representative will provide environmental oversight to ensure the Contractor complies with the Health and Safety Plan and the Waste Management Plan in accordance with Federal, State, and Local regulations.

The specific areas, station numbers and cross-sections, and locations of the impacted areas in the *base* and *alternate* bids are identified in Table 1 and Figures 2 through 16. Specific procedures required for handling impacted media from the different areas of concern (AOC A through AOC W) are listed below:

Areas of Concern (A through W)

The Contractor should reuse all impacted soil within the affected areas to minimize waste volume during construction. The City strongly recommends the Contractor to manage affected soils by reusing potentially impacted soils in all areas of concern (AOC). The proposed improvements located in these affected areas are described in Table 1.

The impacted media generated during construction in all Areas of Concern (AOC), both **base** and **alternate bids**, shall be managed by reusing as much as the impacted material as possible. The excess impacted soils must be disposed of at a licensed TCEQ landfill. The Contractor will be required to coordinate and notify the City's representative 48 hours in advance prior to beginning work in the different Areas of Concern. Excess soils that cannot be reused must be removed, transported, and disposed within 48 hours of completing the utility trenches within the affected area.

The soils suspected to be clean (deemed by the City's environmental consultant) will be segregated separate from the impacted soils. It is acceptable to store impacted soils in roll-off containers, or at a staging facility designated by the Contractor until the excavation is ready to be filled again. After the installation of the different utilities and the required backfill media, impacted soil should be used first to fill the excavation before clean soil is utilized. This procedure only applies to areas described in Table 1. Excess clean soils should be handled as they are handled in a non-impacted project.

Contaminants that would be potentially encountered in the project from the areas included in Table 1 can be classified as Class 2 Non-hazardous waste. All potentially impacted soils must be managed in accordance with applicable Federal, State, and Local regulations. Management of these wastes is governed by the Texas Commission for Environmental Quality (TCEQ) waste requirements.

If impacted soils cannot be reused for any reason; then, the Contractor must properly excavate, remove, and dispose of the soils. The impacted media shall be transported and disposed of at a facility authorized by the TCEQ to accept such materials. The City's representative will be also obtaining a preliminary waste disposal authorization from local disposal facilities for disposal of approximately 7,000 loose or truck cubic yards of impacted media. However, the disposal facility may require additional sampling of the excavated soils for waste characterization purposes. It will be the Contractor's responsibility to conduct additional soil sampling and analyses, if necessary, for waste characterization and disposal purposes. The selected

disposal facility shall be approved by the City, prior to beginning work in affected areas.

When transporting the impacted soils, it is the Contractor's responsibility to ensure all dump trucks used to transport this waste are equipped with operating tarps. If the tarps are not effective, the City's inspector or City's representative will remove trucks from this project. The City inspector or City's representative will also determine if trucks need to be lined with polyethylene sheeting or not.

The Contractor will be required to obtain all necessary permits to transport and waste manifest to dispose of affected media at a licensed landfill. Specifically, the trucks transporting the affected material will be required to have a solid waste haulers permit. This permit is a local requirement and will be verified prior to beginning work in the affected area. In the event the permit is not obtained or available, the inspector will immediately remove the truck from the construction project. Additionally, trucks hauling affected media to a licensed landfill without this permit are subject to a fine by the City of San Antonio, Code Enforcement Department. The Contractor will be required to provide documentation of truck information, such as company, truck numbers, permit numbers, etc.

If necessary, the Contractor shall notify the City's Inspector or City's representative at least 48 hours in advance of hauling impacted soil to the approved landfill. Waste manifests shall be used to transport impacted materials from the impacted areas to the final disposal site(s). The City's Inspector or City's representative will obtain and sign the waste manifests as the generator for the impacted soils. Copies of the disposal records for the soils shall be provided to the Contractor's Environmental Consultant and waste manifest not used for this project must be returned to the City Inspector. The Consultant will be responsible for preparing a final report with all this documentation.

The City shall be notified immediately when impacted soils and/or groundwater are encountered at locations not identified in this document. The notification should include the station numbers, specific points, exact locations, type of impacted media, evidence of impact, and measures taken to contain the impacted media and prevent public access. The contaminated soil and/or groundwater shall not be removed from the location without prior City's approval.

The total estimated quantity of impacted soil to be excavated for all areas of concern (Base bid and Alternate Bid) is approximately 7,000 loose or truck cubic yards. The excavation of soils will not be paid for separately, but it will be subsidiary to the various bid items

governing the excavation for the project, and the installation of storm drain and utilities.

The bid proposal estimated quantities for transportation and disposal (if needed) is based on the best information available as a result of the environmental investigation and in no way correlates to actual payment made for Bid Item 110.2. Final payment for Bid Item 110.2 will be based entirely on actual quantities of materials verified by the COSA Inspector, or if the soils are disposed by the quantities accepted by the TCEQ certified landfill facility and approved by the City. Five percent of the total amounts of pay Item 110.2 will be withheld until all disposal documentation is received by the City.

110.2 Contractors Bid Item – Transportation and Disposal of Impacted Soils

110.2.1 Transportation to Disposal Facility [COSA, *Base Bid*] (Estimated Quantity: 3,000 loose or truck cubic yards) Refer to Bid Item 110.2.1

110.2.2 Transportation to Disposal Facility [SAWS Water, *Base Bid*] (Estimated Quantity: 250 loose or truck cubic yards) Refer to Bid Item 110.2.2

110.2.3 Transportation to Disposal Facility [SAWS Sewer, *Base Bid*] (Estimated Quantity: 280 loose or truck cubic yards) Refer to Bid Item 110.2.3

110.2.4 Transportation to Disposal Facility [CPS, *Base Bid*] (Estimated Quantity: 240 loose or truck cubic yards) Refer to Bid Item 110.2.4

110.2.5 Transportation to Disposal Facility [COSA, *Alternate Bid*] (Estimated Quantity: 2,650 loose or truck cubic yards) Refer to Bid Item 110.2.5

110.2.6 Transportation to Disposal Facility [SAWS Water, *Alternate Bid*] (Estimated Quantity: 500 loose or truck cubic yards) Refer to Bid Item 110.2.6

110.2.7 Transportation to Disposal Facility [SAWS Sewer, *Alternate Bid*] (Estimated Quantity: 5 loose or truck cubic yards) Refer to Bid Item 110.2.7

110.2.8 Transportation to Disposal Facility [CPS, *Alternate Bid*] (Estimated Quantity: 80 loose or truck cubic yards) Refer to Bid Item 110.2.8

110.2.9 Landfill Disposal [COSA, *Base Bid*] (Estimated Quantity: 3,000 loose or truck cubic yards, Class 2 Non-hazardous) Refer to Bid Item 110.2.9

110.2.10 Landfill Disposal [SAWS Water, *Base Bid*] (Estimated Quantity: 250 loose or truck cubic yards, Class 2 Non-hazardous) Refer to Bid Item 110.2.10

110.2.11 Landfill Disposal [SAWS Sewer, *Base Bid*] (Estimated Quantity: 280 loose or truck cubic yards, Class 2 Non-hazardous) Refer to Bid Item 110.2.11

110.2.12 Landfill Disposal [CPS, *Base Bid*] (Estimated Quantity: 240 loose or truck cubic yards, Class 2 Non-hazardous) Refer to Bid Item 110.2.12

110.2.13 Landfill Disposal [COSA, *Alternate Bid*] (Estimated Quantity: 2,650 loose or truck cubic yards, Class 2 Non-hazardous) Refer to Bid Item 110.2.13

110.2.14 Landfill Disposal [SAWS Water, *Alternate Bid*] (Estimated Quantity: 500 loose or truck cubic yards, Class 2 Non-hazardous) Refer to Bid Item 110.2.14

110.2.15 Landfill Disposal [SAWS Sewer, *Alternate Bid*] (Estimated Quantity: 5 loose or truck cubic yards, Class 2 Non-hazardous) Refer to Bid Item 110.2.15

110.2.16 Landfill Disposal [CPS, *Alternate Bid*] (Estimated Quantity: 80 loose or truck cubic yards, Class 2 Non-hazardous) Refer to Bid Item 110.2.16

**ITEM 110.3
SITE SAFETY AND HAZARDOUS MATERIALS TRAINING**

Because of the potential for exposure to hazardous materials, all contractors, employees, and subcontractors working in or near the areas of known impacted media shall be required to have successfully completed a 40-hour Hazardous Waste Operations and Emergency Response (HAZWOPER) course in accordance with the Occupational Safety and Health Administration

(OSHA) guidelines contained in 29 Code of Federal Regulations 1910.120 and retain current certification in such. The site health and safety supervisor shall have completed the 8-hour HAZWOPER Supervisory Training course.

The Contractor shall be responsible for providing this training to their employees and subcontractors' employees. The Contractor shall make current completion certifications available for inspection at any time during the project.

ITEM 110.4
REMOVAL, STORAGE, TREATMENT AND/OR DISPOSAL OF IMPACTED
AND NON-IMPACTED GROUNDWATER

During the course of the project, water, either stormwater or groundwater, may accumulate in the excavations in the different Areas of Concern. It is in the best interest of the Contractor to provide soil berms or other protective measures around the excavated trench to prevent water intrusion. A figure depicting protective measures for stormwater intrusion is shown on Figure 17, "Open Excavation Run-on Prevention."

Groundwater at locations identified in Table 1 has the potential to contain contamination. Tables 2A through 2W provide the maximum detected contaminant concentrations associated with the impacted locations. Management of this waste shall be governed at a minimum by the following management procedures and guidelines.

Groundwater sampling results in the different Areas of Concern indicate that the concentrations encountered are above levels for direct disposal into the stormwater or sanitary sewer system. As necessary for construction, groundwater in this area shall be removed, stored (if necessary), and properly disposed of. It will be the Contractor's responsibility to determine appropriate handling practices. In the event that the Contractor decides to store the groundwater in a temporary frac tank, the Contractor will be required to provide a certification that the tank is free of contaminants and to identify a staging area that is approved by the City Inspector. The contractor shall comply with all Federal, State, and local regulations governing the disposal of contaminated water.

Appropriate methods for disposal of this groundwater may include: (a) Disposal at an authorized disposal facility. This facility must be authorized by all applicable Federal, State, and local agencies to accept such waste. This option would require the contractor to remove, containerize, test, transport, and dispose of the water at an authorized Texas Commission on Environmental Quality (TCEQ) disposal facility; or (b) Pre-treatment and subsequent disposal via San Antonio Water System (SAWS). This option

would require the contractor to remove, treat the water to below SAWS pretreatment standards, test, and dispose of the water through the sanitary sewer system. Coordination with the San Antonio Water System (SAWS) would be required for this option. A permit must be obtained prior starting this project.

The Contractor shall notify the City's Inspector or City's representative at least 48 hours in advance of hauling impacted groundwater to the disposal site. Waste manifests shall be used to transport impacted groundwater from the impacted areas to the final disposal site(s). The City's Inspector or City's representative will sign the manifests as the generator for the impacted groundwater. Copies of the disposal records for the groundwater shall be submitted to the City's Inspector. The City's inspector will forward these documents to the Capital Improvements Management Services Department, Environmental Management Division.

The estimated quantity of suspect impacted groundwater to be disposed of is approximately 25,000 gallons. This item shall govern the removal, storage, testing, transport, treatment, and/or disposal of impacted groundwater removed from the area of concern (for the **Base Bid** and the **Alternate Bid**). Removal and disposal of impacted groundwater shall be measured by the gallon of water actually disposed by manifest or by meter. Under no circumstances shall the Contractor exceed the unit quantity without first obtaining authorization from the City. In the event that the Contractor exceeds the unit quantity, the City will retest and/or re-evaluate the water to determine if it is still contaminated. In the event that the water is non-contaminated, the Contractor shall dispose of the water as clean and no additional compensation will be given to the contractor. Payment for this item will be made at the contract unit price for Removal and Disposal of Impacted Groundwater. Final payment for bid Item 110.4 will be based entirely on actual quantities of materials verified by the City Inspector, or accepted by the TCEQ certified landfill facility and approved by the City. Five percent of the total amounts of pay Item 110.4 will be withheld until all disposal documentation are received by the City.

110.4.1 Contractors Bid Item – Removal, Storage and Treatment of Impacted Groundwater (COSA, Base Bid, Estimated Quantity: 25,000 gallons) Refer to Bid Item 110.4.1

110.4.2 Contractors Bid Item – Disposal of Impacted Groundwater (COSA, Base Bid, Estimated Quantity: 25,000 gallons) Refer to Bid Item 110.4.2

110.4.3 Contractors Bid Item – Removal, Storage and Treatment of Impacted Groundwater (COSA, *Alternate Bid*, Estimated Quantity: 25,000 gallons) Refer to Bid Item 110.4.3

110.4.4 Contractors Bid Item – Disposal of Impacted Groundwater (COSA, *Alternate Bid*, Estimated Quantity: 25,000 gallons) Refer to Bid Item 110.4.4

**ITEM 110.5
SITE SPECIFIC HEALTH AND SAFETY PLAN**

The Contractor shall prepare and implement a Site Specific Health and Safety (H&S) Plan. The Contractor shall also provide a competent Health and Safety Officer/Supervisor or environmental consultant who will comply and implement the Site Specific H&S Plan. The Project Health and Safety Officer/Supervisor or environmental consultant shall also be responsible for providing environmental oversight, air monitoring and aiding the Contractor, City Inspector(s), and/or City's representative to coordinate handling and disposition of impacted soils at the construction site. The Construction Superintendent may also be considered as the Health and Safety Officer/Supervisor.

The Contractor's H&S Plan must comply with applicable regulations contained in 29 CFR 1910.120. The Contractor should review and apply the standards found in Section 1910.120 (Hazardous Waste Operations), Subsection M (Personal Protective Equipment), and Subsection Z (Toxic and Hazardous Substances). Additionally, the Contractor should review and incorporate into the H&S Plan all relevant construction procedures which are regulated by Section 1926. The H&S Plan shall be submitted to the City of San Antonio, Environmental Management Division to the attention of the Environmental Project Manager for review prior beginning construction activities in the impacted areas. Once the Contractor H&S Plan receives approval by CIMS Environmental, the Contractor may begin construction activities in the affected areas.

Where the various sections of the Occupational Safety and Health Administration (OSHA) regulations require specific subplans/programs, such as Confined Space, Lockout/Tagout, Hazard Communication, Excavation and Trenching, etc., written documentation shall be developed by the Contractor that is specific for the potential hazards associated with this construction effort. This is in addition to standard OSHA requirements for this type of construction project. Appropriate traffic control devices and location access

limitation devices shall be utilized according to applicable regulations and the approved H&S Plan.

The H&S Plan shall include at a minimum the following information:

- 1) A health and safety risk analysis for each location, task, or operation to be performed by the Contractor.
- 2) A description of the training to be provided to location workers to comply with 29 CFR 1910.120(f).
- 3) List of engineering controls, work practices, and personal protective equipment to be provided by the Contractor to the Contractor's employees for each task or operation to be performed. These must comply with 29 CFR 1910.120(g).
- 4) A description of the frequency and type of air monitoring to be provided to comply with 29 CFR 1910.120(h), including the concentrations of contaminants or air constituents that will cause the Contractor to take actions to increase or decrease protective measures.
- 5) A description of location control measures to be used to comply with 29 CFR 1910.120(d).
- 6) A decontamination plan to comply with requirements of 29 CFR 1910.120(k). This plan must address both personnel and equipment decontamination and disposal of decontamination-generated fluids and materials.
- 7) An emergency response and spill containment plan to comply with 29 CFR 1910.120(i and j).
- 8) A confined space entry program to comply with 29 CFR 1910.146.
- 9) An excavation safety program to comply with 29 CFR 1926, Subpart P.
- 10) A location map, with a route and phone number, to the nearest emergency medical facility.
- 11) Personal Protective Equipment (PPE) levels shall be defined as appropriate to location contaminant concentrations in order to maintain worker safety.
- 12) A route map showing the closest medical facility to the site.

13)A truck route map showing the designated route from the project site to the proposed disposal facility.

The Contractor shall add additional elements to the H&S Plan, as required, for the safe execution of the project. The Contractor must include a written statement that they are committed to employing/enforcing the H&S Plan and will be implemented for all project operations. All workers and visitors to the site shall be informed of the H&S Plan and shall sign a statement acknowledging their commitment to following the procedures of the H&S Plan. The Contractor will be required to submit a finalized copy of the H&S Plan, a copy of the 40-hour HAZWOPER training certifications, and a copy of the 8 hour supervisory training certificates of all employees qualified to work within the impacted area to the City of San Antonio, Environmental Management Division (EMD), prior to beginning construction. CIMS EMD will review the submittals and determine whether the contractor meets the requirements or not.

The following tables should be used by the Contractor to develop the H&S Plan. Table 1 provides the station numbers where impacted media might be encountered, the type of media impacted and the type of contaminant to be encountered.

Tables 2A through 2W provide a summary of impacted soil and groundwater locations identified by specific points within the project limits in the different Areas of Concern. The table also presents the maximum detected level of contaminants concentrations (TPH, BTEX, VOC, SVOC, etc.) identified at the sampled locations within the project limits within the AOCs.

There is the possibility that other contaminants could be encountered within the project limits. If the Contractor suspects additional contamination or impacted media outside the designated areas, the Contractor shall notify the construction inspector, City's inspector, and/or City's representative immediately.

This work will be paid under Item 110.5, "Site Specific Health and Safety Plan," and includes all time, materials, and labor required to prepare the required document. This document must be prepared with specific information for the project. Generic documents will not be accepted.

110.5 Contractors Bid Item -- Site Specific Health and Safety Plan

Development of a Site Specific Health and Safety Plan (Base Bid, Lump Sum) - - Refer to Bid Item 110.5.1

Development of a Site Specific Health and Safety Plan (Alternate Bid, Lump Sum) - - Refer to Bid Item 110.5.2

**ITEM 110.6
WASTE MANAGEMENT PLAN AND ENVIRONMENTAL OVERSIGHT
IMPLEMENTATION**

The Contractor is required to prepare a Waste Management Plan outlining a description on how the impacted media would be handled during construction. With information provided in Tables 1 and 2A through 2W, the Contractor's Consultant shall provide a plan to reuse the impacted soils and a description of how the groundwater will be removed, treated and/or disposed.

If treatment of the groundwater is the selected method prior to disposal, the Contractor's Consultant must obtain a permit from SAWS prior beginning the project. Cost associated with the permit should be included in Item 110.6 Waste Management Plan and Oversight Implementation.

All potentially impacted soils and groundwater must be managed in accordance with applicable Federal, State, and Local regulations. Management of these wastes is governed by the Texas Commission for Environmental Quality (TCEQ) waste requirements.

The Contractor is required to submit this Plan to CIMS Environmental Project Manager for approval prior beginning work in the impacted areas. The Contractor must have an Environmental Consultant providing oversight during the course of the project in the Areas of Concern (AOCs) listed in Table 1. Oversight is required for the installation of **all** utilities, independently of the depth, in all the areas outlined in Table 1.

Upon completion, the Contractor is required to submit a final report for this project. The environmental report shall include but not be limited to: number of environmental oversight days, air monitoring frequency and results, total cubic yards of impacted media removed and disposed (if needed), and a summary of the environmental activities.

This work will be paid under Item 110.6, "Waste Management Plan and Environmental Oversight Implementation" and includes all equipment, time, materials, and labor required to complete the work.

110.6 Contractors Bid Item – Waste Management Plan and Environmental Oversight Implementation

**Development of the Waste Management Plan (Base bid, Lump Sum) -
Refer to Bid Item 110.6.1**

**Environmental Oversight Implementation (Base bid, Lump Sum) -
Refer to Bid Item 110.6.2**

**Development of the Waste Management Plan (Alternate bid, Lump
Sum) - Refer to Bid Item 110.6.3**

**Environmental Oversight Implementation (Alternate bid, Lump Sum)
- Refer to Bid Item 110.6.4**

TABLES

TABLE 1
ENVIRONMENTAL PROJECT DATA SUMMARY
Blanco Road (Jackson Keller to Hildebrand)
Areas of Concern "A" through "H" Base Bid

Project Design Data					Environmental Data			
AOC No.	Nearest Cross Street	From Station No.	To Station No.	Improvements Of Concern	Impacted Media		Contaminant Type	On-Site Monitoring Required
					Groundwater	Soil		
A	El Monte Blvd. (West)	76+50 (Blanco Rd., west side of the street)	76+80	Sewer, water, gas, storm drainage, sidewalks	No	Yes	Heavy Metals (arsenic and barium)	Yes ¹
		10+24 (El Monte Blvd.)	10+83					
B	El Monte (East of Blanco)	77+75 (Blanco Rd., west side of the street)	78+50	Sewer, water, gas, storm drainage and sidewalks	No	Yes	Heavy Metals (arsenic and barium)	Yes ¹
C	San Angelo Blvd. (West)	79+45 (Blanco Rd., west side of the street)	80+75	Water, gas, storm drainage and sidewalks	No	Yes	Heavy Metals (arsenic and barium)	Yes ¹
		10+22 (San Angelo Blvd.)	10+43					

D	Venice St.	87+95 (Blanco Rd., west side of the street)	88+40	Gas, storm drainage and sidewalks	No	Yes Soils generated from the excavation from the surface to the proposed utility excavation depth are considered class 2, non-hazardous and must be reused.	Hydrocarbons	Yes ¹
E	Basse Rd.	89+60 (Blanco Rd., west side of the street)	90+10	Gas, storm drainage and sidewalks	No	Yes Soils generated from the excavation from the surface to the proposed utility excavation depth are considered class 2, non-hazardous and must be reused.	Hydrocarbons	Yes ¹
F	Basse Rd.	91+60 (Blanco Rd., west side of the street)	92+60	Gas, storm drainage and sidewalks	No	Yes Soils generated from the excavation from the surface to the proposed utility excavation depth are considered class 2, non-hazardous and must be reused.	Heavy Metals (arsenic and lead)	Yes ¹
G	Weizmann Blvd. (West)	103+10 (Blanco Rd., east side of the street)	103+90	Sewer, water, gas, storm drainage and sidewalks	No	Yes Soils generated from the excavation from the surface to the proposed utility excavation depth are considered class 2, non-hazardous and must be reused.	Heavy Metals (Arsenic)	Yes ¹

H	Weizmann Blvd., East	104+25 (Blanco Rd., east side of the street) 10+22 (Weizmann Blvd. East)	104+70 10+85	Sewer, water, storm drainage and sidewalks	Yes Hydrocarbons present in the groundwater. Water must be properly treated and disposed.	Yes Soils generated from the excavation from the surface to the proposed utility excavation depth are considered class 2, non-hazardous and must be reused.	Hydrocarbons and Heavy Metals (Lead and barium)	Yes ¹
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Areas of Concern "I" through "W" Alternate Bid

I	San Francisco	18+20 (Blanco Rd., west and east sides of the street)	18+70	Gas, storm drainage and sidewalks	No	Yes Soils generated from the excavation from the surface to the proposed utility excavation depth are considered class 2, non-hazardous and must be reused.	Heavy Metals (Lead and barium)	Yes ¹
J	Pasadena St.	20+10 (Blanco Rd., east side of the street)	20+40	Gas, storm drainage and sidewalks	No	Yes Soils generated from the excavation from the surface to the proposed utility excavation depth are considered class 2, non-hazardous and must be reused.	Heavy Metals (Lead)	Yes ¹

K	West Olmos Dr.	24+10 (Blanco Rd., east side of the street)	24+30	Water, storm drainage and sidewalks	No	Yes Soils generated from the excavation from the surface to the proposed utility excavation depth are considered class 2, non-hazardous and must be reused.	Heavy Metals (Arsenic)	Yes ¹
L	Santa Monica St.	27+20 (Blanco Rd., west side of the street)	27+40	Storm drainage and sidewalks	No	Yes Soils generated from the excavation from the surface to the proposed utility excavation depth are considered class 2, non-hazardous and must be reused.	Heavy Metals (Barium)	Yes ¹
M	Santa Monica St.	27+85 (Blanco Rd., west side of the street)	28+20	Storm drainage and sidewalks	No	Yes Soils generated from the excavation from the surface to the proposed utility excavation depth are considered class 2, non-hazardous and must be reused.	Heavy Metals (Lead)	Yes ¹
N	Sacramento St.	30+50 (Blanco Rd., west side of the street)	30+85	Gas, storm drainage and sidewalks	No	Yes Soils generated from the excavation from the surface to the proposed utility excavation depth are considered class 2, non-hazardous and must be reused.	Heavy Metals (Barium)	Yes ¹

O	Sacramento St.	30+60 (Blanco Rd., east side of the street)	31+00	Water, gas, storm drainage and sidewalks	No	Yes Soils generated from the excavation from the surface to the proposed utility excavation depth are considered class 2, non-hazardous and must be reused.	Heavy Metals (Barium)	Yes ¹
P	Sacramento St.	31+40 (Blanco Rd., west side of the street) 10+22 (Sacramento west)	31+85 10+82	Water, gas, storm drainage and sidewalks	No	Yes Soils generated from the excavation from the surface to the proposed utility excavation depth are considered class 2, non-hazardous and must be reused.	Hydrocarbons	Yes ¹
Q	Sacramento St.	31+40 (Blanco Rd., east side of the street)	31+90	Water, gas, storm drainage and sidewalks	No	Yes Soils generated from the excavation from the surface to the proposed utility excavation depth are considered class 2, non-hazardous and must be reused.	Heavy Metals (Barium)	Yes ¹
R	McIlvaine St.	32+40 (Blanco Rd., east side of the street)	32+85	Water, storm drainage and sidewalks	No	Yes Soils generated from the excavation from the surface to the proposed utility excavation depth are considered class 2, non-hazardous and must be reused.	Heavy Metals (Lead)	Yes ¹

S	McIlvaine St.	33+40 (Blanco Rd., east side of the street)	33+70	Water, storm drainage and sidewalks	No	Yes Soils generated from the excavation from the surface to the proposed utility excavation depth are considered class 2, non-hazardous and must be reused.	Heavy Metals (Lead)	Yes ¹
T	Fresno Rd. (West)	10+54.14	10+80	Water, storm drainage and sidewalks	Potentially (traces of MtBE detected in groundwater)	Yes Soils generated from the excavation from the surface to the proposed utility excavation depth are considered class 2, non-hazardous and must be reused.	Heavy Metals (Barium)	Yes ¹
U	Fresno Rd.	37+65 (Blanco Rd., west side of the street)	39+00	Water, storm drainage and sidewalks	Potentially (traces of MtBE detected in groundwater)	Yes Soils generated from the excavation from the surface to the proposed utility excavation depth are considered class 2, non-hazardous and must be reused.	Heavy Metals (Barium and lead)	Yes ¹
V	Fresno Rd.	38+20 (Blanco Rd., east side of the street)	39+00	Water, storm drainage and sidewalks	Yes Hydrocarbons present in the groundwater. Water must be properly treated and disposed.	Yes Soils generated from the excavation from the surface to the proposed utility excavation depth are considered class 2, non-hazardous and must be reused.	Heavy Metals (Barium), Hydrocarbons	Yes ¹

W	Edison Dr.	40+25 (Blanco Rd., east side of the street)	41+60	Water, storm drainage and sidewalks	No groundwater encountered during assessment, but likelihood of being contaminated with hydrocarbons	Yes Soils generated from the excavation from the surface to the proposed utility excavation depth are considered class 2, non-hazardous and must be reused.	Heavy Metals (Lead and barium), Methylene Chloride	Yes ¹
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Notes:

AOC: Areas of Concern

- 1) Onsite monitoring must be provided by Contractor's environmental consultant for workers handling impacted materials. COSA's environmental consultant is responsible for providing environmental oversight and monitoring to ensure that impacted media is properly excavated, transported, and disposed of to a licensed landfill and contractor is in compliance with the waste management plan to be prepared for this project.

