Modification of a Previously Approved Plan Checklist

- ☑ **Edwards Aquifer Application Cover Page (TCEQ-20705)**
- ☑ **General Information Form (TCEQ-0587)**

  Attachment A - Road Map
  Attachment B - USGS / Edwards Recharge Zone Map
  Attachment C - Project Description

- ☑ **Geologic Assessment Form (TCEQ-0585)**

  Attachment A - Geologic Assessment Table (TCEQ-0585-Table)
  Attachment B - Stratigraphic Column
  Attachment C - Site Geology
  Attachment D - Site Geologic Map(s)

- ☑ **Modification of a Previously Approved Plan (TCEQ-0590)**

  Attachment A - Original Approval Letter and Approved Modification Letters
  Attachment B - Narrative of Proposed Modification
  Attachment C - Current Site Plan of the Approved Project

- ☑ **Application Form (include any applicable to the proposed modification):**

  ~~Aboveground Storage Tank Facility Plan (TCEQ-0575)~~
  ~~Organized Sewage Collection System Application (TCEQ-0582)~~
  ~~Underground Storage Tank Facility Plan (TCEQ-0583)~~
  ~~Water Pollution Abatement Plan Application (TCEQ-0584)~~
  Lift Station / Force Main System Application (TCEQ-0624)

- ☑ **Temporary Stormwater Section (TCEQ-0602)**

  Attachment A - Spill Response Actions
  Attachment B - Potential Sources of Contamination
  Attachment C - Sequence of Major Activities
  Attachment D - Temporary Best Management Practices and Measures
  Attachment E - Request to Temporarily Seal a Feature (if requested)
  Attachment F - Structural Practices
  Attachment G - Drainage Area Map
  Attachment H - Temporary Sediment Pond(s) Plans and Calculations
  Attachment I - Inspection and Maintenance for BMPs
  Attachment J - Schedule of Interim and Permanent Soil Stabilization Practices

- ☑ **Permanent Stormwater Section (TCEQ-0600), if necessary**

  Attachment A - 20% or Less Impervious Cover Declaration (if requested for multi-family, school, or small business site)
  Attachment B - BMPs for Upgradient Stormwater

Attachment C - BMPs for On-site Stormwater
Attachment D - BMPs for Surface Streams
Attachment E - Request to Seal Features, if sealing a feature
Attachment F - Construction Plans
Attachment G - Inspection, Maintenance, Repair and Retrofit Plan
Attachment H - Pilot-Scale Field Testing Plan (if requested)
Attachment I -Measures for Minimizing Surface Stream Contamination

- ☑ **Agent Authorization Form (TCEQ-0599), if application submitted by agent**
- ☑ **Application Fee Form (TCEQ-0574)**
- ☑ **Check Payable to the "Texas Commission on Environmental Quality"**
- ☑ **Core Data Form (TCEQ-10400)**

Texas Commission on Environmental Quality

Edwards Aquifer Application Cover Page

Our Review of Your Application

The Edwards Aquifer Program staff conducts an administrative and technical review of all applications. The turnaround time for administrative review can be up to 30 days as outlined in 30 TAC 213.4(e). Generally administrative completeness is determined during the intake meeting or within a few days of receipt. The turnaround time for technical review of an administratively complete Edwards Aquifer application is 90 days as outlined in 30 TAC 213.4(e). Please know that the review and approval time is directly impacted by the quality and completeness of the initial application that is received. In order to conduct a timely review, it is imperative that the information provided in an Edwards Aquifer application include final plans, be accurate, complete, and in compliance with 30 TAC 213.

Administrative Review

1. Edwards Aquifer applications must be deemed administratively complete before a technical review can begin. To be considered administratively complete, the application must contain completed forms and attachments, provide the requested information, and meet all the site plan requirements. The submitted application and plan sheets should be final plans. Please submit one full-size set of plan sheets with the original application, and half-size sets with the additional copies.

   To ensure that all applicable documents are included in the application, the program has developed tools to guide you and web pages to provide all forms, checklists, and guidance. Please visit the below website for assistance: http://www.tceq.texas.gov/field/eapp.

2. This Edwards Aquifer Application Cover Page form (certified by the applicant or agent) must be included in the application and brought to the administrative review meeting.

3. Administrative reviews are scheduled with program staff who will conduct the review. Applicants or their authorized agent should call the appropriate regional office, according to the county in which the project is located, to schedule a review. The average meeting time is one hour.

4. In the meeting, the application is examined for administrative completeness. Deficiencies will be noted by staff and emailed or faxed to the applicant and authorized agent at the end of the meeting, or shortly after. Administrative deficiencies will cause the application to be deemed incomplete and returned.

   An appointment should be made to resubmit the application. The application is re-examined to ensure all deficiencies are resolved. The application will only be deemed administratively complete when all administrative deficiencies are addressed.

5. If an application is received by mail, courier service, or otherwise submitted without a review meeting, the administrative review will be conducted within 30 days. The applicant and agent will be contacted with the results of the administrative review. If the application is found to be administratively incomplete, it can be retrieved from the regional office or returned by regular mail. If returned by mail, the regional office may require arrangements for return shipping.

6. If the geologic assessment was completed before October 1, 2004 and the site contains “possibly sensitive” features, the assessment must be updated in accordance with the *Instructions to Geologists* (TCEQ-0585 Instructions).

Technical Review

1. When an application is deemed administratively complete, the technical review period begins. The regional office will distribute copies of the application to the identified affected city, county, and groundwater conservation district whose jurisdiction includes the subject site. These entities and the public have 30 days to provide comments on the application to the regional office. All comments received are reviewed by TCEQ.

2. A site assessment is usually conducted as part of the technical review, to evaluate the geologic assessment and observe existing site conditions. The site must be accessible to our staff. The site boundaries should be

clearly marked, features identified in the geologic assessment should be flagged, roadways marked and the alignment of the Sewage Collection System and manholes should be staked at the time the application is submitted. If the site is not marked the application may be returned.

3. We evaluate the application for technical completeness and contact the applicant and agent via Notice of Deficiency (NOD) to request additional information and identify technical deficiencies. There are two deficiency response periods available to the applicant. There are 14 days to resolve deficiencies noted in the first NOD. If a second NOD is issued, there is an additional 14 days to resolve deficiencies. If the response to the second notice is not received, is incomplete or inadequate, or provides new information that is incomplete or inadequate, the application must be withdrawn or will be denied. Please note that because the technical review is underway, whether the application is withdrawn or denied **the application fee will be forfeited**.
4. The program has 90 calendar days to complete the technical review of the application. If the application is technically adequate, such that it complies with the Edwards Aquifer rules, and is protective of the Edwards Aquifer during and after construction, an approval letter will be issued. Construction or other regulated activity may not begin until an approval is issued.

Mid-Review Modifications

It is important to have final site plans prior to beginning the permitting process with TCEQ to avoid delays.

Occasionally, circumstances arise where you may have significant design and/or site plan changes after your Edwards Aquifer application has been deemed administratively complete by TCEQ. This is considered a "Mid-Review Modification". Mid-Review Modifications may require redistribution of an application that includes the proposed modifications for public comment.

If you are proposing a Mid-Review Modification, two options are available:

- If the technical review has begun your application can be denied/withdrawn, your fees will be forfeited, and the plan will have to be resubmitted.
- TCEQ can continue the technical review of the application as it was submitted, and a modification application can be submitted at a later time.

If the application is denied/withdrawn, the resubmitted application will be subject to the administrative and technical review processes and will be treated as a new application. The application will be redistributed to the affected jurisdictions.

Please contact the regional office if you have questions. If your project is located in Williamson, Travis, or Hays County, contact TCEQ's Austin Regional Office at 512-339-2929. If your project is in Comal, Bexar, Medina, Uvalde, or Kinney County, contact TCEQ's San Antonio Regional Office at 210-490-3096

Please fill out all required fields below and submit with your application.

1. Regulated Entity Name: **Blanco Road Phase III**						**2. Regulated Entity No.:**			
3. Customer Name: **San Antonio Water System (SAWS)**						**4. Customer No.:600529069**			
5. Project Type: **(Please circle/check one)**	New		Modification			Extension		Exception	
6. Plan Type: **(Please circle/check one)**	WPAP	CZP	SCS	UST	AST	EXP	EXT	Technical Clarification	Optional Enhanced Measures
7. Land Use: **(Please circle/check one)**	Residential		Non-residential			**8. Site (acres):**			18.40
9. Application Fee:	$1,618		**10. Permanent BMP(s):**			None			
11. SCS (Linear Ft.):	3,235		**12. AST/UST (No. Tanks):**			N/A			

13. County:	Bexar	14. Watershed:	Cibolo Creek Watershed

Application Distribution

Instructions: Use the table below to determine the number of applications required. One original and one copy of the application, plus additional copies (as needed) for each affected incorporated city, county, and groundwater conservation district are required. Linear projects or large projects, which cross into multiple jurisdictions, can require additional copies. Refer to the "Texas Groundwater Conservation Districts within the EAPP Boundaries" map found at:

http://www.tceq.texas.gov/assets/public/compliance/field_ops/eapp/EAPP%20GWCD%20map.pdf

For more detailed boundaries, please contact the conservation district directly.

Austin Region			
County:	**Hays**	**Travis**	**Williamson**
Original (1 req.)	___	___	___
Region (1 req.)	___	___	___
County(ies)	___	___	___
Groundwater Conservation District(s)	___Edwards Aquifer Authority ___Barton Springs/ Edwards Aquifer ___Hays Trinity ___Plum Creek	___Barton Springs/ Edwards Aquifer	NA
City(ies) Jurisdiction	___Austin ___Buda ___Dripping Springs ___Kyle ___Mountain City ___San Marcos ___Wimberley ___Woodcreek	___Austin ___Bee Cave ___Pflugerville ___Rollingwood ___Round Rock ___Sunset Valley ___West Lake Hills	___Austin ___Cedar Park ___Florence ___Georgetown ___Jerrell ___Leander ___Liberty Hill ___Pflugerville ___Round Rock

San Antonio Region					
County:	**Bexar**	**Comal**	**Kinney**	**Medina**	**Uvalde**
Original (1 req.)	✓	___	___	___	___
Region (1 req.)	✓	___	___	___	___
County(ies)	✓	___	___	___	___
Groundwater Conservation District(s)	✓ Edwards Aquifer Authority ___Trinity-Glen Rose	___Edwards Aquifer Authority	___Kinney	___EAA ___Medina	___EAA ___Uvalde
City(ies) Jurisdiction	___Castle Hills ___Fair Oaks Ranch ___Helotes ___Hill Country Village ___Hollywood Park	___Bulverde ___Fair Oaks Ranch ___Garden Ridge ___New Braunfels ___Schertz	NA	___San Antonio ETJ (SAWS)	NA

	✓ San Antonio (SAWS) __Shavano Park				

I certify that to the best of my knowledge, that the application is complete and accurate. This application is hereby submitted to TCEQ for administrative review and technical review. *Mary P. Stewart*
Print Name of Customer/Authorized Agent
Mary P. Stewart *4-25-2025*
Signature of Customer/Authorized Agent Date

FOR TCEQ INTERNAL USE ONLY				
Date(s)Reviewed:		Date Administratively Complete:		
Received From:		Correct Number of Copies:		
Received By:		Distribution Date:		
EAPP File Number:		Complex:		
Admin. Review(s) (No.):		No. AR Rounds:		
Delinquent Fees (Y/N):		Review Time Spent:		
Lat./Long. Verified:		SOS Customer Verification:		
Agent Authorization Complete/Notarized (Y/N):		Fee Check:	Payable to TCEQ (Y/N):	
Core Data Form Complete (Y/N):			Signed (Y/N):	
Core Data Form Incomplete Nos.:			Less than 90 days old (Y/N):	

General Information Form

Texas Commission on Environmental Quality

For Regulated Activities on the Edwards Aquifer Recharge and Transition Zones and Relating to 30 TAC §213.4(b) & §213.5(b)(2)(A), (B) Effective June 1, 1999

To ensure that the application is administratively complete, confirm that all fields in the form are complete, verify that all requested information is provided, consistently reference the same site and contact person in all forms in the application, and ensure forms are signed by the appropriate party.

Note: Including all the information requested in the form and attachments contributes to more streamlined technical reviews.

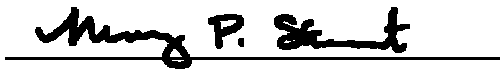
Signature

To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. This **General Information Form** is hereby submitted for TCEQ review. The application was prepared by:

Print Name of Customer/Agent: San Antonio Water System (SAWS)

Date: 4-25-2025

Signature of Customer/Agent:



Project Information

1. Regulated Entity Name: Blanco Road Phase III
2. County: Bexar
3. Stream Basin: Cibolo Creek Watershed
4. Groundwater Conservation District (If applicable): Edwards Aquifer
5. Edwards Aquifer Zone:

   ☒ Recharge Zone
   ☐ Transition Zone

6. Plan Type:

   ☐ WPAP
   ☒ SCS
   ☒ Modification
   ☐ AST
   ☐ UST
   ☐ Exception Request

7. Customer (Applicant):

   Contact Person: Cristina Brantley, P.E.
   Entity: San Antonio Water System
   Mailing Address: 2800 U.S. Highway 281 North
   City, State: San Antonio Zip: 78212
   Telephone: (210) 233-3865 FAX: _____
   Email Address: cristina.brantley@saws.org

8. Agent/Representative (If any):

   Contact Person: Mary P. Stewart, P.E.
   Entity: KCI Technologies, Inc.
   Mailing Address: 2806 West Bitters Road, Suite 218
   City, State: San Antonio Zip: 78248
   Telephone: (210) 641-9999 FAX: _____
   Email Address: Mary.Stewart@kci.com

9. Project Location:

   ☐ The project site is located inside the city limits of _____.
   ☒ The project site is located outside the city limits but inside the ETJ (extra-territorial jurisdiction) of San Antonio.
   ☐ The project site is not located within any city's limits or ETJ.

10. ☒ The location of the project site is described below. The description provides sufficient detail and clarity so that the TCEQ's Regional staff can easily locate the project and site boundaries for a field investigation.

    The project limits begin near the intersection of Blanco Road and Old Blanco Road and finish near the intersection of Blanco Road and Specht Road. The force main improvements are located along Blanco Road within the Recharge Zone.

11. ☒ **Attachment A – Road Map**. A road map showing directions to and the location of the project site is attached. The project location and site boundaries are clearly shown on the map.

12. ☒ **Attachment B - USGS / Edwards Recharge Zone Map**. A copy of the official 7 ½ minute USGS Quadrangle Map (Scale: 1" = 2000') of the Edwards Recharge Zone is attached. The map(s) clearly show:

    ☒ Project site boundaries.
    ☒ USGS Quadrangle Name(s).
    ☒ Boundaries of the Recharge Zone (and Transition Zone, if applicable).
    ☒ Drainage path from the project site to the boundary of the Recharge Zone.

13. ☒ **The TCEQ must be able to inspect the project site or the application will be returned**. Sufficient survey staking is provided on the project to allow TCEQ regional staff to locate the boundaries and alignment of the regulated activities and the geologic or manmade features noted in the Geologic Assessment.

☒ Survey staking will be completed by this date: Upon TCEQ request.

14. ☒ **Attachment C – Project Description**. Attached at the end of this form is a detailed narrative description of the proposed project. The project description is consistent throughout the application and contains, at a minimum, the following details:

    ☒ Area of the site
    ☒ Offsite areas
    ☒ Impervious cover
    ☐ Permanent BMP(s)
    ☒ Proposed site use
    ☒ Site history
    ☒ Previous development
    ☒ Area(s) to be demolished

15. Existing project site conditions are noted below:

    ☐ Existing commercial site
    ☐ Existing industrial site
    ☐ Existing residential site
    ☒ Existing paved and/or unpaved roads
    ☐ Undeveloped (Cleared)
    ☐ Undeveloped (Undisturbed/Uncleared)
    ☐ Other: _____

Prohibited Activities

16. ☒ I am aware that the following activities are prohibited on the Recharge Zone and are not proposed for this project:

    (1) Waste disposal wells regulated under 30 TAC Chapter 331 of this title (relating to Underground Injection Control);

    (2) New feedlot/concentrated animal feeding operations, as defined in 30 TAC §213.3;

    (3) Land disposal of Class I wastes, as defined in 30 TAC §335.1;

    (4) The use of sewage holding tanks as parts of organized collection systems; and

    (5) New municipal solid waste landfill facilities required to meet and comply with Type I standards which are defined in §330.41(b), (c), and (d) of this title (relating to Types of Municipal Solid Waste Facilities).

    (6) New municipal and industrial wastewater discharges into or adjacent to water in the state that would create additional pollutant loading.

17. ☒ I am aware that the following activities are prohibited on the Transition Zone and are not proposed for this project:

    (1) Waste disposal wells regulated under 30 TAC Chapter 331 (relating to Underground Injection Control);

(2) Land disposal of Class I wastes, as defined in 30 TAC §335.1; and

(3) New municipal solid waste landfill facilities required to meet and comply with Type I standards which are defined in §330.41 (b), (c), and (d) of this title.

Administrative Information

18. The fee for the plan(s) is based on:

- ☐ For a Water Pollution Abatement Plan or Modification, the total acreage of the site where regulated activities will occur.
- ☒ For an Organized Sewage Collection System Plan or Modification, the total linear footage of all collection system lines.
- ☐ For a UST Facility Plan or Modification or an AST Facility Plan or Modification, the total number of tanks or piping systems.
- ☐ A request for an exception to any substantive portion of the regulations related to the protection of water quality.
- ☐ A request for an extension to a previously approved plan.

19. ☒ Application fees are due and payable at the time the application is filed. If the correct fee is not submitted, the TCEQ is not required to consider the application until the correct fee is submitted. Both the fee and the Edwards Aquifer Fee Form have been sent to the Commission's:

- ☐ TCEQ cashier
- ☐ Austin Regional Office (for projects in Hays, Travis, and Williamson Counties)
- ☒ San Antonio Regional Office (for projects in Bexar, Comal, Kinney, Medina, and Uvalde Counties)

20. ☒ Submit one (1) original and one (1) copy of the application, plus additional copies as needed for each affected incorporated city, groundwater conservation district, and county in which the project will be located. The TCEQ will distribute the additional copies to these jurisdictions. The copies must be submitted to the appropriate regional office.

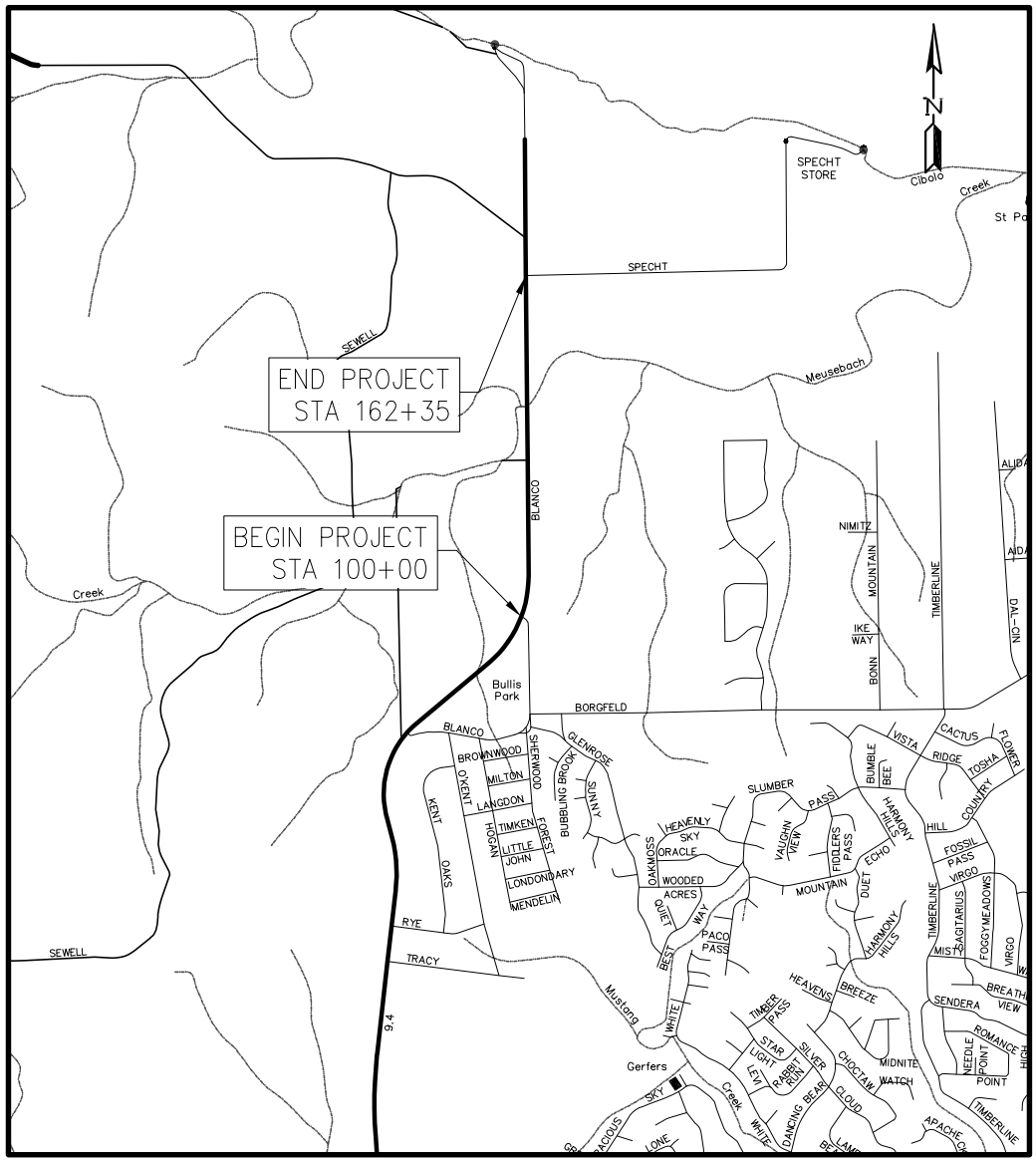
21. ☒ No person shall commence any regulated activity until the Edwards Aquifer Protection Plan(s) for the activity has been filed with and approved by the Executive Director.

ISO 9001:2015 CERTIFIED
ENGINEERS • PLANNERS • SCIENTISTS • CONSTRUCTION MANAGERS
2806 W. Bitters Road, Suite 218 • San Antonio, Texas 78248 • Phone (210) 641-9999

Attachment A

Road Map

Blanco Road Phase III



VICINITY MAP

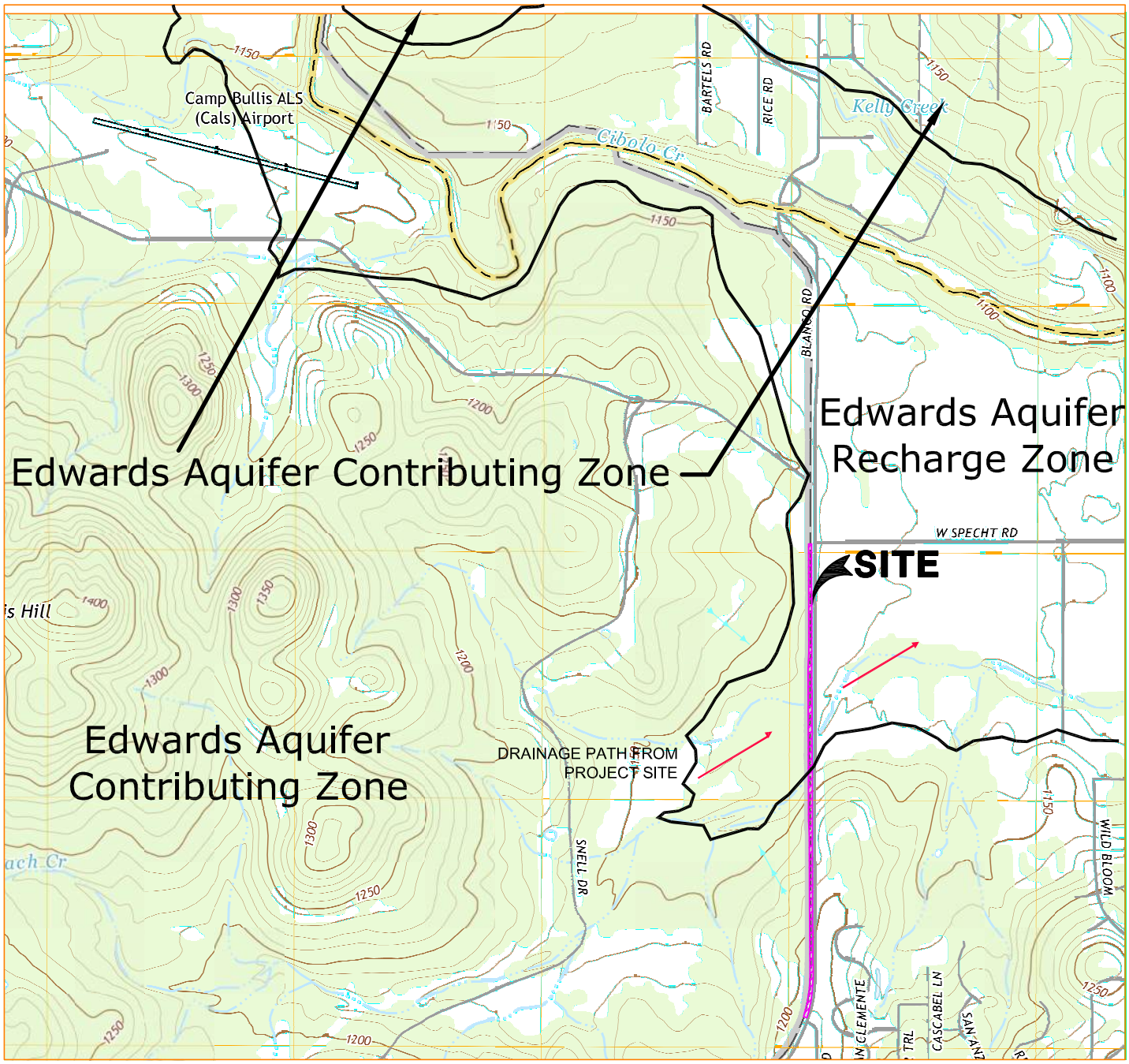
NOT TO SCALE

KCI
ISO 9001:2015 CERTIFIED
ENGINEERS • PLANNERS • SCIENTISTS • CONSTRUCTION MANAGERS
2806 W. Bitters Road, Suite 218 • San Antonio, Texas 78248 • Phone (210) 641-9999

Attachment B

USGS / Edwards Recharge Zone Map

Blanco Road Phase III



USGS TOPOGRAPHIC MAP
CAMP BULLIS, TX
7.5 X 7.5 MINUTE

0 1000 2000 4000

SCALE: 1" = 2000'

N

REV	DATE	DESCRIPTION

BLANCO ROAD PHASE III

USGS/EDWARDS RECHARGE ZONE MAP

KCI TECHNOLOGIES, INC.
2806 BITTERS RD, SUITE 218
SAN ANTONIO, TEXAS 78248
PHONE: (210) 641-9999
FAX: (210) 641-8440
REGISTRATION #F-10573 / #101943-65

SEAL:

FOR REVIEW ONLY
Not for construction, bidding or permit purposes.

DRAFTING:	A.M.
DESIGN:	M.P.S.
"EXHIBIT"	
DATE:	11/2024
KCI JOB #:	672401269
SHEET:	B1

Date: Oct 18, 2024, 11:29am User ID: Abraham.Maldonado File: \\tx-houston\documents\672401269 SAWS Blanco Rd Phase III\SCS Report\02 General Information Form (TCEQ-0587)\Blanco Road\B1 USGS Edwards Recharge Zone Map.dwg

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Attachment C

Project Description
Blanco Road Phase III

This project consists of removing and replacing approximately 12,494 linear feet of proposed dual 6" HDPE force main (FM) pipe serving utility improvements for the project known as Blanco Road Phase III. Blanco Road Phase III is a part of the larger Bexar County roadway reconstruction and drainage improvement project known as Blanco Road From: Borgfeld Drive to Bexar/Comal County Line. The existing Force Main and lift station were constructed with the Specht Road Subdivision Off-site Sewer Improvements and an Organized Sewage Collection System (SCS) Plan was approved for this project May 10, 2024. No changes will be made to the existing lift station and manholes. The site is located outside the city limits but within the Extraterritorial Jurisdiction (ETJ) of San Antonio, Bexar County, Texas. The Blanco Road Phase III project is located over the Edwards Aquifer Recharge & Contributing Zone.