TABLE 2A
MAXIMUM MEDIA CONTAMINATION RESULTS
Blanco Road (Jackson Keller to Hildebrand)
Areas of Concern "A" through "H" Base Bid

	AOC No. A Soil (mg/kg)	AOC No. A Soil (mg/kg)	AOC No. A Groundwater (mg/L)	TRRP Tier 1 PCLs ^{Tot} Soil _{comb} (mg/kg)*	Texas Specific Background Levels (mg/kg)*	TRRP Tier 1 PCLs ^{GW} Soil _{inq} (mg/L)*	TRRP Tier 1 PCLs ^{GW} GW _{inq} (mg/L)	TRRP Tier 1 PCLs ^{air} GW _{Inh-v} (mg/L)
Depth bgs	3 to 5 feet (AOC44-4)	2.5 to 5.0 feet (AOC44-3)						
Chemicals of Concern								
TPH, TX1005, C6- C12	ND	ND	BRL	1,600	NL	65	0.98	1,800
TPH, TX1005, >C12- C28	ND	ND	BRL	2,300	NL	200	0.98	7,500
TPH, TX1005, >C28- C35	ND	ND	BRL	2,300	NL	200	0.98	NL
TPH, TX1005, >C6- C35	ND	ND	BRL	NL	NL	NL	NL	NL
Arsenic	7.26	10.2	BRL	24	5.9	5	0.01	NL
Barium	502	466	BRL	8,100	330	440	2.0	NL
Lead	ND	ND	BRL	500	15	3	0.015	NL
Methylene Chloride	ND	ND	BRL	390	NL	0.013	0.005	1,300

Bolded value indicated that concentration has exceeded the PCL for that chemical.

PCLs: Protective Concentration Levels

bgs: below ground surface

ND: non-detect

NL: No listed

BRL: Below Reporting Limits

TABLE 2B
MAXIMUM MEDIA CONTAMINATION RESULTS
Blanco Road (Jackson Keller to Hildebrand)
Areas of Concern "A" through "H" Base Bid

	AOC No. B Soil (mg/kg)	AOC No. B Soil (mg/kg)	AOC No. B Groundwater (mg/L)	TRRP Tier 1 PCLs ^{Tot} Soil _{comb} (mg/kg)*	Texas Specific Background Levels (mg/kg)*	TRRP Tier 1 PCLs ^{GW} Soil _{inq} (mg/L)*	TRRP Tier 1 PCLs ^{GW} GW _{inq} (mg/L)	TRRP Tier 1 PCLs ^{air} GW _{Inh-V} (mg/L)
Depth bgs	5 to 7.5 feet (AOC43-1)	2.5 to 5.0 feet (AOC44-3)						
Chemicals of Concern								
TPH, TX1005, C6- C12	ND	ND	BRL	1,600	NL	65	0.98	1,800
TPH, TX1005, >C12- C28	ND	ND	BRL	2,300	NL	200	0.98	7,500
TPH, TX1005, >C28- C35	ND	ND	BRL	2,300	NL	200	0.98	NL
TPH, TX1005, >C6- C35	ND	ND	BRL	NL	NL	NL	NL	NL
Arsenic	8.81	11.8	BRL	24	5.9	5	0.01	NL
Barium	ND	556	BRL	8,100	330	440	2.0	NL
Lead	ND	ND	BRL	500	15	3	0.015	NL
Methylene Chloride	ND	ND	BRL	390	NL	0.013	0.005	1,300

Bolded value indicated that concentration has exceeded the PCL for that chemical.

PCLs: Protective Concentration Levels
bgs: below ground surface
ND: non-detect
NL: No listed
BRL: Below Reporting Limits

TABLE 2C
MAXIMUM MEDIA CONTAMINATION RESULTS
Blanco Road (Jackson Keller to Hildebrand)
Areas of Concern "A" through "H" Base Bid

	AOC No. C Soil (mg/kg)	AOC No. C Soil (mg/kg)	AOC No. C Groundwater (mg/L)	TRRP Tier 1 PCLs ^{Tot} Soil _{comb} (mg/kg)*	Texas Specific Background Levels (mg/kg)*	TRRP Tier 1 PCLs ^{GW} Soil _{inq} (mg/L)*	TRRP Tier 1 PCLs ^{GW} GW _{inq} (mg/L)	TRRP Tier 1 PCLs ^{air} GW _{Inh-V} (mg/L)
Depth bgs	5 to 7.5 feet (AOC40-1)	2.0 to 5.0 feet (AOC40-2)						
Chemicals of Concern								
TPH, TX1005, C6- C12	ND	ND	BRL	1,600	NL	65	0.98	1,800
TPH, TX1005, >C12- C28	ND	ND	BRL	2,300	NL	200	0.98	7,500
TPH, TX1005, >C28- C35	ND	ND	BRL	2,300	NL	200	0.98	NL
TPH, TX1005, >C6- C35	ND	ND	BRL	NL	NL	NL	NL	NL
Arsenic	14.6	6.6	BRL	24	5.9	5	0.01	NL
Barium	ND	496	BRL	8,100	330	440	2.0	NL
Lead	17.5	ND	BRL	500	15	3	0.015	NL
Methylene Chloride	ND	ND	BRL	390	NL	0.013	0.005	1,300

Bolded value indicated that concentration has exceeded the PCL for that chemical.

PCLs: Protective Concentration Levels

bgs: below ground surface

ND: non-detect

NL: No listed

BRL: Below Reporting Limits

TABLE 2D
MAXIMUM MEDIA CONTAMINATION RESULTS
Blanco Road (Jackson Keller to Hildebrand)
Areas of Concern "A" through "H" Base Bid

	AOC No. D Soil (mg/kg)		AOC No. D Groundwater (mg/L)	TRRP Tier 1 PCLs ^{Tot} Soil _{comb} (mg/kg)*	Texas Specific Background Levels (mg/kg)*	TRRP Tier 1 PCLs ^{GW} Soil _{inq} (mg/L)*	TRRP Tier 1 PCLs ^{GW} GW _{inq} (mg/L)	TRRP Tier 1 PCLs ^{air} GW _{Inh-V} (mg/L)
Depth bgs	5 to 7.5 feet (AOC36-1)							
Chemicals of Concern								
TPH, TX1005, C6- C12	253		NE	1,600	NL	65	0.98	1,800
TPH, TX1005, >C12- C28	20		NE	2,300	NL	200	0.98	7,500
TPH, TX1005, >C28- C35	ND		NE	2,300	NL	200	0.98	NL
TPH, TX1005, >C6- C35	ND		NE	NL	NL	NL	NL	NL
Arsenic	ND		NE	24	5.9	5	0.01	NL
Barium	ND		NE	8,100	330	440	2.0	NL
Lead	ND		NE	500	15	3	0.015	NL
Methylene Chloride	ND		NE	390	NL	0.013	0.005	1,300

Bolded value indicated that concentration has exceeded the PCL for that chemical.

PCLs: Protective Concentration Levels

bgs: below ground surface

ND: non-detect

NL: No listed

BRL: Below Reporting Limits

NE: Not encountered

TABLE 2E
MAXIMUM MEDIA CONTAMINATION RESULTS
Blanco Road (Jackson Keller to Hildebrand)
Areas of Concern "A" through "H" Base Bid

	AOC No. E Soil (mg/kg)		AOC No. E Groundwater (mg/L)	TRRP Tier 1 PCLs ^{Tot} Soil _{comb} (mg/kg)*	Texas Specific Background Levels (mg/kg)*	TRRP Tier 1 PCLs ^{GW} Soil _{inq} (mg/L)*	TRRP Tier 1 PCLs ^{GW} GW _{inq} (mg/L)	TRRP Tier 1 PCLs ^{air} GW _{Inh-V} (mg/L)
Depth bgs	7.5 to 10.0 feet (AOC35-6)							
Chemicals of Concern								
TPH, TX1005, C6- C12	87.6		NE	1,600	NL	65	0.98	1,800
TPH, TX1005, >C12- C28	20		NE	2,300	NL	200	0.98	7,500
TPH, TX1005, >C28- C35	ND		NE	2,300	NL	200	0.98	NL
TPH, TX1005, >C6- C35	ND		NE	NL	NL	NL	NL	NL
Arsenic	ND		NE	24	5.9	5	0.01	NL
Barium	ND		NE	8,100	330	440	2.0	NL
Lead	ND		NE	500	15	3	0.015	NL
Methylene Chloride	ND		NE	390	NL	0.013	0.005	1,300

Bolded value indicated that concentration has exceeded the PCL for that chemical.

PCLs: Protective Concentration Levels

bgs: below ground surface

ND: non-detect

NL: No listed

BRL: Below Reporting Limits

NE: Not encountered

TABLE 2F
MAXIMUM MEDIA CONTAMINATION RESULTS
Blanco Road (Jackson Keller to Hildebrand)
Areas of Concern "A" through "H" Base Bid

	AOC No. F Soil (mg/kg)	AOC No. F Soil (mg/kg)	AOC No. F Groundwater (mg/L)	TRRP Tier 1 PCLs ^{Tot} Soil _{comb} (mg/kg)*	Texas Specific Background Levels (mg/kg)*	TRRP Tier 1 PCLs ^{GW} Soil _{inq} (mg/L)*	TRRP Tier 1 PCLs ^{GW} GW _{inq} (mg/L)	TRRP Tier 1 PCLs ^{air} GW _{Inh-V} (mg/L)
Depth bgs	2.5 to 5.0 feet (AOC30-2)	1.5 to 2.5 feet (AOC30-3)						
Chemicals of Concern								
TPH, TX1005, C6- C12	ND	ND	NE	1,600	NL	65	0.98	1,800
TPH, TX1005, >C12- C28	ND	ND	NE	2,300	NL	200	0.98	7,500
TPH, TX1005, >C28- C35	ND	ND	NE	2,300	NL	200	0.98	NL
TPH, TX1005, >C6- C35	ND	ND	NE	NL	NL	NL	NL	NL
Arsenic	7.36	ND	NE	24	5.9	5	0.01	NL
Barium	ND	ND	NE	8,100	330	440	2.0	NL
Lead	16.2	15.6	NE	500	15	3	0.015	NL
Methylene Chloride	ND	ND	NE	390	NL	0.013	0.005	1,300

Bolded value indicated that concentration has exceeded the PCL for that chemical.

PCLs: Protective Concentration Levels

bgs: below ground surface

ND: non-detect

NL: No listed

BRL: Below Reporting Limits

NE: Not encountered

TABLE 2G
MAXIMUM MEDIA CONTAMINATION RESULTS
Blanco Road (Jackson Keller to Hildebrand)
Areas of Concern "A" through "H" Base Bid

	AOC No. G Soil (mg/kg)	AOC No. G Soil (mg/kg)	AOC No. G Groundwater (mg/L)	TRRP Tier 1 PCLs ^{Tot} Soil _{comb} (mg/kg)*	Texas Specific Background Levels (mg/kg)*	TRRP Tier 1 PCLs ^{GW} Soil _{inq} (mg/L)*	TRRP Tier 1 PCLs ^{GW} GW _{inq} (mg/L)	TRRP Tier 1 PCLs ^{air} GW _{Inh-V} (mg/L)
Depth bgs	15.5 to 17.5 feet (AOC25-3)	1.5 to 2.5 feet (AOC25-5)						
Chemicals of Concern								
TPH, TX1005, C6- C12	ND	ND	NE	1,600	NL	65	0.98	1,800
TPH, TX1005, >C12- C28	ND	ND	NE	2,300	NL	200	0.98	7,500
TPH, TX1005, >C28- C35	ND	ND	NE	2,300	NL	200	0.98	NL
TPH, TX1005, >C6- C35	ND	ND	NE	NL	NL	NL	NL	NL
Arsenic	21.1	11.18	NE	24	5.9	5	0.01	NL
Barium	ND	ND	NE	8,100	330	440	2.0	NL
Lead	ND	ND	NE	500	15	3	0.015	NL
Methylene Chloride	ND	ND	NE	390	NL	0.013	0.005	1,300

Bolded value indicated that concentration has exceeded the PCL for that chemical.

PCLs: Protective Concentration Levels

bgs: below ground surface

ND: non-detect

NL: No listed

BRL: Below Reporting Limits

NE: Not encountered

TABLE 2H
MAXIMUM MEDIA CONTAMINATION RESULTS
Blanco Road (Jackson Keller to Hildebrand)
Areas of Concern "A" through "H" Base Bid

	AOC No. H Soil (mg/kg)	AOC No. H Soil (mg/kg)	AOC No. H Groundwater (mg/L)	TRRP Tier 1 PCLs ^{Tot} Soil _{comb} (mg/kg)*	Texas Specific Background Levels (mg/kg)*	TRRP Tier 1 PCLs ^{GW} Soil _{inq} (mg/L)*	TRRP Tier 1 PCLs ^{GW} GW _{inq} (mg/L)	TRRP Tier 1 PCLs ^{air} GW _{Inh-V} (mg/L)
Depth bgs	12.5 to 15.0 feet (AOC25-1)	2.5 to 5.0 feet (AOC25-2)						
Chemicals of Concern								
TPH, TX1005, C6- C12	ND	ND	1.56	1,600	NL	65	0.98	1,800
TPH, TX1005, >C12- C28	ND	ND	ND	2,300	NL	200	0.98	7,500
TPH, TX1005, >C28- C35	ND	ND	ND	2,300	NL	200	0.98	NL
TPH, TX1005, >C6- C35	ND	ND	ND	NL	NL	NL	NL	NL
Arsenic	6.97*	ND	NA	24	5.9	5	0.01	NL
Barium	ND	1,640 (at 12.5 feet)	NA	8,100	330	440	2.0	NL
Lead	ND	15.4	NA	500	15	3	0.015	NL
Methylene Chloride	ND	ND	0.004**	390	NL	0.013	0.005	1,300

Bolded value indicated that concentration has exceeded the PCL for that chemical.

PCLs: Protective Concentration Levels

bgs: below ground surface

ND: non-detect

NL: No listed

NA: Not analyzed

BRL: Below Reporting Limits

NE: Not encountered

* Arsenic concentration measured below the site-specific background concentration calculated for this location.

** Traces of many semi-volatile organic components detected in groundwater

TABLE 21
MAXIMUM MEDIA CONTAMINATION RESULTS
Blanco Road (Jackson Keller to Hildebrand)
Areas of Concern "I" through "W" Alternate Bid

	AOC No. I Soil (mg/kg)	AOC No. I Soil (mg/kg)	AOC No. I Groundwater (mg/L)	TRRP Tier 1 PCLs ^{Tot} Soil _{comb} (mg/kg)*	Texas Specific Background Levels (mg/kg)*	TRRP Tier 1 PCLs ^{GW} Soil _{inq} (mg/L)*	TRRP Tier 1 PCLs ^{GW} GW _{inq} (mg/L)	TRRP Tier 1 PCLs ^{air} GW _{Inh-V} (mg/L)
Depth bgs	0.5 to 2.5 feet (AOC83-3)	2.5 to 5.0 feet (AOC85-1)						
Chemicals of Concern								
TPH, TX1005, C6- C12	ND	ND	NE	1,600	NL	65	0.98	1,800
TPH, TX1005, >C12- C28	ND	ND	NE	2,300	NL	200	0.98	7,500
TPH, TX1005, >C28- C35	ND	ND	NE	2,300	NL	200	0.98	NL
TPH, TX1005, >C6- C35	ND	ND	NE	NL	NL	NL	NL	NL
Arsenic	5.95*	6.96*	NE	24	5.9	5	0.01	NL
Barium	ND	674	NE	8,100	330	440	2.0	NL
Lead	17.1 (at 5 feet too)	ND	NE	500	15	3	0.015	NL
Methylene Chloride	ND	ND	NE	390	NL	0.013	0.005	1,300

Bolded value indicated that concentration has exceeded the PCL for that chemical.

PCLs: Protective Concentration Levels

bgs: below ground surface

ND: non-detect

NL: No listed

BRL: Below Reporting Limits

NE: Not encountered

* Arsenic concentration measured below the site-specific background concentration calculated for this location.

** Traces of many semi-volatile organic components detected in groundwater

TABLE 2J
MAXIMUM MEDIA CONTAMINATION RESULTS
Blanco Road (Jackson Keller to Hildebrand)
Areas of Concern "I" through "W" Alternate Bid

	AOC No. J Soil (mg/kg)	AOC No. J Soil (mg/kg)	AOC No. J Groundwater (mg/L)	TRRP Tier 1 PCLs ^{Tot} Soil _{comb} (mg/kg)*	Texas Specific Background Levels (mg/kg)*	TRRP Tier 1 PCLs ^{GW} Soil _{inq} (mg/L)*	TRRP Tier 1 PCLs ^{GW} GW _{Inq} (mg/L)	TRRP Tier 1 PCLs ^{air} GW _{Inh-V} (mg/L)
Depth bgs	2.5 to 5.0 feet (AOC83-1)							
Chemicals of Concern								
TPH, TX1005, C6- C12	ND		NE	1,600	NL	65	0.98	1,800
TPH, TX1005, >C12- C28	ND		NE	2,300	NL	200	0.98	7,500
TPH, TX1005, >C28- C35	ND		NE	2,300	NL	200	0.98	NL
TPH, TX1005, >C6- C35	ND		NE	NL	NL	NL	NL	NL
Arsenic	ND		NE	24	5.9	5	0.01	NL
Barium	ND		NE	8,100	330	440	2.0	NL
Lead	20.7		NE	500	15	3	0.015	NL
Methylene Chloride	ND		NE	390	NL	0.013	0.005	1,300

Bolded value indicated that concentration has exceeded the PCL for that chemical.

PCLs: Protective Concentration Levels

bgs: below ground surface

ND: non-detect

NL: No listed

BRL: Below Reporting Limits

NE: Not encountered

TABLE 2K
MAXIMUM MEDIA CONTAMINATION RESULTS
Blanco Road (Jackson Keller to Hildebrand)
Areas of Concern "I" through "W" Alternate Bid

	AOC No. K Soil (mg/kg)	AOC No. K Soil (mg/kg)	AOC No. K Groundwater (mg/L)	TRRP Tier 1 PCLs ^{Tot} Soil _{comb} (mg/kg)*	Texas Specific Background Levels (mg/kg)*	TRRP Tier 1 PCLs ^{GW} Soil _{inq} (mg/L)*	TRRP Tier 1 PCLs ^{GW} GW _{inq} (mg/L)	TRRP Tier 1 PCLs ^{air} GW _{Inh-V} (mg/L)
Depth bgs	2.5 to 5.0 feet (AOC79-3)							
Chemicals of Concern								
TPH, TX1005, C6- C12	ND		NE	1,600	NL	65	0.98	1,800
TPH, TX1005, >C12- C28	ND		NE	2,300	NL	200	0.98	7,500
TPH, TX1005, >C28- C35	ND		NE	2,300	NL	200	0.98	NL
TPH, TX1005, >C6- C35	ND		NE	NL	NL	NL	NL	NL
Arsenic	14.5		NE	24	5.9	5	0.01	NL
Barium	332		NE	8,100	330	440	2.0	NL
Lead	ND		NE	500	15	3	0.015	NL
Methylene Chloride	ND		NE	390	NL	0.013	0.005	1,300

Bolded value indicated that concentration has exceeded the PCL for that chemical.

PCLs: Protective Concentration Levels

bgs: below ground surface

ND: non-detect

NL: No listed

BRL: Below Reporting Limits

NE: Not encountered

TABLE 2L
MAXIMUM MEDIA CONTAMINATION RESULTS
Blanco Road (Jackson Keller to Hildebrand)
Areas of Concern "I" through "W" Alternate Bid

	AOC No. L Soil (mg/kg)	AOC No. L Soil (mg/kg)	AOC No. L Groundwater (mg/L)	TRRP Tier 1 PCLs ^{Tot} Soil _{comb} (mg/kg)*	Texas Specific Background Levels (mg/kg)*	TRRP Tier 1 PCLs ^{GW} Soil _{inq} (mg/L)*	TRRP Tier 1 PCLs ^{GW} GW _{inq} (mg/L)	TRRP Tier 1 PCLs ^{air} GW _{Inh-V} (mg/L)
Depth bgs	2.5 to 5.0 feet (AOC77-3)							
Chemicals of Concern								
TPH, TX1005, C6- C12	ND		NE	1,600	NL	65	0.98	1,800
TPH, TX1005, >C12- C28	ND		NE	2,300	NL	200	0.98	7,500
TPH, TX1005, >C28- C35	ND		NE	2,300	NL	200	0.98	NL
TPH, TX1005, >C6- C35	ND		NE	NL	NL	NL	NL	NL
Arsenic	ND		NE	24	5.9	5	0.01	NL
Barium	466		NE	8,100	330	440	2.0	NL
Lead	ND		NE	500	15	3	0.015	NL
Methylene Chloride	ND		NE	390	NL	0.013	0.005	1,300

Bolded value indicated that concentration has exceeded the PCL for that chemical.

PCLs: Protective Concentration Levels

bgs: below ground surface

ND: non-detect

NL: No listed

BRL: Below Reporting Limits

NE: Not encountered

TABLE 2M
MAXIMUM MEDIA CONTAMINATION RESULTS
Blanco Road (Jackson Keller to Hildebrand)
Areas of Concern "I" through "W" Alternate Bid

	AOC No. M Soil (mg/kg)	AOC No. M Soil (mg/kg)	AOC No. M Groundwater (mg/L)	TRRP Tier 1 PCLs TotSoil _{comb} (mg/kg)*	Texas Specific Background Levels (mg/kg)*	TRRP Tier 1 PCLs GWSoil _{inq} (mg/L)*	TRRP Tier 1 PCLs GWGW _{inq} (mg/L)	TRRP Tier 1 PCLs airGW _{Inh-V} (mg/L)
Depth bgs	1.5 to 3.0 feet (AOC77-2)							
Chemicals of Concern								
TPH, TX1005, C6- C12	ND		NE	1,600	NL	65	0.98	1,800
TPH, TX1005, >C12- C28	ND		NE	2,300	NL	200	0.98	7,500
TPH, TX1005, >C28- C35	ND		NE	2,300	NL	200	0.98	NL
TPH, TX1005, >C6- C35	ND		NE	NL	NL	NL	NL	NL
Arsenic	6.16*		NE	24	5.9	5	0.01	NL
Barium	22.3		NE	8,100	330	440	2.0	NL
Lead	ND		NE	500	15	3	0.015	NL
Methylene Chloride	ND		NE	390	NL	0.013	0.005	1,300

Bolded value indicated that concentration has exceeded the PCL for that chemical.

PCLs: Protective Concentration Levels

bgs: below ground surface

ND: non-detect

NL: No listed

BRL: Below Reporting Limits

NE: Not encountered

* Arsenic concentration measured below the site-specific background concentration calculated for this location.

TABLE 2N
MAXIMUM MEDIA CONTAMINATION RESULTS
Blanco Road (Jackson Keller to Hildebrand)
Areas of Concern "I" through "W" Alternate Bid

	AOC No. N Soil (mg/kg)	AOC No. N Soil (mg/kg)	AOC No. N Groundwater (mg/L)	TRRP Tier 1 PCLs ^{Tot} Soil _{comb} (mg/kg)*	Texas Specific Background Levels (mg/kg)*	TRRP Tier 1 PCLs ^{GW} Soil _{inq} (mg/L)*	TRRP Tier 1 PCLs ^{GW} GW _{inq} (mg/L)	TRRP Tier 1 PCLs ^{air} GW _{Inh-V} (mg/L)
Depth bgs	2.5 to 5.0 feet (AOC74-4)							
Chemicals of Concern								
TPH, TX1005, C6- C12	ND		NE	1,600	NL	65	0.98	1,800
TPH, TX1005, >C12- C28	ND		NE	2,300	NL	200	0.98	7,500
TPH, TX1005, >C28- C35	ND		NE	2,300	NL	200	0.98	NL
TPH, TX1005, >C6- C35	ND		NE	NL	NL	NL	NL	NL
Arsenic	6.96*		NE	24	5.9	5	0.01	NL
Barium	826		NE	8,100	330	440	2.0	NL
Lead	15		NE	500	15	3	0.015	NL
Methylene Chloride	ND		NE	390	NL	0.013	0.005	1,300

Bolded value indicated that concentration has exceeded the PCL for that chemical.

PCLs: Protective Concentration Levels

bgs: below ground surface

ND: non-detect

NL: No listed

BRL: Below Reporting Limits

NE: Not encountered

* Arsenic concentration measured below the site-specific background concentration calculated for this location.

TABLE 20
MAXIMUM MEDIA CONTAMINATION RESULTS
Blanco Road (Jackson Keller to Hildebrand)
Areas of Concern "I" through "W" Alternate Bid

	AOC No. O Soil (mg/kg)	AOC No. O Soil (mg/kg)	AOC No. O Groundwater (mg/L)	TRRP Tier 1 PCLs TotSoil _{comb} (mg/kg)*	Texas Specific Background Levels (mg/kg)*	TRRP Tier 1 PCLs GWSoil _{inq} (mg/L)*	TRRP Tier 1 PCLs GWGW _{inq} (mg/L)	TRRP Tier 1 PCLs airGW _{Inh-V} (mg/L)
Depth bgs	2.5 to 5.0 feet (AOC73-2)							
Chemicals of Concern								
TPH, TX1005, C6- C12	ND		NE	1,600	NL	65	0.98	1,800
TPH, TX1005, >C12- C28	ND		NE	2,300	NL	200	0.98	7,500
TPH, TX1005, >C28- C35	ND		NE	2,300	NL	200	0.98	NL
TPH, TX1005, >C6- C35	ND		NE	NL	NL	NL	NL	NL
Arsenic	ND		NE	24	5.9	5	0.01	NL
Barium	606		NE	8,100	330	440	2.0	NL
Lead	ND		NE	500	15	3	0.015	NL
Methylene Chloride	0.015J		NE	390	NL	0.013	0.005	1,300

Bolded value indicated that concentration has exceeded the PCL for that chemical.

PCLs: Protective Concentration Levels

bgs: below ground surface

ND: non-detect

NL: No listed

BRL: Below Reporting Limits

NE: Not encountered

J: Target analyte was positively identified below the Method Quantification Limit and above the Standard Quantification Limit.

TABLE 2P
MAXIMUM MEDIA CONTAMINATION RESULTS
Blanco Road (Jackson Keller to Hildebrand)
Areas of Concern "I" through "W" Alternate Bid

	AOC No. P Soil (mg/kg)	AOC No. P Soil (mg/kg)	AOC No. P Groundwater (mg/L)	TRRP Tier 1 PCLs ^{Tot} Soil _{comb} (mg/kg)*	Texas Specific Background Levels (mg/kg)*	TRRP Tier 1 PCLs ^{GW} Soil _{inq} (mg/L)*	TRRP Tier 1 PCLs ^{GW} GW _{inq} (mg/L)	TRRP Tier 1 PCLs ^{air} GW _{Inh-V} (mg/L)
Depth bgs	10-12.5 feet (AOC74-1)	10-12.5 feet (AOC74-5)						
Chemicals of Concern								
TPH, TX1005, C6- C12	238	798	NE	1,600	NL	65	0.98	1,800
TPH, TX1005, >C12- C28	ND	ND	NE	2,300	NL	200	0.98	7,500
TPH, TX1005, >C28- C35	ND	ND	NE	2,300	NL	200	0.98	NL
TPH, TX1005, >C6- C35	238	ND	NE	NL	NL	NL	NL	NL
Arsenic	ND	ND	NE	24	5.9	5	0.01	NL
Barium	ND	ND	NE	8,100	330	440	2.0	NL
Lead	ND	ND	NE	500	15	3	0.015	NL
Methylene Chloride	ND	ND	NE	390	NL	0.013	0.005	1,300

Bolded value indicated that concentration has exceeded the PCL for that chemical.

PCLs: Protective Concentration Levels

bgs: below ground surface

ND: non-detect

NL: No listed

BRL: Below Reporting Limits

NE: Not encountered

TABLE 2Q
MAXIMUM MEDIA CONTAMINATION RESULTS
Blanco Road (Jackson Keller to Hildebrand)
Areas of Concern "I" through "W" Alternate Bid

	AOC No. Q Soil (mg/kg)	AOC No. Q Soil (mg/kg)	AOC No. Q Groundwater (mg/L)	TRRP Tier 1 PCLs ^{Tot} Soil _{comb} (mg/kg)*	Texas Specific Background Levels (mg/kg)*	TRRP Tier 1 PCLs ^{GW} Soil _{inq} (mg/L)*	TRRP Tier 1 PCLs ^{GW} GW _{inq} (mg/L)	TRRP Tier 1 PCLs ^{air} GW _{Inh-V} (mg/L)
Depth bgs	3-5 feet (AOC73-1)	2.5-5 feet (AOC70-3)						
Chemicals of Concern								
TPH, TX1005, C6- C12	ND	ND	NE	1,600	NL	65	0.98	1,800
TPH, TX1005, >C12- C28	ND	ND	NE	2,300	NL	200	0.98	7,500
TPH, TX1005, >C28- C35	ND	ND	NE	2,300	NL	200	0.98	NL
TPH, TX1005, >C6- C35	ND	ND	NE	NL	NL	NL	NL	NL
Arsenic	ND	ND	NE	24	5.9	5	0.01	NL
Barium	1,450	458	NE	8,100	330	440	2.0	NL
Lead	ND	ND	NE	500	15	3	0.015	NL
Methylene Chloride	ND	0.006J	NE	390	NL	0.013	0.005	1,300

Bolded value indicated that concentration has exceeded the PCL for that chemical.