A Geologic feature was found within the SCS 50-foot envelope. The Geologic feature type is a concealed normal fault that crosses the central portion of the site at Meusebach Creek. This Geologic feature has low probability of infiltration and no voids were observed that would contain habitat suitable for endangered karst invertebrates. Project wastewater will eventually be disposed of by the existing Stephen M. Clouse Water Recycling Center.

Geologic Assessment for the Blanco Road Phase III Project, Bexar County, Texas

NOVEMBER 2024

PREPARED FOR

STV Infrastructure

PREPARED BY

SWCA Environmental Consultants

Texas Board of Professional Geoscientists, Firm Registration No. 50159

GEOLOGIC ASSESSMENT FOR THE BLANCO ROAD PHASE III PROJECT, BEXAR COUNTY, TEXAS

Prepared for

STV Infrastructure
12500 San Pedro, Suite 450
San Antonio, Texas 78759
Attn: Amy Stubbs Esguerra

On behalf of

Bexar County

Prepared by

Philip Pearce, P.G., and Kenadi Sutton

SWCA Environmental Consultants
4949 North Loop 1604 West, Suite 235
San Antonio, Texas, 78249
www.swca.com

Texas Board of Professional Geoscientists, Firm Registration No. 50159

SWCA Project No. 76337-03

November 2024

CONTENTS

Appendices

Figures

Tables

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1 INTRODUCTION

Bexar County proposes lane widening and other improvements along approximately 2.5 miles of Blanco Road from Borgfeld Drive to the Comal County line (project) in northern Bexar County (project site) (Figure 1). Approximately 1.5 miles of the northern portion of the project site lie within the Edwards Aquifer Recharge Zone, as defined by the Texas Commission on Environmental Quality (TCEQ). The southern tip of the project site and the portion crossing Cibolo Creek are within Karst Zone 3a, as defined by the U.S. Fish and Wildlife Service. SWCA Environmental Consultants (SWCA) investigated the entire project site.

The purpose of this geologic assessment is to describe geologic conditions on the property, such as locations of karst features and Edwards Aquifer recharge features, to comply with TCEQ Edwards Aquifer Protection Program and the Endangered Species Act.

2 METHODOLOGY

SWCA scientists studied information sources pertaining to all reputed caves from the project site to gather information related to documented caves in the vicinity prior to conducting field work. These information sources include:

- Internal, SWCA data;
- Environmental Systems Research Institute, Inc. (ESRI) ArcGIS® Online Basemap Map Services (2024);
- U.S. Geological Survey (USGS) (2022, 2024) 7.5-minute topographic digital raster graphics;
- Geologic maps (Barnes 1974; Stein and Ozuna 1995); and
- Mapped fault lines (Collins 1994).

SWCA geoscientist Kenadi Sutton conducted field surveys for a geologic assessment on July 20, 2023, and October 17, 2024. The pedestrian survey was completed by traversing parallel transects spaced approximately 30 to 50 feet apart as directed by the TCEQ (2004) in the *Instructions to Geologists for Geologic Assessments on the Edwards Aquifer Recharge/Transition Zones* (Rev. 10-01-04). The project site is centered on an existing paved road, maintained right-of-way, and a wooded area backing into Cibolo Creek. The project site includes both disturbed and undisturbed ground.

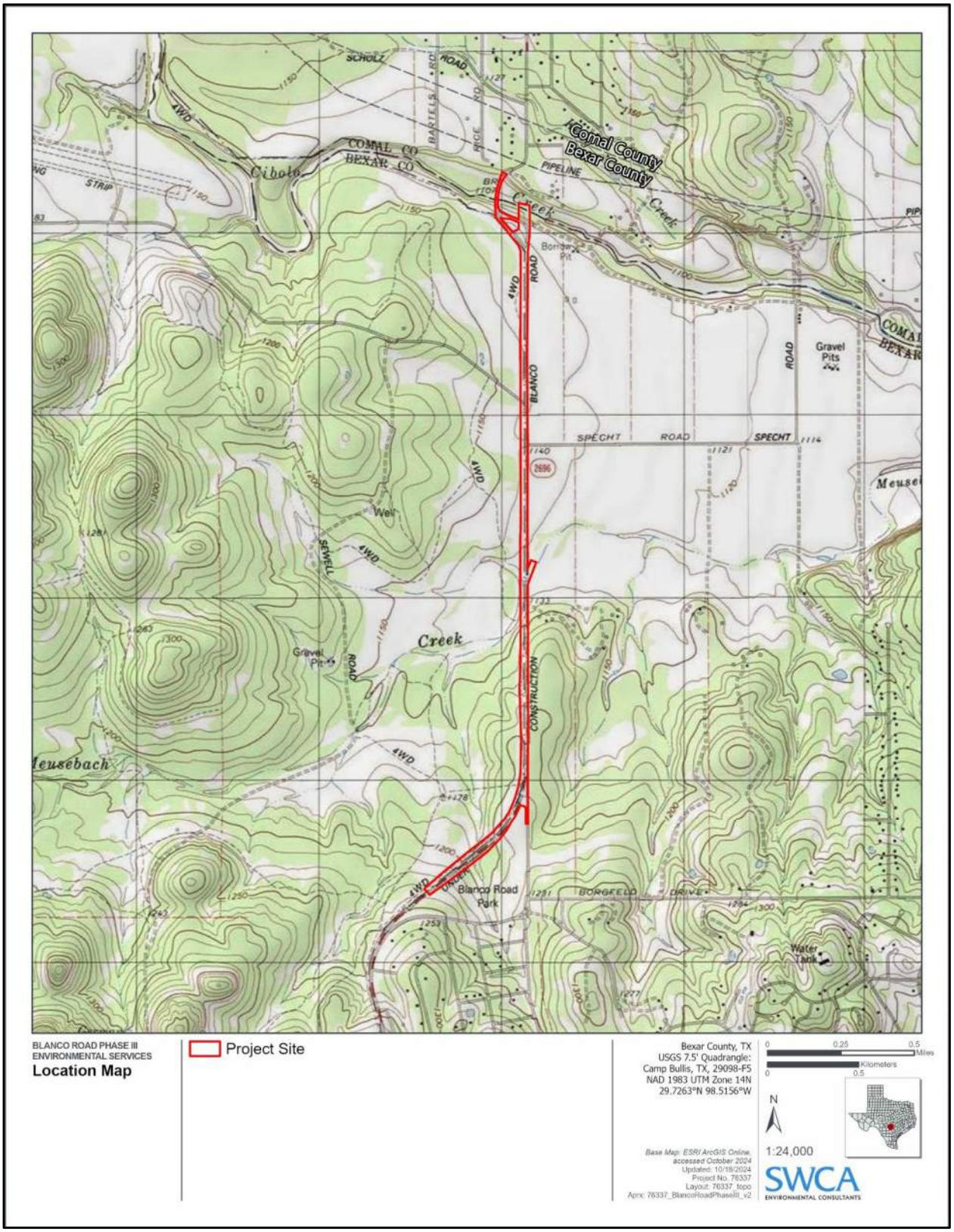

Figure 1. Project site location map.

3 RESULTS

3.1 Project Site Overview

The project site lies within the Contributing and Recharge Zones of the northern segment of the Edwards Aquifer (TCEQ 2021). Topography within and surrounding the project site lacks significant elevation changes. Project site topography ranges from approximately 1,210 feet above mean sea level at the southern terminus of the project site, to 1,110 feet above mean sea level at the northern terminus of the project site, with a gentle decrease in elevation from south to north.

The project site includes existing roadway, maintained right-of-way, and a wooded area near Cibolo Creek. The northern extent of the project site includes a portion of Cibolo Creek where it follows the Comal County line.

3.2 Geology

Quaternary-age terrace deposits cover the center and northernmost tip of the project site, with the Cretaceous-age upper member of the Glen Rose Formation (Kgru) and lower member of the Glen Rose Formation (Kgrl) outcropping at the southern and northern portions of the project site, respectively (Appendix A: Attachment D). The Glen Rose Formation is described as limestone, dolomite, and marl subdivided into two units by a *Corbula* bed. The formation has alternating resistant and recessive beds forming stairstep topography. The limestone is aphanitic to fine grained, hard to soft and marly, and light gray to yellowish gray. The dolomite is fine grained, porous, and yellowish brown. Marine megafossils include molluscan steinkerns, rudistids, oysters, and echinoids. The upper part is relatively thinner bedded, more dolomitic, and less fossiliferous than the lower part. The upper member is approximately 220 feet thick. The lower part is more massive, about 160 feet thick, and includes a *Corbula* bed at the top with abundant steinkerns of *Corbula harveyi* in an interval up to 5 feet thick. The total thickness of Glen Rose Formation is approximately 380 feet. Project site geology has been mapped most recently at a useful scale by Collins (1994) and SWCA finds this interpretation of the geology to be generally accurate. The stratigraphic column is included as Attachment B within Appendix A.

The project site occurs along the Balcones Fault Zone (BFZ) within the Edwards Aquifer Contributing and Recharge Zones (TCEQ 2021). Structural down-warping occurred with the Gulf of Mexico's ancestral formation during the middle Tertiary. The earth's crust was stretched in response and the BFZ formed along a zone of weakness, which currently marks the boundary between the Edwards Plateau and the Gulf Coastal Plain in central Texas. The BFZ is characterized by a series of northeast-trending, predominantly normal, nearly vertical, en echelon faults. Faults are mapped approximately 1.2 miles east of the project site. Based on an average trend of major faults in the vicinity of the project site, the predominant trend is N55ºE. Therefore, features with trends that fall within the range of N40ºE to N70ºE received 10 extra points on the geologic assessment table when evaluating sensitivity.

Recharge into the Edwards Aquifer primarily occurs in areas where the Edwards Group and Georgetown Formation are exposed at the surface. Most recharge is from direct infiltration via precipitation and streamflow loss. Recharge occurs predominantly along secondary porosity features such as faults, fractures, and karst features (caves, solution cavities, sinkholes, etc.).

3.3 Soils

The Natural Resources Conservation Service (NRCS) (2024) identifies nine soil units within the project site (Figure 2). Table 1 provides additional detail for these soil types.

Table 1. Project Site Soil Unit Details

Soil Name	Hydric	Hydrologic Soil Group*	Drainage Class	Frequency of Flooding/Ponding
BrD: Brackett gravelly clay loam, 3 to 12 percent slopes	No	D	Well drained	None
Ca: Anhalt clay, 0 to 2 percent slopes				
CrD: Comfort-Rock outcrop complex, 1 to 8 percent slopes				
LvB: Lewisville silty clay, 1 to 3 percent slopes		B		None to rare/None
Or: Orife soils, moist, 0 to 3 percent slopes, frequently flooded		A		Frequent/None
RUD: Rumple-Comfort, rubbly association, 1 to 8 percent slopes		D		None
TaB: Eckrant cobbly clay, 1 to 8 percent slopes				
Tc: Tinn clay, 0 to 1 percent slopes, occasionally flooded			Moderately well drained	Rare to frequent/Rare to occasional
VcB: Sunev clay loam, 1 to 3 percent slopes		B	Well drained	None

Data Source: NRCS (2024).

* Group A – Soils had high infiltration rates when thoroughly wetted and exhibit the lowest potential for runoff; Group B – Soils had moderate infiltration rates when thoroughly wetted and exhibit moderate potential for runoff; Group D – Soils had very slow infiltration rates when thoroughly wetted and exhibit the highest potential for runoff.

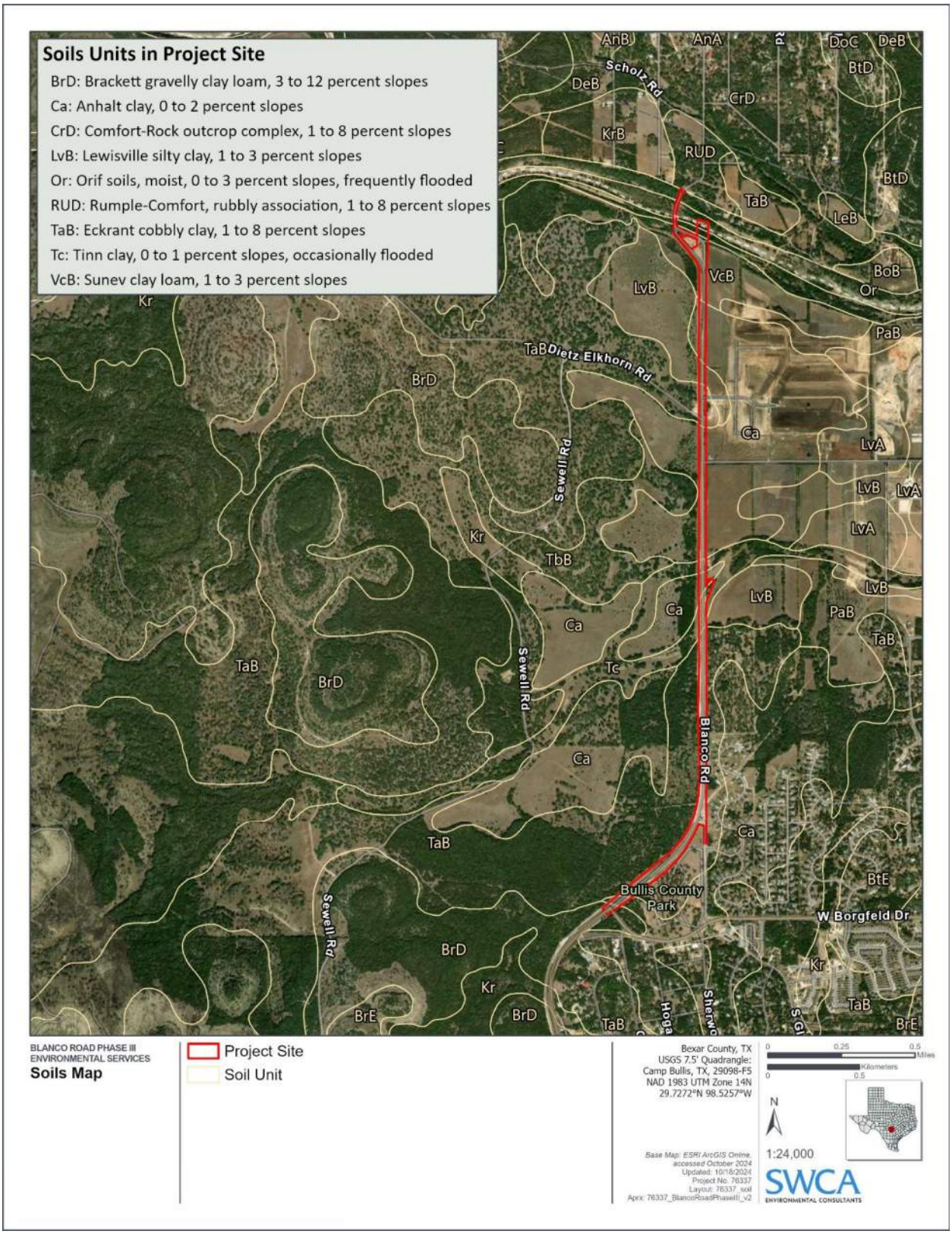

Figure 2. Project site soils map.

4 ASSESSMENT OF THE POTENTIAL FOR OCCURRENCE OF ENDANGERED KARST INVERTEBRATE SPECIES

The project site is underlain by the Cretaceous-age upper and lower members of the Glen Rose Formation and lie within areas delineated as Karst Zones 3a and 4b on the U.S. Fish and Wildlife Service karst invertebrate zone maps (Veni et al. 2024). Zone 3a delineates areas suitable for endangered karst invertebrate species but have a low probability of containing endangered karst species because the habitat is occupied by other karst invertebrate species. Zone 4b delineates areas which do not contain karst invertebrate species. Most of the project site lies in Karst Zone 4b, however the southern terminus near the Blanco Road and Borgfeld Road intersection and the portion of the project site that crosses Cibolo Creek overlie Zone 3a. Feature BR-01, identified in Karst Zone 3a, consisted of three fractures, each approximately 4 to 6 feet in length, observed in bedrock exposed in Cibolo Creek, which is present near the northern terminus of the project site (Attachment E: Photograph 7). The fractures were plugged with grasses and fine sediments. Feature BR-02, identified in Karst Zone 4b, is a concealed fault that crosses the central portion of the project site. This feature was concealed by alluvium sediments. No voids were observed that would contain habitat suitable for endangered karst invertebrates.

5 HYDROGEOLOGIC ASSESSMENT

The overall potential for fluid migration to the Edwards Aquifer for the project site appears relatively low compared to background infiltration rates, due to the presence of paved surfaces and a lack of sensitive geologic features. Two wells near the project site are drilled through the Edwards Aquifer and into the underlying Trinity Aquifer (Figure 3). Table 2 shows water well number, depth to water, and distance from the project for wells within a 0.5-mile radius of the project (Texas Water Development Board [TWDB] 2024).

Table 2. Nearby Water Wells Showing Depth to Water

Water Well	Aquifer	Depth To Water	Year Measured	Distance From Project (feet)
6820301	Trinity	142.42	1992	60
6820305	Trinity	189.62	2011	1,400

Source: TWDB (2024)

SWCA identified two geologic features, including a fault, within the project site.

Feature BR-01 consisted of three fractures, each approximately 4 to 6 feet in length, observed in bedrock exposed in Cibolo Creek, which is present near the northern terminus of the project site (see Attachment E: Photograph 7). The fractures had a general orientation of N39°E, consistent with the regional trend. The fractures were plugged with grass and fine sediments. The probability of rapid infiltration is low due to the presence of fine infilling.

Feature BR-02 consisted of a concealed normal fault that transected the project site north-adjacent to Meusebach Creek. This fault was not observed during the site visit and is concealed beneath alluvial deposits. Though not observed on-site, the fault is mapped by Collins (1994). The fault had a general orientation of N45°E, consistent with the regional trend. The probability of infiltration is low due to it being concealed beneath soil and alluvial deposits.

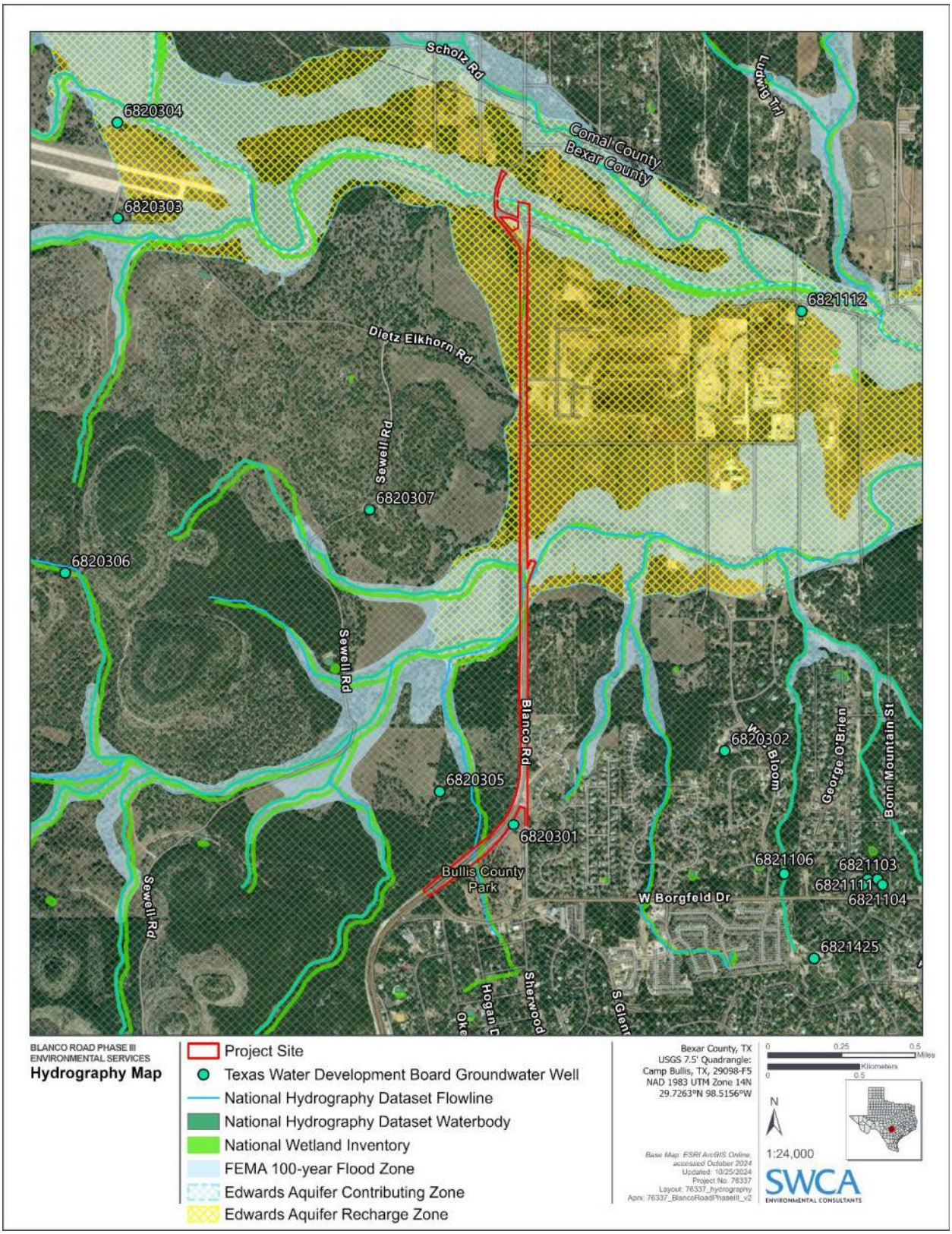

Figure 3. Project site with well locations and surface waters.

6 CONCLUSIONS

SWCA identified two geologic features within the project site.

Feature BR-01 is a cluster of solution enlarged fractures within an outcrop of the lower member of the Glen Rose Formation in the streambed of Cibolo Creek. The fractures were plugged with grass and fine sediments. The probability of rapid infiltration is low due to the presence of fine infilling.

Feature BR-02 consisted of a concealed normal fault that transected the project site north-adjacent to Meusebach Creek. This fault was not observed during the site visit and is concealed beneath alluvial deposits. The probability of infiltration is low due to it being concealed beneath soil and alluvial deposits.

Features BR-01 and BR-02 are not considered suitable habitat for endangered karst invertebrates, because no void space was present.

7 LITERATURE CITED

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APPENDIX A

Texas Commission on Environmental Quality (TCEQ) Forms

Geologic Assessment

Texas Commission on Environmental Quality

For Regulated Activities on The Edwards Aquifer Recharge/transition Zones and Relating to 30 TAC §213.5(b)(3), Effective June 1, 1999

To ensure that the application is administratively complete, confirm that all fields in the form are complete, verify that all requested information is provided, consistently reference the same site and contact person in all forms in the application, and ensure forms are signed by the appropriate party.

Note: Including all the information requested in the form and attachments contributes to more streamlined technical reviews.

Signature

To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. My signature certifies that I am qualified as a geologist as defined by 30 TAC Chapter 213.

Print Name of Geologist: Philip Pearce, P.G. Telephone: 210.877.2847

Fax: 210.877.2848

Date: 11/19/2024

Representing: SWCA Environmental Consultants (TBPG Firm Registration #50159) (Name of Company and TBPG or TBPE registration number)

Signature of Geologist:

Regulated Entity Name: Blanco Road from Borgfeld Drive to Bexar/Comal County Line

Project Information

1. Date(s) Geologic Assessment was performed: 7/20/2023; 10/17/2024
2. Type of Project:
   - ☒ WPAP
   - ☒ SCS
   - ☐ AST
   - ☐ UST
3. Location of Project:
   - ☒ Recharge Zone
   - ☐ Transition Zone

☐ Contributing Zone within the Transition Zone

4. ☒ **Attachment A - Geologic Assessment Table**. Completed Geologic Assessment Table (Form TCEQ-0585-Table) is attached.

5. ☒ Soil cover on the project site is summarized in the table below and uses the SCS Hydrologic Soil Groups* (Urban Hydrology for Small Watersheds, Technical Release No. 55, Appendix A, Soil Conservation Service, 1986). If there is more than one soil type on the project site, show each soil type on the site Geologic Map or a separate soils map.

Table 1 - Soil Units, Infiltration Characteristics and Thickness

Soil Name	Group*	Thickness(feet)
See Attachment		

** Soil Group Definitions (Abbreviated)*

A. Soils having a high infiltration rate when thoroughly wetted.
B. Soils having a moderate infiltration rate when thoroughly wetted.
C. Soils having a slow infiltration rate when thoroughly wetted.
D. Soils having a very slow infiltration rate when thoroughly wetted.

6. ☒ **Attachment B – Stratigraphic Column**. A stratigraphic column showing formations, members, and thicknesses is attached. The outcropping unit, if present, should be at the top of the stratigraphic column. Otherwise, the uppermost unit should be at the top of the stratigraphic column.

7. ☒ **Attachment C – Site Geology**. A narrative description of the site specific geology including any features identified in the Geologic Assessment Table, a discussion of the potential for fluid movement to the Edwards Aquifer, stratigraphy, structure(s), and karst characteristics is attached.

8. ☒ **Attachment D – Site Geologic Map(s)**. The Site Geologic Map must be the same scale as the applicant's Site Plan. The minimum scale is 1”: 400'

   Applicant's Site Plan Scale: 1" = 200'
   Site Geologic Map Scale: 1" = 200'
   Site Soils Map Scale (if more than 1 soil type): 1" = 2,000'

9. Method of collecting positional data:

   ☒ Global Positioning System (GPS) technology.
   ☐ Other method(s). Please describe method of data collection: _____

10. ☒ The project site and boundaries are clearly shown and labeled on the Site Geologic Map.

11. ☒ Surface geologic units are shown and labeled on the Site Geologic Map.

12. ☒ Geologic or manmade features were discovered on the project site during the field investigation. They are shown and labeled on the Site Geologic Map and are described in the attached Geologic Assessment Table.

    ☐ Geologic or manmade features were not discovered on the project site during the field investigation.

13. ☒ The Recharge Zone boundary is shown and labeled, if appropriate.

14. All known wells (test holes, water, oil, unplugged, capped and/or abandoned, etc.): If applicable, the information must agree with Item No. 20 of the WPAP Application Section.

    ☐ There are _____ (#) wells present on the project site and the locations are shown and labeled. (Check all of the following that apply.)
    - ☐ The wells are not in use and have been properly abandoned.
    - ☐ The wells are not in use and will be properly abandoned.
    - ☐ The wells are in use and comply with 16 TAC Chapter 76.

    ☒ There are no wells or test holes of any kind known to exist on the project site.

Administrative Information

15. ☒ Submit one (1) original and one (1) copy of the application, plus additional copies as needed for each affected incorporated city, groundwater conservation district, and county in which the project will be located. The TCEQ will distribute the additional copies to these jurisdictions. The copies must be submitted to the appropriate regional office.

Table 1 – Soil Units, Infiltration Characteristics and Thickness

Soil Name	Group*	Thickness (feet)
BrD: Brackett gravelly clay loam, 3 to 12 percent slopes	D	0.5-1.67
Ca: Anhalt clay, 0 to 2 percent slopes	D	1.67-3.33
CrD: Comfort-Rock outcrop complex, 1 to 8 percent slopes	D	0.33-1.67
LvB: Lewisville silty clay, 1 to 3 percent slopes	B	1.67-6.67
Or: Orife soils, moist, 0 to 3 percent slopes, frequently flooded	A	6.67
RUD: Rumple-Comfort, rubbly association, 1 to 8 percent slopes	D	1.67-3.33
TaB: Eckrant cobbly clay, 1 to 8 percent slopes	D	0.33-1.67
Tc: Tinn clay, 0 to 1 percent slopes, occasionally flooded	D	6.67
VcB: Sunev clay loam, 1 to 3 percent slopes	B	2.75-6

** Soil Group Definitions (Abbreviated)*

A. Soils having a high infiltration rate when thoroughly wetted.

B. Soils having a moderate infiltration rate when thoroughly wetted.

C. Soils having a slow infiltration rate when thoroughly wetted.

D. Soils having a very slow infiltration rate when thoroughly wetted.

ATTACHMENT A

Geologic Assessment Table

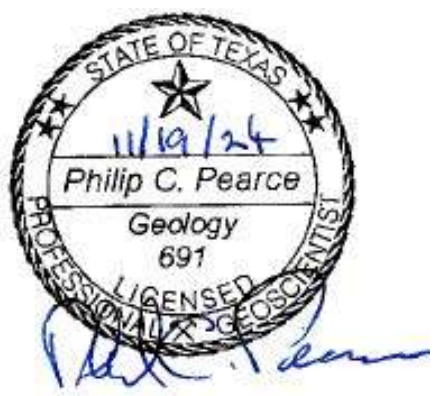
GEOLOGIC ASSESSMENT TABLE			PROJECT NAME: BLANCO ROAD PHASE III																	
LOCATION			FEATURE CHARACTERISTICS												EVALUATION			PHYSICAL SETTING		
1A	1B *	1C*	2A	2B	3	4			5	5A	6	7	8A	8B	9	10		11		12
FEATURE ID	LATITUDE	LONGITUDE	FEATURE TYPE	POINTS	FORMATION	DIMENSIONS (FEET)			TREND (DEGREES)	DOM	DENSITY (NO/FT)	APERTURE (FEET)	INFILL	RELATIVE INFILTRATION RATE	TOTAL	SENSITIVITY		CATCHMENT AREA (ACRES)		TOPOGRAPHY
						X	Y	Z		10						<40	>40	<1.6	>1.6	
BR-01	29.74233	-98.51282	O	5	Kgrl	6	5	-	N39E	X	2	0.03	V,F	5	20	X		X		Streambed
BR-02	29.72392	-98.51299	F	20	Kgru	-	-	-	N45E	X	-	-	F	5	35	X		X		Streambed

* DATUM: NAD83

2A TYPE	TYPE	2B POINTS
C	Cave	30
SC	Solution cavity	20
SF	Solution-enlarged fracture(s)	20
F	Fault	20
O	Other natural bedrock features	5
MB	Manmade feature in bedrock	30
SW	Swallow hole	30
SH	Sinkhole	20
CD	Non-karst closed depression	5
Z	Zone, clustered or aligned features	30

8A INFILLING	
N	None, exposed bedrock
C	Coarse - cobbles, breakdown, sand, gravel
O	Loose or soft mud or soil, organics, leaves, sticks, dark colors
F	Fines, compacted clay-rich sediment, soil profile, gray or red colors
V	Vegetation. Give details in narrative description
FS	Flowstone, cements, cave deposits
X	Other materials

12 TOPOGRAPHY
Cliff, Hilltop, Hillside, Drainage, Floodplain, Streambed



I have read, I understood, and I have followed the Texas Commission on Environmental Quality's Instructions to Geologists. The information presented here complies with that document and is a true representation of the conditions observed in the field.
My signature certifies that I am qualified as a geologist as defined by 30 TAC Chapter 213.

Date 11/19/2024

Sheet 1 of 1

TCEQ-0585-Table (Rev. 10-01-04)

ATTACHMENT B

Stratigraphic Column

Stratigraphic Column

Hydrogeologic Subdivision			Group, Formation, or Member			Thickness (feet)
Lower Cretaceous	I	*Edwards Aquifer*	Georgetown Formation (Kgt)			2-20
	II		*Edwards Group*	*Person Formation (Kep)*	Cyclic and marine members, undivided	80-90
	III				Leached and collapsed members, undivided	70-90
	IV				Regional dense member	20-24
	V			*Kainer Formation (Kek)*	Grainstone member	50-60
	VI				Kirschberg evaporite member	50-60
	VII				Dolomitic member	110 -130
	VIII				Basal nodular member	50-60
	Lower confining unit		Upper member of the Glen Rose Limestone (Kgru)			220
			Lower member of the Glen Rose Formation (Kgrl)			160

Modified from Stein and Ozuna, 1995

ATTACHMENT C

Narrative Description of Geology

Please refer to section 3.2 of this report for geologic narrative description.

ATTACHMENT D

Site Geologic Map

Qal

Kgru

Blanco Rd

Blanco Rd

Old Blanco Rd

W Borgfeld Dr

Blanco Rd

STATE OF TEXAS
11/19/24
Philip C. Pearce
Geology
691
LICENSED
PROFESSIONAL GEOSCIENTIST

BLANCO ROAD PHASE III
ENVIRONMENTAL SERVICES

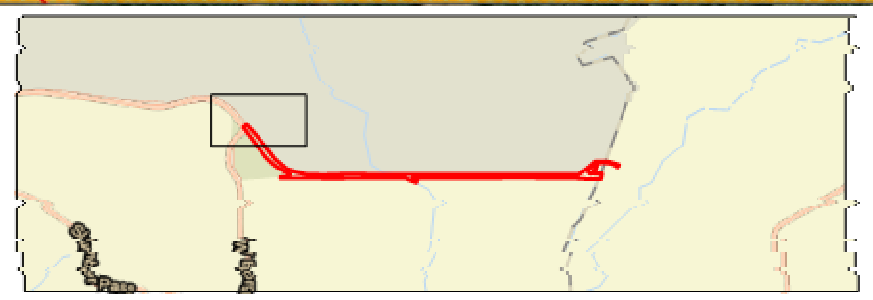
Geology Map

- Inferred Normal
- Project Site
- Edwards Aquifer Contributing Zone

Geology Description

- Qal: Alluvium deposits (Pleistocene)
- Kgru: Upper member of the Glen Rose Formation (Comanchean)

1 inch = 200 feet



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Camp Bullis, TX, 29098-F5
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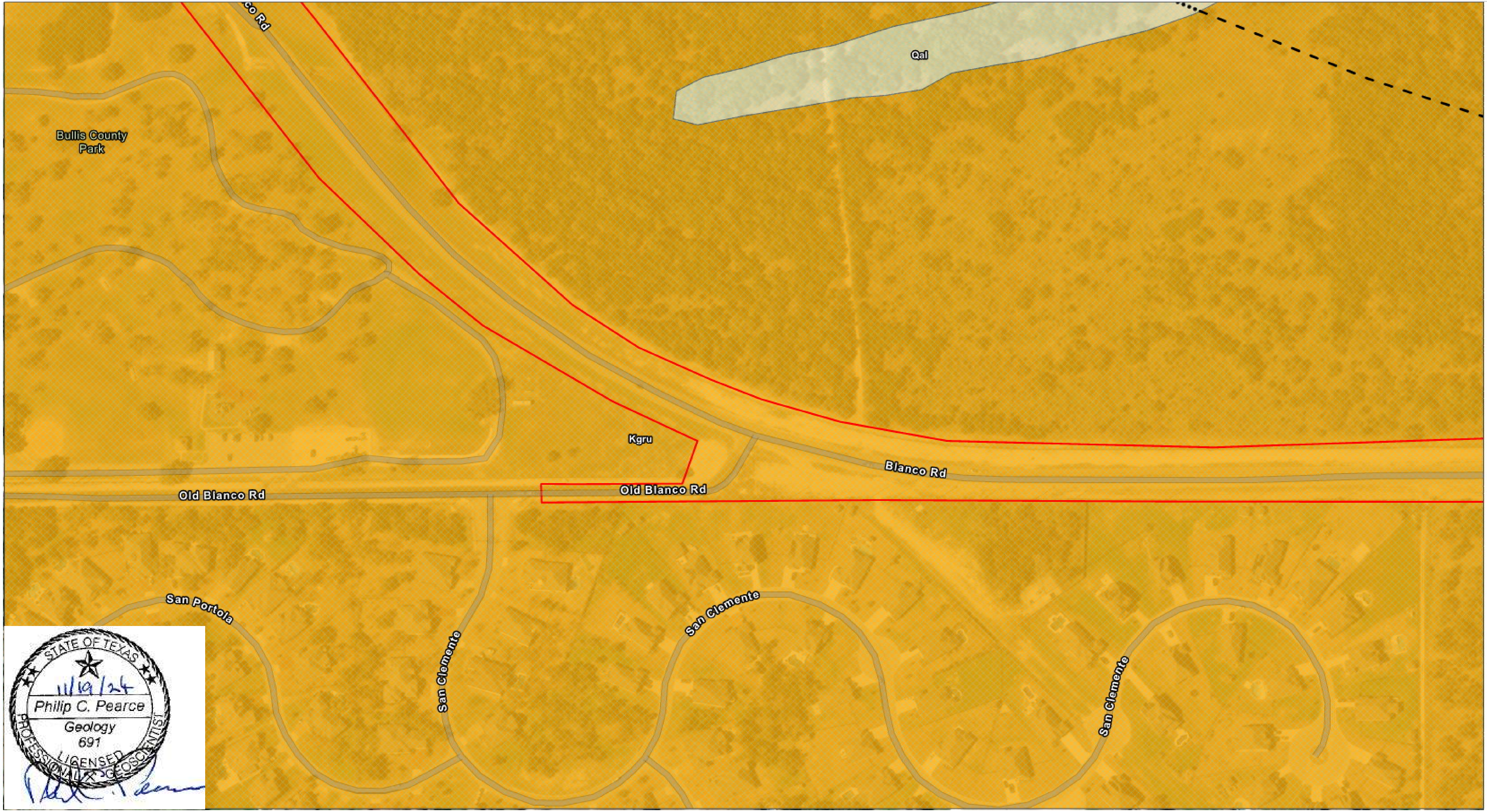
accessed November 2024
Updated: 11/18/2024

Aproc 76337_BlancoRoadPhaseIII_v2

SWCA ENVIRONMENTAL CONSULTANTS

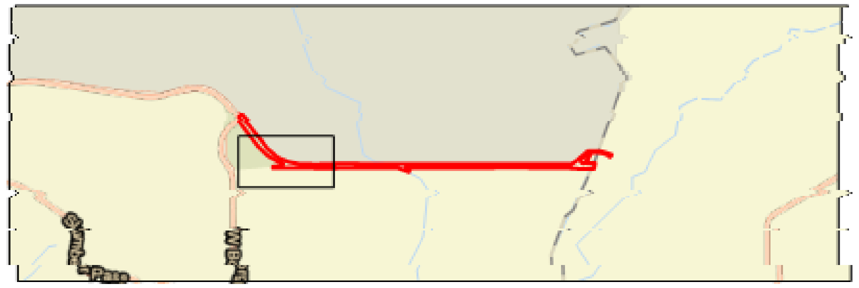


BLANCO ROAD PHASE III
ENVIRONMENTAL SERVICES
Geology Map

1 inch = 200 feet

- Inferred Normal
- Concealed Normal
- Project Site
- Edwards Aquifer Contributing Zone

Geology Description
- Qal: Alluvium deposits (Pleistocene)
- Kgru: Upper member of the Glen Rose Formation (Comanchean)



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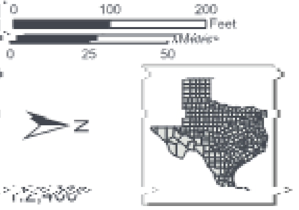

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Page 2 of 5

Qal

Kgrl

Mossbach Creek

BR-02

Blanco Rd

Blanco Rd

Mossbach Creek

Kgru

Qt

Qt

STATE OF TEXAS
11/19/24
Philip C. Pearce
Geology
691
LICENSED
PROFESSIONAL GEOSCIENTIST

BLANCO ROAD PHASE III
ENVIRONMENTAL SERVICES

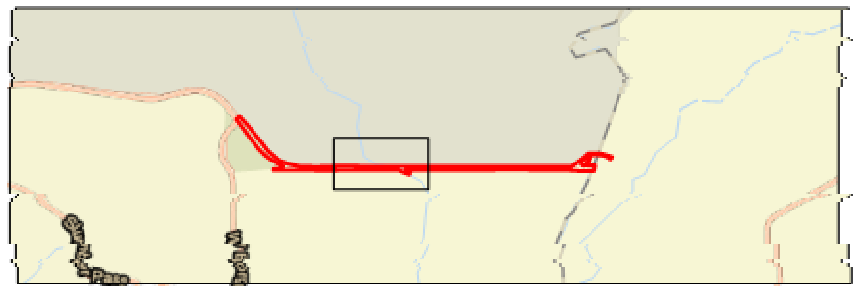
Geology Map

1 inch = 200 feet

- Geologic Feature
- Inferred Normal
- Concealed Normal
- Project Site
- Edwards Aquifer Contributing Zone
- Edwards Aquifer Recharge Zone

Geology Description

- Qal: Alluvium deposits (Pleistocene)
- Qt: Fluviatile terrace deposits (Pleistocene)
- Kgru: Upper member of the Glen Rose Formation (Comanchean)
- Kgrl: Lower member of the Glen Rose Formation (Comanchean)



Bexar County, TX
USGS 7.5' Quadrangle
Camp Bullis, TX, 29098-F5
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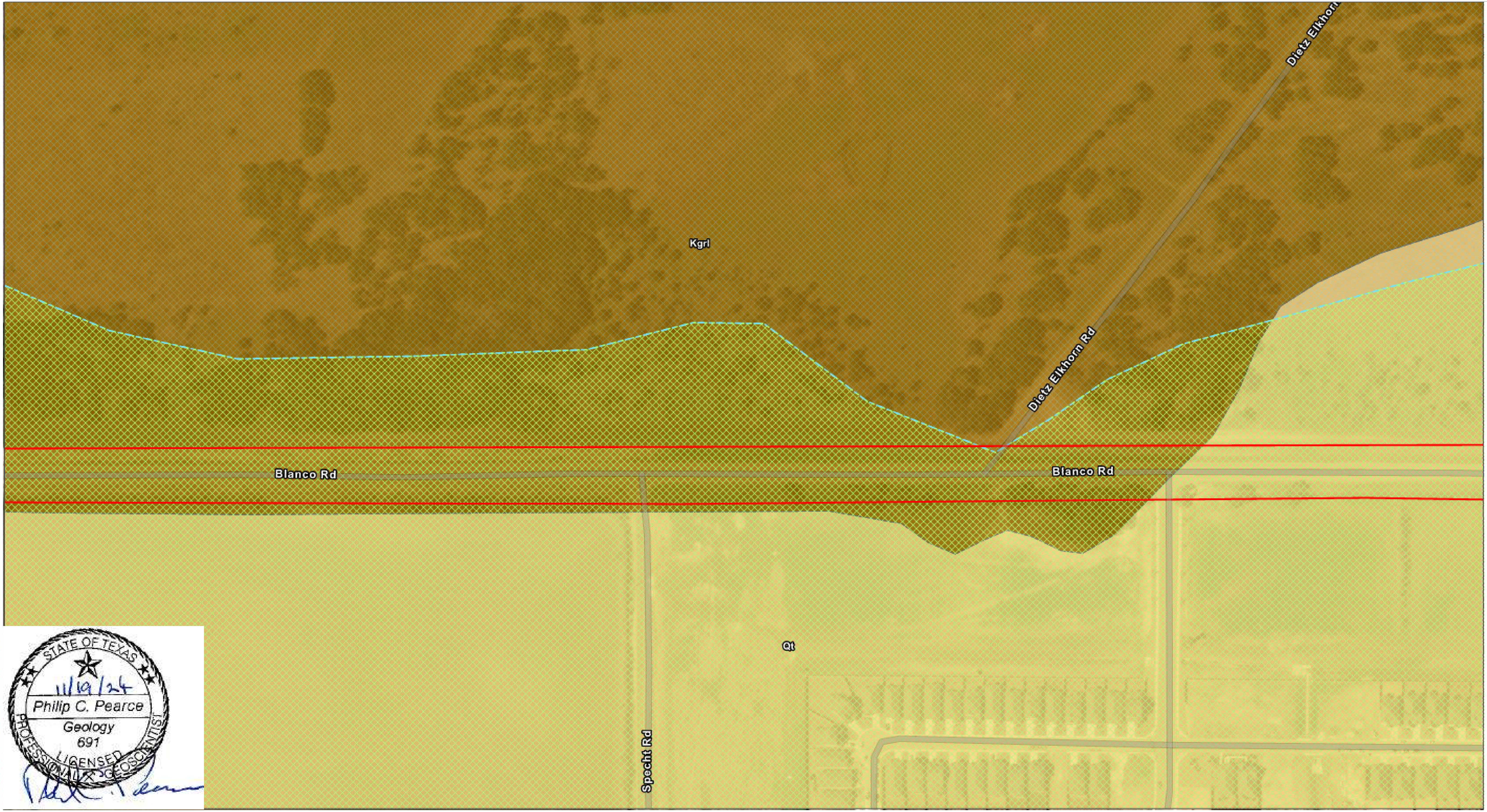
accessed November 2024
Updated: 11/18/2024

Aproc 76337_BlancoRoadPhaseIII_v2

SWCA ENVIRONMENTAL CONSULTANTS

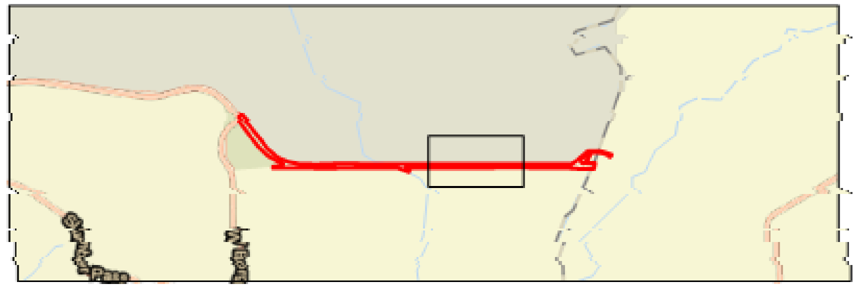


BLANCO ROAD PHASE III
ENVIRONMENTAL SERVICES
Geology Map

1 inch = 200 feet

- Project Site
- Edwards Aquifer Contributing Zone
- Edwards Aquifer Recharge Zone

Geology Description
- Qt: Fluviatile terrace deposits (Pleistocene)
- Kgrl: Lower member of the Glen Rose Formation (Comanchean)



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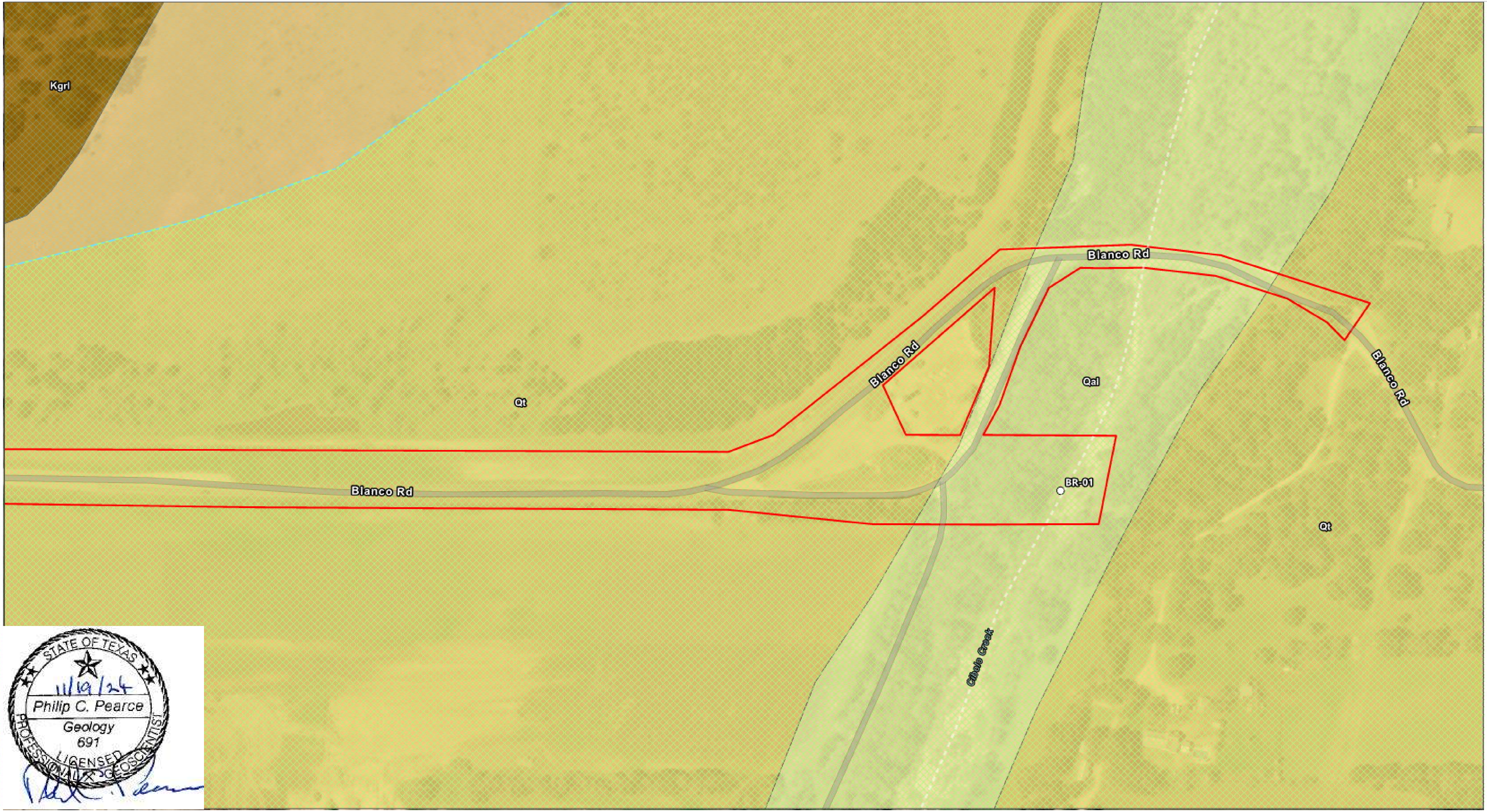
Page 4 of 5



BLANCO ROAD PHASE III
ENVIRONMENTAL SERVICES

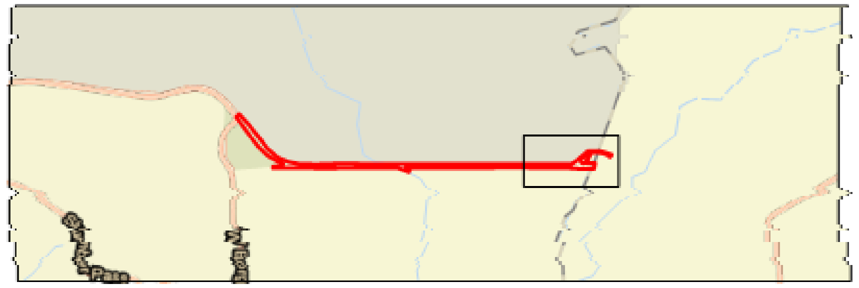
Geology Map

1 inch = 200 feet

- Geologic Feature
- Project Site
- Edwards Aquifer Contributing Zone
- Edwards Aquifer Recharge Zone

Geology Description

- Qal: Alluvium deposits (Pleistocene)
- Qt: Fluviatile terrace deposits (Pleistocene)
- Kgrl: Lower member of the Glen Rose Formation (Comanchean)



Bexar County, TX
USGS 7.5' Quadrangle:
Camp Bullis, TX, 29098-F5
29.7404°N 98.5134°W

0 100 200 Feet
0 25 50 Meters

accessed November 2024

Apm: 76337_BlancoRoadPhaseIII_v2

SWCA ENVIRONMENTAL CONSULTANTS

Page 5 of 5

ATTACHMENT E

Photographic Log

Photo 1. Representative view of southern project site extent, facing north.

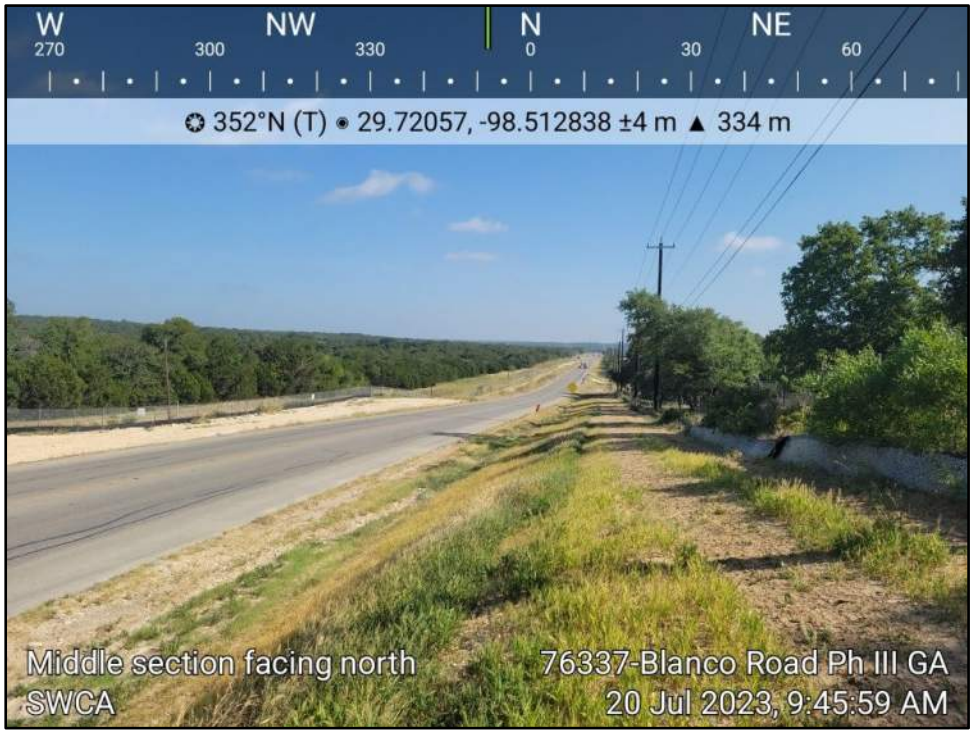


Photo 2. Representative view of central project extent, facing north.

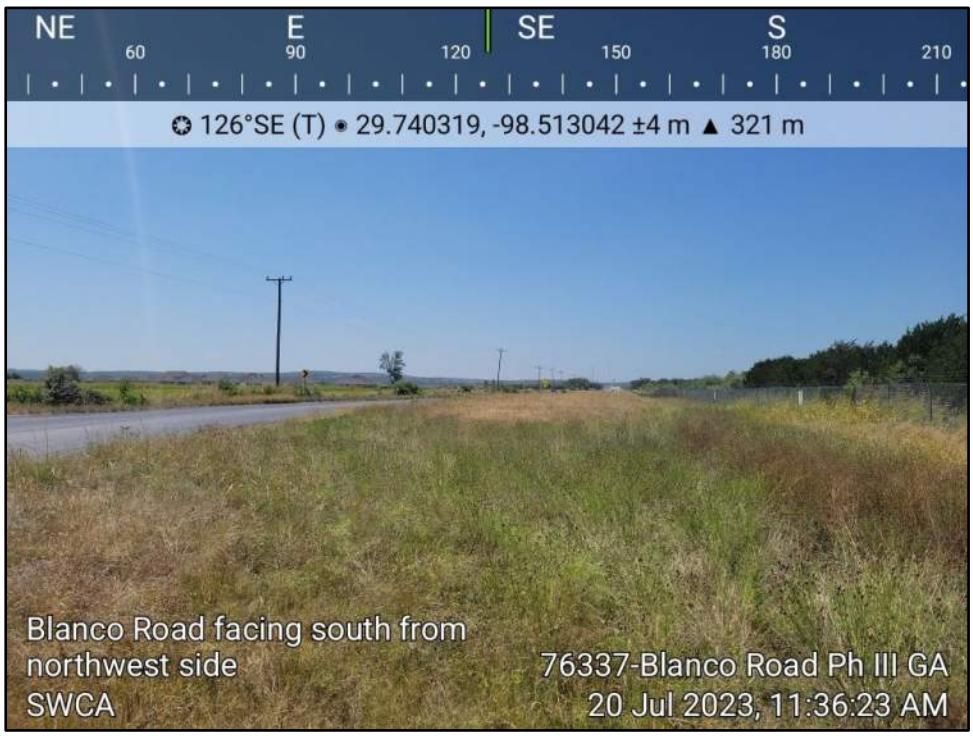


Photo 3. Representative view of northern project site extent, facing south.

Photo 4. Representative photograph of Cibolo Creek within project site extent.

Photo 5. Representative photograph of Meusebach Creek crossing.

Photo 6. Representative photograph of intermittent stream crossing.

Photo 7. Representative photograph of feature BR-01 in Cibolo Creek dry creek bed at northern project site extent.

Photo 8. Representative view of small dry creek bed on Klabunde tract easement.

Photo 9. Dry creek adjacent to Klabunde tract easement.

Photo 10. Existing drainage improvement adjacent to Klabunde tract easement.