PCLs: Protective Concentration Levels

bgs: below ground surface

ND: non-detect

NL: No listed

BRL: Below Reporting Limits

NE: Not encountered

J: Target analyte was positively identified below the Method Quantification Limit and above the Standard Quantification Limit.

TABLE 2R
MAXIMUM MEDIA CONTAMINATION RESULTS
Blanco Road (Jackson Keller to Hildebrand)
Areas of Concern "I" through "W" Alternate Bid

	AOC No. R Soil (mg/kg)	AOC No. R Soil (mg/kg)	AOC No. R Groundwater (mg/L)	TRRP Tier 1 PCLs ^{Tot} Soil _{comb} (mg/kg)*	Texas Specific Background Levels (mg/kg)*	TRRP Tier 1 PCLs ^{GW} Soil _{inq} (mg/L)*	TRRP Tier 1 PCLs ^{GW} GW _{inq} (mg/L)	TRRP Tier 1 PCLs ^{air} GW _{Inh-V} (mg/L)
Depth bgs	1-2.5 feet (AOC70-1)							
Chemicals of Concern								
TPH, TX1005, C6- C12	ND		NE	1,600	NL	65	0.98	1,800
TPH, TX1005, >C12- C28	ND		NE	2,300	NL	200	0.98	7,500
TPH, TX1005, >C28- C35	ND		NE	2,300	NL	200	0.98	NL
TPH, TX1005, >C6- C35	ND		NE	NL	NL	NL	NL	NL
Arsenic	ND		NE	24	5.9	5	0.01	NL
Barium	ND		NE	8,100	330	440	2.0	NL
Lead	23		NE	500	15	3	0.015	NL
Methylene Chloride	ND		NE	390	NL	0.013	0.005	1,300

Bolded value indicated that concentration has exceeded the PCL for that chemical.

PCLs: Protective Concentration Levels

bgs: below ground surface

ND: non-detect

NL: No listed

BRL: Below Reporting Limits

NE: Not encountered

TABLE 2S
MAXIMUM MEDIA CONTAMINATION RESULTS
Blanco Road (Jackson Keller to Hildebrand)
Areas of Concern "I" through "W" Alternate Bid

	AOC No. S Soil (mg/kg)	AOC No. S Soil (mg/kg)	AOC No. S Groundwater (mg/L)	TRRP Tier 1 PCLs ^{Tot} Soil _{comb} (mg/kg)*	Texas Specific Background Levels (mg/kg)*	TRRP Tier 1 PCLs ^{GW} Soil _{inq} (mg/L)*	TRRP Tier 1 PCLs ^{GW} GW _{inq} (mg/L)	TRRP Tier 1 PCLs ^{air} GW _{Inh-V} (mg/L)
Depth bgs	1-2.5 feet (AOC67-1)							
Chemicals of Concern								
TPH, TX1005, C6- C12	ND		NE	1,600	NL	65	0.98	1,800
TPH, TX1005, >C12- C28	ND		NE	2,300	NL	200	0.98	7,500
TPH, TX1005, >C28- C35	ND		NE	2,300	NL	200	0.98	NL
TPH, TX1005, >C6- C35	ND		NE	NL	NL	NL	NL	NL
Arsenic	ND		NE	24	5.9	5	0.01	NL
Barium	ND		NE	8,100	330	440	2.0	NL
Lead	20.6		NE	500	15	3	0.015	NL
Methylene Chloride	ND		NE	390	NL	0.013	0.005	1,300

Bolded value indicated that concentration has exceeded the PCL for that chemical.

PCLs: Protective Concentration Levels

bgs: below ground surface

ND: non-detect

NL: No listed

BRL: Below Reporting Limits

NE: Not encountered

TABLE 2T
MAXIMUM MEDIA CONTAMINATION RESULTS
Blanco Road (Jackson Keller to Hildebrand)
Areas of Concern "I" through "W" Alternate Bid

	AOC No. T Soil (mg/kg)	AOC No. T Soil (mg/kg)	AOC No. T Groundwater (mg/L)	TRRP Tier 1 PCLs ^{Tot} Soil _{comb} (mg/kg)*	Texas Specific Background Levels (mg/kg)*	TRRP Tier 1 PCLs ^{GW} Soil _{inq} (mg/L)*	TRRP Tier 1 PCLs ^{GW} GW _{inq} (mg/L)	TRRP Tier 1 PCLs ^{air} GW _{Inh-V} (mg/L)
Depth bgs	5-7.5 feet (AOC64-2)							
Chemicals of Concern								
TPH, TX1005, C6- C12	ND		ND*	1,600	NL	65	0.98	1,800
TPH, TX1005, >C12- C28	ND		ND*	2,300	NL	200	0.98	7,500
TPH, TX1005, >C28- C35	ND		ND*	2,300	NL	200	0.98	NL
TPH, TX1005, >C6- C35	ND		ND*	NL	NL	NL	NL	NL
Arsenic	ND		ND*	24	5.9	5	0.01	NL
Barium	645		ND*	8,100	330	440	2.0	NL
Lead	ND		ND*	500	15	3	0.015	NL
Methylene Chloride	0.005J		ND*	390	NL	0.013	0.005	1,300

Bolded value indicated that concentration has exceeded the PCL for that chemical.

PCLs: Protective Concentration Levels

bgs: below ground surface

ND: non-detect

NL: No listed

BRL: Below Reporting Limits

NE: Not encountered

J: Target analyte was positively identified below the Method Quantification Limit and above the Standard Quantification Limit.

* **The only constituent found in groundwater was 0.006 mg/L MtBE**

TABLE 2U
MAXIMUM MEDIA CONTAMINATION RESULTS
Blanco Road (Jackson Keller to Hildebrand)
Areas of Concern "I" through "W" Alternate Bid

	AOC No. U Soil (mg/kg)	AOC No. U Soil (mg/kg)	AOC No. U Groundwater (mg/L)	TRRP Tier 1 PCLs ^{Tot} Soil _{comb} (mg/kg)*	Texas Specific Background Levels (mg/kg)*	TRRP Tier 1 PCLs ^{GW} Soil _{inq} (mg/L)*	TRRP Tier 1 PCLs ^{GW} GW _{inq} (mg/L)	TRRP Tier 1 PCLs ^{air} GW _{Inh-V} (mg/L)
Depth bgs	5-7.5 feet (AOC64-2)	7.5-10 feet (AOC64-3)						
Chemicals of Concern								
TPH, TX1005, C6- C12	ND	ND	ND*	1,600	NL	65	0.98	1,800
TPH, TX1005, >C12- C28	ND	ND	ND*	2,300	NL	200	0.98	7,500
TPH, TX1005, >C28- C35	ND	ND	ND*	2,300	NL	200	0.98	NL
TPH, TX1005, >C6- C35	ND	ND	ND*	NL	NL	NL	NL	NL
Arsenic	ND	ND	ND*	24	5.9	5	0.01	NL
Barium	645	709	ND*	8,100	330	440	2.0	NL
Lead	ND	15.9	ND*	500	15	3	0.015	NL
Methylene Chloride	ND	ND	ND*	390	NL	0.013	0.005	1,300

Bolded value indicated that concentration has exceeded the PCL for that chemical.

PCLs: Protective Concentration Levels

bgs: below ground surface

ND: non-detect

NL: No listed

BRL: Below Reporting Limits

NE: Not encountered

J: Target analyte was positively identified below the Method Quantification Limit and above the Standard Quantification Limit.

* **The only constituent found in groundwater was 0.006 mg/L MtBE**

TABLE 2V
MAXIMUM MEDIA CONTAMINATION RESULTS
Blanco Road (Jackson Keller to Hildebrand)
Areas of Concern "I" through "W" Alternate Bid

	AOC No. V Soil (mg/kg)	AOC No. V Soil (mg/kg)	AOC No. V Groundwater (mg/L)	TRRP Tier 1 PCLs ^{Tot} Soil _{comb} (mg/kg)*	Texas Specific Background Levels (mg/kg)*	TRRP Tier 1 PCLs ^{GW} Soil _{inq} (mg/L)*	TRRP Tier 1 PCLs ^{GW} GW _{inq} (mg/L)	TRRP Tier 1 PCLs ^{air} GW _{Inh-V} (mg/L)
Depth bgs	5-7.5 feet (AOC60-1)	5-7.5 feet (AOC61-2)						
Chemicals of Concern								
TPH, TX1005, C6- C12	221 (at 7.5 feet)	104	ND*	1,600	NL	65	0.98	1,800
TPH, TX1005, >C12- C28	ND	ND	ND*	2,300	NL	200	0.98	7,500
TPH, TX1005, >C28- C35	ND	ND	ND*	2,300	NL	200	0.98	NL
TPH, TX1005, >C6- C35	221	104	13.1	NL	NL	NL	NL	NL
Arsenic	ND	ND	ND*	24	5.9	5	0.01	NL
Barium	552	709	ND*	8,100	330	440	2.0	NL
Lead	ND	15.9	ND*	500	15	3	0.015	NL
Methylene Chloride	ND	ND	ND*	390	NL	0.013	0.005	1,300

Bolded value indicated that concentration has exceeded the PCL for that chemical.

PCLs: Protective Concentration Levels

bgs: below ground surface

ND: non-detect

NL: No listed

BRL: Below Reporting Limits

NE: Not encountered

J: Target analyte was positively identified below the Method Quantification Limit and above the Standard Quantification Limit.

* **Groundwater also exhibited 3.46 mg/L MtBE and 0.3645 mg/L Benzene.**

TABLE 2W
MAXIMUM MEDIA CONTAMINATION RESULTS
Blanco Road (Jackson Keller to Hildebrand)
Areas of Concern "I" through "W" Alternate Bid

	AOC No. W Soil (mg/kg)	AOC No. W Soil (mg/kg)	AOC No. W Groundwater (mg/L)	TRRP Tier 1 PCLs ^{Tot} Soil _{comb} (mg/kg)*	Texas Specific Background Levels (mg/kg)*	TRRP Tier 1 PCLs ^{GW} Soil _{inq} (mg/L)*	TRRP Tier 1 PCLs ^{GW} GW _{inq} (mg/L)	TRRP Tier 1 PCLs ^{air} GW _{Inh-V} (mg/L)
Depth bgs	2.5-5 feet (AOC58-1)	2.5-5 feet (AOC58-2)						
Chemicals of Concern								
TPH, TX1005, C6- C12	ND	ND	NE	1,600	NL	65	0.98	1,800
TPH, TX1005, >C12- C28	ND	ND	NE	2,300	NL	200	0.98	7,500
TPH, TX1005, >C28- C35	ND	ND	NE	2,300	NL	200	0.98	NL
TPH, TX1005, >C6- C35	ND	ND	NE	NL	NL	NL	NL	NL
Arsenic	ND	ND	NE	24	5.9	5	0.01	NL
Barium	ND	1,050 in sample from 58-3 at 5 feet	NE	8,100	330	440	2.0	NL
Lead	25.9	25.9	NE	500	15	3	0.015	NL
Methylene Chloride	0.017*	0.009*	NE	390	NL	0.013	0.005	1,300

Bolded value indicated that concentration has exceeded the PCL for that chemical.

PCLs: Protective Concentration Levels

bgs: below ground surface

ND: non-detect

NL: No listed

BRL: Below Reporting Limits

NE: Not encountered

* Lab reported these values might not be accurate and the samples might have not contained Methylene Chloride.

This information might be found at the Texas Commission of Environmental Quality (TCEQ) web site [<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>]. The chemicals listed in this table only reflect partial information of the potential chemicals that may be found during the construction activities. It is the contractor environmental consultant's responsibility to monitor the area where the potential contaminants exist, as it is outlined in this document.

FIGURES

FIGURE 1

PROJECT LIMITS



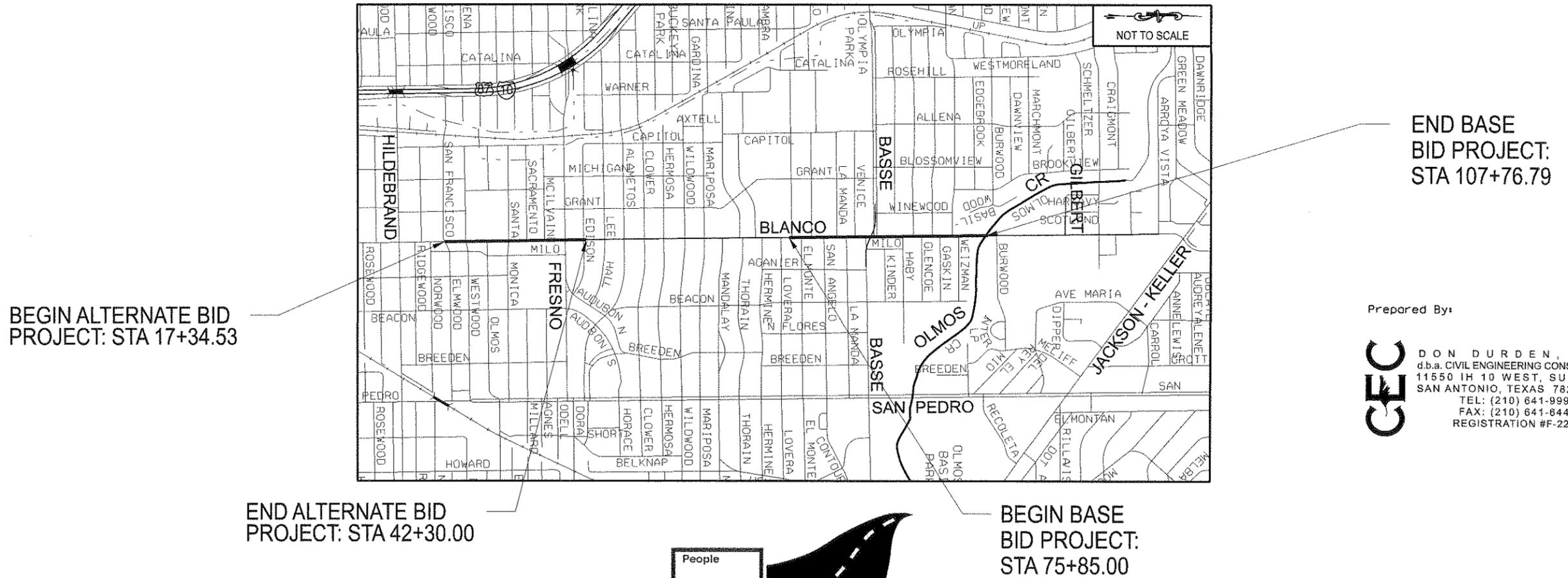
CITY OF SAN ANTONIO

DEPARTMENT OF CAPITAL IMPROVEMENT MANAGEMENT SERVICES

BLANCO RD (FROM HILDEBRAND TO JACKSON-KELLER)

TOTAL LENGTH OF PROJECT: 12,112 ft / 2.29 MI

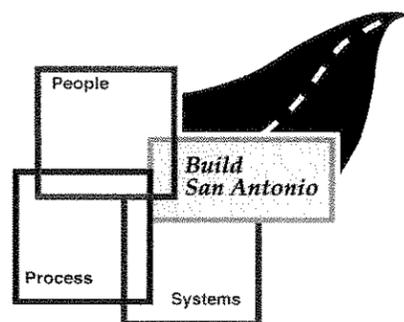
FIGURE 1 PROJECT LIMITS



Prepared By:



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REGISTRATION #F-2214



OUR MISSION: TOGETHER, DEDICATED TO OUR COMMUNITY... BUILDING A GREAT SAN ANTONIO

FIGURES 2 THROUGH 7

BASE BID

**CROSS SECTIONS OF ENVIRONMENTAL AREAS OF CONCERN
"A" THROUGH "H"**

FOR LOCATION OF UNDERGROUND ELECTRIC AND GAS FACILITIES, TELEPHONE CABLES, AND TIME WARNER CABLE TV CALL TEXAS STATE WIDE ONE CALL LOCATOR NUMBER 1-800-545-6005 48 HOURS PRIOR BEFORE BEGINNING ANY EXCAVATION.

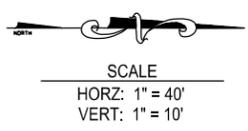
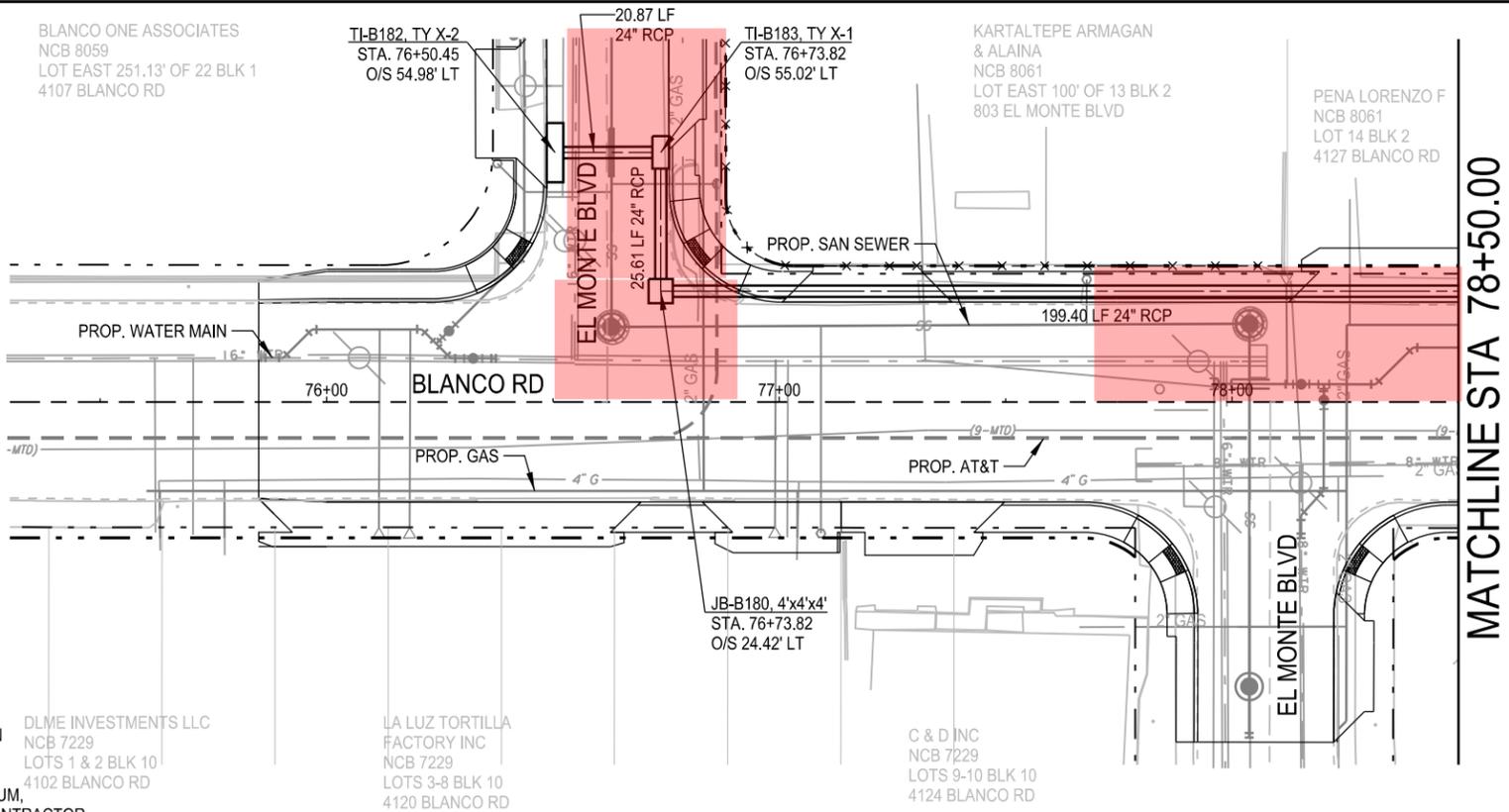
DUE TO FEDERAL REGULATION TITLE 49, PART 192.181, C.P.S. MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA.

THE CONTRACTOR WILL BE RESPONSIBLE FOR PROTECTING C.P.S. OVERHEAD AND UNDERGROUND ELECTRIC FACILITIES IF ADJACENT TO WORK AREAS.

THE CONTRACTOR WILL HAVE RESPONSIBILITY TO PROTECT AND SUPPORT CABLE TV AND TELEPHONE COMPANY PLANT DURING CONSTRUCTION.

THE EXISTENCE AND LOCATION OF UTILITIES INDICATED ON THE PLAN ARE TAKEN FROM AVAILABLE RECORDS AND ARE NOT GUARANTEED TO BE ACCURATE.

CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) IN ORDER TO DEVELOP THE CONTRACTOR'S PLANS TO IMPLEMENT THE PROJECT DESCRIBED IN THE CONTRACT COUMDNTS. THE CONTRACTOR'S PLANS SHALL PROVIDE FOR ADEQUATE TRENCH SAFETY SYSTEMS THAT COMPLY WITH, AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL DEVELOP AND IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION



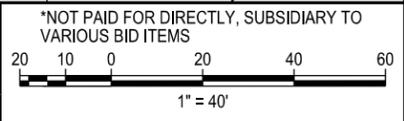
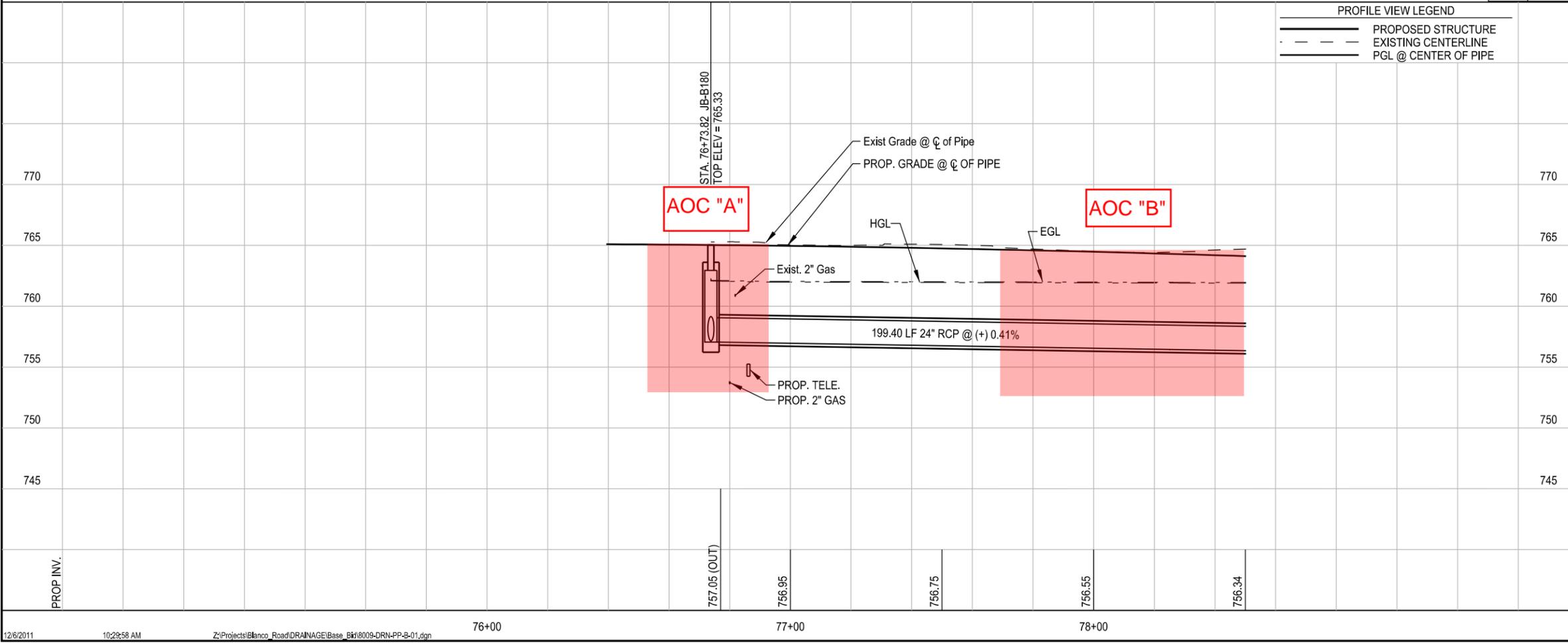
PLAN VIEW LEGEND

- CI = CURB INLET
- JB = JUNCTION BOX
- MH = MANHOLE
- TI = TRAFFIC INLET
- PROPOSED STRUCTURE
- PROPOSED CURB
- EXIST EDGE OF ROADWAY
- EXISTING FEATURES
- EXISTING RIGHT OF WAY
- PROPOSED RIGHT OF WAY
- UG TEL = UNDGR TELEPHONE
- X GAS = GAS LINE
- X SS = SANITARY SEWER LINE
- X WTR = WATER LINE
- UG FO = UNDGR FIBER OPTIC
- FENCE

SYSTEM B

PROPOSED WATER, SANITARY SEWER, TELEPHONE, AND GAS UTILITIES SHOWN ARE APPROXIMATE. SEE RELEVANT PLANS FOR DETAILS.

FINAL	EST	UNIT	DESCRIPTION
	287.4	CY	Excavation, Trenching and Backfilling*
	220.45	LF	Reinforced Concrete Pipe (24") Class III
	1	EA	Junction Box 4'x4'x4'
	1	EA	Ty X-1
	1	EA	Ty X-2
	18.0	CY	Gravel Subgrade Filler
	18.2	CY	Flowable Backfill
	220.45	LF	Trench Excavation Safety Protection



CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS
MANAGEMENT SERVICES
DEPARTMENT

BLANCO ROAD SEG 3 BASE BID

FIGURE 2
AOC "A" & "B"

FOR LOCATION OF UNDERGROUND ELECTRIC AND GAS FACILITIES, TELEPHONE CABLES, AND TIME WARNER CABLE TV CALL TEXAS STATE WIDE ONE CALL LOCATOR NUMBER 1-800-545-6005 48 HOURS PRIOR BEFORE BEGINNING ANY EXCAVATION.

DUE TO FEDERAL REGULATION TITLE 49, PART 192.181, C.P.S. MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA.