Modification of a Previously Approved Plan

Texas Commission on Environmental Quality

for Regulated Activities on the Edwards Aquifer Recharge Zone and Transition Zone and Relating to 30 TAC 213.4(j), Effective June 1, 1999

To ensure that the application is administratively complete, confirm that all fields in the form are complete, verify that all requested information is provided, consistently reference the same site and contact person in all forms in the application, and ensure forms are signed by the appropriate party.

Note: Including all the information requested in the form and attachments contributes to more streamlined technical reviews.

Signature

To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. This request for a **Modification of a Previously Approved Plan** is hereby submitted for TCEQ review and executive director approval. The request was prepared by:

Print Name of Customer/Agent: San Antonio Water System (SAWS)

Date: 5/15/2025

Signature of Customer/Agent:

Project Information

1. Current Regulated Entity Name: Blanco Road Phase III
   Original Regulated Entity Name: Blanco Road Phase III
   Regulated Entity Number(s) (RN): RN111029088
   Edwards Aquifer Protection Program ID Number(s): 13001893
   ☒ The applicant has not changed and the Customer Number (CN) is: 600529069
   ☐ The applicant or Regulated Entity has changed. A new Core Data Form has been provided.

2. ☒ **Attachment A: Original Approval Letter and Approved Modification Letters**. A copy of the original approval letter and copies of any modification approval letters are attached.

3. A modification of a previously approved plan is requested for (check all that apply):
   - ☐ Physical or operational modification of any water pollution abatement structure(s) including but not limited to ponds, dams, berms, sewage treatment plants, and diversionary structures;
   - ☐ Change in the nature or character of the regulated activity from that which was originally approved or a change which would significantly impact the ability of the plan to prevent pollution of the Edwards Aquifer;
   - ☐ Development of land previously identified as undeveloped in the original water pollution abatement plan;
   - ☒ Physical modification of the approved organized sewage collection system;
   - ☐ Physical modification of the approved underground storage tank system;
   - ☐ Physical modification of the approved aboveground storage tank system.

4. ☒ Summary of Proposed Modifications (select plan type being modified). If the approved plan has been modified more than once, copy the appropriate table below, as necessary, and complete the information for each additional modification.

WPAP Modification Summary	***Approved Project***	***Proposed Modification***
Acres	_____	_____
Type of Development	_____	_____
Number of Residential Lots	_____	_____
Impervious Cover (acres)	_____	_____
Impervious Cover (%	_____	_____
Permanent BMPs	_____	_____
Other	_____	_____

SCS Modification Summary	***Approved Project***	***Proposed Modification***
Linear Feet	11,709.26 LF	12,181 LF
Pipe Diameter	6"	6"
Other	_____	_____

AST Modification Summary	***Approved Project***	***Proposed Modification***
Number of ASTs	_____	_____
Volume of ASTs	_____	_____
Other	_____	_____

UST Modification Summary	***Approved Project***	***Proposed Modification***
Number of USTs	_____	_____
Volume of USTs	_____	_____
Other	_____	_____

5. ☒ **Attachment B: Narrative of Proposed Modification**. A detailed narrative description of the nature of the proposed modification is attached. It discusses what was approved, including any previous modifications, and how this proposed modification will change the approved plan.

6. ☒ **Attachment C: Current Site Plan of the Approved Project**. A current site plan showing the existing site development (i.e., current site layout) at the time this application for modification is attached. A site plan detailing the changes proposed in the submitted modification is required elsewhere.
   - ☐ The approved construction has not commenced. The original approval letter and any subsequent modification approval letters are included as Attachment A to document that the approval has not expired.
   - ☒ The approved construction has commenced and has been completed. Attachment C illustrates that the site was constructed as approved.
   - ☐ The approved construction has commenced and has been completed. Attachment C illustrates that the site was **not** constructed as approved.
   - ☐ The approved construction has commenced and has **not** been completed. Attachment C illustrates that, thus far, the site was constructed as approved.
   - ☐ The approved construction has commenced and has **not** been completed. Attachment C illustrates that, thus far, the site was **not** constructed as approved.

7. ☒ The acreage of the approved plan has increased. A Geologic Assessment has been provided for the new acreage.
   ☐ Acreage has not been added to or removed from the approved plan.

8. ☒ Submit one (1) original and one (1) copy of the application, plus additional copies as needed for each affected incorporated city, groundwater conservation district, and county in which the project will be located. The TCEQ will distribute the additional copies to these jurisdictions. The copies must be submitted to the appropriate regional office.

Attachment A

Original Approval Letter

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

May 10, 2024

Mr. Brian Otto
Meritage Homes of Texas, LLC
2722 W. Bitters Road, Suite 200
San Antonio, Texas 78248

Re: Approval of an Organized Sewage Collection System (SCS) Plan
Specht Road Subdivision Off-Site Sewer Improvements; Located northeast of Blanco Road and Specht Road; City of San Antonio ETJ, Bexar County, Texas
Edwards Aquifer Protection Program ID: 13001893, Regulated Entity No. RN111029088

Dear Mr. Otto:

The Texas Commission on Environmental Quality (TCEQ) has completed its review on the application for the above-referenced project submitted to the Edwards Aquifer Protection Program (EAPP) by Cude Engineers on behalf of the applicant, Meritage Homes of Texas, LLC on February 27, 2024. Final review of the application was completed after additional material was received on April 30, 2024.

As presented to the TCEQ, the application was prepared in general compliance with the requirements of 30 Texas Administrative Codes (TAC) Chapter §213 and Chapter §217. The engineering design report, technical specifications and final design plans were prepared by a Texas licensed professional engineer (PE). All construction plans and design information were sealed, signed, and dated by a Texas licensed PE. Therefore, the application for the construction of the proposed project and methods to protect the Edwards Aquifer are hereby **approved,** subject to applicable state rules and the conditions in this letter.

This approval expires two years from the date of this letter, unless, prior to the expiration date, more than 10 percent of the construction has commenced on the project or an extension of time has been officially requested. This approval or extension will expire, and no extension will be granted if more than 50 percent of the project has not been completed within ten years from the date of this letter.

The applicant or a person affected may file with the chief clerk a motion for reconsideration of the executive director's final action on this Edwards Aquifer protection plan. A motion for reconsideration must be filed in accordance with 30 TAC §50.139.

BACKGROUND

TCEQ issued a SCS approval for Estancia Ranch gravity sewer (13001157) on October 8, 2020. The project proceeded with construction of the lift station and force main without submittal of an SCS application to TCEQ.

PROJECT DESCRIPTION

The proposed sewage collection system will provide disposal service for residential development. The system includes one lift station, dual force mains, gravity line from the sewer outfall approved for Estancia Ranch (13001157), and other appurtenance necessary for conveying wastewater to a treatment plant.

The proposed SCS includes the lines listed in the table below:

Pipe Diameter (inches)	Linear Feet	Pipe Material	Specifications
8	27.62	PVC SDR 26	ASTM D-3034
6	11,709.26	HDPE (DIPS), DR 11	ASTM F714
Total Linear Feet	11,736.88		

LIFT STATION DETAILS

The proposed lift station will consist of a 10-foot diameter wet well with an approximate depth of 29.5 feet, three Flygt NP 31711 SH 3-275 model submersible pumps, and Emergency Power Generator. Each pump will have a pumping capacity of 203 gallons per minute (gpm) at a total dynamic head (TDH) of 215 feet. **The lift station is designed and will be constructed to ensure that bypassing of sewage does not occur.**

Additional equipment will include a control panel, an audio-visual alarm, SCADA instrumentation with full time monitoring at SAWS SCADA control center, hoisting equipment, level pump controllers, pump supports and discharge piping with valves, and a security fence with controlled access. Additional redundant influent flow level monitoring will be provided at the sewer outfall upstream of this lift station by a Smart Cover with satellite link that alarms at the SAWS Control Center when a changing trend is identified.

TREATMENT FACILITY

The system will be connected to an existing SAWS wastewater line for conveyance to the Stephen M. Clouse Water Recycling Center for treatment and disposal. **The proposed system shall be connected for conveyance prior to use of the development.** The project will conform to all applicable codes, ordinances, and requirements of the City of San Antonio and SAWS.

GEOLOGY

According to the Geologic Assessment (GA) included with the application, the surficial units of the site are the Bulverde, Little Sisters and Twin Sisters members of the lower Glen Rose limestone. No sensitive geologic features were identified in the GA. The site assessment conducted on April 18, 2024, by TCEQ staff determined the site to be generally as described by the GA.

SPECIAL CONDITIONS

I. In lieu of meeting 30 TAC 217.67(a)(3) which requires a 5 feet per second flushing velocity twice per day, applicant provided enhanced SCADA system monitoring, use of a Smart Cover with satellite telemetry that will alarm at SAWS SCADA Control Center if any trend identifies higher sewer outfall levels or reduced pumping capability. SAWS will also maintain ability to flush each force main if monitoring and test data reflect reduction in force main capacity potentially the result of deposition of sediment in the force main.

II. In lieu of a geologist certification that the excavation has been inspected for the presence of sensitive features, applicant and SAWS submitted Inspection reports and construction inspection photos of the lift station excavation prior to placement of base and concrete.

STANDARD CONDITIONS

1. The plan holder (applicant) must comply with all provisions of 30 TAC Chapter §213 and all technical specifications in the approved plan. The plan holder should also acquire and comply with additional and separate approvals, permits, registrations or authorizations from other TCEQ Programs (i.e., Water Quality) as required based on the specifics of the plan.

2. In addition to the rules of the Commission, the plan holder must also comply with state and local ordinances and regulations providing for the protection of water quality as applicable.

Prior to Commencement of Construction:

3. The plan holder of any approved Edwards Aquifer protection plan must notify the EAPP and obtain approval from the executive director prior to initiating any modification to the activities described in the referenced application following the date of the approval.

4. The plan holder must provide written notification of intent to commence construction, replacement, or rehabilitation of the referenced project. Notification must be submitted to the EAPP no later than 48 hours prior to commencement of the regulated activity. Notification must include the date on which the regulated activity will commence, the name of the approved plan and program ID number for the regulated activity, and the name of the prime contractor with the name and telephone number of the contact person.

5. Temporary erosion and sedimentation (E&S) controls as described in the referenced application, must be installed prior to construction, and maintained during construction. Temporary E&S controls may be removed when vegetation is established, and the construction area is stabilized. The TCEQ may monitor stormwater discharges from the site to evaluate the adequacy of temporary E&S control measures. Additional controls may be necessary if excessive solids are being discharged from the site.

During Construction:

6. This approval does not authorize the installation of temporary or permanent aboveground storage tanks on this project that will have a total storage capacity of 500 gallons or more of static hydrocarbons or hazardous substances without prior approval of an Aboveground Storage Tank facility application.

7. If any sensitive feature is encountered during construction, replacement, or rehabilitation on this project, all regulated activities must be **immediately** suspended near it and notification must be made to TCEQ EAPP staff. Temporary BMPs must be installed and maintained to protect the feature from pollution and contamination. Regulated activities near the feature may not proceed until the executive director has reviewed and approved the methods proposed to protect the feature and the aquifer from potentially adverse impacts to water quality.

8. If sediment escapes the construction site, the sediment must be removed at a frequency sufficient to minimize offsite impacts to water quality (e.g., fugitive sediment in street being washed into surface streams or sensitive features by the next rain). Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been reduced by 50 percent. Litter, construction debris, and construction chemicals shall be prevented from becoming stormwater discharge pollutants.

9. Intentional discharges of sediment laden water are not allowed. If dewatering becomes necessary, the discharge must be filtered through appropriately selected BMPs.

10. The following records shall be maintained and made available to the executive director upon request: the dates when major grading activities occur, the dates when construction activities temporarily or permanently cease on a portion of the site, and the dates when stabilization measures are initiated.

11. Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, and construction activities will not resume within 21 days. When the initiation of stabilization measures by the 14th day is precluded by weather conditions, stabilization measures shall be initiated as soon as practicable.

<u>After Completion of Construction:</u>

12. No part of the organized sewage collection system may be used as a sewage holding tank, as defined in 30 TAC §213.3 (excluding lift stations), over the Edwards Aquifer recharge zone.

13. A Texas licensed PE **must certify** in writing that the new sewage collection system (including force mains) has passed all required testing. The certification shall be submitted to the EAPP within 30 days of test completion and prior to the new sewage collection system being put into service.

14. A Texas licensed PE **must certify** subsequent testing required every five years of the existing sewage collection system after being put into use to determine types and locations of structural damage and defects such as offsets, open joints, or cracked or crushed lines that would allow exfiltration to occur. The test results must be retained by the plan holder for five years and made available to the executive director upon request.

The holder of the approved Edwards Aquifer protection plan is responsible for compliance with Chapter §213 and any condition of the approved plan through all phases of plan implementation. Failure to comply with any condition within this approval letter is a violation of Chapter §213 and is subject to administrative rule or orders and penalties as provided under §213.10 of this title (relating to Enforcement). Such violations may also be subject to civil penalties and injunction. Upon legal transfer of this property, the new owner is required to comply with all terms of the approved Edwards Aquifer protection plan.

This action is taken as delegated by the executive director of the Texas Commission on Environmental Quality. If you have any questions or require additional information, please contact Don Vandertulip, PE, BCEE of the Edwards Aquifer Protection Program at 210-403-4057 or the regional office at 512-339-2929.

Sincerely,

Lillian Butler

Lillian I. Butler, Section Manager
Edwards Aquifer Protection Program
Texas Commission on Environmental Quality

LIB/dv

cc: Mr. David D. Cupit, II, PE; Cude Engineers

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2806 W. Bitters Road, Suite 218 • San Antonio, Texas 78248 • Phone (210) 641-9999

Attachment B

Narrative of Proposed Modification
Blanco Road Phase III

This project consists of removing and replacing approximately 6,247 linear feet of proposed 2 - 6" HDPE force main (FM) pipe serving utility improvements for the project known as Blanco Road Phase III. Blanco Road Phase III is a part of the larger Bexar County roadway reconstruction and drainage improvement project known as Blanco Road From: Borgfeld Drive to Bexar/Comal County Line. The existing Force Main and lift station were constructed with the Specht Road Subdivision Off-site Sewer Improvements and an Organized Sewage Collection System (SCS) Plan was approved for this project May 10, 2024. No changes will be made to the existing lift station and manholes. The site is located outside the city limits but within the Extraterritorial Jurisdiction (ETJ) of San Antonio, Bexar County, Texas. The Blanco Road Phase III project is located over the Edwards Aquifer Recharge & Contributing Zone.

A Geologic feature was found within the SCS 50-foot envelope. The Geologic feature type is a concealed normal fault that crosses the central portion of the site at Meusebach Creek. This Geologic feature has low probability of infiltration and no voids were observed that would contain habitat suitable for endangered karst invertebrates. Project wastewater will eventually be disposed of by the existing Stephen M. Clouse Water Recycling Center.

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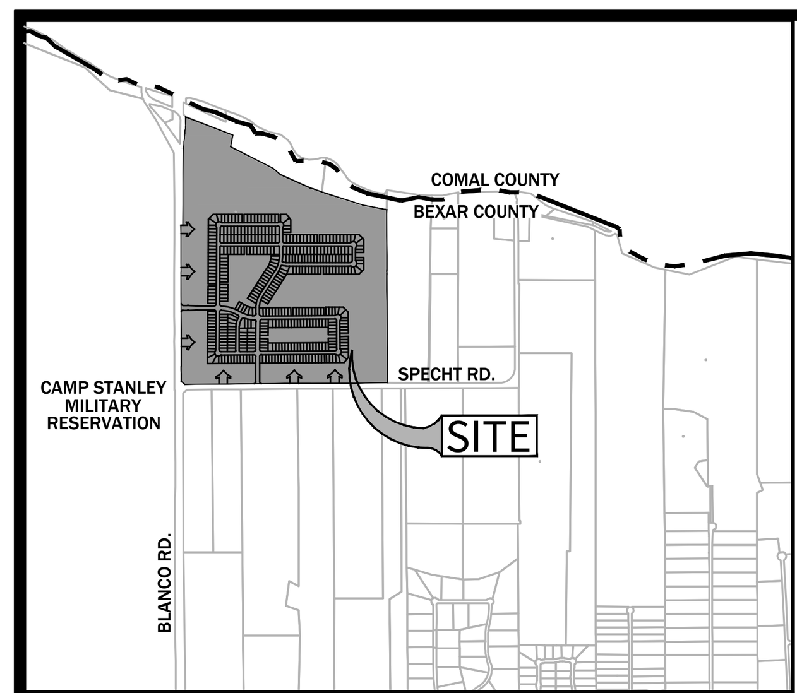
Attachment C

Current Site Plan of the Approved Project



LOCATION MAP

OWNER/DEVELOPER:

MERITAGE HOMES OF TEXAS, L.L.C.
CONTACT PERSON: TONDA ALEXANDER
2722 W. BITTERS RD. SUITE 200
SAN ANTONIO,TX 78248
TEL: (210) 298-4294

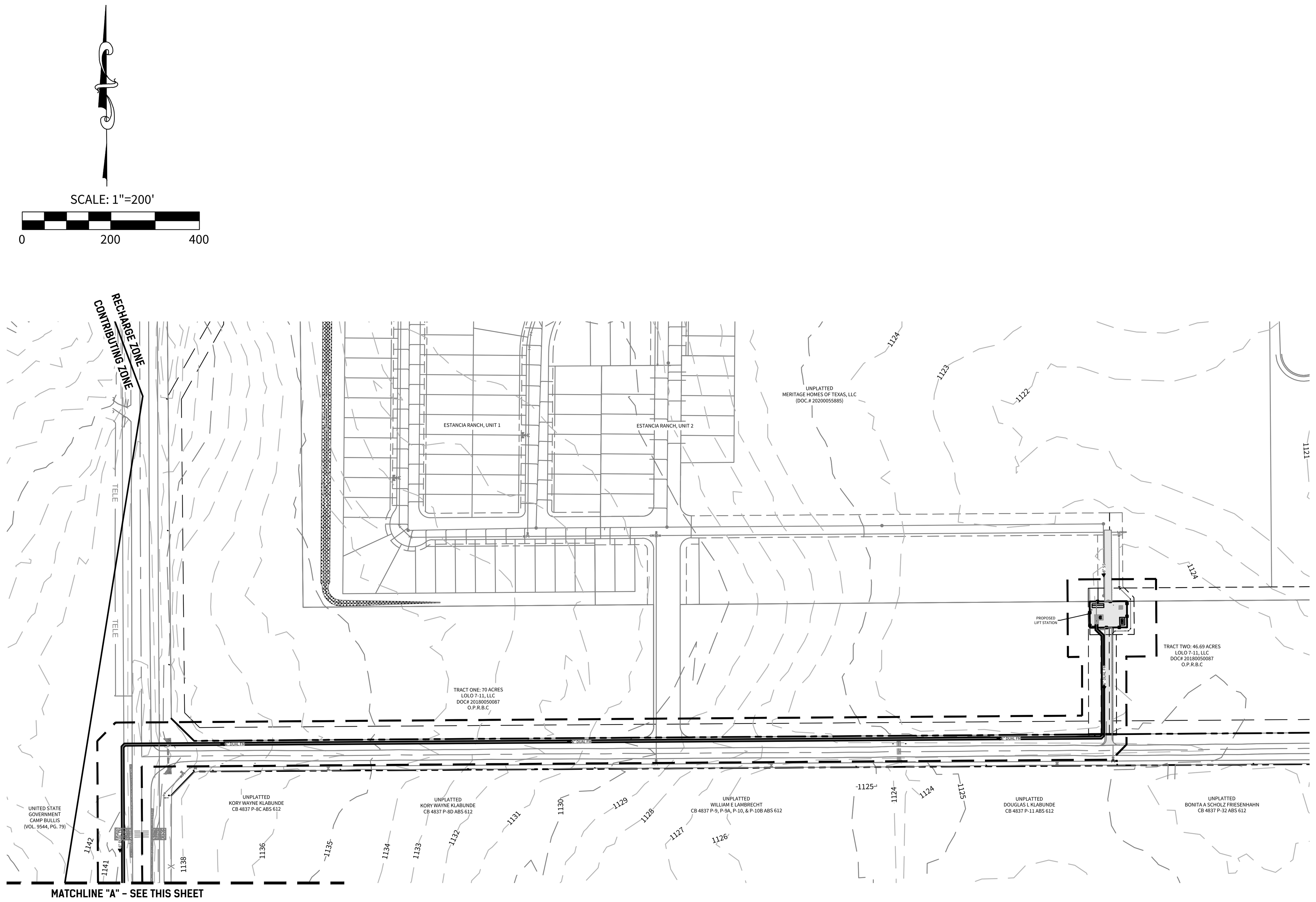
CIVIL ENGINEER:

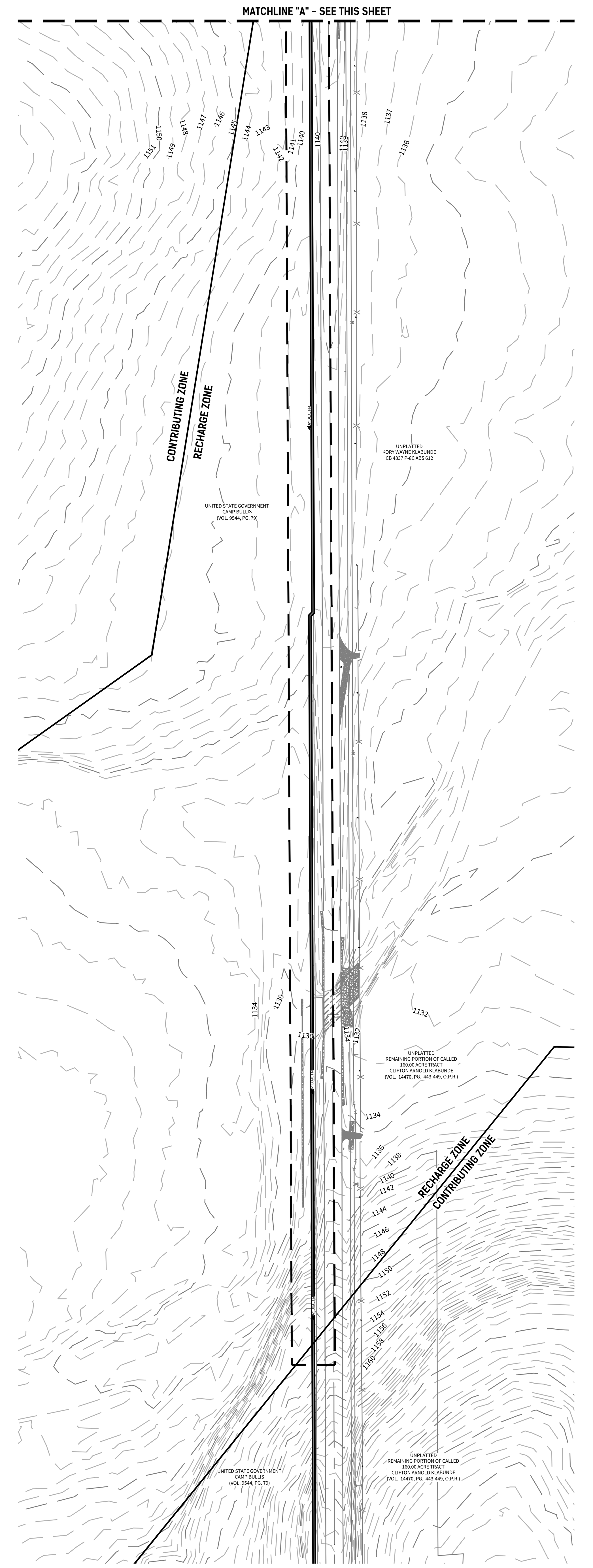
M.W. CUDE ENGINEERS, L.L.C.
CONTACT PERSON: ANDREW R. LOWRY, P.E.
4122 POND HILL ROAD, SUITE 101
SAN ANTONIO, TX 78231
TEL: (210) 681-2951
FAX: (210) 523-7112

LEGEND

1% ANNUAL CHANCE FLOODPLAIN	
RECHARGE/CONTRIBUTING ZONE LIMITS	
EXISTING CONTOUR	xxx
50' ENVELOPE	
PROPOSED FORCE MAIN	

SCALE: 1"=200'
0 200 400





CUDEENGINEERS.COM

EST. 1980 CUDE ENGINEERS

4122 Pond Hill Road, Suite 101
San Antonio, Texas 78231
P:(210) 681.2951 F: (210) 523.7112

STERLING RIDGE LIFT STATION AND GRAVITY SEWER UPGRADES

SEWAGE COLLECTION SYSTEM SITE PLAN

DATE	01/09/2024
PROJECT NO.	03473.002
DRAWN BY	C3
CHECKED BY	C3

REVISIONS
1.
2.
3.
4.
5.
6.
7.
8.
9.

CUDE ENGINEERS
TBPE No. 455
TBPLS No. 10048500

PLAT NO.
N/A

SAWS JOB NO.
20-1595

C1.00

Lift Station/Force Main System Application

Texas Commission on Environmental Quality

for Regulated Activities On the Edwards Aquifer Recharge Zone and Relating to 30 TAC §213.5(c)(3)(B)and(c), Effective June 1, 1999

To ensure that the application is administratively complete, confirm that all fields in the form are complete, verify that all requested information is provided, consistently reference the same site and contact person in all forms in the application, and ensure forms are signed by the appropriate party.

Note: Including all the information requested in the form and attachments contributes to more streamlined technical reviews.

Regulated Entity Name: Blanco Road Phase III

Customer Information

(If different than customer information provided on core data form)

1. The person(s) responsible for providing the engineering certification to the TCEQ pursuant to 30 TAC §213.5(f)(2)(C) during construction and 30 TAC §213.5 (c)(3)(D) upon completion of construction is:

   Contact Person: Cristina Brantley, P.E.
   Entity: San Antonio Water System (SAWS)
   Mailing Address: 2800 U.S. Highway 281 North
   City, State: San Antonio Zip: 78212
   Telephone: (210) 233-3865 Fax: _____
   Email Address: cristina.brantley@saws.org

2. The engineer responsible for the design of this lift station and force main:

   Contact Person: Mary P. Stewart, P.E.
   Entity: KCI Technologies, Inc.
   Mailing Address: 2806 West Bitters Road, Suite 218
   City, State: San Antonio Zip: 78248
   Telephone: (210) 641-9999 Fax: _____
   Email Address: Mary.Stewart, P.E.
   Texas Licensed Professional Engineer's Serial Number: 108905

Project Information

3. This project is for the construction or replacement of:

   ☐ Lift Station only.

☒ Lift Station and Force Main system.
☐ Lift Station, Force Main, and Gravity system.

4. The sewage collection system will convey the wastewater to the Stephen M. Clouse Water Recycling Center (name) Treatment Plant. The treatment facility is:

   ☒ Existing
   ☐ Proposed

5. All components of this lift station/force main system will comply with:

   ☒ The City of San Antonio standard specifications.
   ☐ Other. Specifications are attached.

Site Plan Requirements

Items 6-14 must be included on the Site Plan.

6. ☒ The Site Plan must have a minimum scale of 1" = 400'.

   Site Plan Scale: 1" = 200‘.

7. ☒ Lift station/force main system layout meets all requirements of 30 TAC Chapter 217.

8. Geologic or Manmade Features:

   ☐ No geologic or manmade features were identified in the Geologic Assessment.
   ☒ All geologic or manmade features identified in the Geologic Assessment (caves, solution openings, sinkholes, fractures, joints, porous zones, etc.) which exist at the site of the proposed lift station and along the path(s) or within **50 feet of each side** of a proposed force main line are shown on the Site Plan and are listed in the table below. Designs used to protect the integrity of the sewer line crossing each feature are described and labeled on the attached page. A detailed design drawing for each feature is shown on Plan Sheet 4 of 21.
   ☐ No Geologic Assessment is required for this project.

Table 1 - Geologic or Manmade Features

Line	*Station to Station*	*Type of Feature*
SEWER	136+00 to 138+00	Fault
	to	
	to	
	to	
	to	
	to	
	to	
	to	

9. ☒ Existing topographic contours are shown and labeled. The contour interval is 1 feet. (Contour interval must not be greater than 5 feet).

10. ☒ Finished topographic contours are shown and labeled. The contour interval is 1 feet. (Contour interval must not be greater than 5 feet).

    ☐ Finished topographic contours will not differ from the existing topographic configuration and are not shown.

11. 100-year floodplain boundaries

    ☒ Some part(s) of the project site is located within the 100-year floodplain. The floodplain is shown and labeled.

    ☐ No part of the project site is located within the 100-year floodplain.