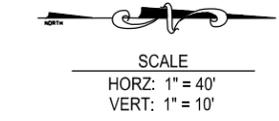
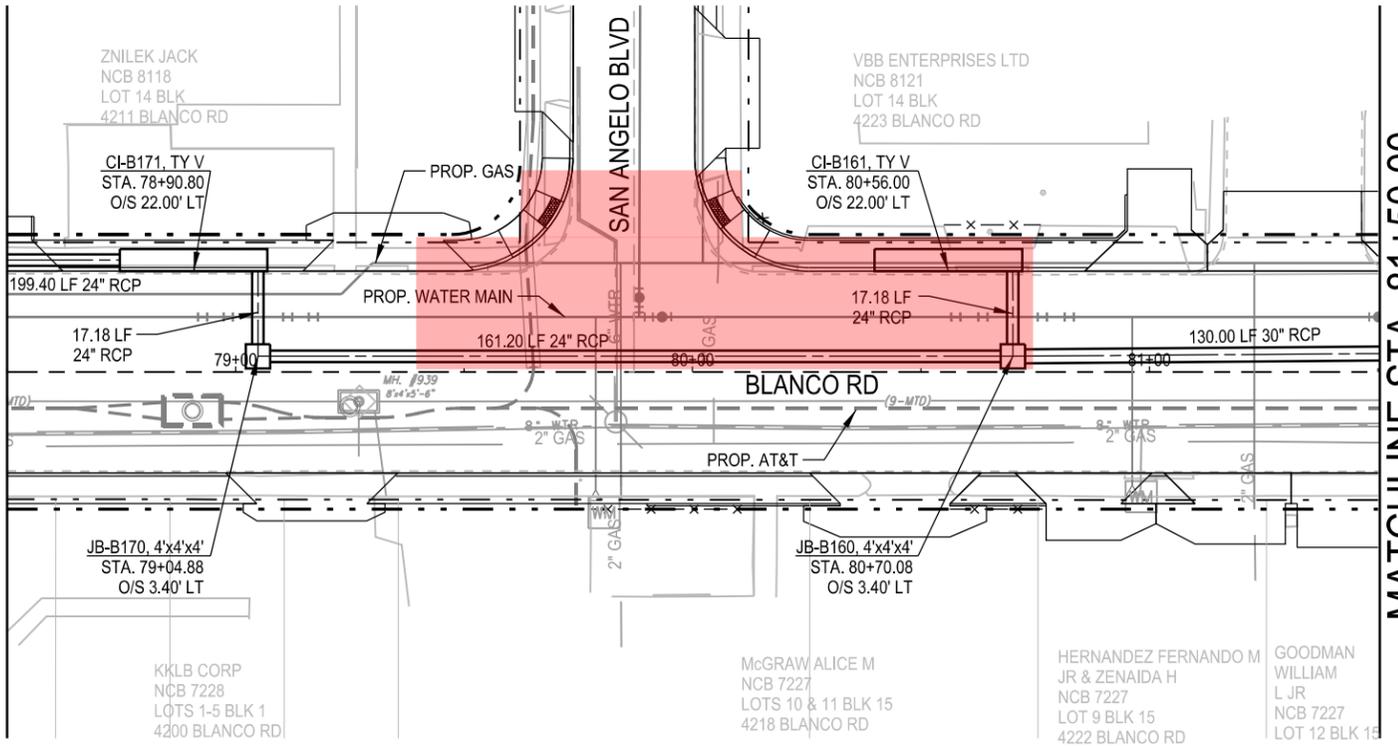
THE CONTRACTOR WILL BE RESPONSIBLE FOR PROTECTING C.P.S. OVERHEAD AND UNDERGROUND ELECTRIC FACILITIES IF ADJACENT TO WORK AREAS.

THE CONTRACTOR WILL HAVE RESPONSIBILITY TO PROTECT AND SUPPORT CABLE TV AND TELEPHONE COMPANY PLANT DURING CONSTRUCTION.

THE EXISTENCE AND LOCATION OF UTILITIES INDICATED ON THE PLAN ARE TAKEN FROM AVAILABLE RECORDS AND ARE NOT GUARANTEED TO BE ACCURATE.

CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) IN ORDER TO DEVELOP THE CONTRACTOR'S PLANS TO IMPLEMENT THE PROJECT DESCRIBED IN THE CONTRACT COUMDNTS. THE CONTRACTOR'S PLANS SHALL PROVIDE FOR ADEQUATE TRENCH SAFETY SYSTEMS THAT COMPLY WITH, AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL DEVELOP AND IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION

MATCHLINE STA 78+50.00



PLAN VIEW LEGEND

- CI = CURB INLET
- JB = JUNCTION BOX
- MH = MANHOLE
- TI = TRAFFIC INLET
- PROPOSED STRUCTURE
- PROPOSED CURB
- - - EXIST EDGE OF ROADWAY
- - - EXISTING FEATURES
- - - EXISTING RIGHT OF WAY
- - - PROPOSED RIGHT OF WAY
- UG TEL — UNDGR TELEPHONE
- X GAS — GAS LINE
- X SS — SANITARY SEWER LINE
- X WTR — WATER LINE
- UG FO — UNDGR FIBER OPTIC
- x - x - FENCE

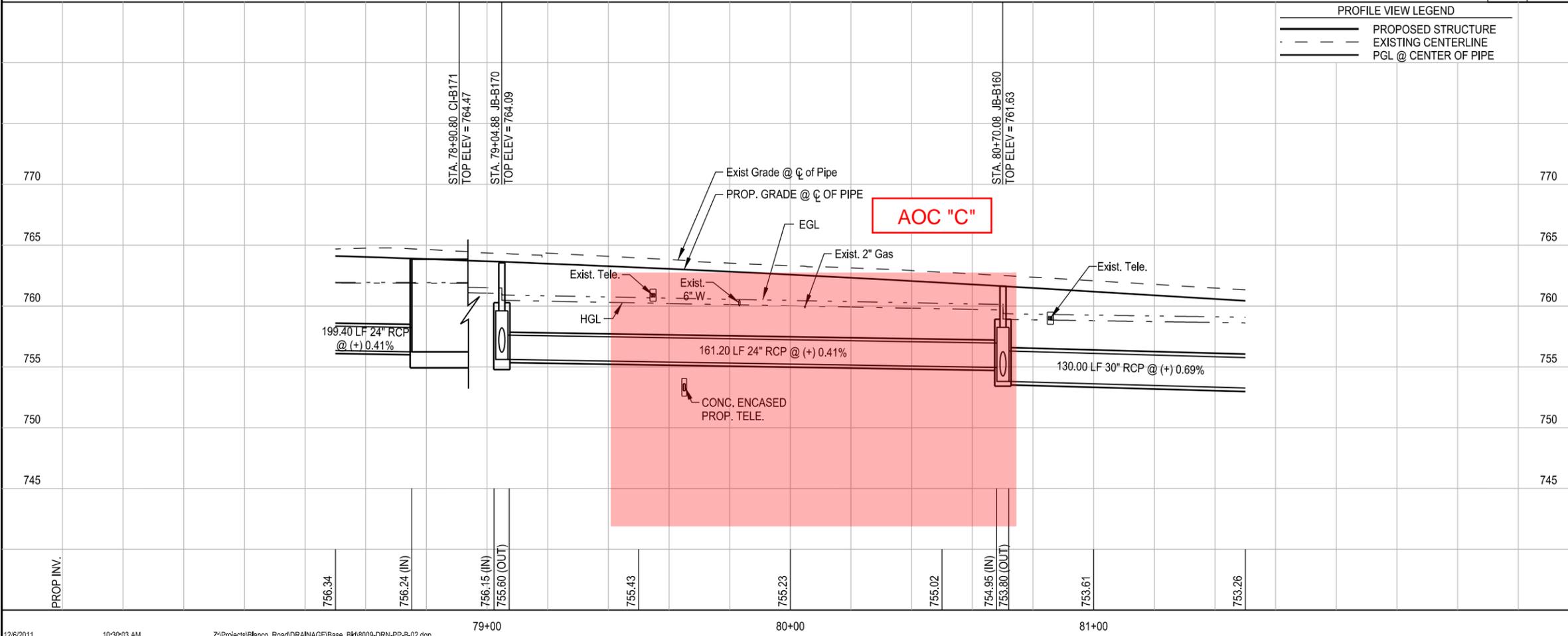
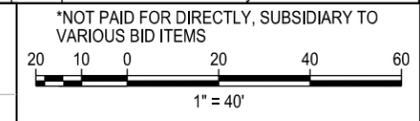
FINAL	EST	UNIT	DESCRIPTION
	302.2	CY	Excavation, Trenching and Backfilling*
	220.78	LF	Reinforced Concrete Pipe (24") Class III
	77.92	LF	Reinforced Concrete Pipe (30") Class III
	2	EA	Junction Box 4'x4'x4'
	2	EA	Inlet (TY V)
	25.9	CY	Gravel Subgrade Filler
	28.3	CY	Flowable Backfill
	298.70	LF	Trench Excavation Safety Protection

PROPOSED WATER, SANITARY SEWER, TELEPHONE, AND GAS UTILITIES SHOWN ARE APPROXIMATE. SEE RELEVANT PLANS FOR DETAILS.

SYSTEM B

PROFILE VIEW LEGEND

- PROPOSED STRUCTURE
- - - EXISTING CENTERLINE
- PGL @ CENTER OF PIPE



CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS
MANAGEMENT SERVICES
DEPARTMENT

BLANCO ROAD SEG 3 BASE BID

FIGURE 3
AOC "C"

FOR LOCATION OF UNDERGROUND ELECTRIC AND GAS FACILITIES, TELEPHONE CABLES, AND TIME WARNER CABLE TV CALL TEXAS STATE WIDE ONE CALL LOCATOR NUMBER 1-800-545-6005 48 HOURS PRIOR BEFORE BEGINNING ANY EXCAVATION.

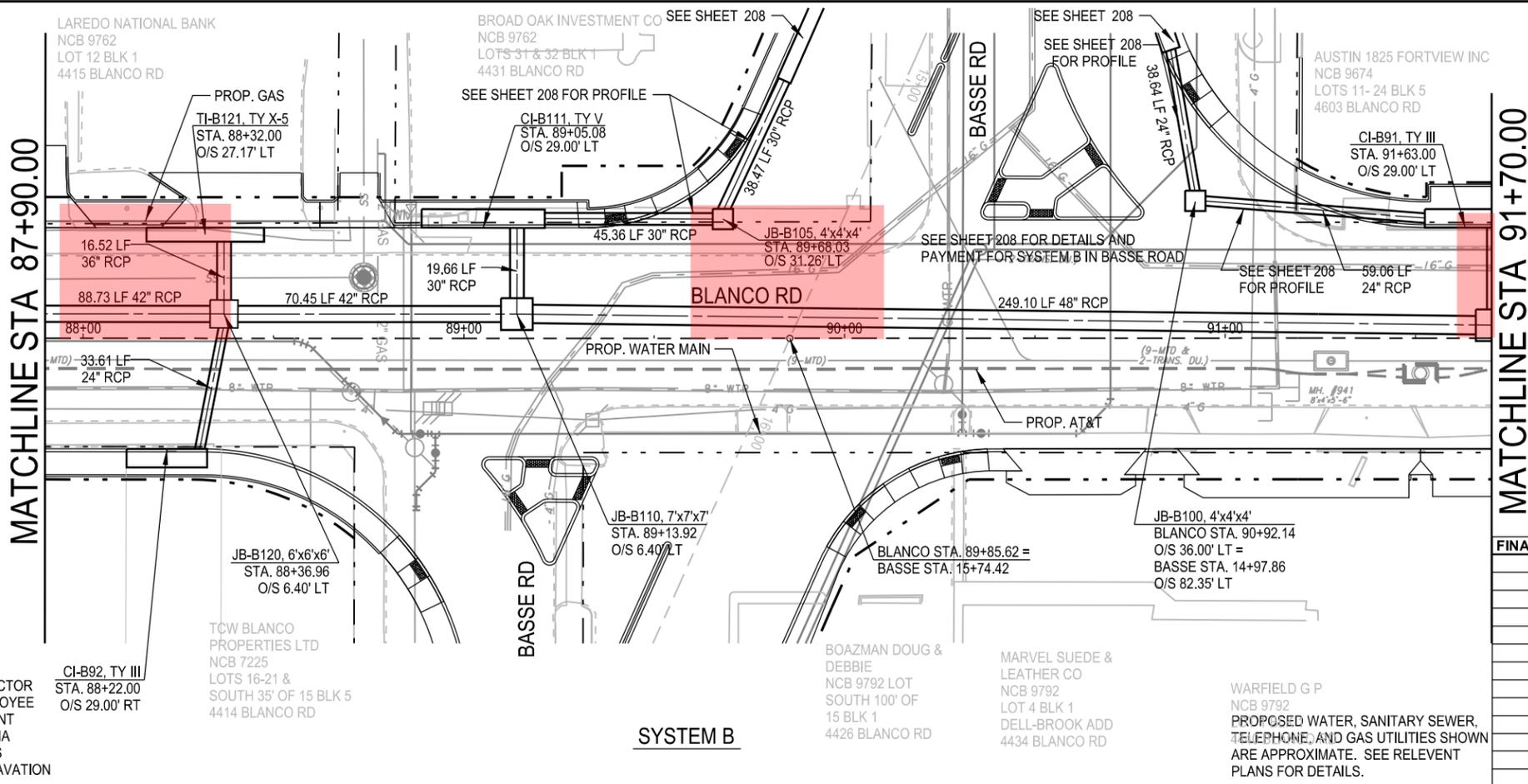
DUE TO FEDERAL REGULATION TITLE 49, PART 192.181, C.P.S. MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA.

THE CONTRACTOR WILL BE RESPONSIBLE FOR PROTECTING C.P.S. OVERHEAD AND UNDERGROUND ELECTRIC FACILITIES IF ADJACENT TO WORK AREAS.

THE CONTRACTOR WILL HAVE RESPONSIBILITY TO PROTECT AND SUPPORT CABLE TV AND TELEPHONE COMPANY PLANT DURING CONSTRUCTION.

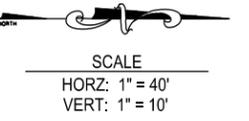
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PLAN VIEW LEGEND

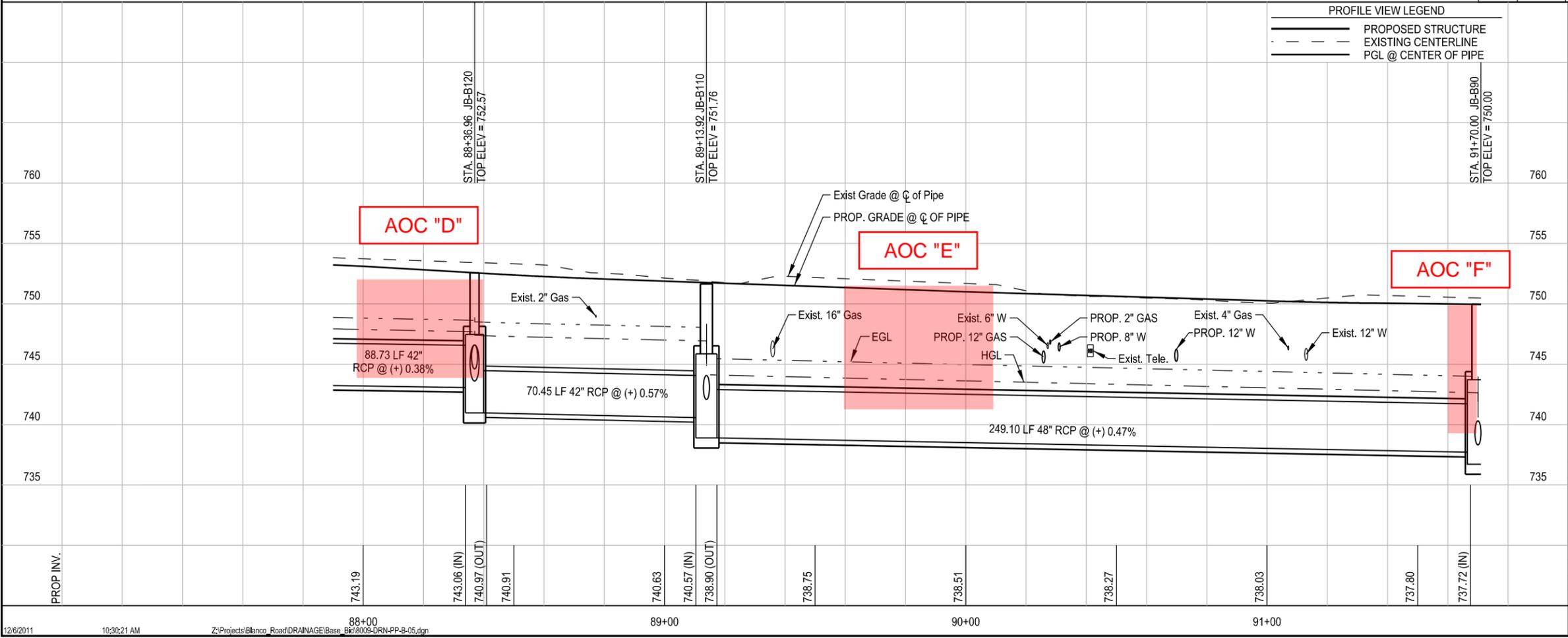
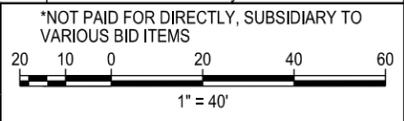
- CI = CURB INLET
- JB = JUNCTION BOX
- MH = MANHOLE
- TI = TRAFFIC INLET
- PROPOSED STRUCTURE
- PROPOSED CURB
- EXISTING EDGE OF ROADWAY
- EXISTING FEATURES
- EXISTING RIGHT OF WAY
- PROPOSED RIGHT OF WAY
- UG TEL = UNDGR TELEPHONE
- X GAS = GAS LINE
- X SS = SANITARY SEWER LINE
- X WTR = WATER LINE
- UG FO = UNDGR FIBER OPTIC
- FENCE



FINAL	EST	UNIT	DESCRIPTION
	120.4	CY	Excavation, Trenching and Backfilling*
	33.61	LF	Reinforced Concrete Pipe (24") Class III
	36.20	LF	Reinforced Concrete Pipe (36") Class III
	114.42	LF	Reinforced Concrete Pipe (42") Class III
	249.10	LF	Reinforced Concrete Pipe (48") Class IV
	1	EA	Junction Box 6'x6'x6'
	2	EA	Inlet (TY III)
	1	EA	Inlet (TY V)
	1	EA	Ty X-5
	64.5	CY	Gravel Subgrade Filler
	215.3	CY	Flowable Backfill
	433.33	LF	Trench Excavation Safety Protection

PROFILE VIEW LEGEND

- PROPOSED STRUCTURE
- EXISTING CENTERLINE
- PGL @ CENTER OF PIPE



MAESTAS & ASSOCIATES, INC.
 11550 IH 10 WEST, STE. 320 SAN ANTONIO, TX 78230
 (210) 366-1988 (210) 366-1980 fax TBPE No.: F-333

**CITY OF SAN ANTONIO
 CAPITAL IMPROVEMENTS
 MANAGEMENT SERVICES
 DEPARTMENT**

BLANCO ROAD SEG 3 BASE BID

**FIGURE 4
 AOC "D", "E" & "F"**

FOR LOCATION OF UNDERGROUND ELECTRIC AND GAS FACILITIES, TELEPHONE CABLES, AND TIME WARNER CABLE TV CALL TEXAS STATE WIDE ONE CALL LOCATOR NUMBER 1-800-545-6005 48 HOURS PRIOR BEFORE BEGINNING ANY EXCAVATION.

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AUSTIN 1825 FORTVIEW INC
NCB 9674
LOTS 11- 24 BLK 5
4603 BLANCO RD

CI-B85, TY I
STA. 94+87.00
O/S 22.00' LT

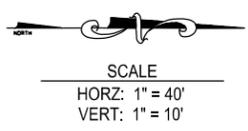
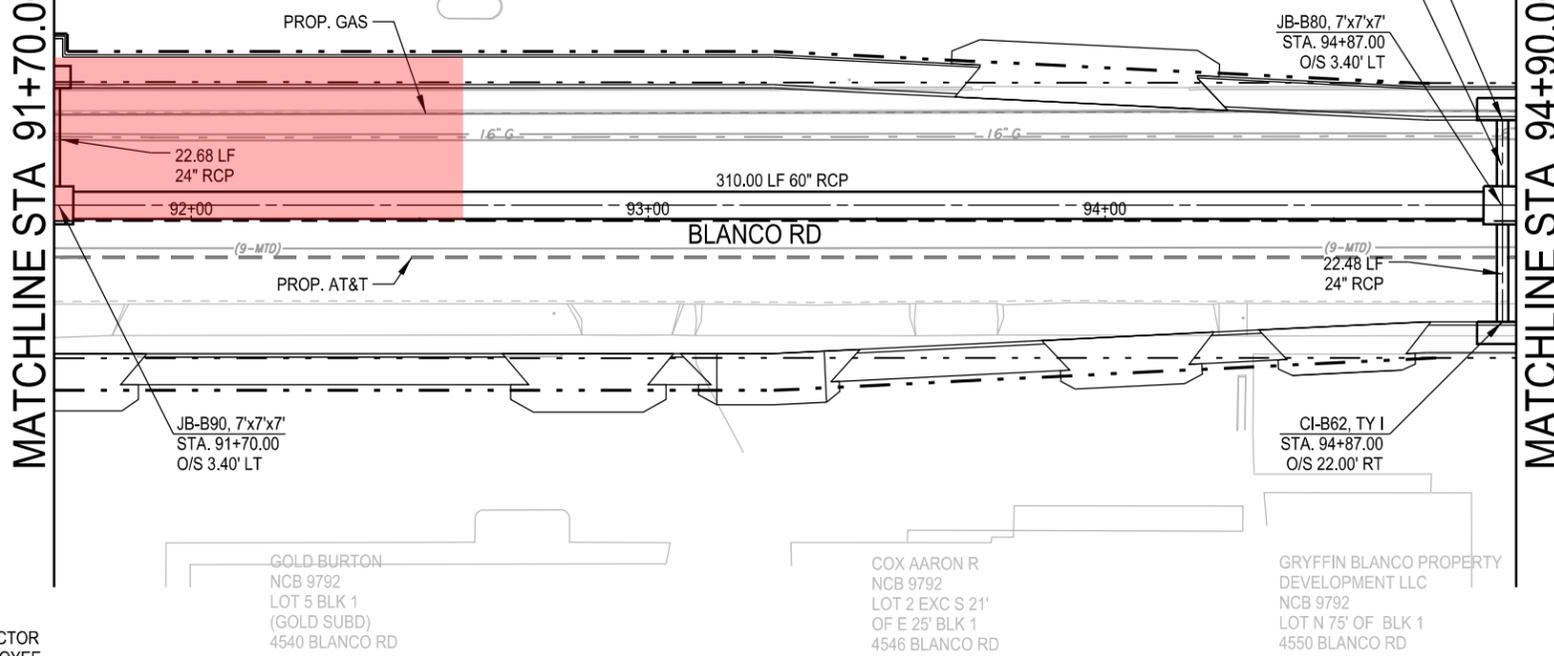
15.68 LF 24" RCP

JB-B80, 7'x7'x7'
STA. 94+87.00
O/S 3.40' LT

CI-B62, TY I
STA. 94+87.00
O/S 22.00' RT

MATCHLINE STA 91+70.00

MATCHLINE STA 94+90.00



PLAN VIEW LEGEND

- CI = CURB INLET
- JB = JUNCTION BOX
- MH = MANHOLE
- TI = TRAFFIC INLET
- PROPOSED STRUCTURE
- PROPOSED CURB
- EXIST EDGE OF ROADWAY
- EXISTING FEATURES
- EXISTING RIGHT OF WAY
- PROPOSED RIGHT OF WAY
- UG TEL = UNDGR TELEPHONE
- X GAS = GAS LINE
- X SS = SANITARY SEWER LINE
- X WTR = WATER LINE
- UG FO = UNDGR FIBER OPTIC
- FENCE

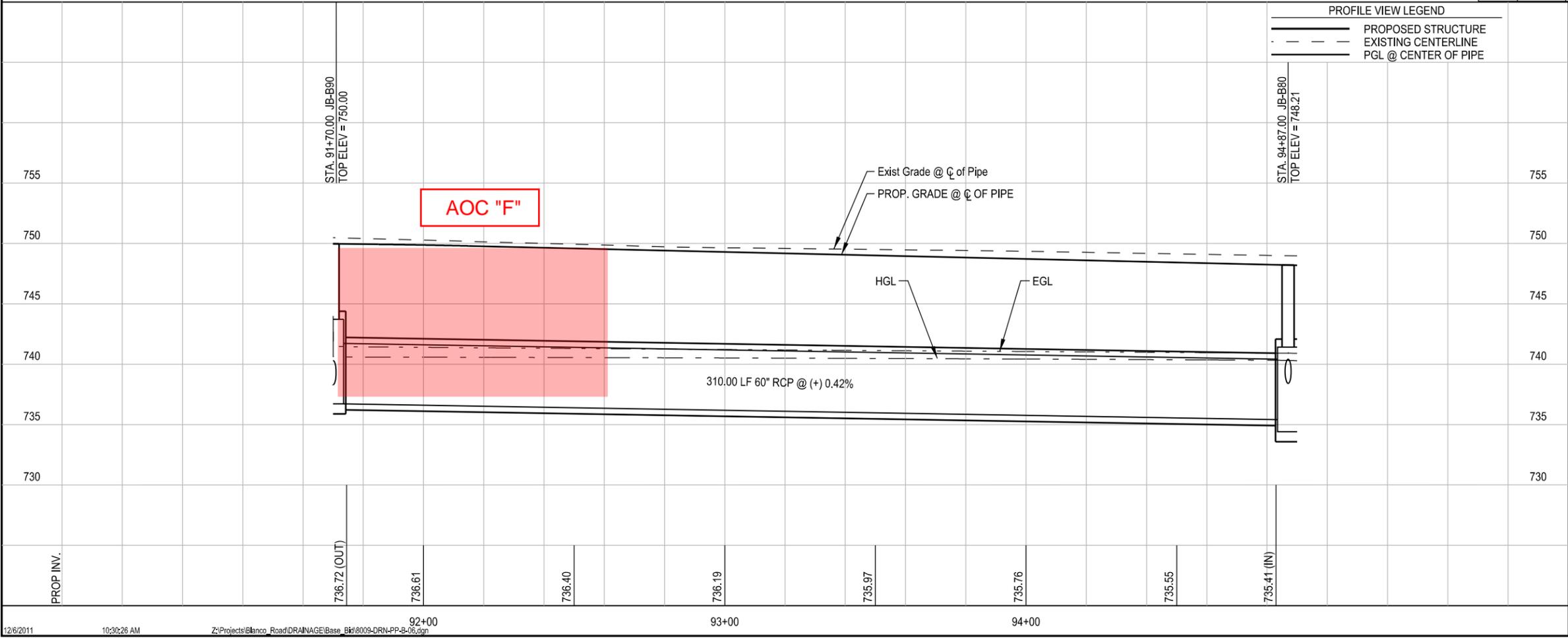
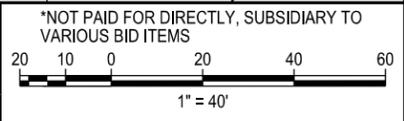
FINAL	EST	UNIT	DESCRIPTION
	1754.6	CY	Excavation, Trenching and Backfilling*
	38.16	LF	Reinforced Concrete Pipe (24") Class III
	22.68	LF	Reinforced Concrete Pipe (36") Class III
	310.00	LF	Reinforced Concrete Pipe (60") Class III
	2	EA	Junction Box 7'x7'x7'
	2	EA	Inlet (TY I)
	68.6	CY	Gravel Subgrade Filler
	266.4	CY	Flowable Backfill
	370.84	LF	Trench Excavation Safety Protection

PROPOSED WATER, SANITARY SEWER, TELEPHONE, AND GAS UTILITIES SHOWN ARE APPROXIMATE. SEE RELEVANT PLANS FOR DETAILS.

SYSTEM B

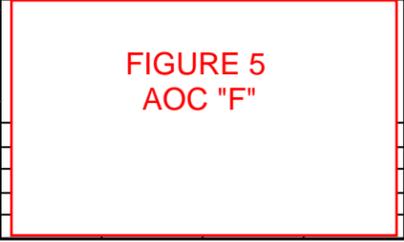
PROFILE VIEW LEGEND

- PROPOSED STRUCTURE
- EXISTING CENTERLINE
- PGL @ CENTER OF PIPE



CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS
MANAGEMENT SERVICES
DEPARTMENT

BLANCO ROAD SEG 3 BASE BID



FOR LOCATION OF UNDERGROUND ELECTRIC AND GAS FACILITIES, TELEPHONE CABLES, AND TIME WARNER CABLE TV CALL TEXAS STATE WIDE ONE CALL LOCATOR NUMBER 1-800-545-6005 48 HOURS PRIOR BEFORE BEGINNING ANY EXCAVATION.