    The 100-year floodplain boundaries are based on the following specific (including date of material) sources(s): _____

12. 5-year floodplain:

    ☐ After construction is complete, no part of this project will be in or cross a 5-year floodplain, either naturally occurring or manmade. (Do not include streets or concrete-lined channels constructed above sewer lines.)

    ☒ After construction is complete, all sections of the force main located within the 5-year floodplain will be encased in concrete or capped with concrete. These locations are listed in the table below and are shown and labeled on the Site Plan. (Do not include streets or concrete-lined channels constructed above sewer lines.)

Table 2 - 5-Year Floodplain

Line	*Sheet*	*Station to Station*
SEWER	14 of 26	131+27.76 to 135+27.76
SEWER	15 of 26	135+27.76 to 135+27.76
SEWER	16 of 26	135+00.00 to 139+00.00
SEWER	17 of 26	139+00.00 to 142+37.76

13. All known wells (oil, water, unplugged, capped and/or abandoned, test holes, etc.):

    If applicable, this must agree with Item No. 15 on the Geologic Assessment Form.

    ☐ There are _____ (#) wells present on the project site and the locations are shown and labeled. (Check all of the following that apply)

    ☐ The wells are not in use and have been properly plugged.

    ☐ The wells are not in use and will be properly plugged.

    ☐ The wells are in use and comply with 16 TAC Chapter 76.

    ☒ There are no wells or test holes of any kind known to exist on the project site.

14. ☒ Legal boundaries of the site are shown.

Plan and Profile Sheets

*The construction drawings and technical specifications will not be considered for review unless they are the **final plans and technical specifications** which will be used by the contractor for bidding and construction.*

Items 15 – 18 must be included on the Plan and Profile sheets.

15. ☒ The equipment installation construction plans must have a minimum scale of 1" = 10'.

    Plan sheet scale: 1" = 40 '.

16. ☒ Locations, descriptions and elevations of all required equipment and piping for the lift station and force main are shown and labeled.

17. ☒ Air Release/Vacuum Valves will be provided at all peaks in elevation of the proposed force main. These locations are listed in the table below and labeled on the appropriate plan and profile sheets.

Table 3 - Air Release/Vacuum Valves

Line	*Station*	*Sheet*
EXISTING SEWER	165+55.21	21 of 21
		of
		of
		of
		of
		of

18. ☒ The **final plans and technical specifications** are submitted for the TCEQ's review. Each sheet of the construction plans and specifications are dated, signed, and sealed by the Texas Licensed Professional Engineer responsible for the design on each sheet.

19. ☒ **Attachment A - Engineering Design Report**. An engineering design report with the following required items is attached:

    - ☒ The report is dated, signed, and sealed by a Texas Licensed Professional Engineer.
    - ☐ Calculations for sizing system.
    - ☐ Pump head calculations, including, but not limited to, system head and pump capacity curves, head loss calculations, and minimum and maximum static head C values for normal and peak operational conditions.
    - ☐ 100-year and 25-year flood considerations.
    - ☐ Total lift station pumping capacity with the largest pump out of service.
    - ☐ Type of pumps, including standby units.
    - ☐ Type of pump controllers, including standby air supply for bubbler controllers, as applicable.

☒ Pump cycle time.
☐ Type of wet well ventilation; include number of air changes for mechanical ventilation.
☒ Minimum and maximum flow velocities for the force main.
☐ Lift station security.
☐ Lift station emergency provisions and reliability.

Administrative Information

20. ☒ Upon completion of the wet well excavation, a geologist must certify that the excavation was inspected for the presence of sensitive features and submit the signed, sealed, and dated certification to the appropriate regional office.

21. ☒ The TCEQ Lift Stations and Force Mains General Construction Notes (TCEQ-0591) are included on the General Notes Sheet of the Final Construction Plans for this lift station and/or force main system.

22. ☒ Submit one (1) original and one (1) copy of the application, plus additional copies as needed for each affected incorporated city, groundwater conservation district, and county in which the project will be located. The TCEQ will distribute the additional copies to these jurisdictions. The copies must be submitted to the appropriate regional office.

23. ☒ Any modification of this lift station/force main system application will require TCEQ approval, prior to construction, and may require submission of a revised application, with appropriate fees.

Signature

To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. This **Lift Station/Force Main System Application** is hereby submitted for TCEQ review and executive director approval. The system was designed in accordance with the requirements of 30 TAC §213.5(c)(3)(C) and 30 TAC Chapter 217, and prepared by:

Print Name of Licensed Professional Engineer: Mary P. Stewart

Place engineer's seal here:

Date: 4-25-2025

Signature of Licensed Professional Engineer:

Mary P. Stewart

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Attachment A

Engineering Design Report

Blanco Road Phase III

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ENGINEERING DESIGN REPORT

Table of Contents

This Engineering Design Report has been prepared to comply with the Texas Commission on Environmental Quality's Design Criteria for Domestic Wastewater Systems (30 TAC 217), and regulations over the Edwards Aquifer Recharge Zone (30 TAC 213). Please note that throughout this application, the more stringent of SAWS or TCEQ regulations shall apply.

I. SEWER SYSTEM INFORMATION

A. Project Information

This project consists of removing and replacing approximately 12,494 linear feet of proposed dual 6" HDPE force main (FM) pipe serving utility improvements for the project known as Blanco Road Phase III. Blanco Road Phase III is a part of the larger Bexar County roadway reconstruction and drainage improvement project known as Blanco Road From: Borgfeld Drive to Bexar/Comal County Line. The existing FM and lift station were constructed with the Specht Road Subdivision Off-site Sewer Improvements and an Organized Sewage Collection System (SCS) Plan was approved for this project May 10, 2024. No changes will be made to the existing lift station and manholes. The site is located outside the city limits but within the Extraterritorial Jurisdiction (ETJ) of San Antonio, Bexar County, Texas. The Blanco Road Phase III project is located over the Edwards Aquifer Recharge & Contributing Zone.

A Geologic feature was found within the SCS 50-foot envelope. The Geologic feature type is a concealed normal fault that crosses the central portion of the site at Meusebach Creek. This Geologic feature has low probability of infiltration and no voids were observed that would contain habitat suitable for endangered karst invertebrates. Project wastewater will eventually be disposed of by the existing Stephen M. Clouse Water Recycling Center.

II. LIFT STATION & FORCE MAIN DESIGN CALCULATIONS (FROM PREVIOUS SCS REPORT)

A. Average Dry Weather Flow

The total Equivalent Dwelling Unit (EDU) count for The Specht Road subdivision is 430 EDU's that will convey wastewater flows to the proposed lift station. The average daily flow for each EDU is 200 gallons per day (gpd) therefore for this subdivision, the average dry weather flow (ADWF) is 200 gpd x 430 EDU's = 86,000 gpd or 59.72 gallons per minute (gpm) (divide gpd flow by 1440 minutes per day).

B. Peak Dry Weather Flow

The determination of peak dry weather flows for this residential development follows Section 11.3.1 of the SAWS Utility Service Regulations (USR), where a peaking factor of 2.5 is used and is applied to the average dry weather flow. Applying the 2.5 factor to the average dry weather flow of 86,000 gpd produces 215,000 gpd (= 86,000 gpd x 2.5) or 149.31 gpm (divide gpd by 1440 minutes per day).

C. Peak Wet Weather Flow – Inflow & Infiltration

The determination of peak wet weather flows for inflow and infiltration (I&I) follows the SAWS USR, where a 600 gallons per day per acre served will be used in calculating I&I flows. The total service area

for the proposed lift station is approximately 120 acres. The total I&I flow based on 600 gallons per day per acre served x 120 acres equals to 72,000 gpd or 50 gpm (divided gpd by 1440 minutes per day).

The peak wet weather flow takes into account the I&I flows so by adding 72,000 gpd (I&I) to 215,000 gpd, the total flow is 287,000 gpd or 199 gpm (divide gpd by 1440 per day).

D. Minimum Dry Weather Flow

The minimum dry weather flow (MDWF) is a value used for determining the maximum detention time in the proposed lift station wet well.

MDWF (gpd) = (0.2 * (0.0144 * ADF)0.198) * ADF ADF = 70,456 gpd

Based on the above values for ADF and the formula, the calculated MDWF is 70,456 gpd or 49 gpm.

E. Velocity in Force Main

The proposed force main for discharging wastewater from this lift station is a 6" HDPE (DIPS) pipe, DR 11 (200 psi). In order to calculate the velocity (v) in the force main, the formula to be used is the following:

V = Q / A where:

Q = flow in the force main, cfs

A = area of the force main (⍰(D/2)2), ft2

The internal diameter of the 6" HDPE (DR 11, class 200 DIPS) pipe is 5.571" and the cross-sectional area is equaled to 0.169 ft2. The design flow in the force main is equal to 200 gpm or 0.44 cfs. Using these values and the formula above, the velocity of the force main is equaled to 2.63 feet per second (fps).

F. Force Main Flush Time

The force main flush time (FT) is calculated using the values of the wet well filling time (WWFT), pump run time (PRT) and wet well detention time (WWDT). The previous values are derived using the following equations and parameters below:

D = wet well diameter, feet = 10 feet

$\triangle h_{on\text{-}off}$ = distance between "Lead Pump On" and "All Pumps Off", feet = 0.72 feet

Q_i = Average Daily Inflow, gpm = 59.72 gpm

Q_0 = Pumped Flow, gpm = 200 gpm

L = Force Main Lengths, feet = 12,174 feet

v = Force Main Velocity, fps = 2.63 fps

Wet Well Filling Time (WWFT)

$$WWFT = \frac{7.481\pi D^2(\triangle h_{on\text{-}off})}{4Q_i}$$

WWFT = 7.10 min

Pump Run Time (PRT)

$$PRT = \frac{7.481\pi D^2(\triangle h_{on\text{-}off})}{4(Q_0 - Q_i)}$$

PRT = 3.02 min

Wet Well Detention Time (WWDT)

WWDT = WWFT + PRT

WWDT = 7.10 + 3.02 = 10.12 min

Flushing Time (FT)

FT = (FCW)(WWDT) + (FCD)(PRT) where:

FC = flushing cycle = $\frac{L}{60v(PRT)}$ = 25.56 min.

FCW = whole part of the flushing cycle

FCD = decimal part of the flushing cycle

WWDT = wet well detention time, mins

PRT = pump running time

L = *~~12,174~~ 12,181 feet

v = 2.63 fps

FT = *~~254.59~~ 254.69 mins

* Calculated quantity from existing Force Main.

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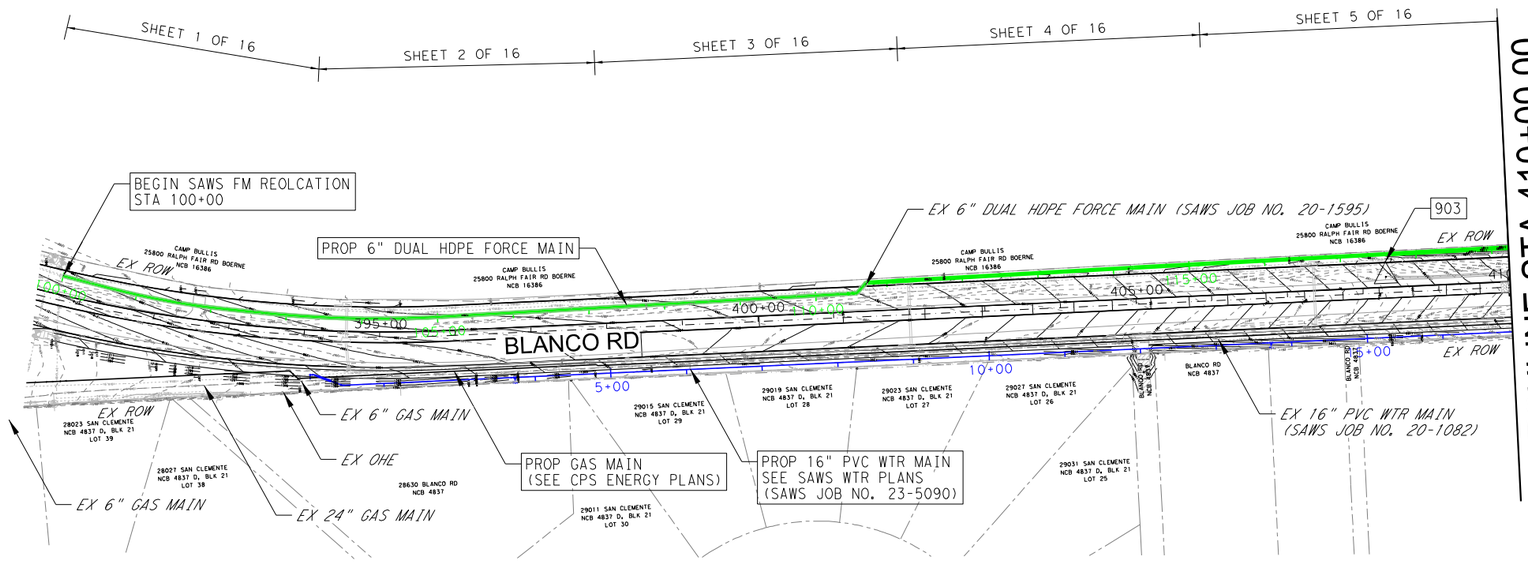
ENGINEERS • PLANNERS • SCIENTISTS • CONSTRUCTION MANAGERS
2806 W. Bitters Road, Suite 218 • San Antonio, Texas 78248 • Phone (210) 641-9999

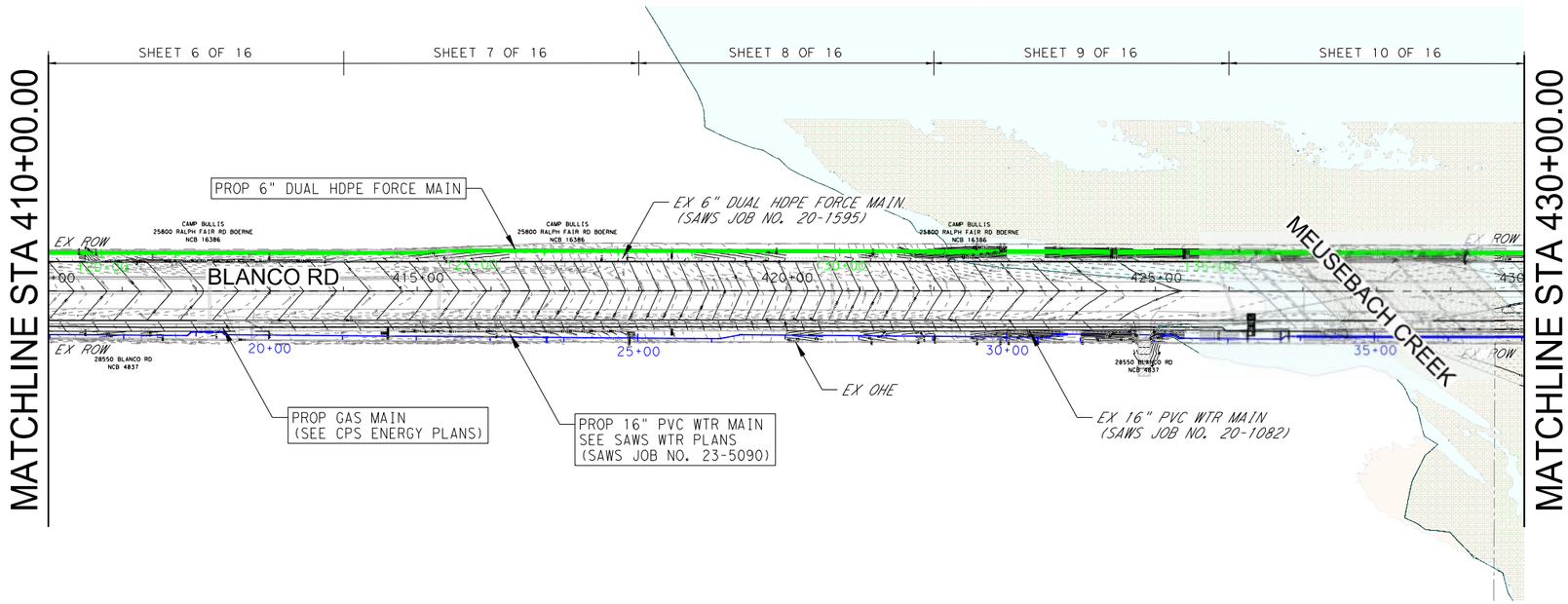
Attachment B

Site Plan

Blanco Road Phase III



CP/BM	Station	Offset	Northing	Easting	Elevation	Description	Location
903	408+31	19.88' LT	13811355.21	2123417.90	1189.61'	MAGNL W/WASHER	W. SIDE OF BLANCO RD



NOTES

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

2. DUE TO FEDERAL REGULATION TITLE 49, PART 91.181 CPS 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.

3. THE CONTRACTOR WILL BE RESPONSIBLE FOR PROTECTING CPS OVERHEAD AND UNDERGROUND ELECTRIC FACILITIES ADJACENT TO THE WORK AREAS.

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

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TRENCH EXCAVATION SAFETY PROTECTION:
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LAYOUT LEGEND

- CONTROL POINT
- EXIST ROW
- #### PROP TOPOGRAPHIC CONTOURS
- #### EXIST TOPOGRAPHIC CONTOURS
- EFFECTIVE FEMA 5-YR FLOOD PLAIN
- EFFECTIVE FEMA 100-YR FLOOD PLAIN

GRAPHIC SCALE
(IN FEET)
100 50 0 100 200 300
1" = 200'

STATE OF TEXAS
DAVID J. RUSSELL II
123318
LICENSED
PROFESSIONAL ENGINEER
01/24/2025

KCI TECHNOLOGIES, INC.
2806 W. BITTERS RD. - SUITE 218
SAN ANTONIO, TX 78248 - 210.641.9999
TEXAS REGISTERED ENGINEERING FIRM
TBPE FIRM No. F-10573
www.kci.com

NO.		DRAWN	APPROVED	DATE

REVISIONS

SAWS BLANCO RD PHASE III SEWER

BLANCO RD PHASE III PROJECT LAYOUT

SHT 1 OF 2

DEVELOPER:

CONT. | BUDGET PROJ.

SUBMITTED 100% SUBMITTAL

APPROVED

MAP No. | SHEET OF 4 / 21

SECT No. | JOB No.: 23-5584 | PROJ SEQ

DRN: | DSGN: | CHK:

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PLOTTED SCALE: 1:200.037
PLOTTED ON: 1/23/2025 @ 8:11:57 PM
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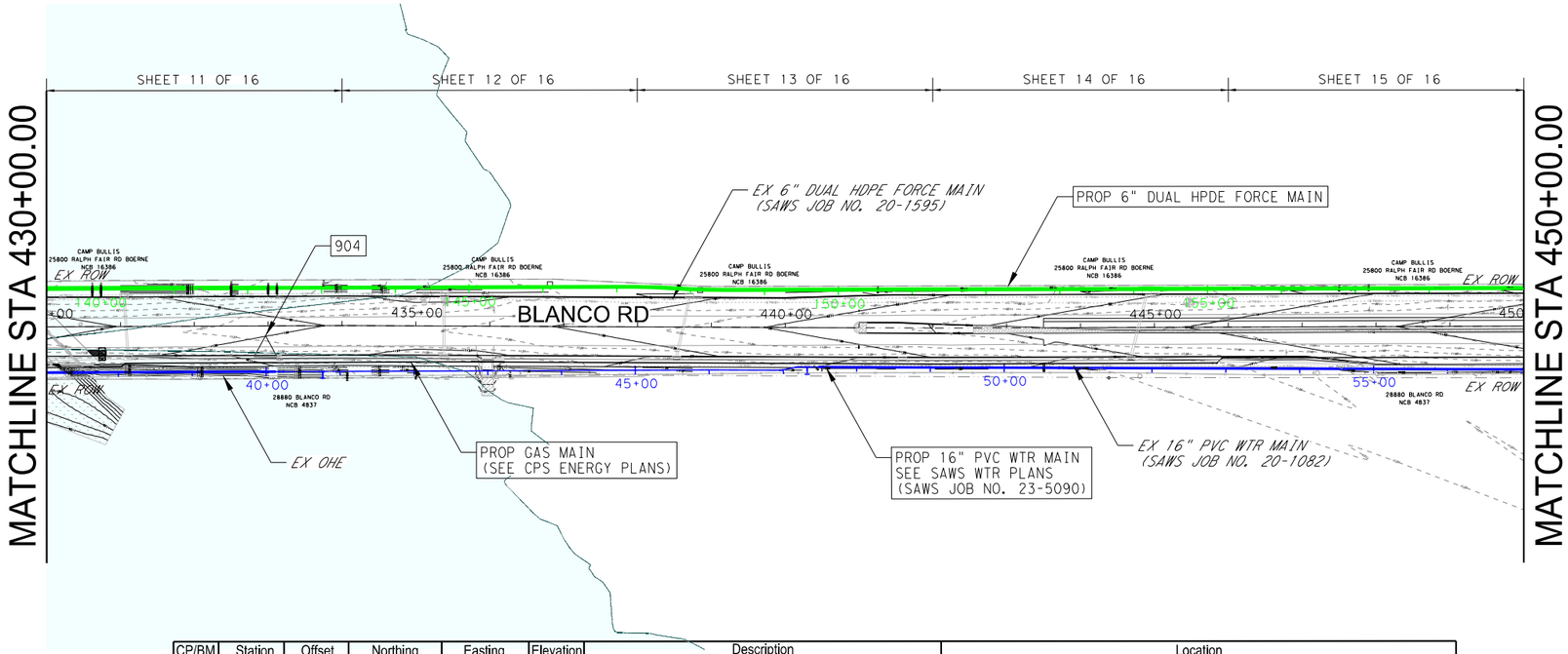
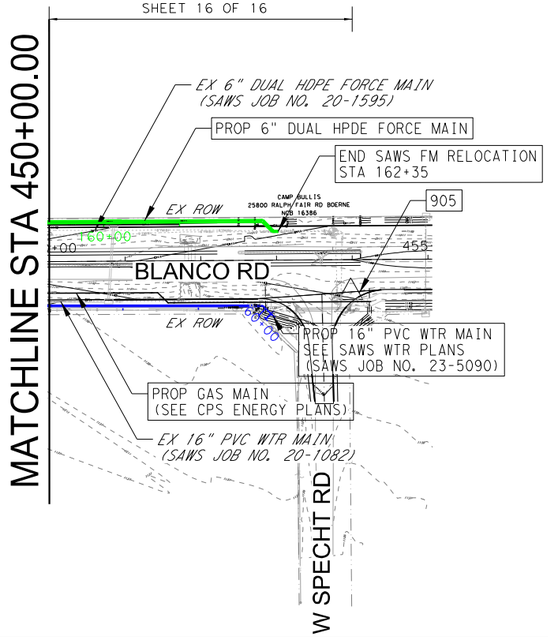


CP/BM	Station	Offset	Northing	Easting	Elevation	Description	Location
904	432+99	32.45' RT	13813820.62	2123461.88	1136.22	MAGNL W/WASHER	E. SIDE OF BLANCO RD
905	453+98	44.62' RT	13815921.98	2123471.33	1141.71	MAGNL W/WASHER	E. SIDE OF BLANCO RD



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- EXIST ROW
- PROP TOPOGRAPHIC CONTOURS
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- EFFECTIVE FEMA 100-YR FLOOD PLAIN

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(IN FEET)
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01/24/2025

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TEXAS REGISTERED ENGINEERING FIRM
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www.kci.com

NO.		DRAWN	APPROVED	DATE

REVISIONS

SAWS BLANCO RD PHASE III SEWER

BLANCO RD PHASE III PROJECT LAYOUT

SHT 2 OF 2

DEVELOPER:

CONT. | BUDGET PROJ.

SUBMITTED 100% SUBMITTAL

APPROVED

MAP No. | SHEET OF 5 / 21

SECT No. | JOB No.: 23-5584 | PROJ SEQ

DRN: | DSGN: | CHK:

PLOTTED BY: Marco.Meraz
PLOTTED SCALE: 1:200
PLOTTED ON: 1/23/2025 @ 8:12:05 PM
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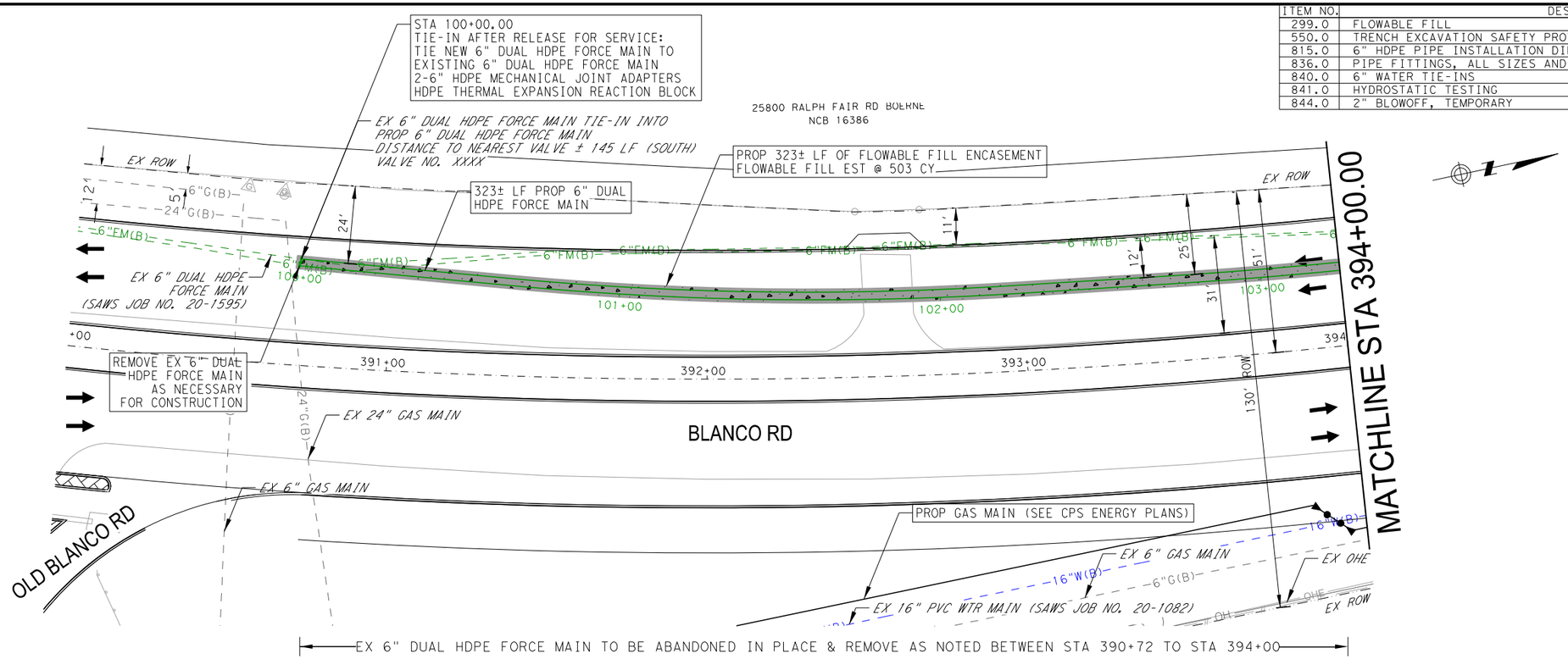
ISO 9001:2015 CERTIFIED
ENGINEERS • PLANNERS • SCIENTISTS • CONSTRUCTION MANAGERS
2806 W. Bitters Road, Suite 218 • San Antonio, Texas 78248 • Phone (210) 641-9999

Attachment C

Force Main Plan & Profile
Blanco Road Phase III

ITEM NO.	DESCRIPTION	UNITS	QUANTITY
299.0	FLOWABLE FILL	CY	503
550.0	TRENCH EXCAVATION SAFETY PROTECTION	LF	646
815.0	6" HDPE PIPE INSTALLATION DIRECT BURY FORCE MAIN	LF	646
836.0	PIPE FITTINGS, ALL SIZES AND TYPES	TON	0.06
840.0	6" WATER TIE-INS	EA	2
841.0	HYDROSTATIC TESTING	EA	2
844.0	2" BLOWOFF, TEMPORARY	EA	2