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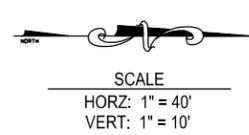
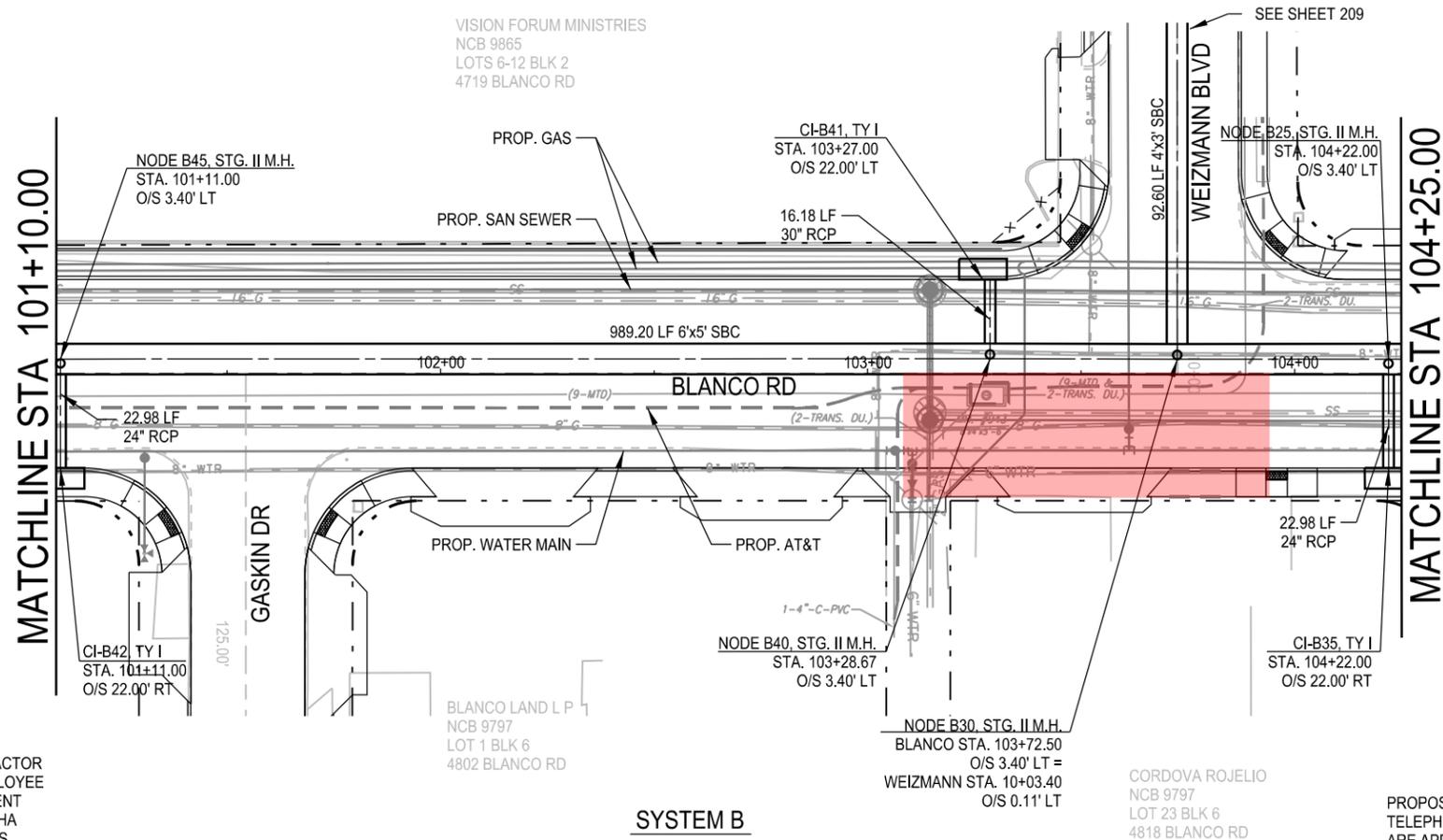
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VISION FORUM MINISTRIES
NCB 9865
LOTS 6-12 BLK 2
4719 BLANCO RD



PLAN VIEW LEGEND

- CI = CURB INLET
- JB = JUNCTION BOX
- MH = MANHOLE
- TI = TRAFFIC INLET
- PROPOSED STRUCTURE
- PROPOSED CURB
- - - - EXIST EDGE OF ROADWAY
- - - - EXISTING FEATURES
- - - - EXISTING RIGHT OF WAY
- - - - PROPOSED RIGHT OF WAY
- UG TEL — UNDGR TELEPHONE
- X GAS — GAS LINE
- X SS — SANITARY SEWER LINE
- X WTR — WATER LINE
- UG FO — UNDGR FIBER OPTIC
- x - x - x - FENCE

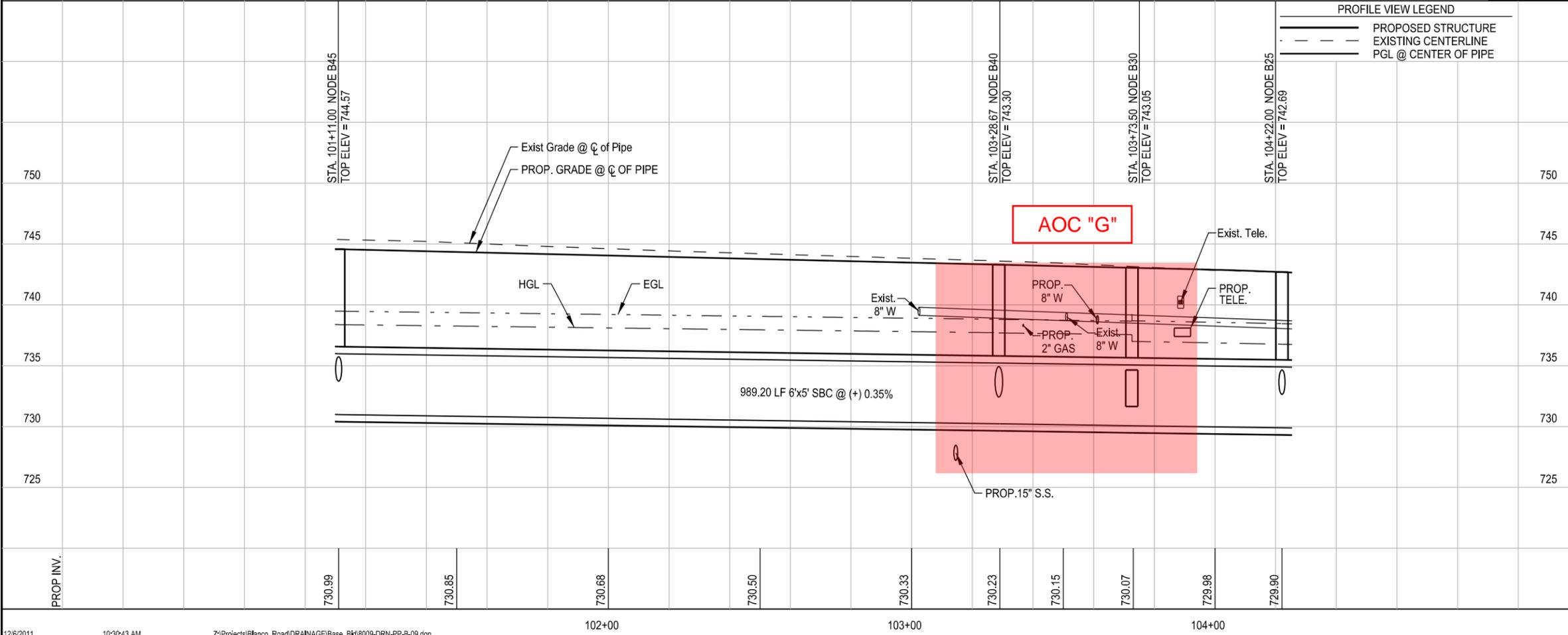
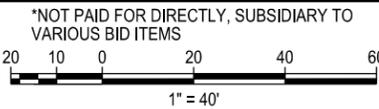
FINAL	EST	UNIT	DESCRIPTION
	1875	CY	Box Culvert Excavation & Backfill
	315.00	LF	Precast Concrete Culvert (6'x5')
	112.4	CY	Excavation, Trenching and Backfilling*
	45.96	LF	Reinforced Concrete Pipe (24") Class III
	16.18	LF	Reinforced Concrete Pipe (30") Class III
	4	EA	Stg. II Manhole
	3	EA	Inlet (TY I)
	70.5	CY	Gravel Subgrade Filler
	5.9	CY	Flowable Backfill
	377.14	LF	Trench Excavation Safety Protection

PROPOSED WATER, SANITARY SEWER, TELEPHONE, AND GAS UTILITIES SHOWN ARE APPROXIMATE. SEE RELEVANT PLANS FOR DETAILS.

SYSTEM B

PROFILE VIEW LEGEND

- PROPOSED STRUCTURE
- - - - EXISTING CENTERLINE
- PGL @ CENTER OF PIPE



CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS
MANAGEMENT SERVICES
DEPARTMENT

BLANCO ROAD SEG 3 BASE BID

FIGURE 6
AOC "G"

FOR LOCATION OF UNDERGROUND ELECTRIC AND GAS FACILITIES, TELEPHONE CABLES, AND TIME WARNER CABLE TV CALL TEXAS STATE WIDE ONE CALL LOCATOR NUMBER 1-800-545-6005 48 HOURS PRIOR BEFORE BEGINNING ANY EXCAVATION.

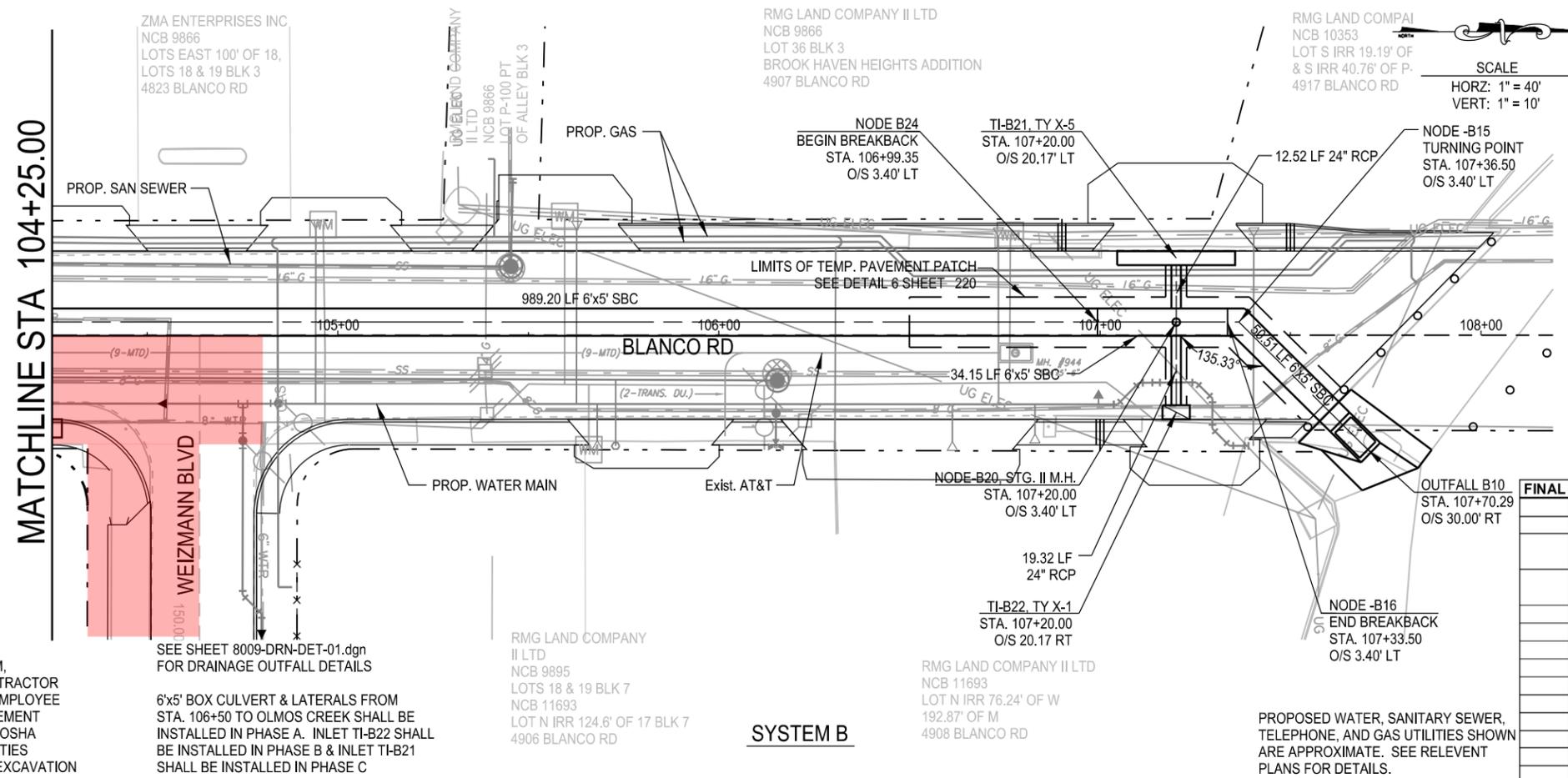
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THE CONTRACTOR WILL HAVE RESPONSIBILITY TO PROTECT AND SUPPORT CABLE TV AND TELEPHONE COMPANY PLANT DURING CONSTRUCTION.

THE EXISTENCE AND LOCATION OF UTILITIES INDICATED ON THE PLAN ARE TAKEN FROM AVAILABLE RECORDS AND ARE NOT GUARANTEED TO BE ACCURATE.

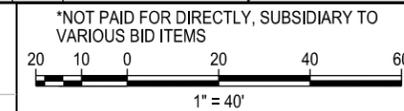
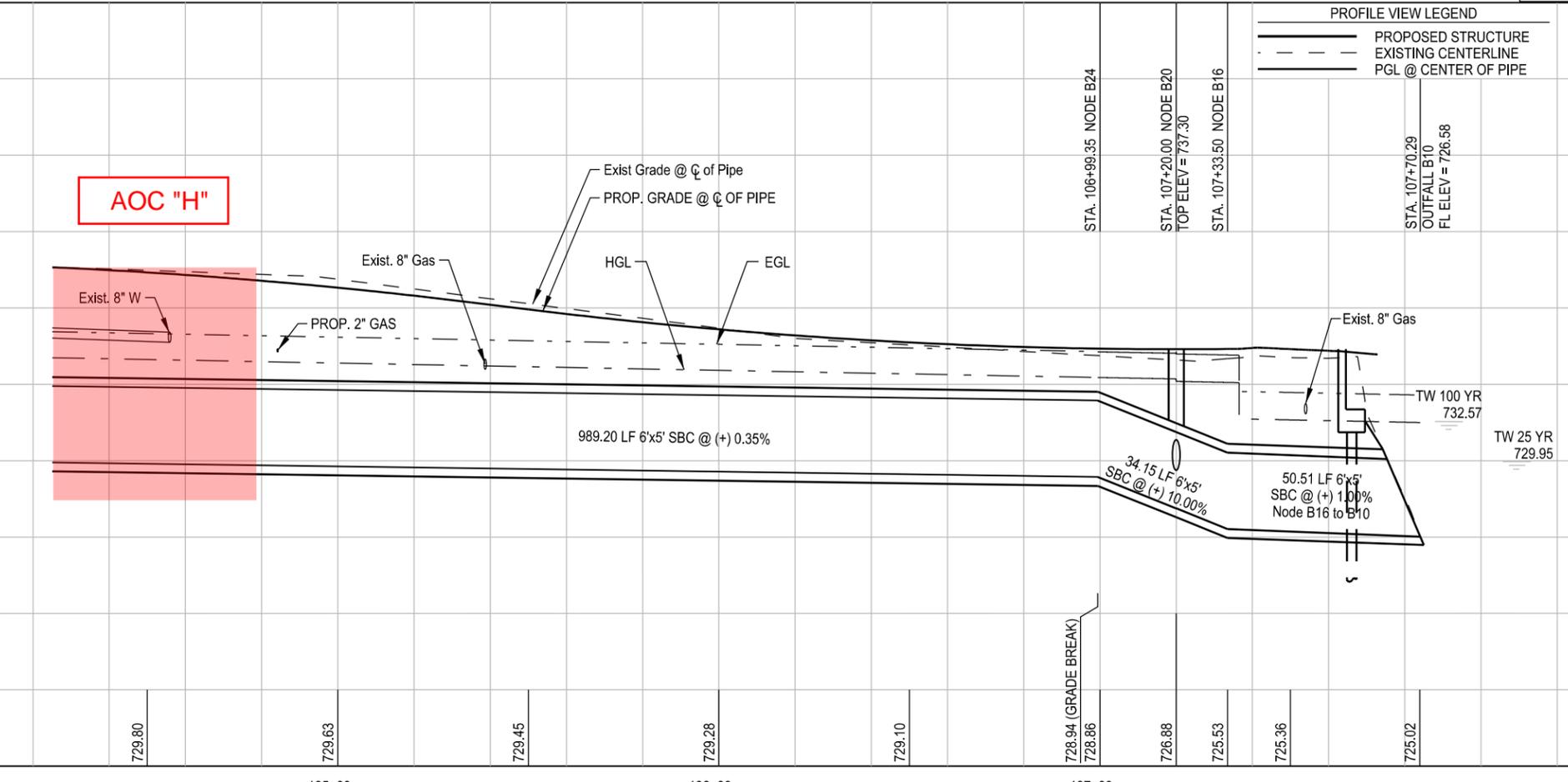
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PLAN VIEW LEGEND

- CI = CURB INLET
- JB = JUNCTION BOX
- MH = MANHOLE
- TI = TRAFFIC INLET
- PROPOSED STRUCTURE
- PROPOSED CURB
- - - - EXISTING EDGE OF ROADWAY
- - - - EXISTING FEATURES
- - - - EXISTING RIGHT OF WAY
- - - - PROPOSED RIGHT OF WAY
- UG TEL — UNDGR TELEPHONE
- X GAS — GAS LINE
- X SS — SANITARY SEWER LINE
- X WTR — WATER LINE
- UG FO — UNDGR FIBER OPTIC
- x - x - FENCE

FINAL	EST	UNIT	DESCRIPTION
	1676	CY	Box Culvert Excavation & Backfill
	19	GAL	Tack Coat
	191	SY	Hot Mix Asphaltic Pavement, Ty D (2.5" Compacted Depth)
	175	SY	Hot Mix Asphaltic Pavement, Ty B (7.5" Compacted Depth)
	362.01	LF	Precast Concrete Culvert (6'x5')
	41.0	CY	Excavation, Trenching and Backfilling*
	31.84	LF	Reinforced Concrete Pipe (24") Class III
	1	EA	Stg. II Manhole
	1	EA	Ty X-1
	1	EA	Ty X-5
	77.4	CY	Gravel Subgrade Filler
	2.6	CY	Flowable Backfill
	63.3	SY	Concrete Riprap (5" Thick)
	393.85	LF	Trench Excavation Safety Protection

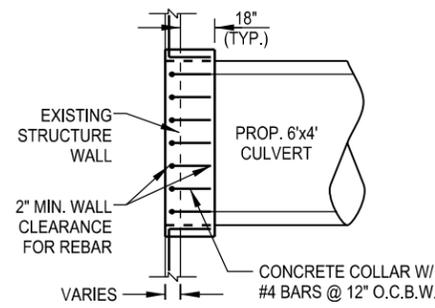


CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS
MANAGEMENT SERVICES
DEPARTMENT

BLANCO ROAD SEG 3 BASE BID

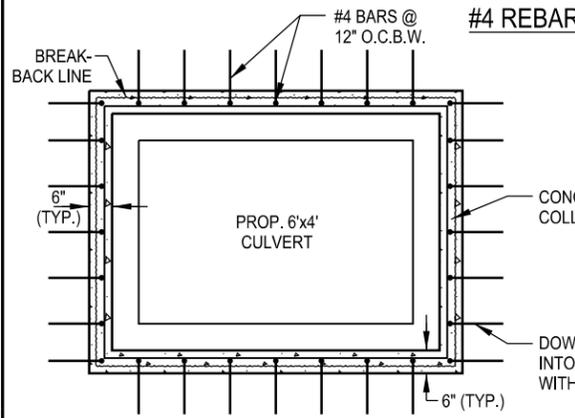
**FIGURE 7
AOC "H"**

FIGURES 8 THROUGH 16
ALTERNATE BID
ENVIRONMENTAL AREAS OF CONCERN
"I" THROUGH "W"

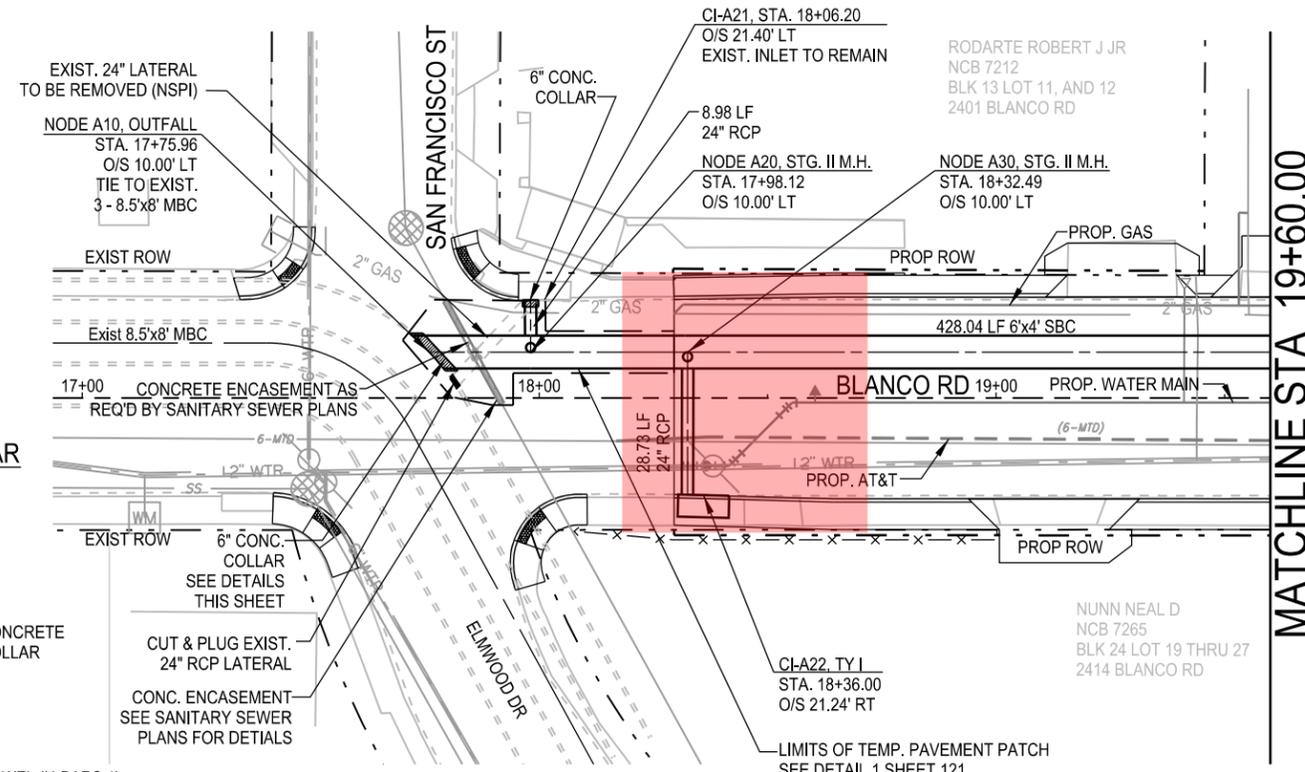


CONCRETE COLLAR PLAN
NOT TO SCALE

NOTE: CONTRACTOR SHALL MAINTAIN A 12" EMBEDMENT ON ALL REBAR.



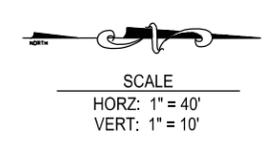
CONCRETE COLLAR SECTION
NOT TO SCALE



SYSTEM A

NOTE: CONNECTION FOR PROPOSED 6x4 BOX CULVERT AND 24" RCP TO EXISTING STRUCTURES SHALL BE SUBSIDIARY TO 6x4 BOX CULVERT AND 24" RCP

PROPOSED WATER, SANITARY SEWER, TELEPHONE, AND GAS UTILITIES SHOWN ARE APPROXIMATE. SEE RELEVANT PLANS FOR DETAILS.



PLAN VIEW LEGEND

CI	= CURB INLET	PROPOSED STRUCTURE
JB	= JUNCTION BOX	PROPOSED CURB
MH	= MANHOLE	EXISTING EDGE OF ROADWAY
TI	= TRAFFIC INLET	EXISTING FEATURES
		EXISTING RIGHT OF WAY
		PROPOSED RIGHT OF WAY
UG TEL	= UNDGR TELEPHONE	
X GAS	= GAS LINE	
X SS	= SANITARY SEWER LINE	
X WTR	= WATER LINE	
UG FO	= UNDGR FIBER OPTIC	
-x-x-x-	= FENCE	

FINAL	EST	UNIT	DESCRIPTION
	1069	CY	Box Culvert Excavation & Backfill
	9	GAL	Tack Coat
	89	SY	Hot Mix Asphaltic Pavement, Ty B (7.5" Compacted Depth)
	184.04	LF	Precast Concrete Culvert (6'x4')
	67.6	CY	Excavation, Trenching and Backfilling*
	37.71	LF	Reinforced Concrete Pipe (24") Class III
	2	EA	Stg. II Manhole
	1	EA	Inlet (TY I)
	41.1	CY	Gravel Subgrade Filler
	3.1	CY	Flowable Backfill
	221.75	LF	Trench Excavation Safety Protection

FOR LOCATION OF UNDERGROUND ELECTRIC AND GAS FACILITIES, TELEPHONE CABLES, AND TIME WARNER CABLE TV CALL TEXAS STATE WIDE ONE CALL LOCATOR NUMBER 1-800-545-6005 48 HOURS PRIOR BEFORE BEGINNING ANY EXCAVATION.

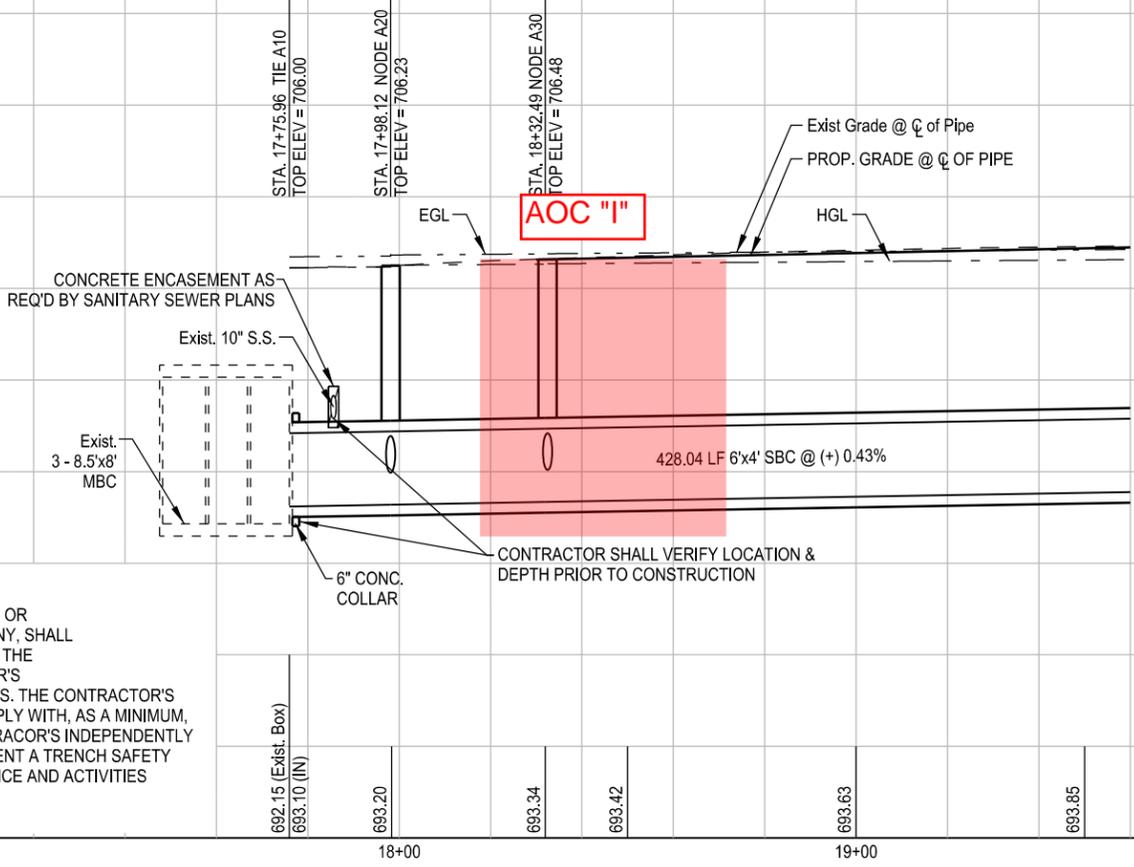
710 DUE TO FEDERAL REGULATION TITLE 49, PART 192.181, C.P.S. MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA.