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2. PROPOSED FORCE MAIN PIPE SHALL BE 6" HDPE DR11, DUCTILE IRON PIPE SIZE (DIPS).
3. CONTRACTOR TO REFER TO JOINT RESTRAINTS & THRUST BEARING DETAILS DD-839-01 & DD-839-02 FOR TIE-IN LOCATIONS & CONNECTIONS AT INTERSECTIONS. REFER TO THRUST BLOCK TABLE (SOIL MATERIALS OTHER THAN ROCK) REQUIREMENTS AT THESE LOCATIONS

LEGEND

- PROP FORCE MAIN
- PROP WATER MAIN
- PROP STEEL CASING
- PROP FLOWABLE FILL
- REMOVAL LIMITS
- EXIST FORCE MAIN
- EXIST WATER MAIN
- EXIST GAS MAIN
- EXIST OVERHEAD ELEC
- EXIST APPARENT ROW
- UTILITY CROSSING
- EFFECTIVE FEMA 5-YR FLOODPLAIN
- EFFECTIVE FEMA 100-YR FLOODPLAIN

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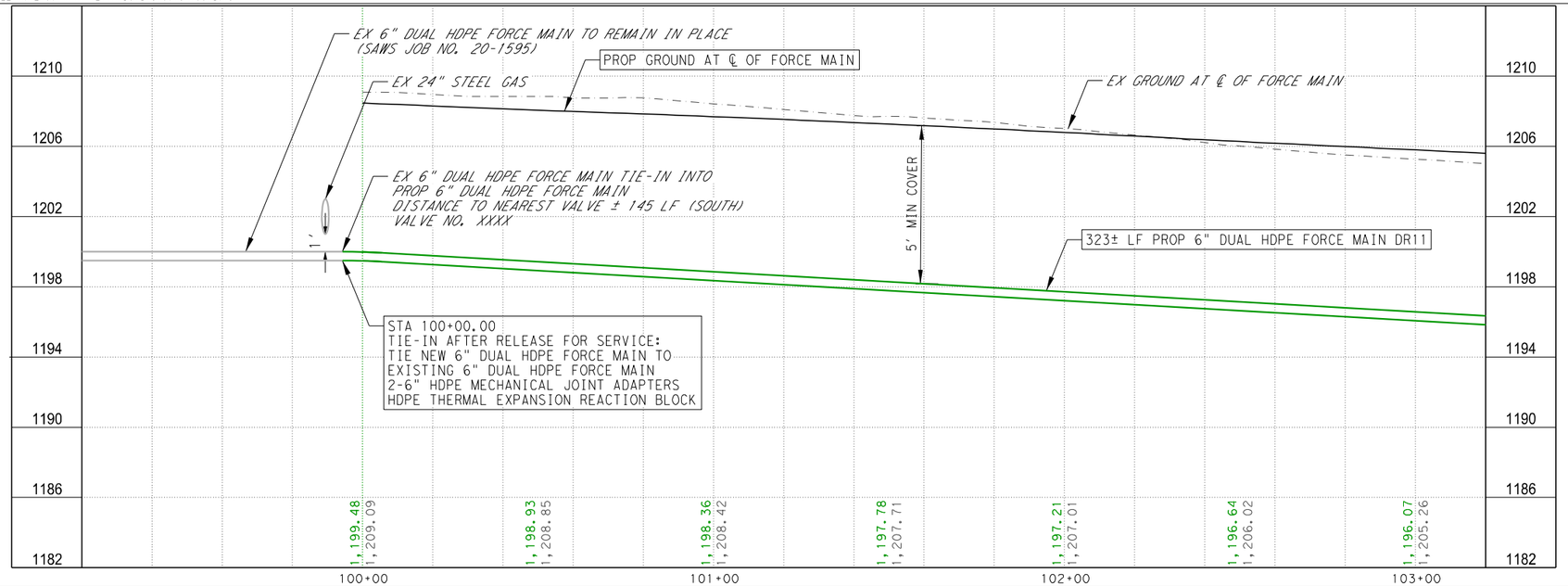

GRAPHIC SCALE
(IN FEET)
20 10 0 20 40 60
1" = 40'

STATE OF TEXAS
DAVID J. RUSSELL II
123318
LICENSED
PROFESSIONAL ENGINEER
01/24/2025

KCI TECHNOLOGIES, INC.
2806 W. BITTERS RD. - SUITE 218
SAN ANTONIO, TX 78248 - 210.641.9999
TEXAS REGISTERED ENGINEERING FIRM
TBPE FIRM No. F-10573
www.kci.com

NO.		DRAWN	APPROVED	DATE

REVISIONS

SAWS BLANCO RD PHASE III SEWER

PLAN & PROFILE
STA 390+00 TO STA 394+00

SHT 1 OF 16

DEVELOPER:
CONT.
BUDGET PROJ.
SUBMITTED 100% SUBMITTAL
APPROVED
MAP No.
SHEET OF 6 / 21
SECT No.
JOB No.: 23-5584
PROJ SEQ
DRN: JC
DSGN: DR2
CHK: DR2

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PLOTTED SCALE: 1:39.9999
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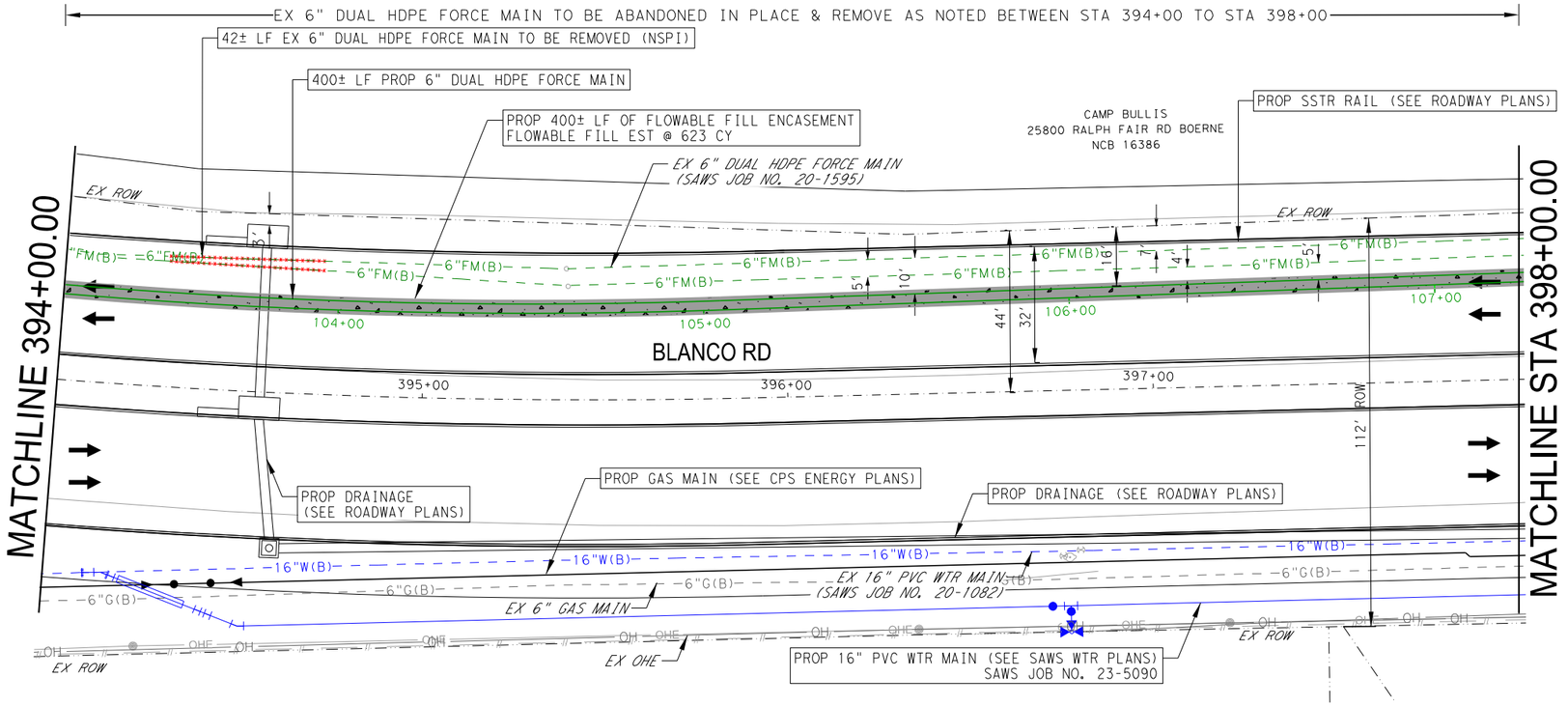
ITEM NO.	DESCRIPTION	UNITS	QUANTITY
299.0	FLOWABLE FILL	CY	623
550.0	TRENCH EXCAVATION SAFETY PROTECTION	LF	800
815.0	6" HDPE PIPE INSTALLATION DIRECT BURY FORCE MAIN	LF	800



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- PROP STEEL CASING
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- REMOVAL LIMITS
- EXIST FORCE MAIN
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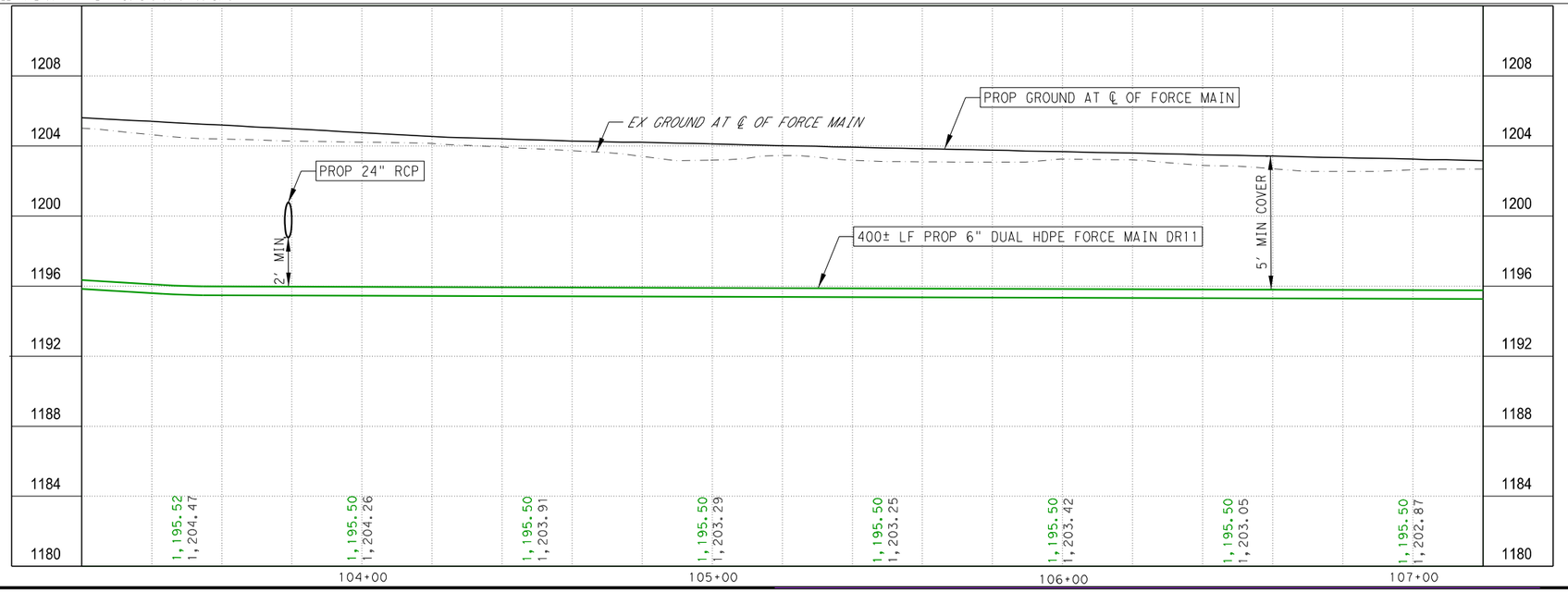

VERT. SCALE: 1"=8'
PROP FLOWLINE OF FM ELEV
EX NATURAL GROUND ELEV

GRAPHIC SCALE
(IN FEET)
20 10 0 20 40 60
1" = 40'

STATE OF TEXAS
DAVID J. RUSSELL II
123318
LICENSED
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NO.		DRAWN	APPROVED	DATE

REVISIONS

SAWS BLANCO RD PHASE III SEWER

PLAN & PROFILE
STA 394+00 TO STA 398+00

SHT 2 OF 16

DEVELOPER:

CONT. | BUDGET PROJ.

SUBMITTED 100% SUBMITTAL

APPROVED

MAP No. | SHEET OF 7 / 21

SECT No. | JOB No.: 23-5584 | PROJ SEQ

DRN: JC | DSGN: DR2 | CHK: DR2

PLOTTED BY: Marco.Meraz
PLOTTED SCALE: 1:39.9999
PLOTTED ON: 1/23/2025 @ 8:12:35 PM
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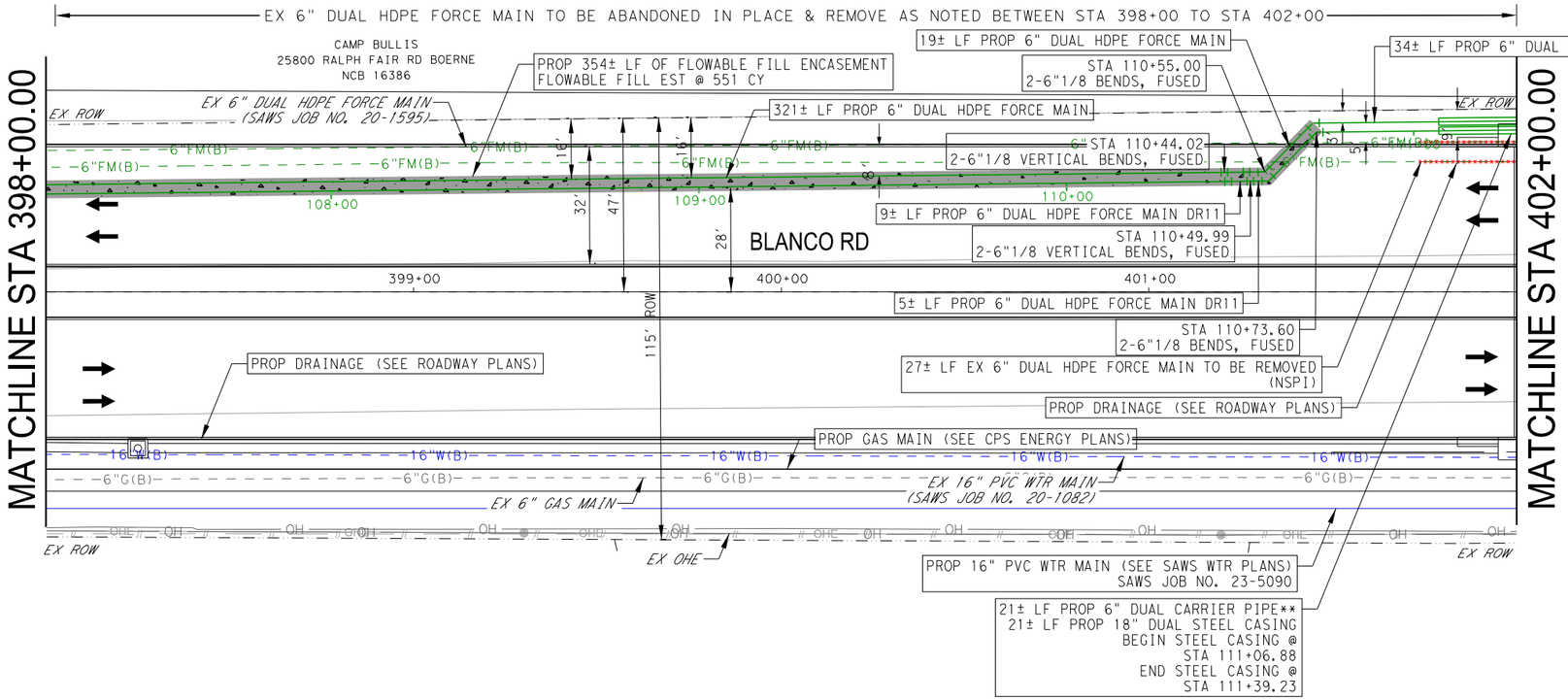
ITEM NO.	DESCRIPTION	UNITS	QUANTITY
299.0	FLOWABLE FILL	CY	551
550.0	TRENCH EXCAVATION SAFETY PROTECTION	LF	818
815.0	6" HDPE PIPE INSTALLATION DIRECT BURY FORCE MAIN	LF	776
836.0	PIPE FITTINGS, ALL SIZES AND TYPES	TON	0.11
856.2	6" CARRIER PIPE (OPEN CUT)	LF	42
856.3	18" STEEL CASING (OPEN CUT)	LF	42



CONTRACTOR NOTE:
**CONSTRUCTION OF PROPOSED UTILITIES IS NEXT TO CAMP BULLIS & FENCE; LIMITED ROW & OTHER EX. UTILITIES ARE PRESENT IN THE AREA.

NOTES:
1.PIPE STIFFENERS TO BE REQUIRED AT TRANSTITION COUPLINGS WHERE APPLICABLE
2.PROPOSED FORCE MAIN PIPE SHALL BE 6" HDPE DR11. DUCTILE IRON PIPE SIZE (DIPS).
3. CONTRACTOR TO REFER TO JOINT RESTRAINTS & THRUST BEARING DETAILS DD-839-01 & DD-839-02 FOR TIE-IN LOCATIONS & CONNECTIONS AT INTERSECTIONS. REFER TO THRUST BLOCK TABLE (SOIL MATERIALS OTHER THAN ROCK) REQUIREMENTS AT THESE LOCATIONS

LEGEND

- PROP FORCE MAIN
- PROP WATER MAIN
- PROP STEEL CASING
- PROP FLOWABLE FILL
- REMOVAL LIMITS
- EXIST FORCE MAIN
- EXIST WATER MAIN
- EXIST GAS MAIN
- EXIST OVERHEAD ELEC
- EXIST APPARENT ROW
- UTILITY CROSSING
- EFFECTIVE FEMA 5-YR FLOODPLAIN
- EFFECTIVE FEMA 100-YR FLOODPLAIN

NOTES

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

2. DUE TO FEDERAL REGULATION TITLE 49, PART 91.181 CPS 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.

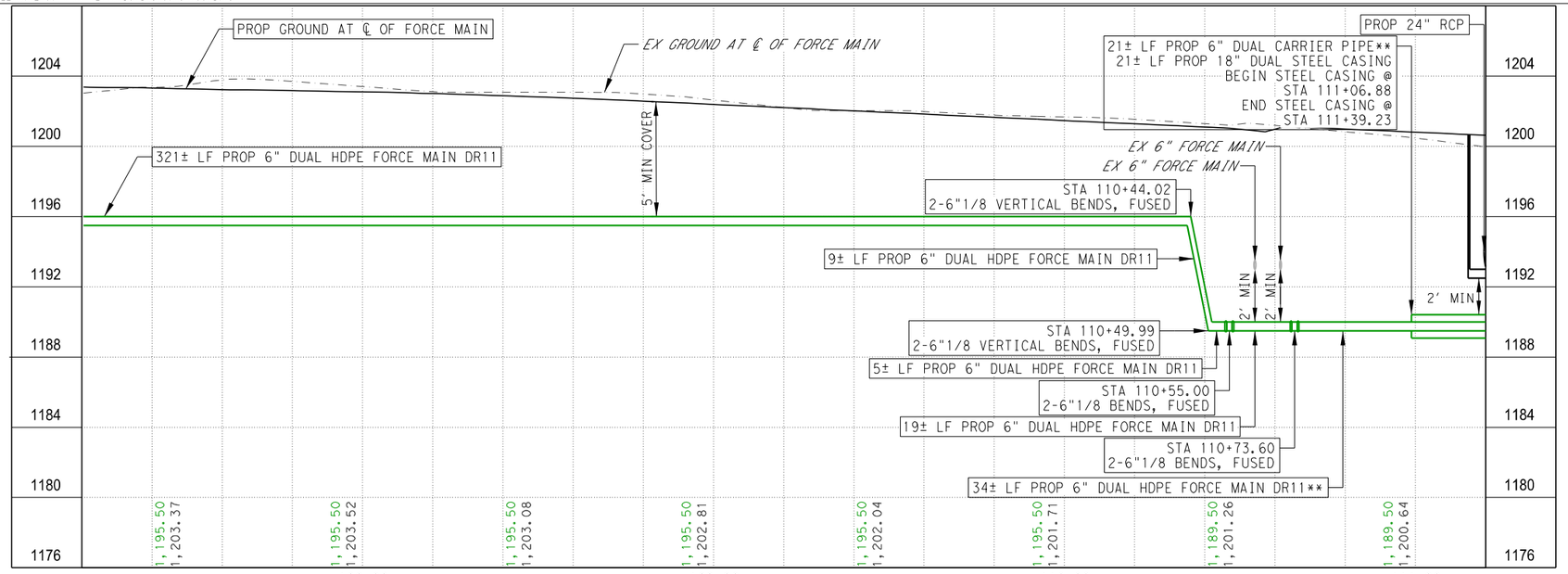
3. THE CONTRACTOR WILL BE RESPONSIBLE FOR PROTECTING CPS OVERHEAD AND UNDERGROUND ELECTRIC FACILITIES ADJACENT TO THE WORK AREAS.

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

SAWS NOTE:
LOCATION AND DEPTH OF EXISTING MAINS AND SERVICES SHOWN ON THE PLANS ARE APPROXIMATE ONLY. ACTUAL LOCATION AND DEPTHS MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO BEGINNING CONSTRUCTION BY CALLING THE SAWS LINE LOCATOR. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION WHEN WORKING NEAR EXISTING SAWS FACILITIES AND SHOULD THEY DAMAGE FACILITIES DURING CONSTRUCTION OPERATIONS; THE CONTRACTOR WILL BE REQUIRED TO REIMBURSE THE SAN ANTONIO WATER SYSTEM FOR THE TOTAL COST TO REPAIR OR REPLACE THE DAMAGED FACILITIES.

EXISTING UTILITIES:
THE EXISTING UNDERGROUND UTILITIES SHOWN ON THESE PLANS ARE BASED UPON RECORD INFORMATION ONLY AND ARE APPROXIMATE. THE EXACT LOCATION OF ALL EXISTING UNDERGROUND UTILITIES SHALL BE FIELD VERIFIED BY THE CONTRACTOR. THE CONTRACTOR SHALL ALSO CONTACT THE UTILITY PURVEYORS BEFORE BEGINNING WORK. CONTRACTOR SHALL TAKE FULL RESPONSIBILITY FOR ALL AND ANY DAMAGES THAT MIGHT OCCUR BY HIS FAILURE TO ACCURATELY LOCATE ALL EXISTING UNDERGROUND UTILITIES AND PRESERVE EXISTING CONDITIONS.

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



GRAPHIC SCALE
(IN FEET)
20 10 0 20 40 60
1" = 40'

STATE OF TEXAS
DAVID J. RUSSELL II
123318
LICENSED
PROFESSIONAL ENGINEER
01/24/2025

KCI TECHNOLOGIES, INC.
2806 W. BITTERS RD. - SUITE 218
SAN ANTONIO, TX 78248 - 210.641.9999
TEXAS REGISTERED ENGINEERING FIRM
TBPE FIRM No. F-10573
www.kci.com

NO.		DRAWN	APPROVED	DATE

REVISIONS

SAWS BLANCO RD PHASE III SEWER

PLAN & PROFILE
STA 398+00 TO STA 402+00

SHT 3 OF 16

DEVELOPER:
CONT. BUDGET PROJ.
SUBMITTED 100% SUBMITTAL
APPROVED
MAP No.
SECT No. JOB No.: 23-5584
DRN: JC DSGN: DR2 CHK: DR2
SHEET OF 8 / 21
PROJ SEQ

PLOTTED BY: Marco.Meraz
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PLOTTED ON: 1/23/2025 @ 8:12:55 PM
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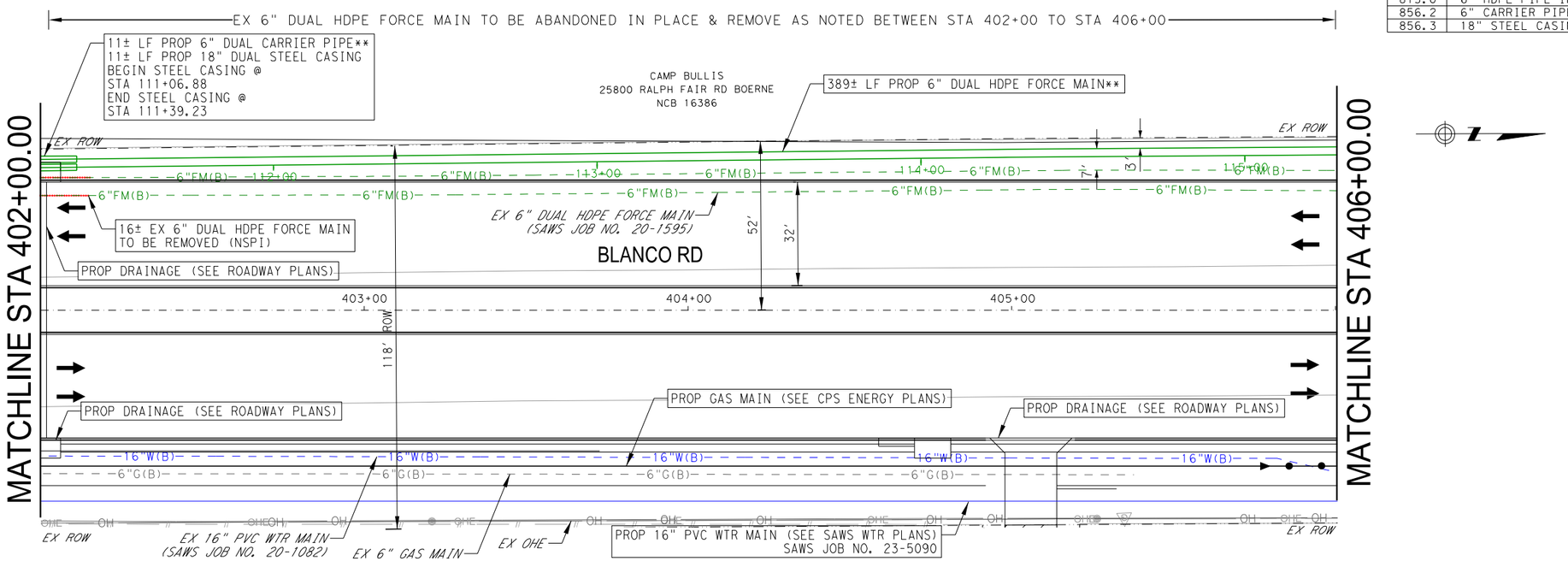
ITEM NO.	DESCRIPTION	UNITS	QUANTITY
550.0	TRENCH EXCAVATION SAFETY PROTECTION	LF	800
815.0	6" HDPE PIPE INSTALLATION DIRECT BURY FORCE MAIN	LF	778
856.2	6" CARRIER PIPE (OPEN CUT)	LF	22
856.3	18" STEEL CASING (OPEN CUT)	LF	22



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LEGEND

- PROP FORCE MAIN
- PROP WATER MAIN
- PROP STEEL CASING
- PROP FLOWABLE FILL
- REMOVAL LIMITS
- EXIST FORCE MAIN (FM)
- EXIST WATER MAIN (W)
- EXIST GAS MAIN (G)
- EXIST OVERHEAD ELEC (OHE)
- EXIST APPARENT ROW
- UTILITY CROSSING
- EFFECTIVE FEMA 5-YR FLOODPLAIN
- EFFECTIVE FEMA 100-YR FLOODPLAIN

NOTES

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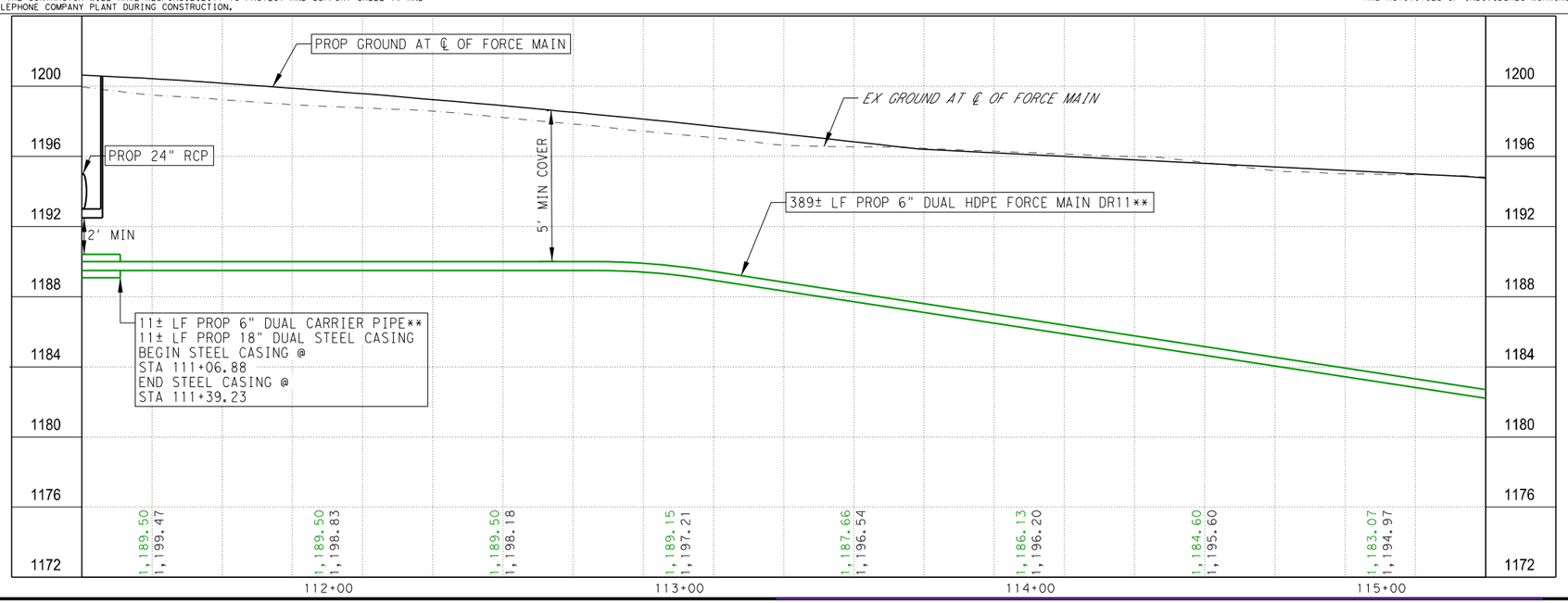

GRAPHIC SCALE
(IN FEET)
20 10 0 20 40 60
1" = 40'

STATE OF TEXAS
DAVID J. RUSSELL II
123318
LICENSED
PROFESSIONAL ENGINEER
01/24/2025

KCI TECHNOLOGIES, INC.
2806 W. BITTERS RD. - SUITE 218
SAN ANTONIO, TX 78248 - 210.641.9999
TEXAS REGISTERED ENGINEERING FIRM
TBPE FIRM No. F-10573
www.kci.com

NO.		DRAWN	APPROVED	DATE

REVISIONS

SAWS BLANCO RD PHASE III SEWER

PLAN & PROFILE
STA 402+00 TO STA 406+00

SHT 4 OF 16

DEVELOPER:

CONT.	BUDGET PROJ.
SUBMITTED	100% SUBMITTAL
APPROVED	
MAP No.	SHEET OF 9 / 21
SECT No.	JOB No.: 23-5584 PROJ SEQ
DRN: JC	DSGN: DR2 CHK: DR2

PLOTTED BY: Marco.Meraz
PLOTTED SCALE: 1:39.9999
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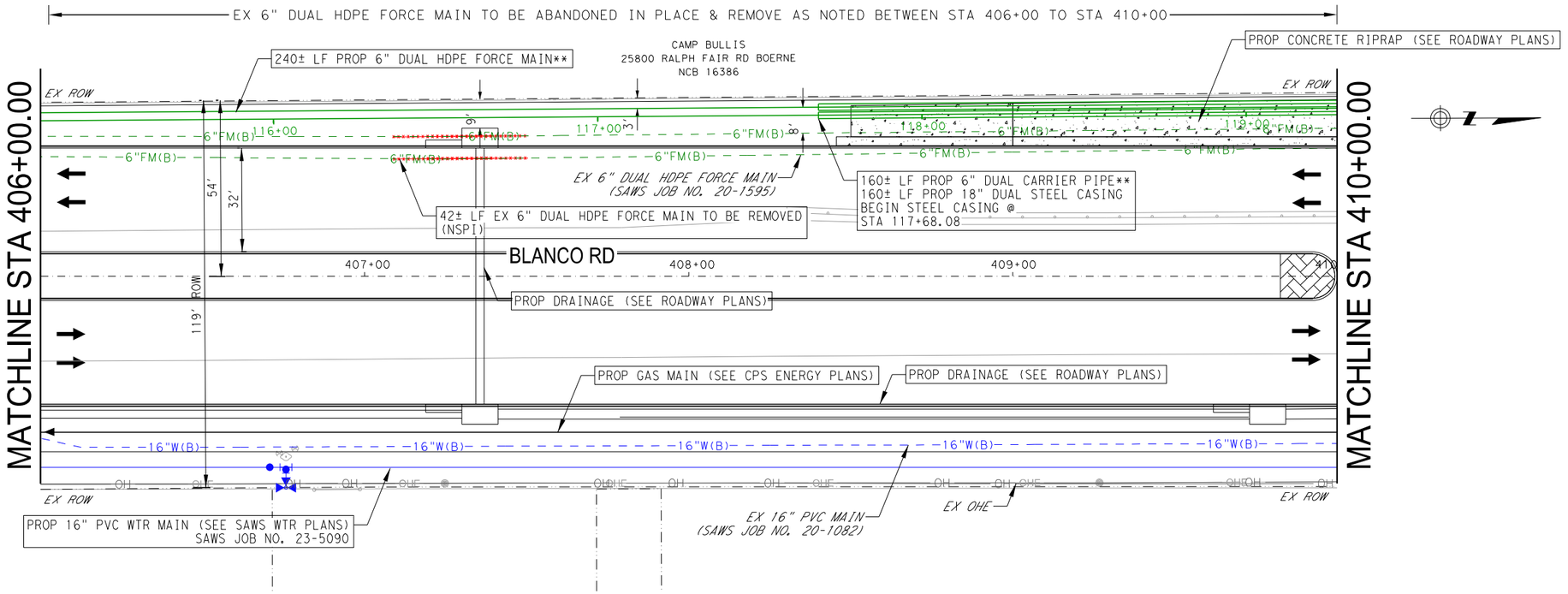
ITEM NO.	DESCRIPTION	UNITS	QUANTITY
550.0	TRENCH EXCAVATION SAFETY PROTECTION	LF	800
815.0	6" HDPE PIPE INSTALLATION DIRECT BURY FORCE MAIN	LF	480
856.2	6" CARRIER PIPE (OPEN CUT)	LF	320
856.3	18" STEEL CASING (OPEN CUT)	LF	320



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- REMOVAL LIMITS
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- EXIST WATER MAIN
- EXIST GAS MAIN
- EXIST OVERHEAD ELEC
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- EFFECTIVE FEMA 5-YR FLOODPLAIN
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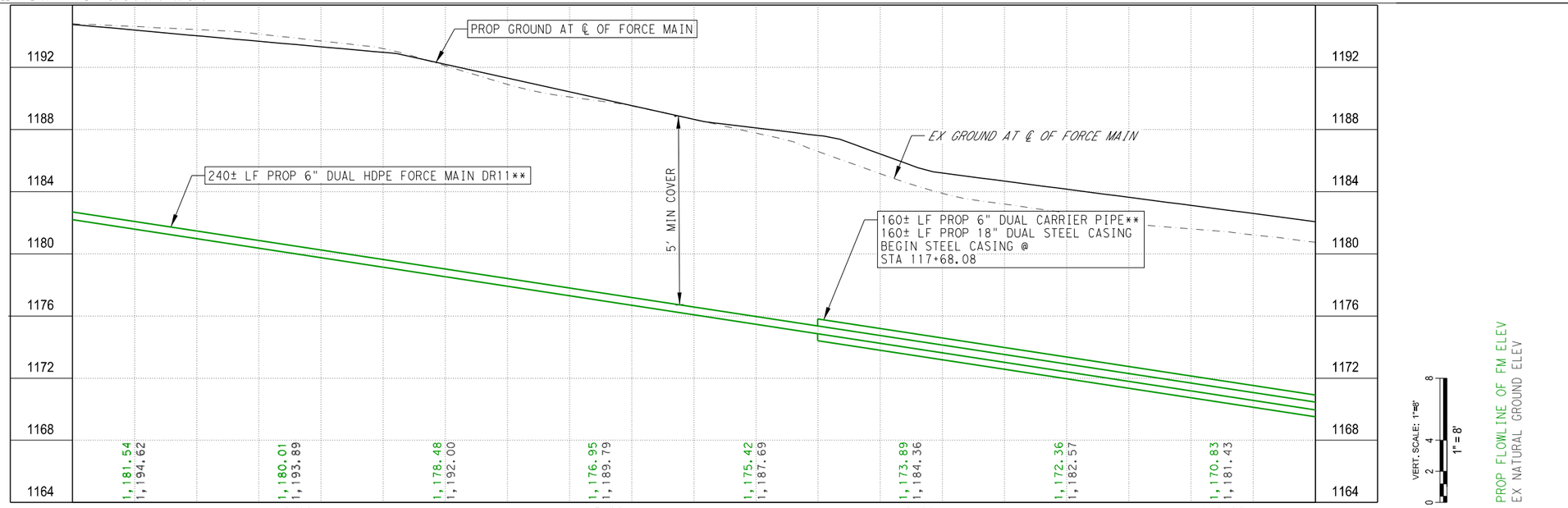

GRAPHIC SCALE
(IN FEET)
20 10 0 20 40 60
1" = 40'

STATE OF TEXAS
DAVID J. RUSSELL II
123318
LICENSED
PROFESSIONAL ENGINEER
01/24/2025

KCI TECHNOLOGIES, INC.
2806 W. BITTERS RD. - SUITE 218
SAN ANTONIO, TX 78248 - 210.641.9999
TEXAS REGISTERED ENGINEERING FIRM
TBPE FIRM No. F-10573
www.kci.com

NO.		DRAWN	APPROVED	DATE

REVISIONS

SAWS BLANCO RD PHASE III SEWER

PLAN & PROFILE
STA 406+00 TO STA 410+00

SHT 5 OF 16

DEVELOPER:
CONT. BUDGET PROJ.
SUBMITTED 100% SUBMITTAL
APPROVED
MAP No. SHEET OF 10 / 21
SECT No. JOB No.: 23-5584 PROJ SEQ
DRN: JC DSGN: DR2 CHK: DR2

PLOTTED BY: Marco.Meraz
PLOTTED SCALE: 1:39.9999
PLOTTED ON: 1/23/2025 @ 8:13:35 PM
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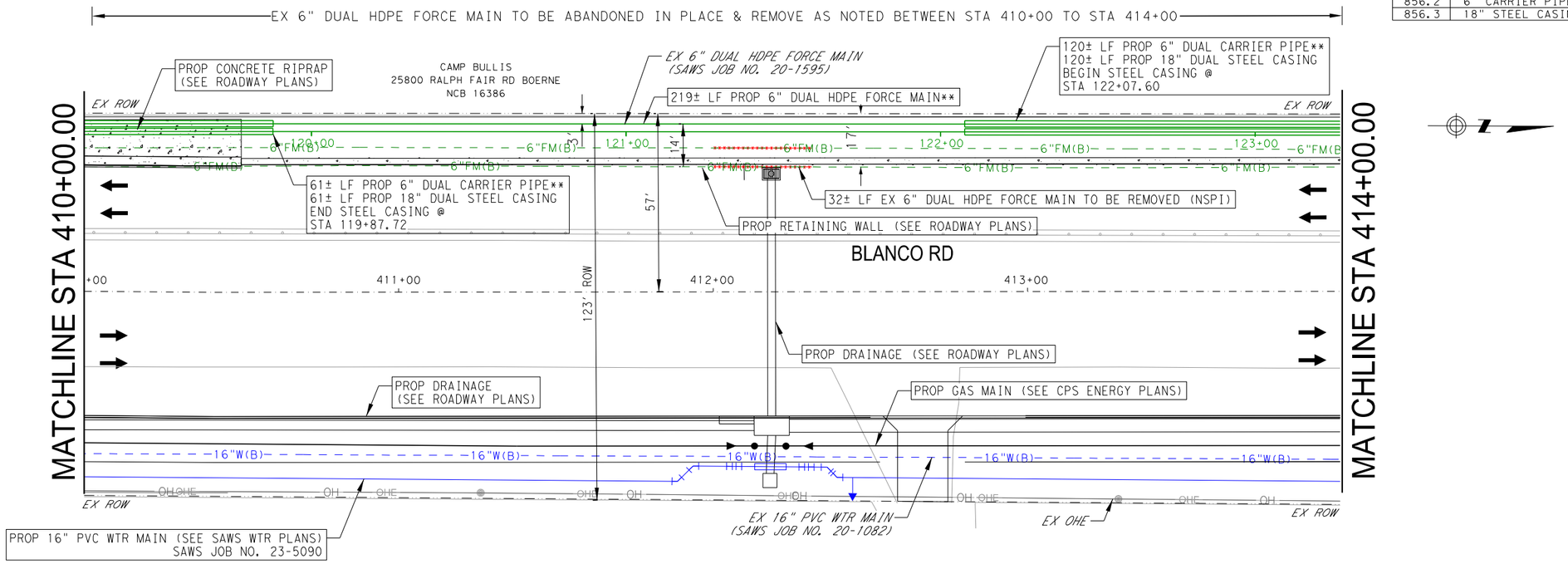
ITEM NO.	DESCRIPTION	UNITS	QUANTITY
550.0	TRENCH EXCAVATION SAFETY PROTECTION	LF	800
815.0	6" HDPE PIPE INSTALLATION DIRECT BURY FORCE MAIN	LF	438
856.2	6" CARRIER PIPE (OPEN CUT)	LF	362
856.3	18" STEEL CASING (OPEN CUT)	LF	362



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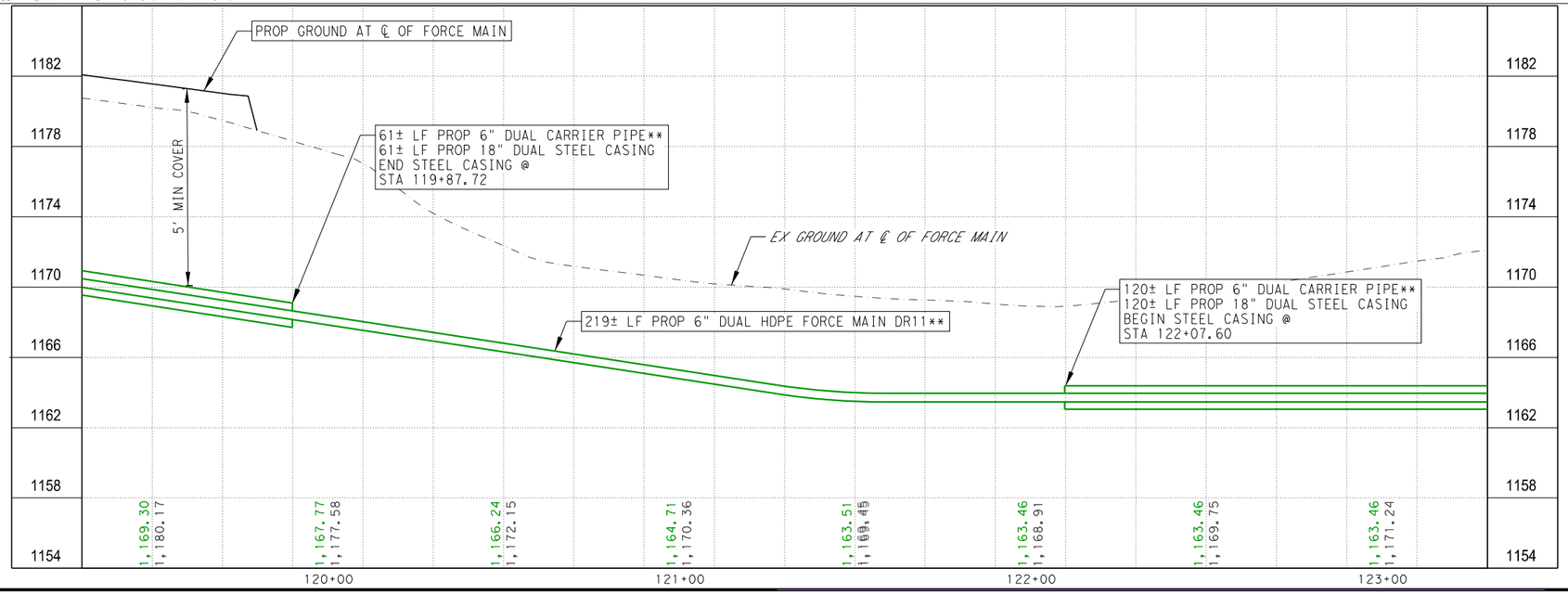

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NO.		DRAWN	APPROVED	DATE

REVISIONS

SAWS BLANCO RD PHASE III SEWER

PLAN & PROFILE
STA 410+00 TO STA 414+00

SHT 6 OF 16

DEVELOPER:

CONT. | BUDGET PROJ.

SUBMITTED 100% SUBMITTAL

APPROVED

MAP No. | SHEET OF 11 / 21

SECT No. | JOB No.: 23-5584 | PROJ SEQ

DRN: JC | DSGN: DR2 | CHK: DR2

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PLOTTED SCALE: 1:39.9999
PLOTTED ON: 1/23/2025 @ 8:13:56 PM
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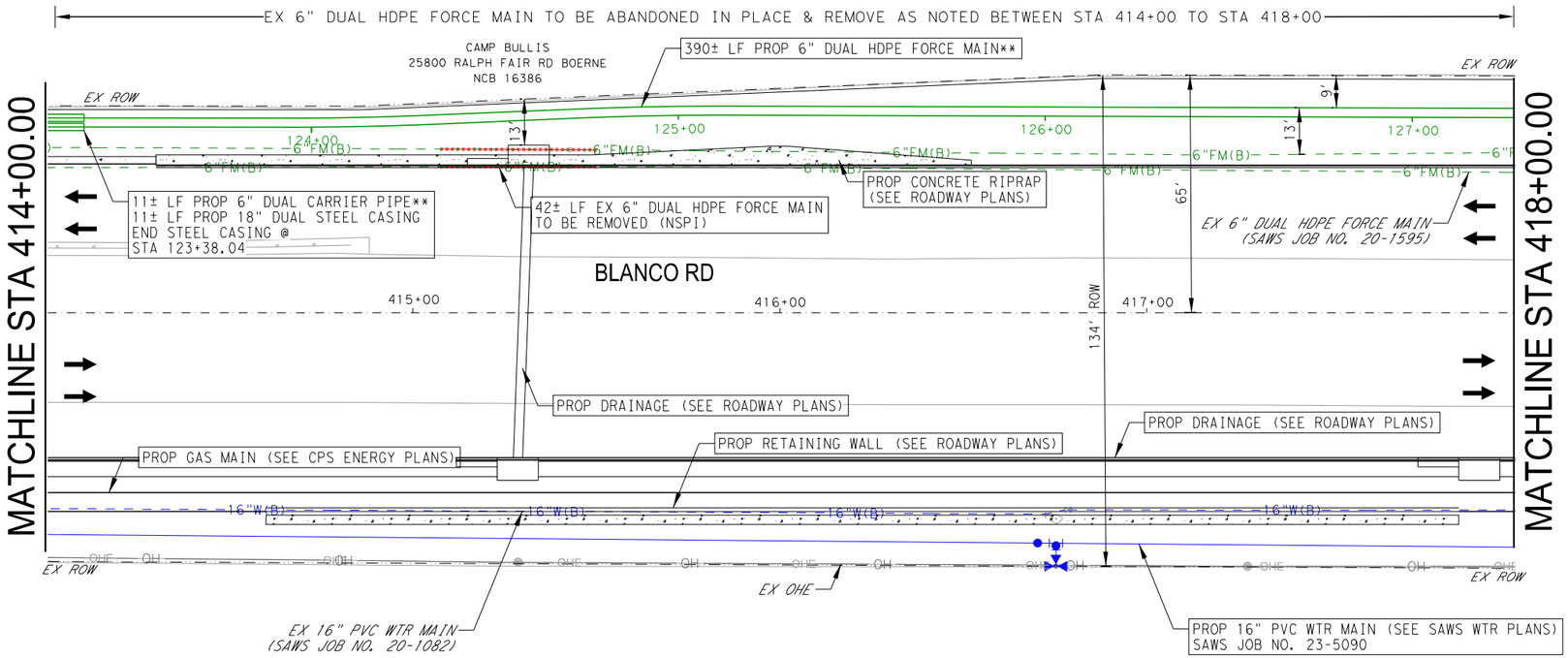
ITEM NO.	DESCRIPTION	UNITS	QUANTITY
550.0	TRENCH EXCAVATION SAFETY PROTECTION	LF	802
815.0	6" HDPE PIPE INSTALLATION DIRECT BURY FORCE MAIN	LF	780
856.2	6" CARRIER PIPE (OPEN CUT)	LF	22
856.3	18" STEEL CASING (OPEN CUT)	LF	22



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LEGEND

- PROP FORCE MAIN
- PROP WATER MAIN
- PROP STEEL CASING
- PROP FLOWABLE FILL
- REMOVAL LIMITS
- EXIST FORCE MAIN (FM)
- EXIST WATER MAIN (W)
- EXIST GAS MAIN (G)
- EXIST OVERHEAD ELEC (OHE)
- EXIST APPARENT ROW
- UTILITY CROSSING
- EFFECTIVE FEMA 5-YR FLOODPLAIN
- EFFECTIVE FEMA 100-YR FLOODPLAIN

NOTES

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

2. DUE TO FEDERAL REGULATION TITLE 49, PART 91.181 CPS 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.

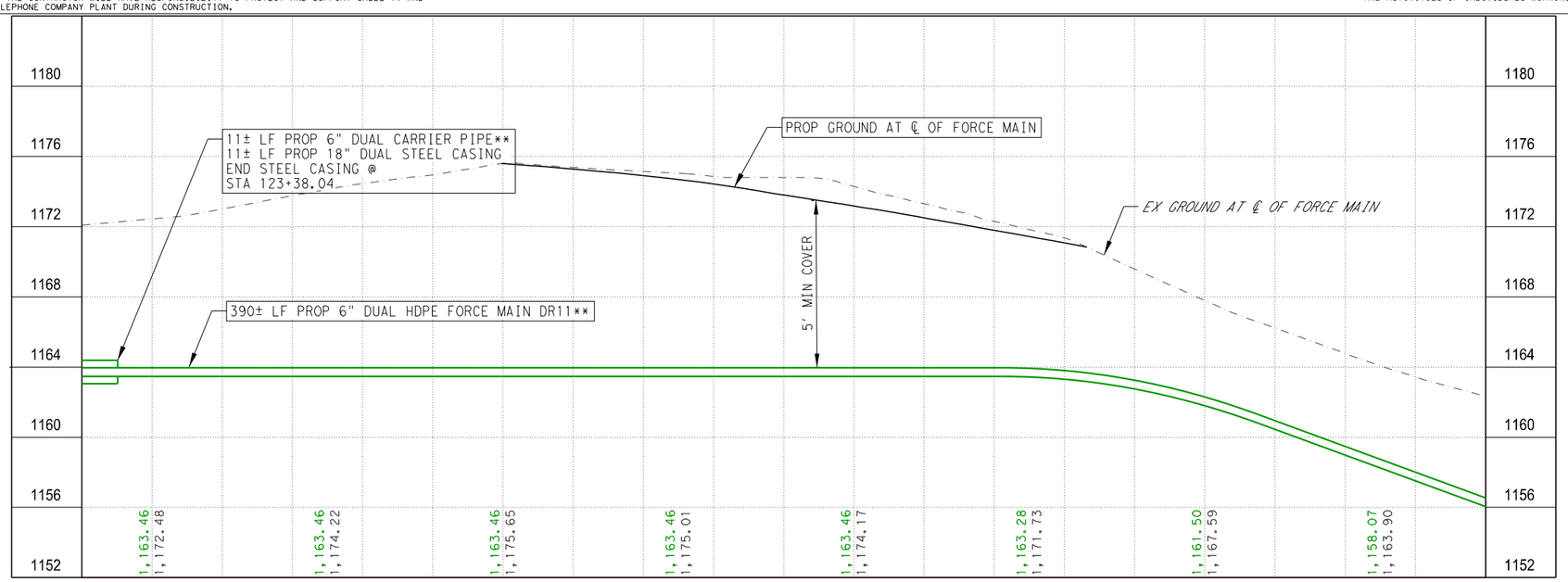
3. THE CONTRACTOR WILL BE RESPONSIBLE FOR PROTECTING CPS OVERHEAD AND UNDERGROUND ELECTRIC FACILITIES ADJACENT TO THE WORK AREAS.

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

SAWS NOTE:
LOCATION AND DEPTH OF EXISTING MAINS AND SERVICES SHOWN ON THE PLANS ARE APPROXIMATE ONLY. ACTUAL LOCATION AND DEPTHS MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO BEGINNING CONSTRUCTION BY CALLING THE SAWS LINE LOCATOR. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION WHEN WORKING NEAR EXISTING SAWS FACILITIES AND SHOULD THEY DAMAGE FACILITIES DURING CONSTRUCTION OPERATIONS; THE CONTRACTOR WILL BE REQUIRED TO REIMBURSE THE SAN ANTONIO WATER SYSTEM FOR THE TOTAL COST TO REPAIR OR REPLACE THE DAMAGED FACILITIES.

EXISTING UTILITIES:
THE EXISTING UNDERGROUND UTILITIES SHOWN ON THESE PLANS ARE BASED UPON RECORD INFORMATION ONLY AND ARE APPROXIMATE. THE EXACT LOCATION OF ALL EXISTING UNDERGROUND UTILITIES SHALL BE FIELD VERIFIED BY THE CONTRACTOR. THE CONTRACTOR SHALL ALSO CONTACT THE UTILITY PURVEYORS BEFORE BEGINNING WORK. CONTRACTOR SHALL TAKE FULL RESPONSIBILITY FOR ALL AND ANY DAMAGES THAT MIGHT OCCUR BY HIS FAILURE TO ACCURATELY LOCATE ALL EXISTING UNDERGROUND UTILITIES AND PRESERVE EXISTING CONDITIONS.

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



GRAPHIC SCALE
(IN FEET)
20 10 0 20 40 60
1" = 40'

STATE OF TEXAS
DAVID J. RUSSELL II
123318
LICENSED
PROFESSIONAL ENGINEER
01/24/2025

KCI TECHNOLOGIES, INC.
2806 W. BITTERS RD. - SUITE 218
SAN ANTONIO, TX 78248 - 210.641.9999
TEXAS REGISTERED ENGINEERING FIRM
TBPE FIRM No. F-10573
www.kci.com

NO.		DRAWN	APPROVED	DATE

REVISIONS

SAWS BLANCO RD PHASE III SEWER

PLAN & PROFILE
STA 414+00 TO STA 418+00

SHT 7 OF 16

DEVELOPER:

CONT. | BUDGET PROJ.