705 THE CONTRACTOR WILL BE RESPONSIBLE FOR PROTECTING C.P.S. OVERHEAD AND UNDERGROUND ELECTRIC FACILITIES IF ADJACENT TO WORK AREAS.

700 THE CONTRACTOR WILL HAVE RESPONSIBILITY TO PROTECT AND SUPPORT CABLE TV AND TELEPHONE COMPANY PLANT DURING CONSTRUCTION.

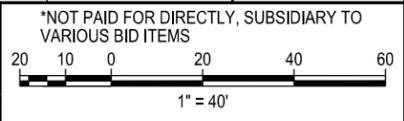
695 THE EXISTENCE AND LOCATION OF UTILITIES INDICATED ON THE PLAN ARE TAKEN FROM AVAILABLE RECORDS AND ARE NOT GUARANTEED TO BE ACCURATE.

690 CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) IN ORDER TO DEVELOP THE CONTRACTOR'S PLANS TO IMPLEMENT THE PROJECT DESCRIBED IN THE CONTRACT COUMDNITS. THE CONTRACTOR'S PLANS SHALL PROVIDE FOR ADEQUATE TRENCH SAFETY SYSTEMS THAT COMPLY WITH, AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL DEVELOP AND IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.



PROFILE VIEW LEGEND

—	PROPOSED STRUCTURE
- - -	EXISTING CENTERLINE
—	PGL @ CENTER OF PIPE



**CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS
MANAGEMENT SERVICES
DEPARTMENT**

BLANCO ROAD SEG 1 ADD. ALT. 1

**FIGURE 8
AOC "I"**

FOR LOCATION OF UNDERGROUND ELECTRIC AND GAS FACILITIES, TELEPHONE CABLES, AND TIME WARNER CABLE TV CALL TEXAS STATE WIDE ONE CALL LOCATOR NUMBER 1-800-545-6005 48 HOURS PRIOR BEFORE BEGINNING ANY EXCAVATION.

DUE TO FEDERAL REGULATION TITLE 49, PART 192.181, C.P.S. MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA.

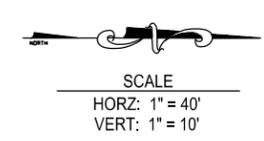
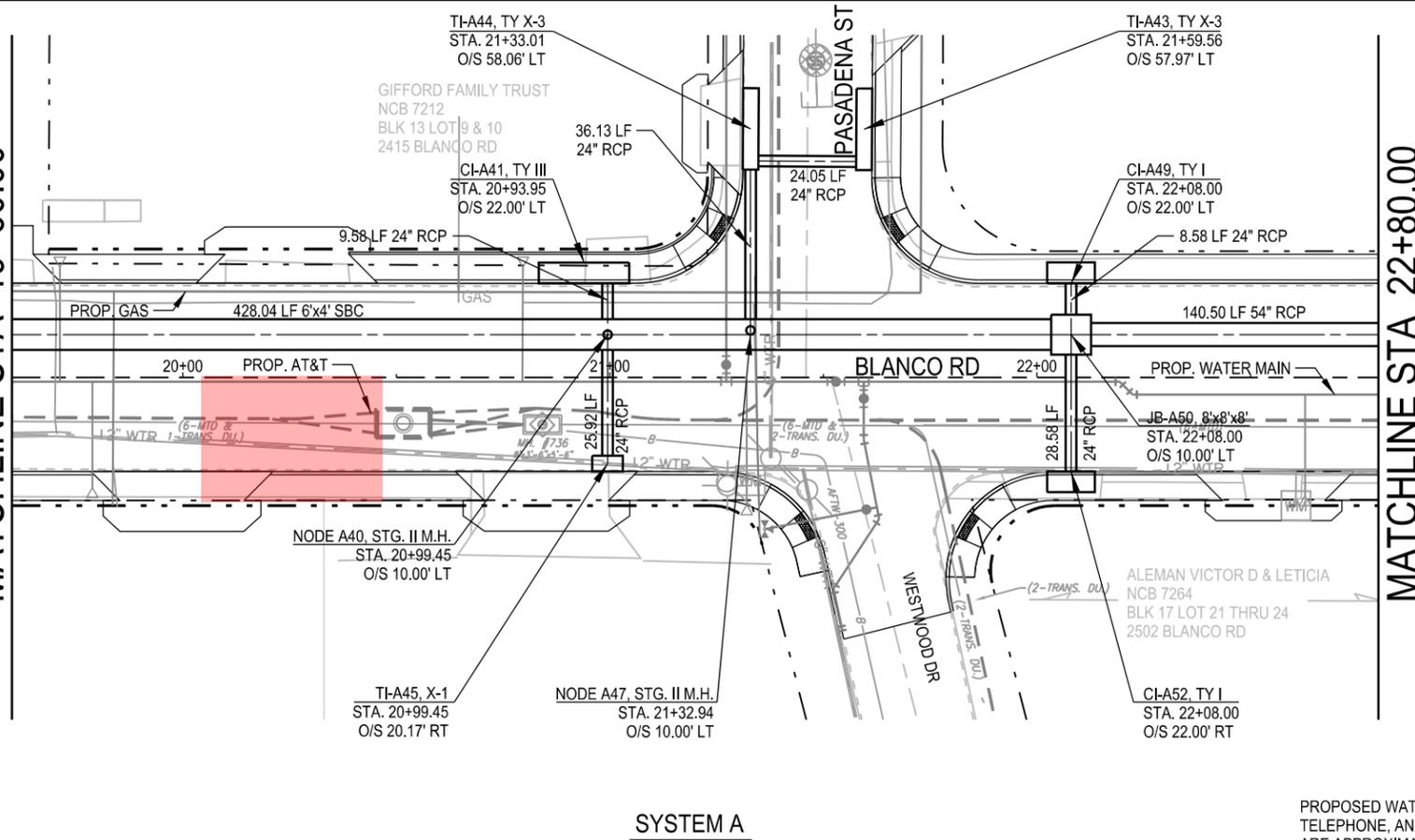
THE CONTRACTOR WILL BE RESPONSIBLE FOR PROTECTING C.P.S. OVERHEAD AND UNDERGROUND ELECTRIC FACILITIES IF ADJACENT TO WORK AREAS.

THE CONTRACTOR WILL HAVE RESPONSIBILITY TO PROTECT AND SUPPORT CABLE TV AND TELEPHONE COMPANY PLANT DURING CONSTRUCTION.

THE EXISTENCE AND LOCATION OF UTILITIES INDICATED ON THE PLAN ARE TAKEN FROM AVAILABLE RECORDS AND ARE NOT GUARANTEED TO BE ACCURATE.

CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) IN ORDER TO DEVELOP THE CONTRACTOR'S PLANS TO IMPLEMENT THE PROJECT DESCRIBED IN THE CONTRACT COUMDNTS. THE CONTRACTOR'S PLANS SHALL PROVIDE FOR ADEQUATE TRENCH SAFETY SYSTEMS THAT COMPLY WITH, AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL DEVELOP AND IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION

MATCHLINE STA 19+60.00



PLAN VIEW LEGEND

- CI = CURB INLET
- JB = JUNCTION BOX
- MH = MANHOLE
- TI = TRAFFIC INLET
- PROPOSED STRUCTURE
- PROPOSED CURB
- EXIST EDGE OF ROADWAY
- EXISTING FEATURES
- EXISTING RIGHT OF WAY
- PROPOSED RIGHT OF WAY
- UG TEL = UNDGR TELEPHONE
- X GAS = GAS LINE
- X SS = SANITARY SEWER LINE
- X WTR = WATER LINE
- UG FO = UNDGR FIBER OPTIC
- FENCE

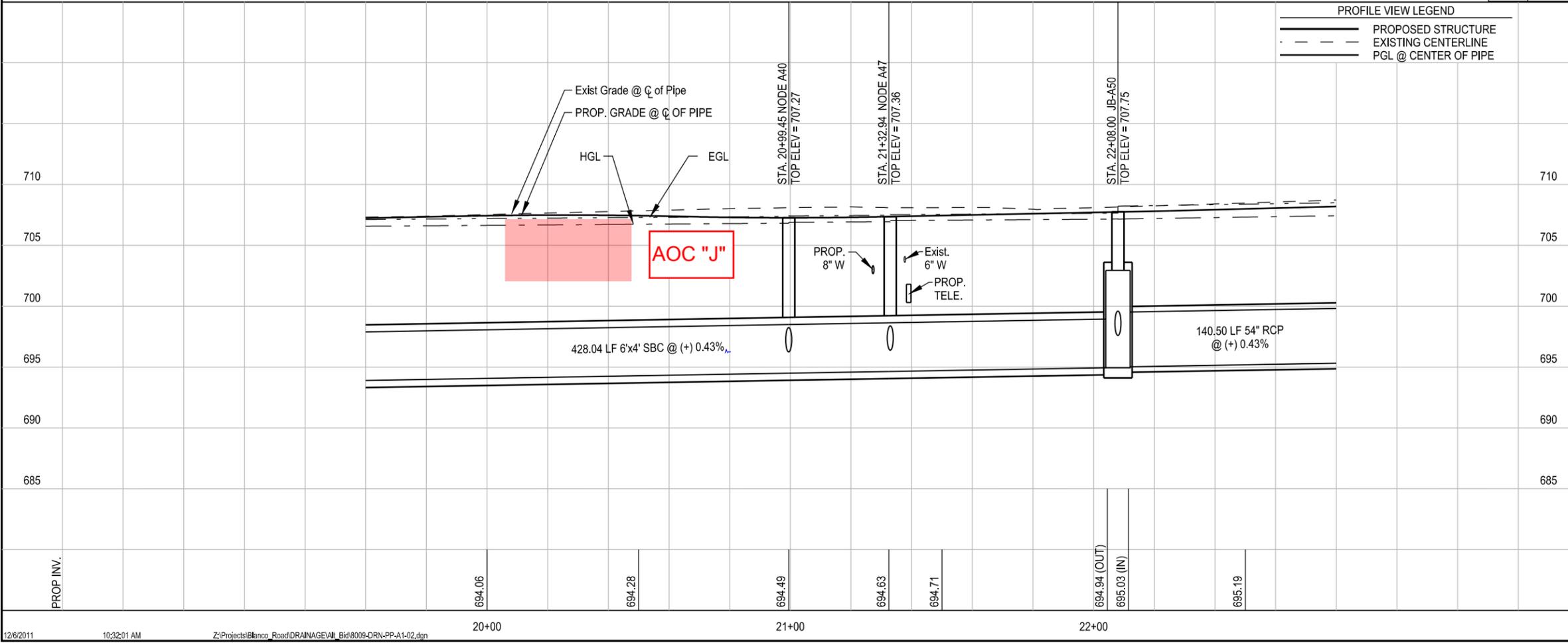
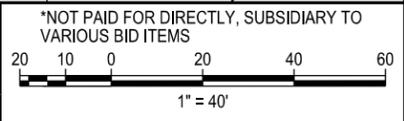
FINAL	EST	UNIT	DESCRIPTION
	1370	CY	Box Culvert Excavation & Backfill
	244.00	LF	Precast Concrete Culvert (6'x4')
	546.7	CY	Excavation, Trenching and Backfilling*
	133.00	LF	Reinforced Concrete Pipe (24") Class III
	68.00	LF	Reinforced Concrete Pipe (54") Class III
	1	EA	Junction Box 8'x8'x8'
	2	EA	Stg. II Manhole
	2	EA	Inlet (TY I)
	1	EA	Inlet (TY III)
	1	EA	Ty X-1
	2	EA	Ty X-3
	73.1	CY	Gravel Subgrade Filler
	55.7	CY	Flowable Backfill
	445.00	LF	Trench Excavation Safety Protection

PROPOSED WATER, SANITARY SEWER, TELEPHONE, AND GAS UTILITIES SHOWN ARE APPROXIMATE. SEE RELEVANT PLANS FOR DETAILS.

SYSTEM A

PROFILE VIEW LEGEND

- PROPOSED STRUCTURE
- EXISTING CENTERLINE
- PGL @ CENTER OF PIPE



CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS
MANAGEMENT SERVICES
DEPARTMENT

BLANCO ROAD SEG 1 ADD. ALT. 1

FIGURE 9
AOC "J"

FOR LOCATION OF UNDERGROUND ELECTRIC AND GAS FACILITIES, TELEPHONE CABLES, AND TIME WARNER CABLE TV CALL TEXAS STATE WIDE ONE CALL LOCATOR NUMBER 1-800-545-6005 48 HOURS PRIOR BEFORE BEGINNING ANY EXCAVATION.

DUE TO FEDERAL REGULATION TITLE 49, PART 192.181, C.P.S. MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA.

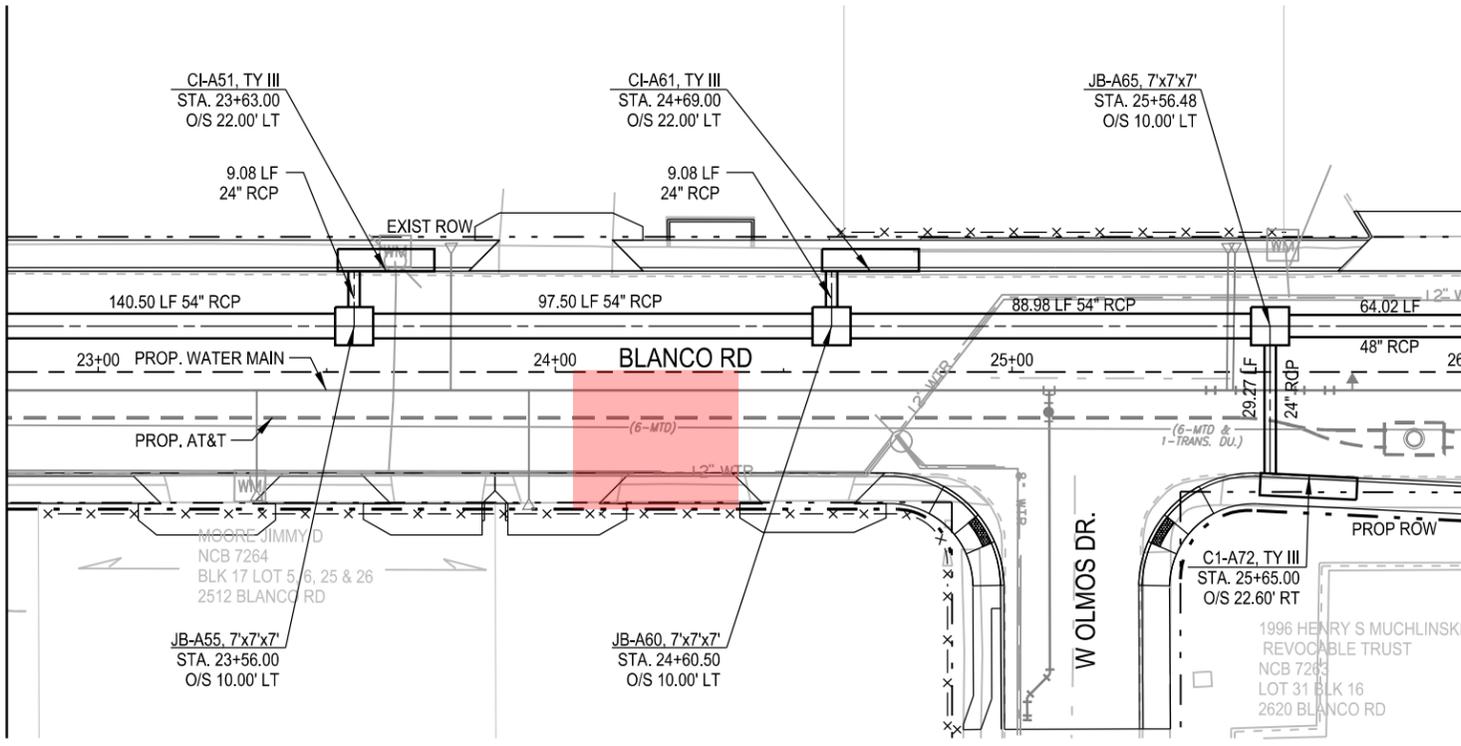
THE CONTRACTOR WILL BE RESPONSIBLE FOR PROTECTING C.P.S. OVERHEAD AND UNDERGROUND ELECTRIC FACILITIES IF ADJACENT TO WORK AREAS.

THE CONTRACTOR WILL HAVE RESPONSIBILITY TO PROTECT AND SUPPORT CABLE TV AND TELEPHONE COMPANY PLANT DURING CONSTRUCTION.

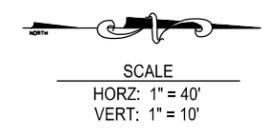
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MATCHLINE STA 22+80.00



MATCHLINE STA 26+00.00



PLAN VIEW LEGEND

- CI = CURB INLET
- JB = JUNCTION BOX
- MH = MANHOLE
- TI = TRAFFIC INLET
- PROPOSED STRUCTURE
- PROPOSED CURB
- - - EXIST EDGE OF ROADWAY
- - - EXISTING FEATURES
- - - EXISTING RIGHT OF WAY
- - - PROPOSED RIGHT OF WAY
- UG TEL — UNDGR TELEPHONE
- X GAS — GAS LINE
- X SS — SANITARY SEWER LINE
- X WTR — WATER LINE
- UG FO — UNDGR FIBER OPTIC
- x - x - x - FENCE

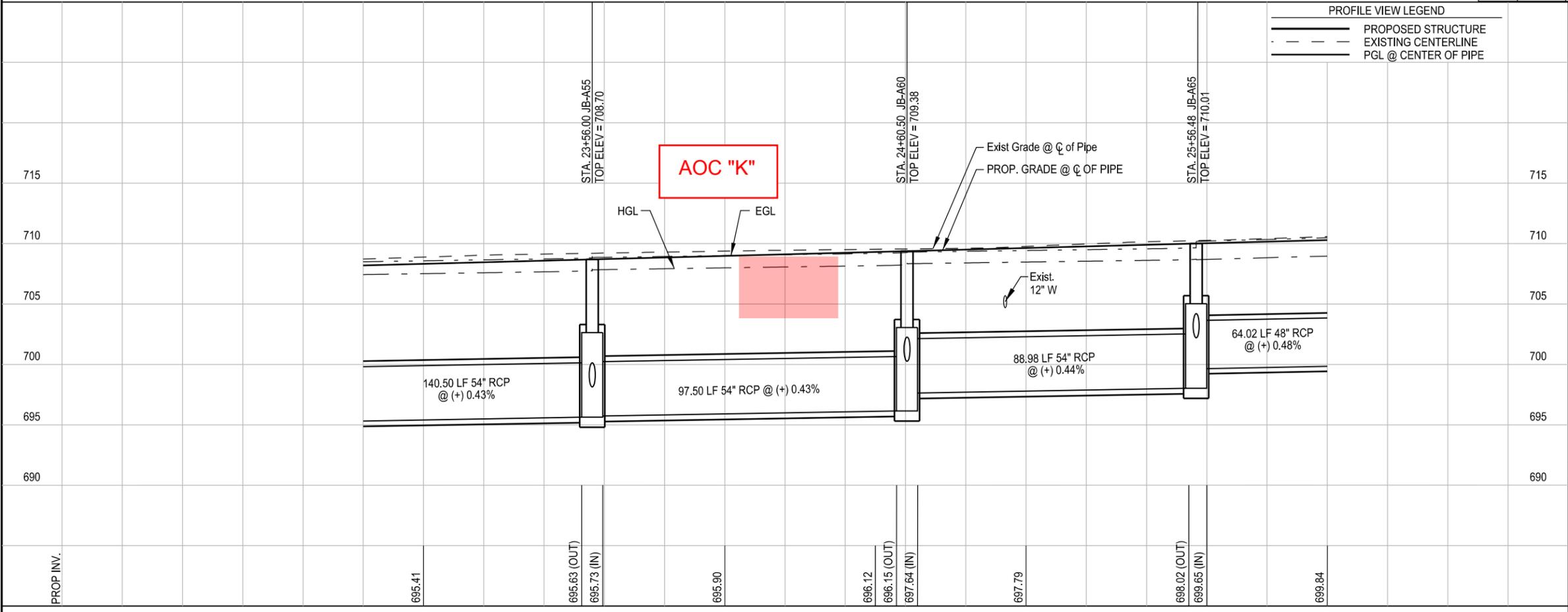
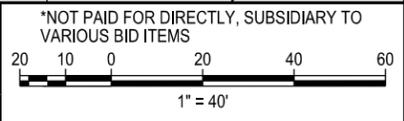
SYSTEM A

PROPOSED WATER, SANITARY SEWER, TELEPHONE, AND GAS UTILITIES SHOWN ARE APPROXIMATE. SEE RELEVANT PLANS FOR DETAILS.

FINAL	EST	UNIT	DESCRIPTION
	1420.8	CY	Excavation, Trenching and Backfilling*
	47.43	LF	Reinforced Concrete Pipe (24") Class III
	40.02	LF	Reinforced Concrete Pipe (48") Class IV
	258.98	LF	Reinforced Concrete Pipe (54") Class III
	3	EA	Junction Box 7'x7'x7'
	3	EA	Inlet (TY III)
	55.5	CY	Gravel Subgrade Filler
	197.8	CY	Flowable Backfill
	346.43	LF	Trench Excavation Safety Protection

PROFILE VIEW LEGEND

- PROPOSED STRUCTURE
- - - EXISTING CENTERLINE
- PGL @ CENTER OF PIPE



CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS
MANAGEMENT SERVICES
DEPARTMENT

BLANCO ROAD SEG 1 ADD. ALT. 1

FIGURE 10
AOC "K"

FOR LOCATION OF UNDERGROUND ELECTRIC AND GAS FACILITIES, TELEPHONE CABLES, AND TIME WARNER CABLE TV CALL TEXAS STATE WIDE ONE CALL LOCATOR NUMBER 1-800-545-6005 48 HOURS PRIOR BEFORE BEGINNING ANY EXCAVATION.

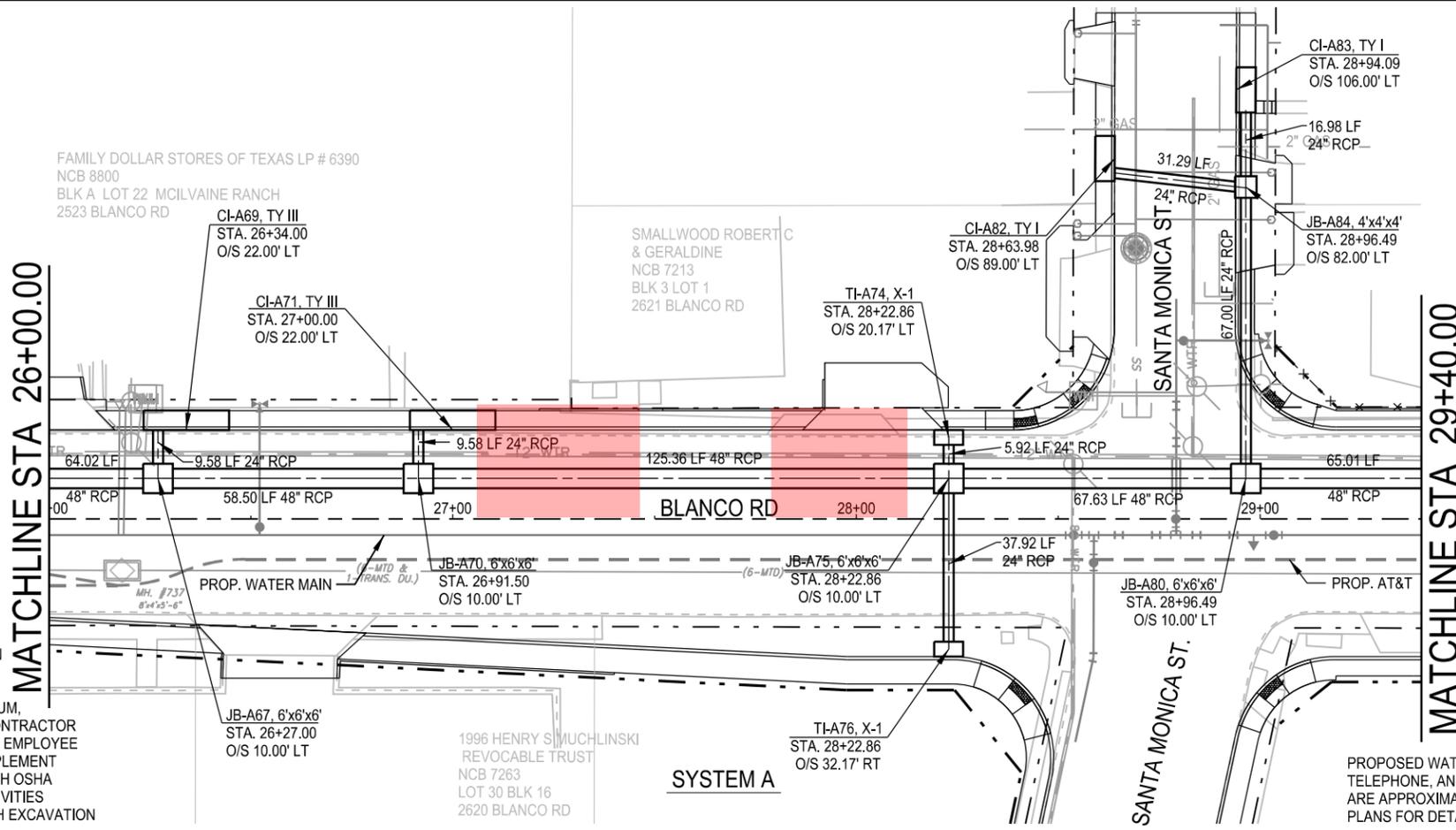
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- PROPOSED STRUCTURE
- PROPOSED CURB
- EXIST EDGE OF ROADWAY
- EXISTING FEATURES
- EXISTING RIGHT OF WAY
- PROPOSED RIGHT OF WAY
- UG TEL = UNDGR TELEPHONE
- X GAS = GAS LINE
- X SS = SANITARY SEWER LINE
- X WTR = WATER LINE
- UG FO = UNDGR FIBER OPTIC
- FENCE

SCALE
HORIZ: 1" = 40'
VERT: 1" = 10'

FINAL	EST	UNIT	DESCRIPTION
	1402.9	CY	Excavation, Trenching and Backfilling*
	178.34	LF	Reinforced Concrete Pipe (24") Class III
	316.00	LF	Reinforced Concrete Pipe (48") Class IV
	1	EA	Junction Box 4'x4'x4'
	4	EA	Junction Box 6'x6'x6'
	2	EA	Inlet (TY I)
	2	EA	Inlet (TY III)
	2	EA	Ty X-1
	66.0	CY	Gravel Subgrade Filler
	201.8	CY	Flowable Backfill
	494.34	LF	Trench Excavation Safety Protection

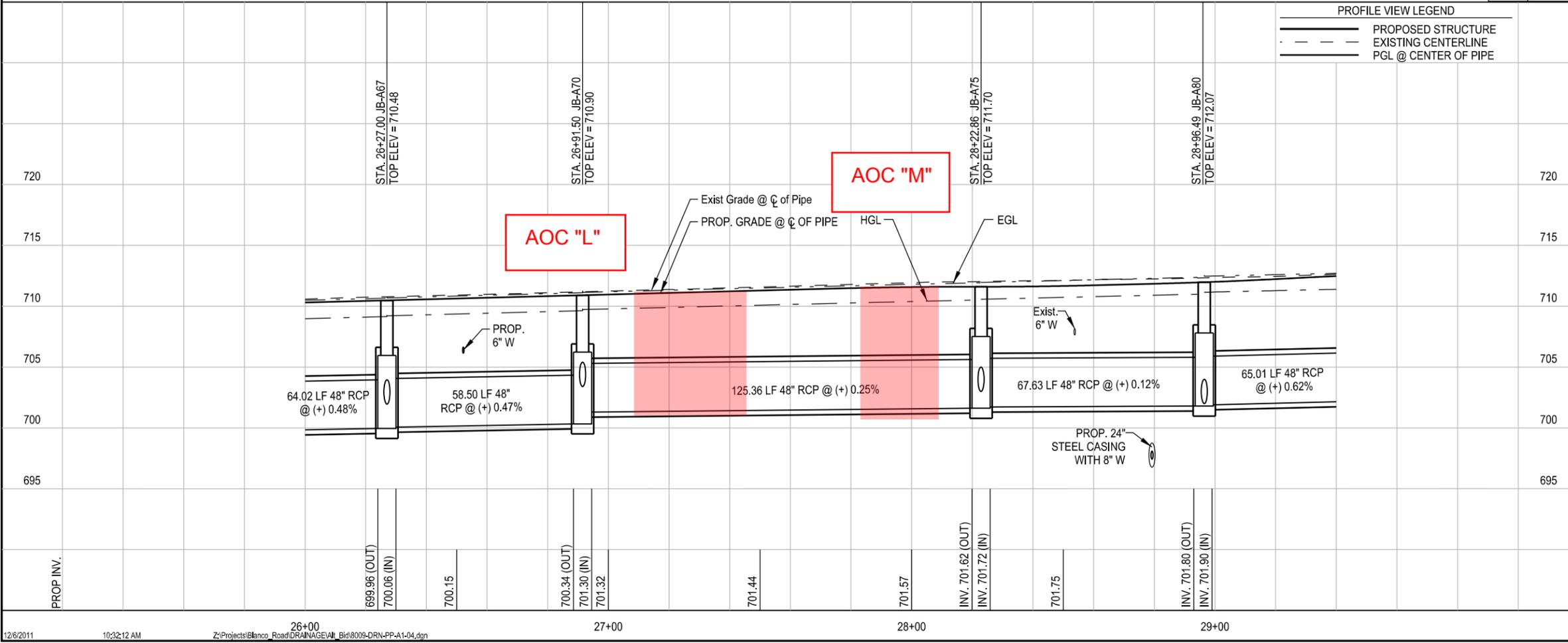
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PROFILE VIEW LEGEND

- PROPOSED STRUCTURE
- EXISTING CENTERLINE
- PGL @ CENTER OF PIPE

*NOT PAID FOR DIRECTLY, SUBSIDIARY TO VARIOUS BID ITEMS

1" = 40'



MAESTAS
& ASSOCIATES, INC.
11550 IH 10 WEST, STE. 320 SAN ANTONIO, TX 78230
(210) 366-1988 (210) 366-1980 fax TBPE No.: F-333

CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS
MANAGEMENT SERVICES
DEPARTMENT

BLANCO ROAD SEG 1 ADD. ALT. 1

FIGURE 11
AOC "L" & "M"

FOR LOCATION OF UNDERGROUND ELECTRIC AND GAS FACILITIES, TELEPHONE CABLES, AND TIME WARNER CABLE TV CALL TEXAS STATE WIDE ONE CALL LOCATOR NUMBER 1-800-545-6005 48 HOURS PRIOR BEFORE BEGINNING ANY EXCAVATION.

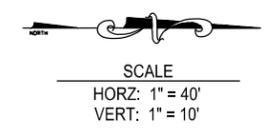
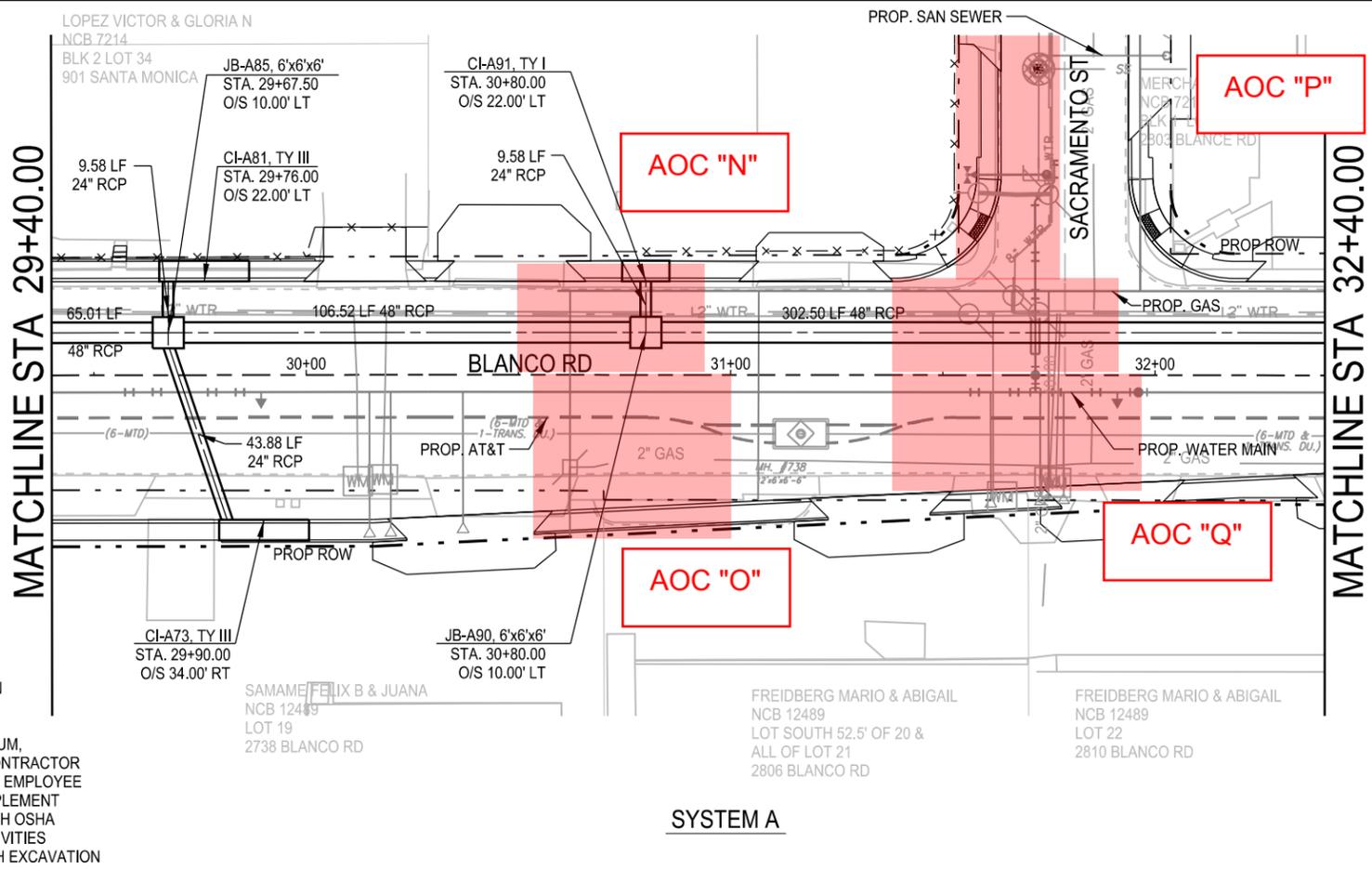
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PLAN VIEW LEGEND

- CI = CURB INLET
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- PROPOSED STRUCTURE
- PROPOSED CURB
- - - - EXIST EDGE OF ROADWAY
- - - - EXISTING FEATURES
- - - - EXISTING RIGHT OF WAY
- - - - PROPOSED RIGHT OF WAY
- UG TEL --- UNDGR TELEPHONE
- X-GAS- GAS LINE
- X-SS- SANITARY SEWER LINE
- X-WTR- WATER LINE
- UG FO --- UNDGR FIBER OPTIC
- x-x-x-x- FENCE

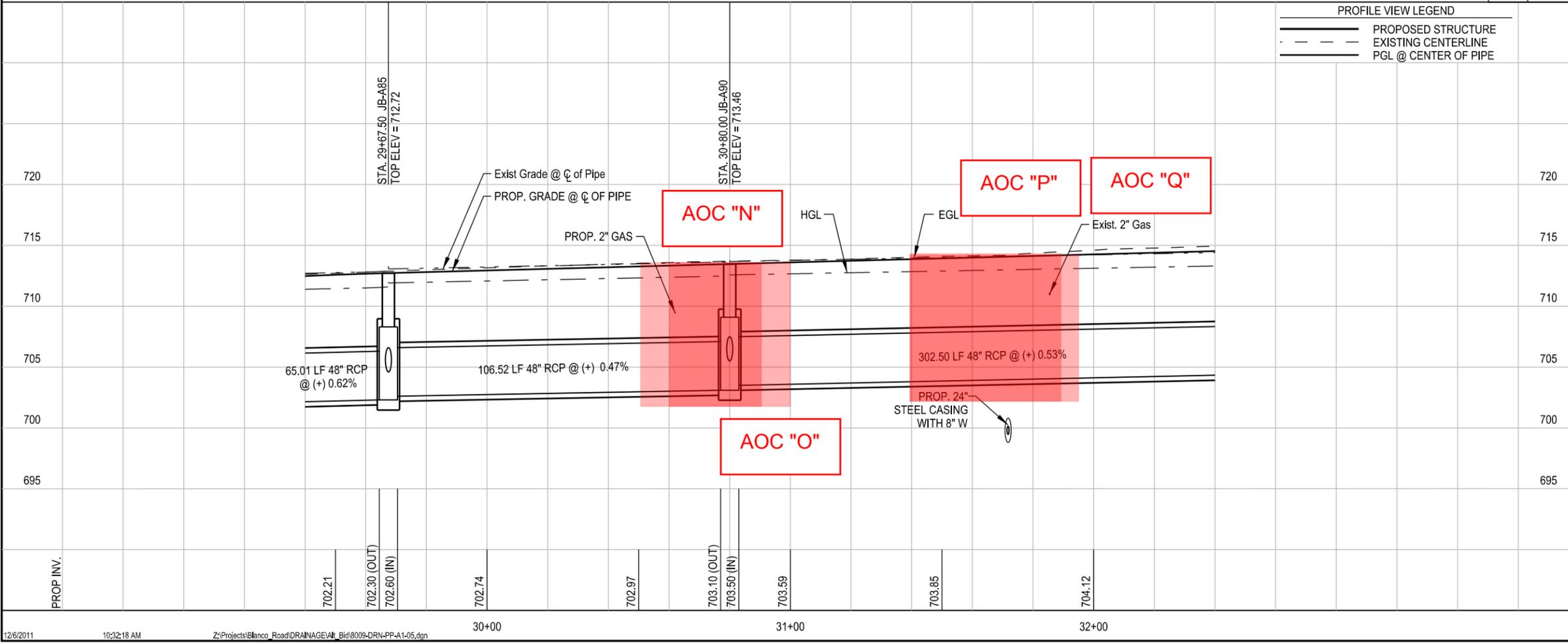
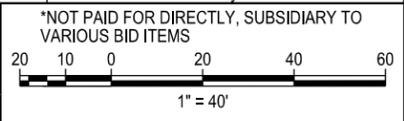
FINAL	EST	UNIT	DESCRIPTION
	1067.9	CY	Excavation, Trenching and Backfilling*
	63.04	LF	Reinforced Concrete Pipe (24") Class III
	288.02	LF	Reinforced Concrete Pipe (48") Class IV
	2	EA	Junction Box 6'x6'x6'
	1	EA	Inlet (TY I)
	2	EA	Inlet (TY III)
	52.1	CY	Gravel Subgrade Filler
	175.6	CY	Flowable Backfill
	351.06	LF	Trench Excavation Safety Protection

PROPOSED WATER, SANITARY SEWER, TELEPHONE, AND GAS UTILITIES SHOWN ARE APPROXIMATE. SEE RELEVANT PLANS FOR DETAILS.

SYSTEM A

PROFILE VIEW LEGEND

- PROPOSED STRUCTURE
- - - - EXISTING CENTERLINE
- PGL @ CENTER OF PIPE



CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS
MANAGEMENT SERVICES
DEPARTMENT

BLANCO ROAD SEG 1 ADD. ALT. 1

FIGURE 12
AOC "N", "O", "P" & "Q"

FOR LOCATION OF UNDERGROUND ELECTRIC AND GAS FACILITIES, TELEPHONE CABLES, AND TIME WARNER CABLE TV CALL TEXAS STATE WIDE ONE CALL LOCATOR NUMBER 1-800-545-6005 48 HOURS PRIOR BEFORE BEGINNING ANY EXCAVATION.

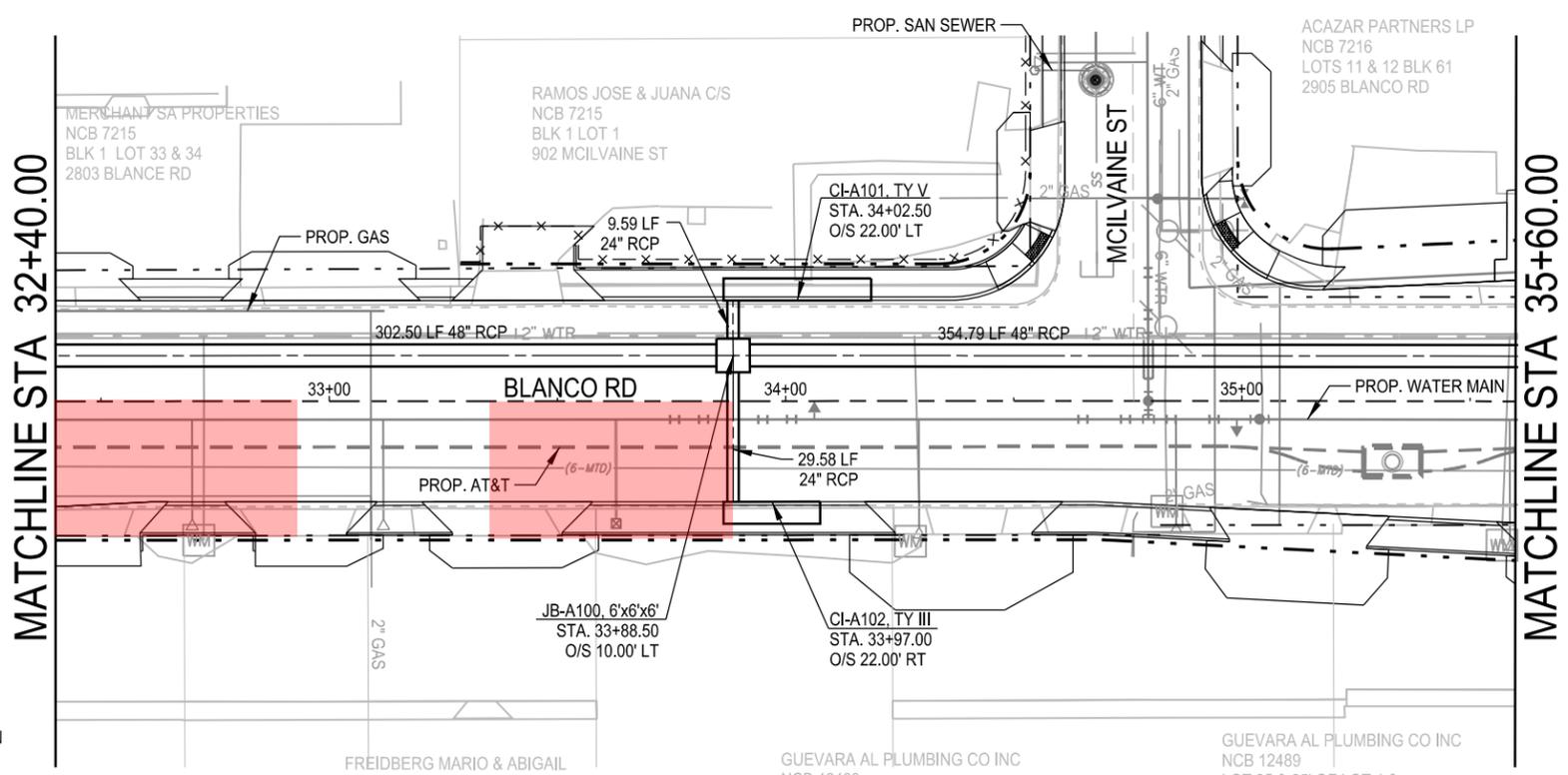
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PLAN VIEW LEGEND

- CI = CURB INLET
- JB = JUNCTION BOX
- MH = MANHOLE
- TI = TRAFFIC INLET

SCALE

HORZ: 1" = 40'
VERT: 1" = 10'

- PROPOSED STRUCTURE
- PROPOSED CURB
- - - EXIST EDGE OF ROADWAY
- - - EXISTING FEATURES
- - - EXISTING RIGHT OF WAY
- - - PROPOSED RIGHT OF WAY
- UG TEL — UNDGR TELEPHONE
- X GAS — GAS LINE
- X SS — SANITARY SEWER LINE
- X WTR — WATER LINE
- UG FO — UNDGR FIBER OPTIC
- x - x - x - FENCE

FINAL	EST	UNIT	DESCRIPTION
	1146.2	CY	Excavation, Trenching and Backfilling*
	39.17	LF	Reinforced Concrete Pipe (24") Class III
	314.00	LF	Reinforced Concrete Pipe (48") Class IV
	1	EA	Junction Box 6'x6'x6'
	1	EA	Inlet (TY III)
	1	EA	Inlet (TY V)
	54.4	CY	Gravel Subgrade Filler
	189.0	CY	Flowable Backfill
	353.17	LF	Trench Excavation Safety Protection

PROPOSED WATER, SANITARY SEWER, TELEPHONE, AND GAS UTILITIES SHOWN ARE APPROXIMATE. SEE RELEVANT PLANS FOR DETAILS.

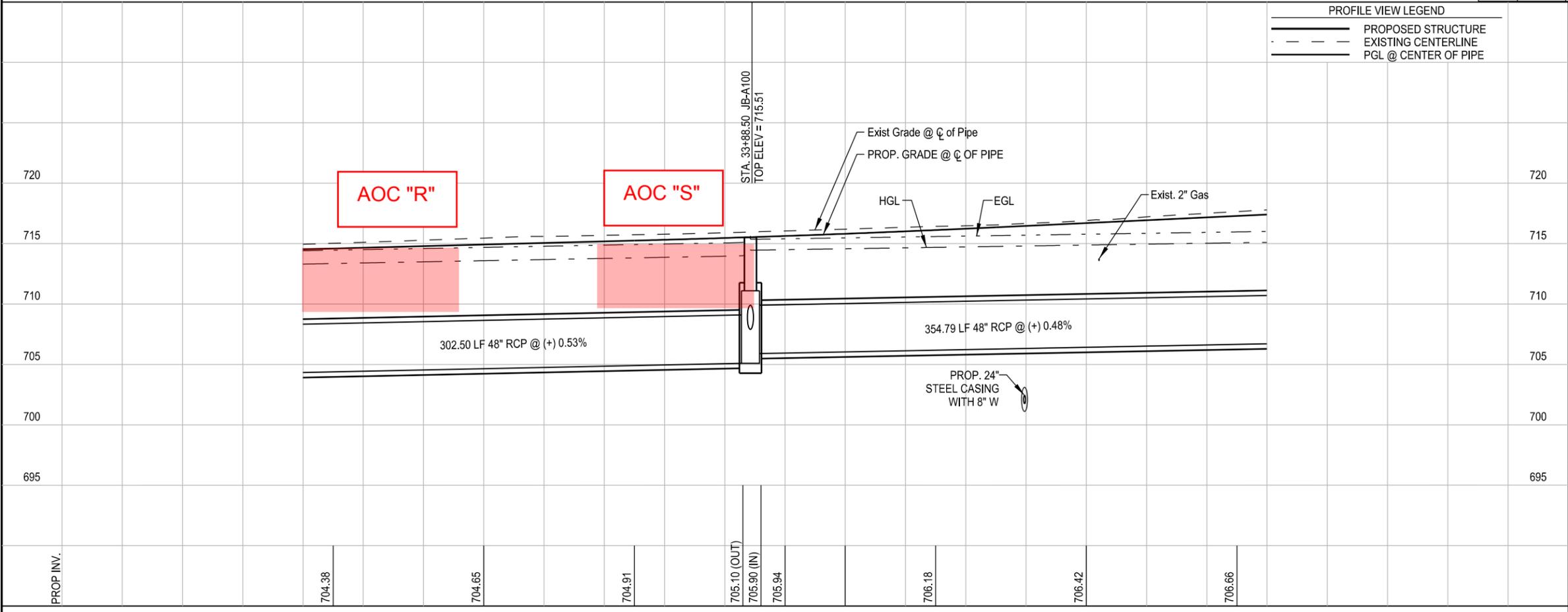
SYSTEM A

PROFILE VIEW LEGEND

- PROPOSED STRUCTURE
- - - EXISTING CENTERLINE
- PGL @ CENTER OF PIPE

*NOT PAID FOR DIRECTLY, SUBSIDIARY TO VARIOUS BID ITEMS

1" = 40'

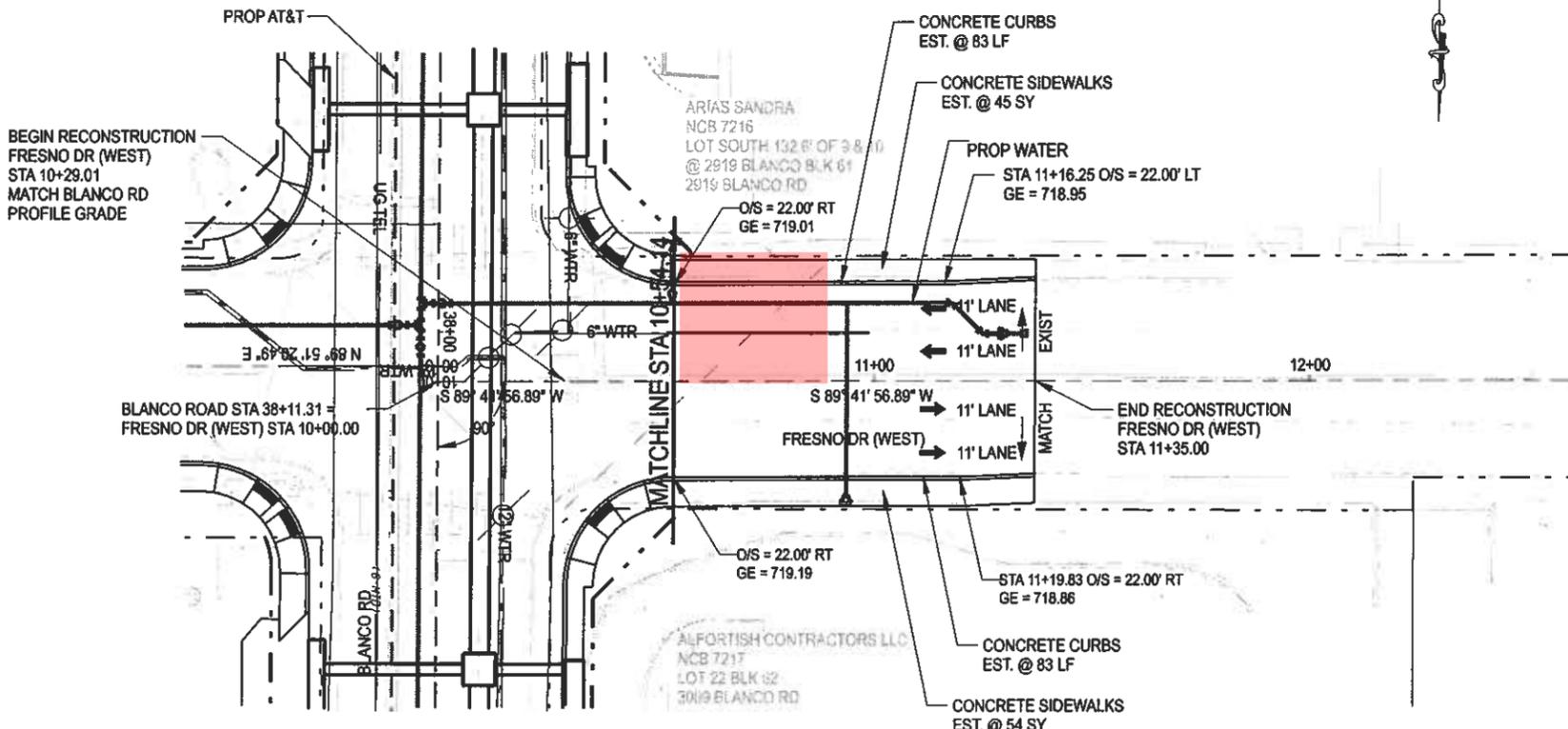


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**CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS
MANAGEMENT SERVICES
DEPARTMENT**

BLANCO ROAD SEG 1 ADD. ALT. 1

**FIGURE 13
AOC "R" & "S"**



ITEM	UNIT	QTY
FLEX BASE 6" COMP TY C - 1 AR	SY	
CONC PAV (10") (BUS PAD)	SY	
FLEX PAV FULL DEPTH REPAIR (6")	SY	17
CONC PAV FULL DEPTH REPAIR (6")	SY	
CONCRETE CURBS	LF	166
CONCRETE SIDEWALKS	SY	99
PORTLAND CEM CONC DRWWY	SY	
PORTLAND CEM CONC DRWWY COMM	SY	
ASPHALTIC CONCRETE DRWWY	SY	
GRAVEL DRIVEWAY	SY	
CONC RET WALL-COMM. TY E	CY	
CHAIN LINK WIRE FENCE(4')	LF	
CHAIN LINK WIRE FENCE(6')	LF	
GATES-VEHICULAR	EA	
BERMUDA SODDING	SY	3
ST AUGUSTINE SODDING	SY	3
CONCRETE STEPS	CY	

- PLAN VIEW LEGEND**
- ===== PROPOSED CURB
 - EXIST EDGE OF ROADWAY
 - EXISTING FEATURES
 - - - - - EXISTING RIGHT OF WAY
 - - - - - PROPOSED RIGHT OF WAY
 - /PAS 1-1 DRIVEWAY
 - GE GUTTER ELEVATION
 - PROPOSED FLOW ARROW

FRESNO DR (WEST) - ALIGNMENT DATA

Beginning chain RXCFREW description

Point FREW01	N 13,722,610.8033 E	2,125,442.6842	Sta 10+00.00
Course from FREW01 to FREW02 S 89° 41' 56.89" W Dist 22.0001			
Point FREW02	N 13,722,610.6878 E	2,125,420.6844	Sta 10+22.00
Course from FREW02 to FREW03 S 89° 41' 56.89" W Dist 277.6772			
Point FREW03	N 13,722,609.2297 E	2,125,143.0111	Sta 12+99.68

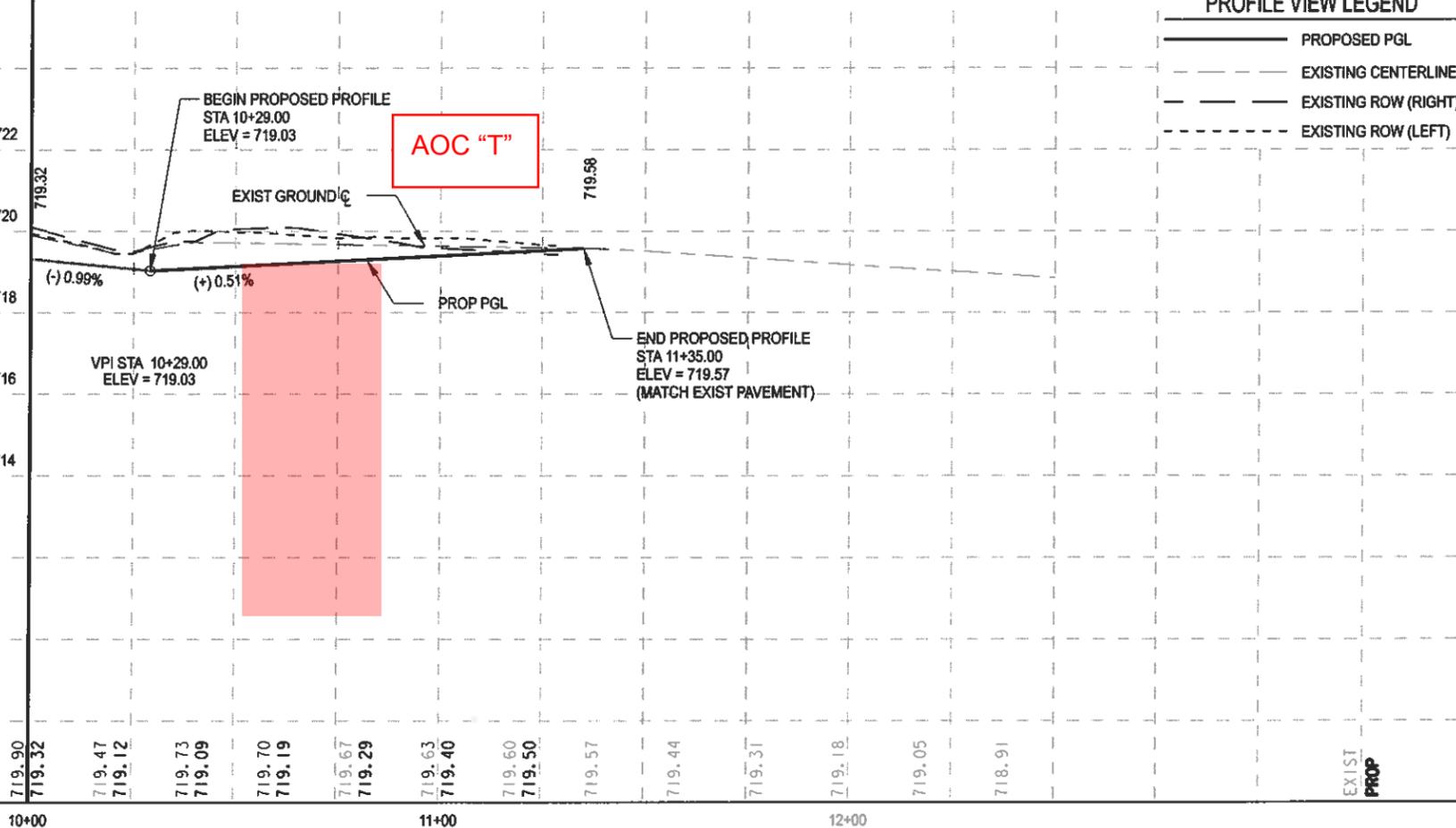
Ending chain RXCFREW description

FRESNO DR (WEST) - PROFILE DATA

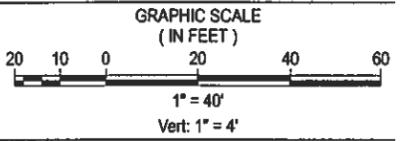
Beginning profile RPCFREW description:

STATION	ELEV	GRADE	TOTAL L	BACKL	AHEAD L
VPI 1	10+00.00	719.3200			
VPI 2	10+29.00	719.0330	-0.9897		
VPI 3	11+35.00	719.5775	0.5137		

Ending profile RPCFREW description



- PROFILE VIEW LEGEND**
- ===== PROPOSED PGL
 - EXIST CENTERLINE
 - EXISTING ROW (RIGHT)
 - EXISTING ROW (LEFT)



CFC DON DURDEN, INC.
 d.b.a. CIVIL ENGINEERING CONSULTANTS
 11550 IH 10 WEST, SUITE 395
 SAN ANTONIO, TEXAS 78230-1037
 TEL: (210) 841-9999
 FAX: (210) 841-8448
 REGISTRATION #F-2214

CITY OF SAN ANTONIO
 CAPITAL IMPROVEMENTS
 MANAGEMENT SERVICES
 DEPARTMENT

BLANCO ROAD SEG 1 ADD. ALT. 1

FIGURE 14
AOC "T"

FOR LOCATION OF UNDERGROUND ELECTRIC AND GAS FACILITIES, TELEPHONE CABLES, AND TIME WARNER CABLE TV CALL TEXAS STATE WIDE ONE CALL LOCATOR NUMBER 1-800-545-6005 48 HOURS PRIOR BEFORE BEGINNING ANY EXCAVATION.

DUE TO FEDERAL REGULATION TITLE 49, PART 192.181, C.P.S. MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA.

THE CONTRACTOR WILL BE RESPONSIBLE FOR PROTECTING C.P.S. OVERHEAD AND UNDERGROUND ELECTRIC FACILITIES IF ADJACENT TO WORK AREAS.

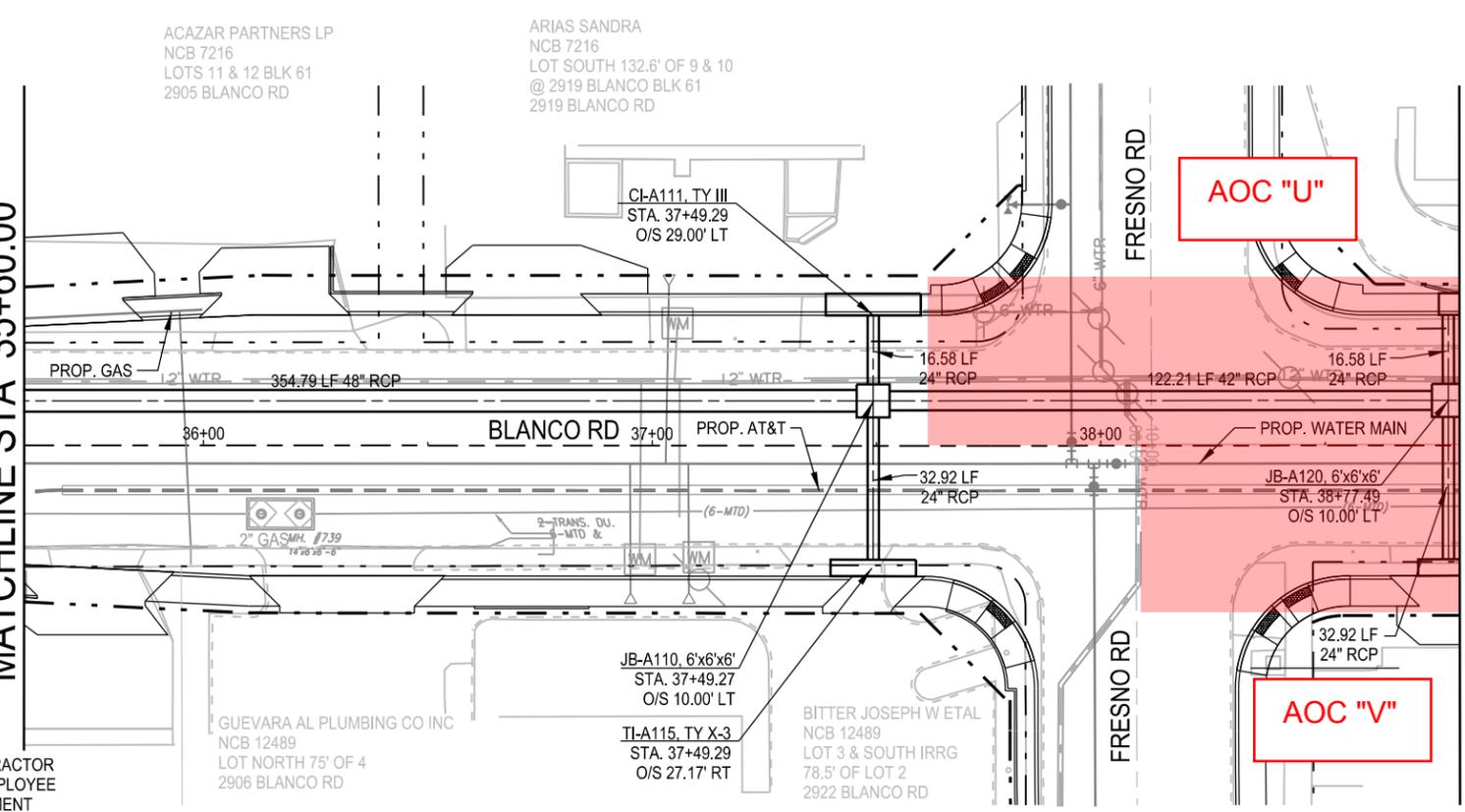
THE CONTRACTOR WILL HAVE RESPONSIBILITY TO PROTECT AND SUPPORT CABLE TV AND TELEPHONE COMPANY PLANT DURING CONSTRUCTION.

THE EXISTENCE AND LOCATION OF UTILITIES INDICATED ON THE PLAN ARE TAKEN FROM AVAILABLE RECORDS AND ARE NOT GUARANTEED TO BE ACCURATE.

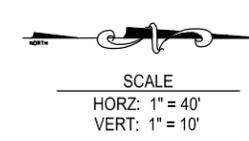
CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) IN ORDER TO DEVELOP THE CONTRACTOR'S PLANS TO IMPLEMENT THE PROJECT DESCRIBED IN THE CONTRACT COUMDNTS. THE CONTRACTOR'S PLANS SHALL PROVIDED FOR ADEQUATE TRENCH SAFETY SYSTEMS THAT COMPLY WITH, AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL DEVELOP AND IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION

MATCHLINE STA 35+60.00

MATCHLINE STA 38+80.00



SYSTEM A



PLAN VIEW LEGEND

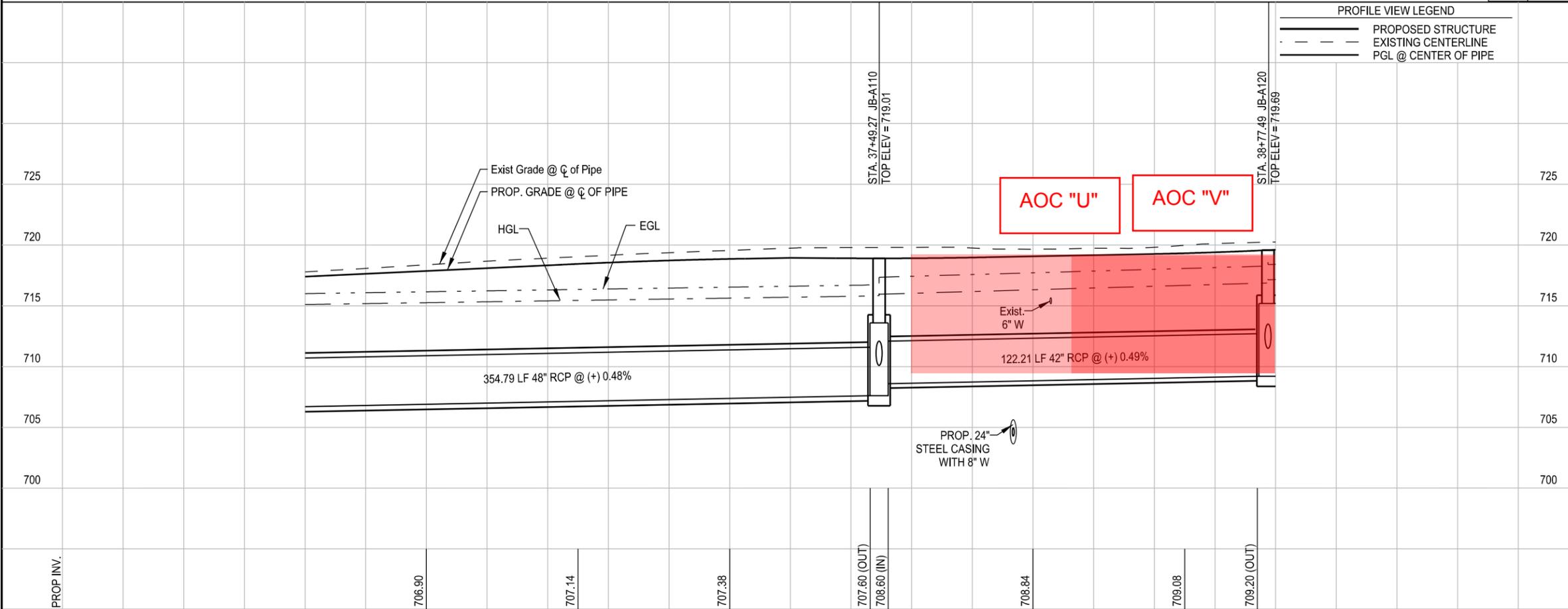
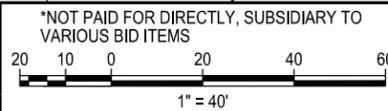
- CI = CURB INLET
- JB = JUNCTION BOX
- MH = MANHOLE
- TI = TRAFFIC INLET
- PROPOSED STRUCTURE
- PROPOSED CURB
- - - EXIST EDGE OF ROADWAY
- - - EXISTING FEATURES
- - - EXISTING RIGHT OF WAY
- - - PROPOSED RIGHT OF WAY
- UG TEL --- UNDGR TELEPHONE
- X GAS- GAS LINE
- X SS- SANITARY SEWER LINE
- X WTR- WATER LINE
- UG FO --- UNDGR FIBER OPTIC
- x-x-x-x- FENCE

FINAL	EST	UNIT	DESCRIPTION
	1282.0	CY	Excavation, Trenching and Backfilling*
	99.01	LF	Reinforced Concrete Pipe (24") Class III
	122.21	LF	Reinforced Concrete Pipe (42") Class III
	186.27	LF	Reinforced Concrete Pipe (48") Class IV
	2	EA	Junction Box 6'x6'x6'
	1	EA	Inlet (TY III)
	1	EA	Ty X-3
	57.0	CY	Gravel Subgrade Filler
	182.9	CY	Flowable Backfill
	407.49	LF	Trench Excavation Safety Protection

PROPOSED WATER, SANITARY SEWER, TELEPHONE, AND GAS UTILITIES SHOWN ARE APPROXIMATE. SEE RELEVANT PLANS FOR DETAILS.

PROFILE VIEW LEGEND

- PROPOSED STRUCTURE
- - - EXISTING CENTERLINE
- PGL @ CENTER OF PIPE



CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS
MANAGEMENT SERVICES
DEPARTMENT

BLANCO ROAD SEG 1 ADD. ALT. 1

FIGURE 15
AOC "U" & "V"

FOR LOCATION OF UNDERGROUND ELECTRIC AND GAS FACILITIES, TELEPHONE CABLES, AND TIME WARNER CABLE TV CALL TEXAS STATE WIDE ONE CALL LOCATOR NUMBER 1-800-545-6005 48 HOURS PRIOR BEFORE BEGINNING ANY EXCAVATION.

DUE TO FEDERAL REGULATION TITLE 49, PART 192.181, C.P.S. MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA.

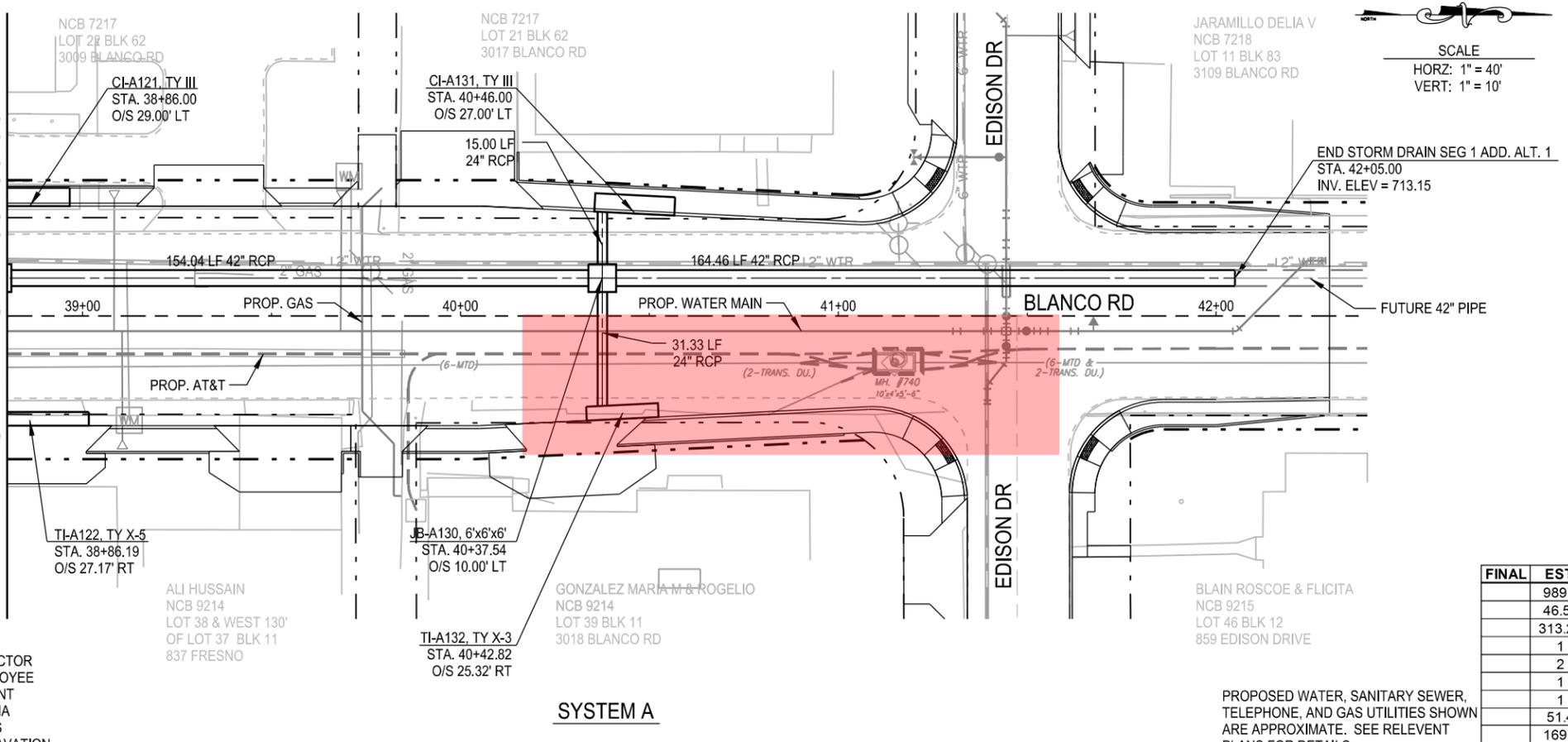
THE CONTRACTOR WILL BE RESPONSIBLE FOR PROTECTING C.P.S. OVERHEAD AND UNDERGROUND ELECTRIC FACILITIES IF ADJACENT TO WORK AREAS.

THE CONTRACTOR WILL HAVE RESPONSIBILITY TO PROTECT AND SUPPORT CABLE TV AND TELEPHONE COMPANY PLANT DURING CONSTRUCTION.

THE EXISTENCE AND LOCATION OF UTILITIES INDICATED ON THE PLAN ARE TAKEN FROM AVAILABLE RECORDS AND ARE NOT GUARANTEED TO BE ACCURATE.

CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) IN ORDER TO DEVELOP THE CONTRACTOR'S PLANS TO IMPLEMENT THE PROJECT DESCRIBED IN THE CONTRACT COUMDNTS. THE CONTRACTOR'S PLANS SHALL PROVIDED FOR ADEQUATE TRENCH SAFETY SYSTEMS THAT COMPLY WITH, AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL DEVELOP AND IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION

MATCHLINE STA 38+80.00



PLAN VIEW LEGEND

- CI = CURB INLET
- JB = JUNCTION BOX
- MH = MANHOLE
- TI = TRAFFIC INLET
- PROPOSED STRUCTURE
- PROPOSED CURB
- - - EXIST EDGE OF ROADWAY
- - - EXISTING FEATURES
- - - EXISTING RIGHT OF WAY
- - - PROPOSED RIGHT OF WAY
- UG TEL --- UNDGR TELEPHONE
- X GAS- GAS LINE
- X SS- SANITARY SEWER LINE
- X WTR- WATER LINE
- UG FO --- UNDGR FIBER OPTIC
- x-x-x-x- FENCE

SCALE
 HORZ: 1" = 40'
 VERT: 1" = 10'

FINAL	EST	UNIT	DESCRIPTION
	989.0	CY	Excavation, Trenching and Backfilling*
	46.50	LF	Reinforced Concrete Pipe (24") Class III
	313.22	LF	Reinforced Concrete Pipe (42") Class IV
	1	EA	Junction Box 6'x6'x6'
	2	EA	Inlet (TY III)
	1	EA	Ty X-3
	1	EA	Ty X-5
	51.4	CY	Gravel Subgrade Filler
	169.0	CY	Flowable Backfill
	359.72	LF	Trench Excavation Safety Protection

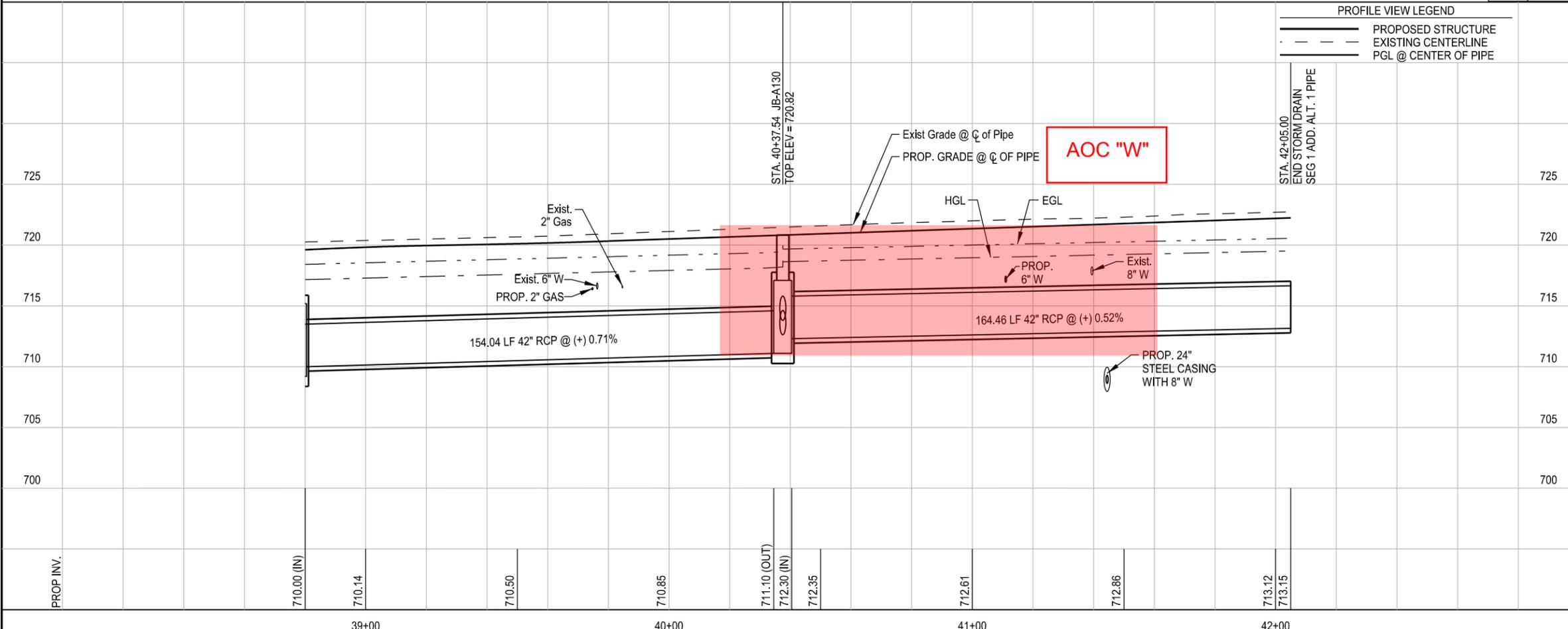
PROPOSED WATER, SANITARY SEWER, TELEPHONE, AND GAS UTILITIES SHOWN ARE APPROXIMATE. SEE RELEVANT PLANS FOR DETAILS.

SYSTEM A

PROFILE VIEW LEGEND

- PROPOSED STRUCTURE
- - - EXISTING CENTERLINE
- PGL @ CENTER OF PIPE

*NOT PAID FOR DIRECTLY, SUBSIDIARY TO VARIOUS BID ITEMS
 20 10 0 20 40 60
 1" = 40'



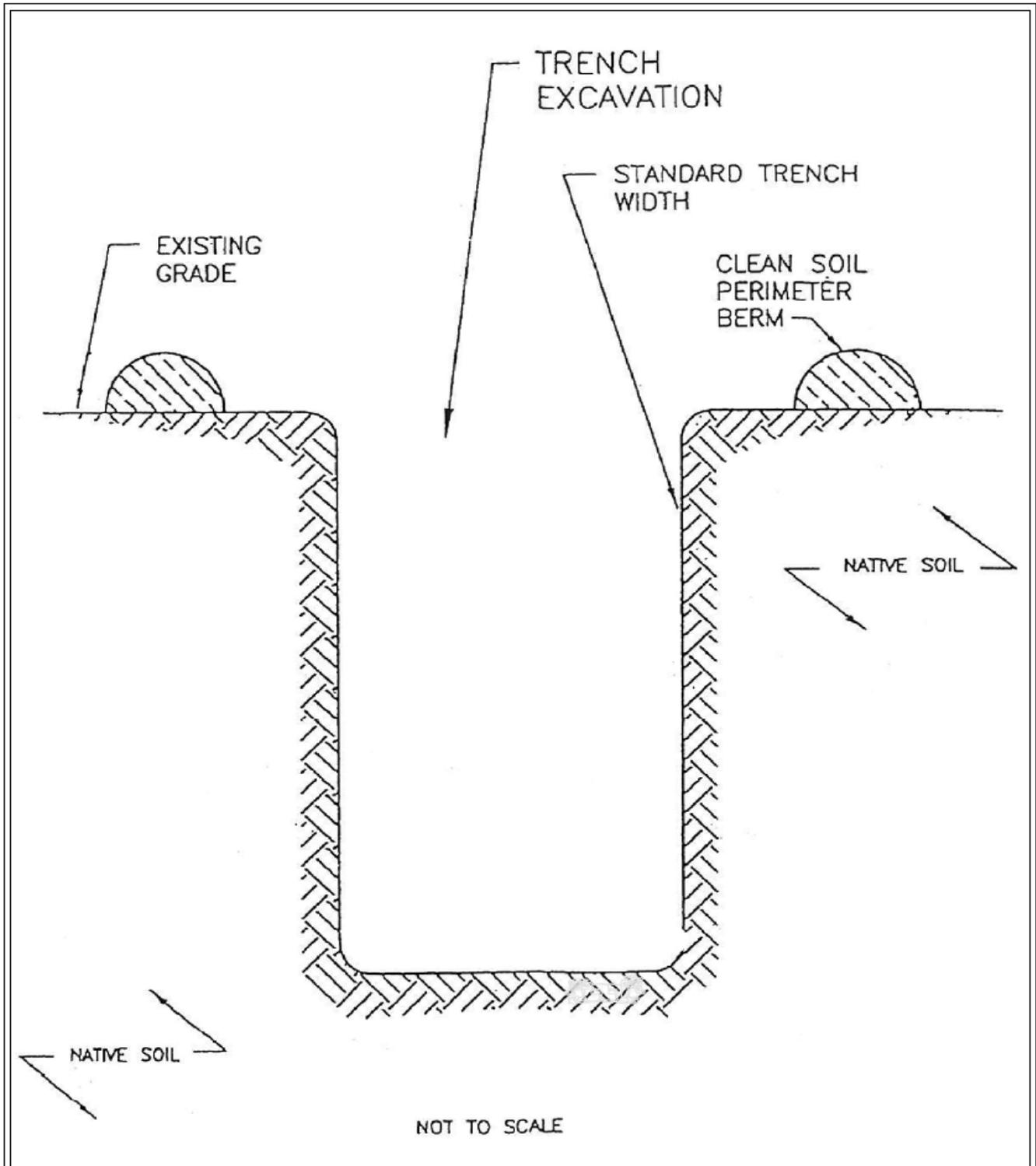
CITY OF SAN ANTONIO
 CAPITAL IMPROVEMENTS
 MANAGEMENT SERVICES
 DEPARTMENT

BLANCO ROAD SEG 1 ADD. ALT. 1

FIGURE 16
AOC "W"

FIGURE 17

OPEN EXCAVATION RUN-ON PREVENTION



NOT TO SCALE

City of San Antonio

Open Excavation Run-On Prevention

Created by: Ryan L. Garcia
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City of San Antonio
 Capital Improvements
 Management Services
 Environmental Services
 Director Mike Frieble, P.E.
 Municipal Plaza Building
 114 West Commerce Street
 San Antonio, TX 78205