SUBMITTED 100% SUBMITTAL

APPROVED

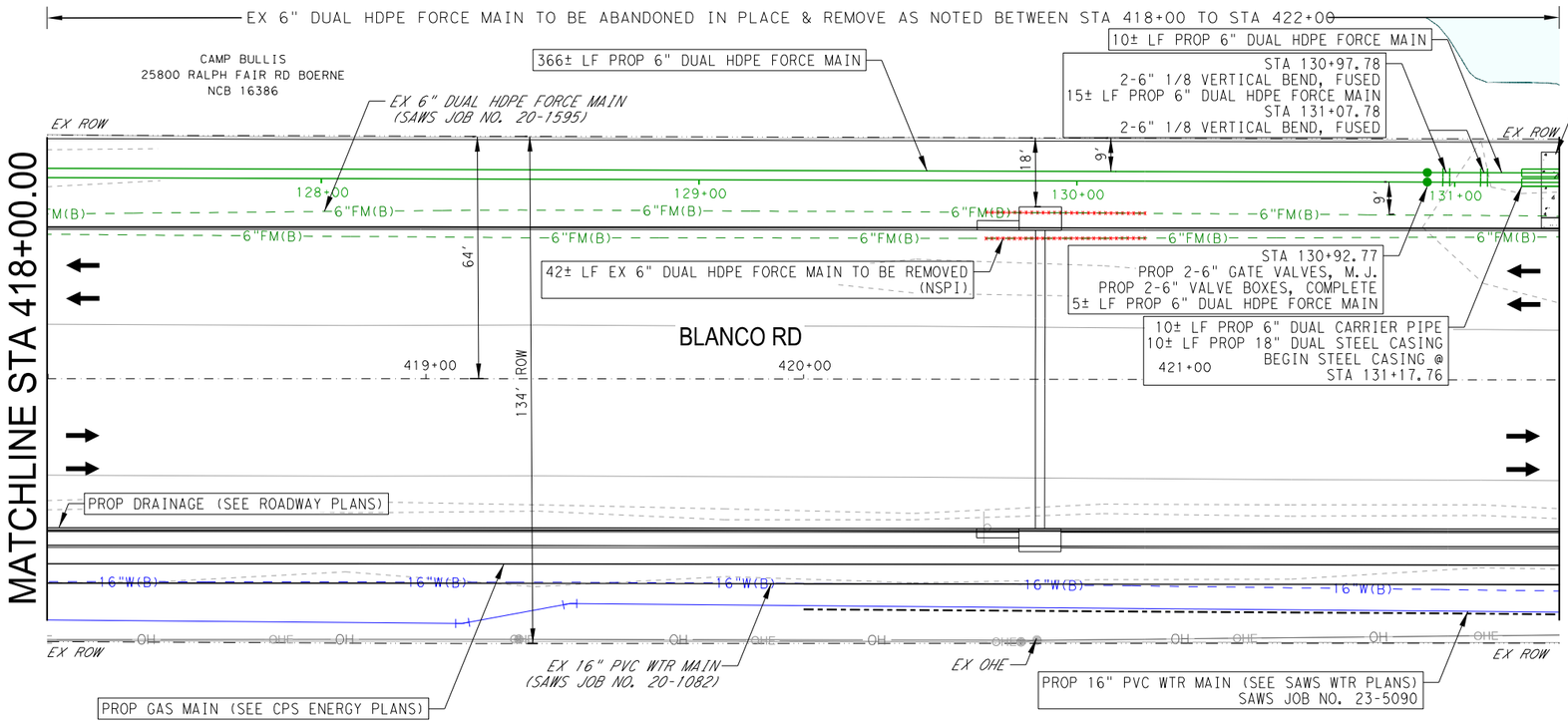
MAP No. | SHEET OF 12 / 21

SECT No. | JOB No.: 23-5584 | PROJ SEQ

DRN: JC | DSGN: DR2 | CHK: DR2

PLOTTED BY: Marco.Meraz
PLOTTED SCALE: 1:39.9999
PLOTTED ON: 1/23/2025 @ 8:14:16 PM
DESIGN FILENAME: c:\dms\kci-projects_02\marco.meraz@kci.com\dms93886\014_SAWS_Blanco Ph.III_SEWER_Sheet 7.dgn

ITEM NO.	DESCRIPTION	UNITS	QUANTITY
550.0	TRENCH EXCAVATION SAFETY PROTECTION	LF	812
815.0	6" HDPE PIPE INSTALLATION DIRECT BURY FORCE MAIN	LF	792
828.0	6" GATE VALVES	EA	2
836.0	PIPE FITTINGS, ALL SIZES AND TYPES	TON	0.06
856.2	6" CARRIER PIPE (OPEN CUT)	LF	20
856.3	18" STEEL CASING (OPEN CUT)	LF	20



CONTRACTOR NOTE:
**CONSTRUCTION OF PROPOSED UTILITIES IS NEXT TO CAMP BULLIS & FENCE; LIMITED ROW & OTHER EX. UTILITIES ARE PRESENT IN THE AREA.

NOTES:
1.PIPE STIFFENERS TO BE REQUIRED AT TRANSTITION COUPLINGS WHERE APPLICABLE
2.PROPOSED FORCE MAIN PIPE SHALL BE 6" HDPE DR11. DUCTILE IRON PIPE SIZE (DIPS).
3. CONTRACTOR TO REFER TO JOINT RESTRAINTS & THRUST BEARING DETAILS DD-839-01 & DD-839-02 FOR TIE-IN LOCATIONS & CONNECTIONS AT INTERSECTIONS. REFER TO THRUST BLOCK TABLE (SOIL MATERIALS OTHER THAN ROCK) REQUIREMENTS AT THESE LOCATIONS

LEGEND

- PROP FORCE MAIN
- PROP WATER MAIN
- PROP STEEL CASING
- PROP FLOWABLE FILL
- REMOVAL LIMITS
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- EXIST WATER MAIN
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NOTES

1. FOR LOCATION OF UNDERGROUND ELECTRIC AND GAS FACILITIES, TELEPHONE CABLES, AND SPECTRUM 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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GRAPHIC SCALE
(IN FEET)
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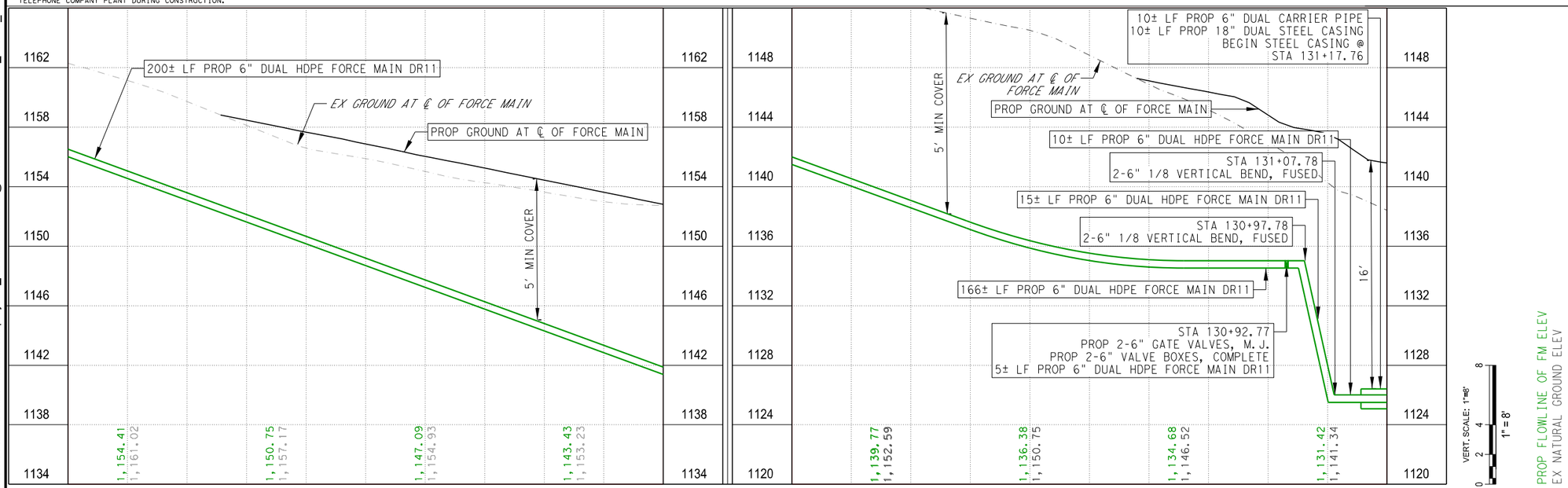
1" = 40'



STATE OF TEXAS
DAVID J. RUSSELL II
123318
LICENSED
PROFESSIONAL ENGINEER
01/24/2025

KCI TECHNOLOGIES, INC.
2806 W. BITTERS RD. - SUITE 218
SAN ANTONIO, TX 78248 - 210.641.9999
TEXAS REGISTERED ENGINEERING FIRM
TBPE FIRM No. F-10573
www.kci.com

NO.		DRAWN	APPROVED	DATE

REVISIONS

SAWS BLANCO RD PHASE III
SEWER

PLAN & PROFILE
STA 418+00 TO STA 422+00

SHT 8 OF 16

DEVELOPER:
CONT. | BUDGET PROJ.
SUBMITTED 100% SUBMITTAL
APPROVED
MAP No. | SHEET OF 13 / 21
SECT No. | JOB No.: 23-5584 | PROJ SEQ
DRN: JC | DSGN: DR2 | CHK: DR2

PLOTTED BY: Marco.Meraz
PLOTTED SCALE: 1:39.9999
PLOTTED ON: 1/23/2025 @ 8:14:36 PM
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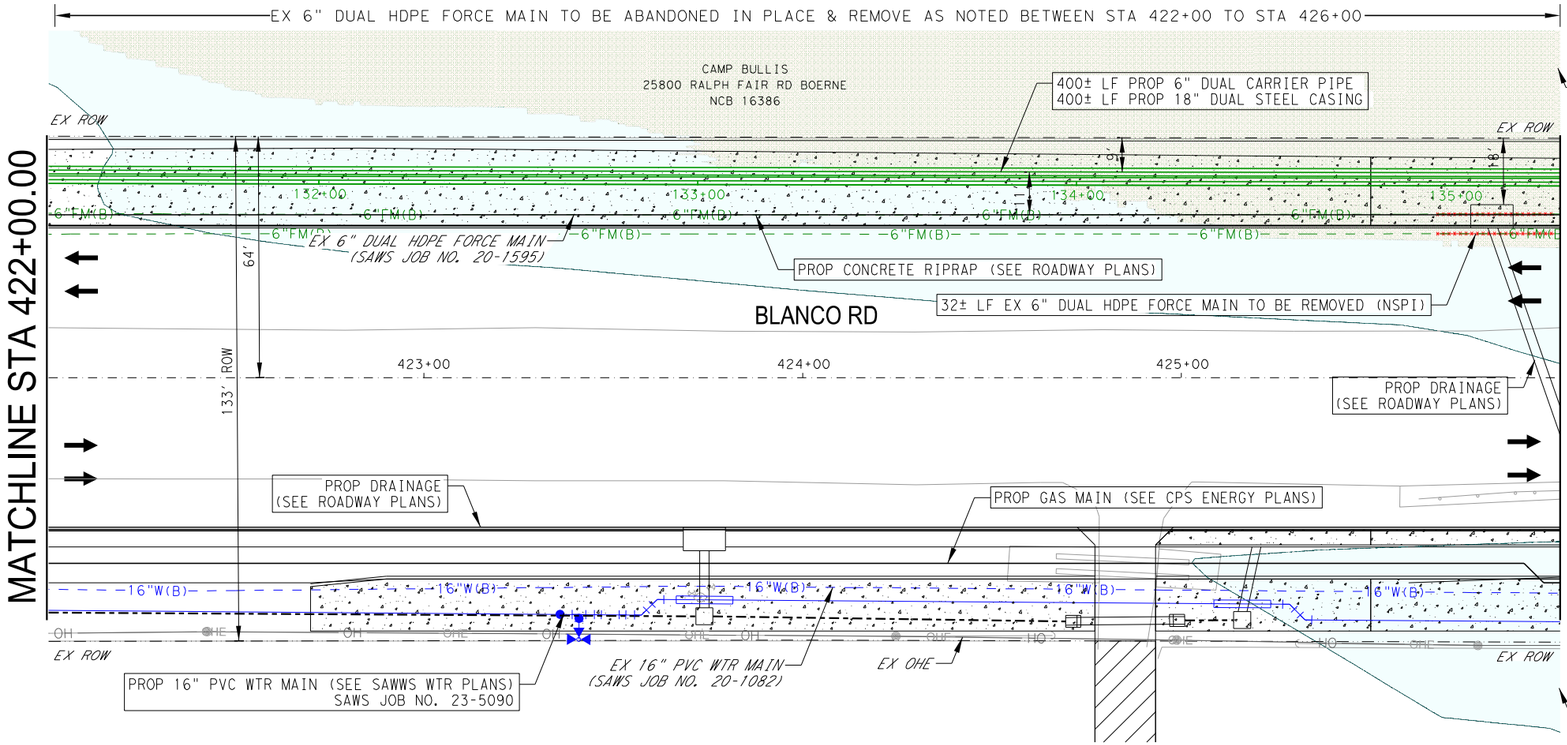
ITEM NO.	DESCRIPTION	UNITS	QUANTITY
550.0	TRENCH EXCAVATION SAFETY PROTECTION	LF	800
856.2	6" CARRIER PIPE (OPEN CUT)	LF	800
856.3	18" STEEL CASING (OPEN CUT)	LF	800



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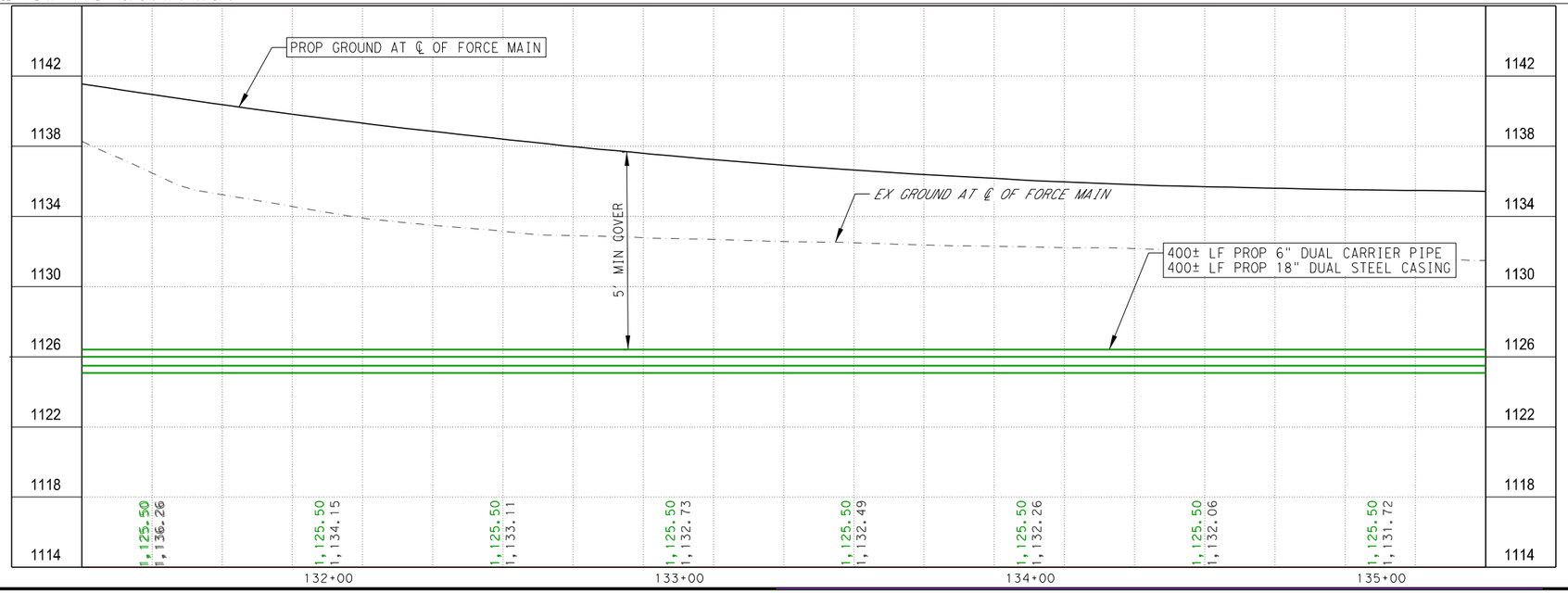

GRAPHIC SCALE
(IN FEET)
20 10 0 20 40 60
1" = 40'

STATE OF TEXAS
DAVID J. RUSSELL II
123318
LICENSED
PROFESSIONAL ENGINEER
01/24/2025

KCI TECHNOLOGIES, INC.
2806 W. BITTERS RD. - SUITE 218
SAN ANTONIO, TX 78248 - 210.641.9999
TEXAS REGISTERED ENGINEERING FIRM
TBPE FIRM No. F-10573
www.kci.com

NO.		DRAWN	APPROVED	DATE

REVISIONS

SAWS BLANCO RD PHASE III SEWER

PLAN & PROFILE
STA 422+00 TO STA 426+00

SHT 9 OF 16

DEVELOPER:

CONT. | BUDGET PROJ.

SUBMITTED 100% SUBMITTAL

APPROVED

MAP No. | SHEET OF 14 / 21

SECT No. | JOB No.: 23-5584 | PROJ SEQ

DRN: JC | DSGN: DR2 | CHK: DR2

PLOTTED BY: Marco.Meraz
PLOTTED SCALE: 1:39.9999
PLOTTED ON: 1/23/2025 @ 8:14:59 PM
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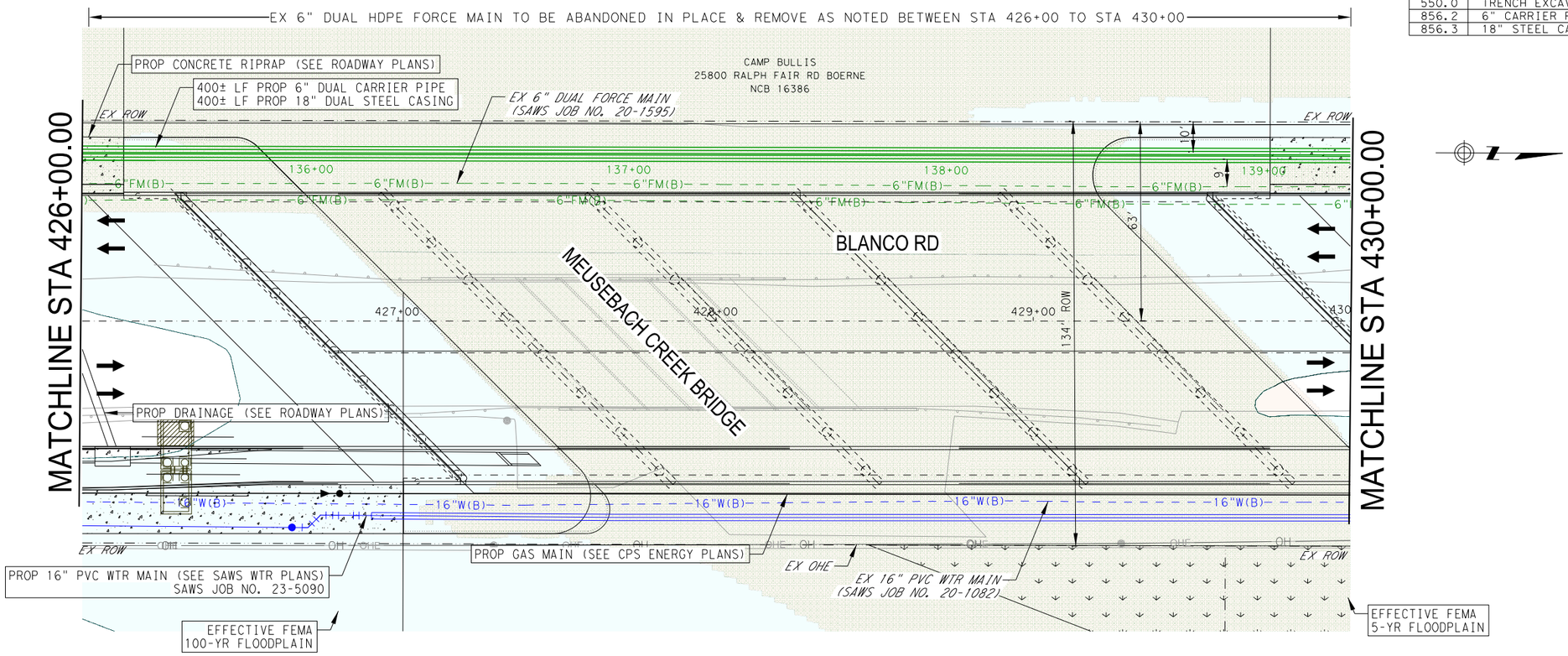
ITEM NO.	DESCRIPTION	UNITS	QUANTITY
550.0	TRENCH EXCAVATION SAFETY PROTECTION	LF	800
856.2	6" CARRIER PIPE (OPEN CUT)	LF	800
856.3	18" STEEL CASING (OPEN CUT)	LF	800



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- REMOVAL LIMITS
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(IN FEET)
20 10 0 20 40 60
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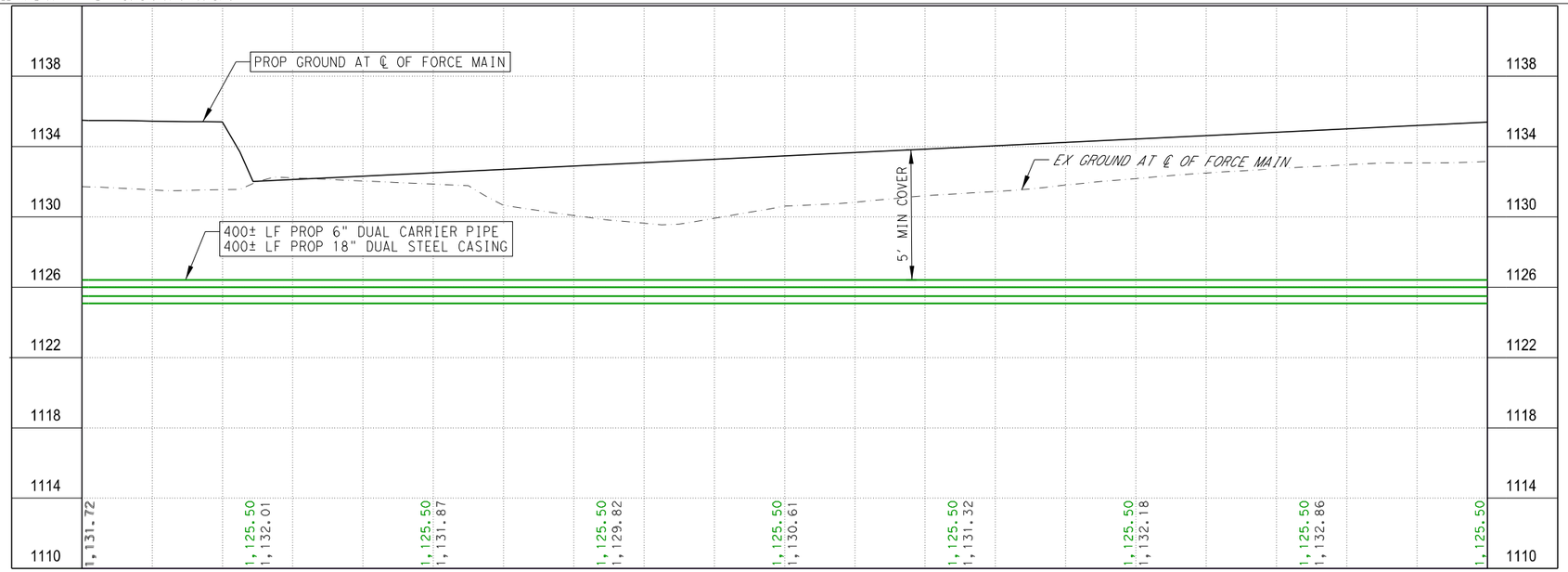

VERT. SCALE: 1"=8'
0 2 4 8
1" = 8'

PROP FLOWLINE OF FM ELEV
EX NATURAL GROUND ELEV

STATE OF TEXAS
DAVID J. RUSSELL II
123318
LICENSED
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NO.		DRAWN	APPROVED	DATE

REVISIONS

SAWS BLANCO RD PHASE III SEWER

PLAN & PROFILE
STA 426+00 TO STA 430+00

SHT 10 OF 16

DEVELOPER:

CONT. | BUDGET PROJ.

SUBMITTED 100% SUBMITTAL

APPROVED

MAP No. | SHEET OF 15 / 21

SECT No. | JOB No.: 23-5584 | PROJ SEQ

DRN: JC | DSGN: DR2 | CHK: DR2

PLOTTED BY: Marco.Meraz
PLOTTED SCALE: 1:40.0006
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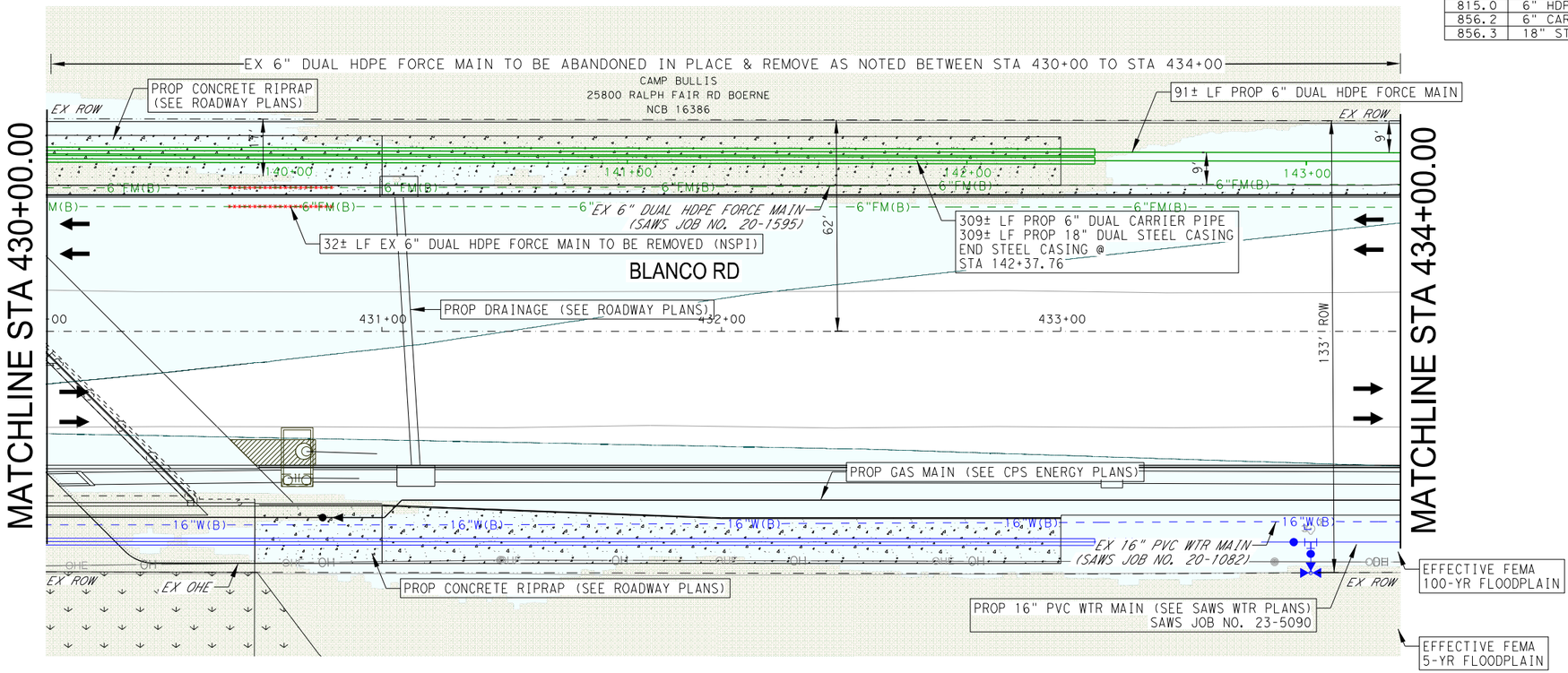
ITEM NO.	DESCRIPTION	UNITS	QUANTITY
550.0	TRENCH EXCAVATION SAFETY PROTECTION	LF	800
815.0	6" HDPE PIPE INSTALLATION DIRECT BURY FORCE MAIN	LF	182
856.2	6" CARRIER PIPE (OPEN CUT)	LF	618
856.3	18" STEEL CASING (OPEN CUT)	LF	618



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3. THE CONTRACTOR WILL BE RESPONSIBLE FOR PROTECTING CPS OVERHEAD AND UNDERGROUND ELECTRIC FACILITIES ADJACENT TO THE WORK AREAS.

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

SAWS NOTE:
LOCATION AND DEPTH OF EXISTING MAINS AND SERVICES SHOWN ON THE PLANS ARE APPROXIMATE ONLY. ACTUAL LOCATION AND DEPTHS MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO BEGINNING CONSTRUCTION BY CALLING THE SAWS LINE LOCATOR. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION WHEN WORKING NEAR EXISTING SAWS FACILITIES AND SHOULD THEY DAMAGE FACILITIES DURING CONSTRUCTION OPERATIONS; THE CONTRACTOR WILL BE REQUIRED TO REIMBURSE THE SAN ANTONIO WATER SYSTEM FOR THE TOTAL COST TO REPAIR OR REPLACE THE DAMAGED FACILITIES.

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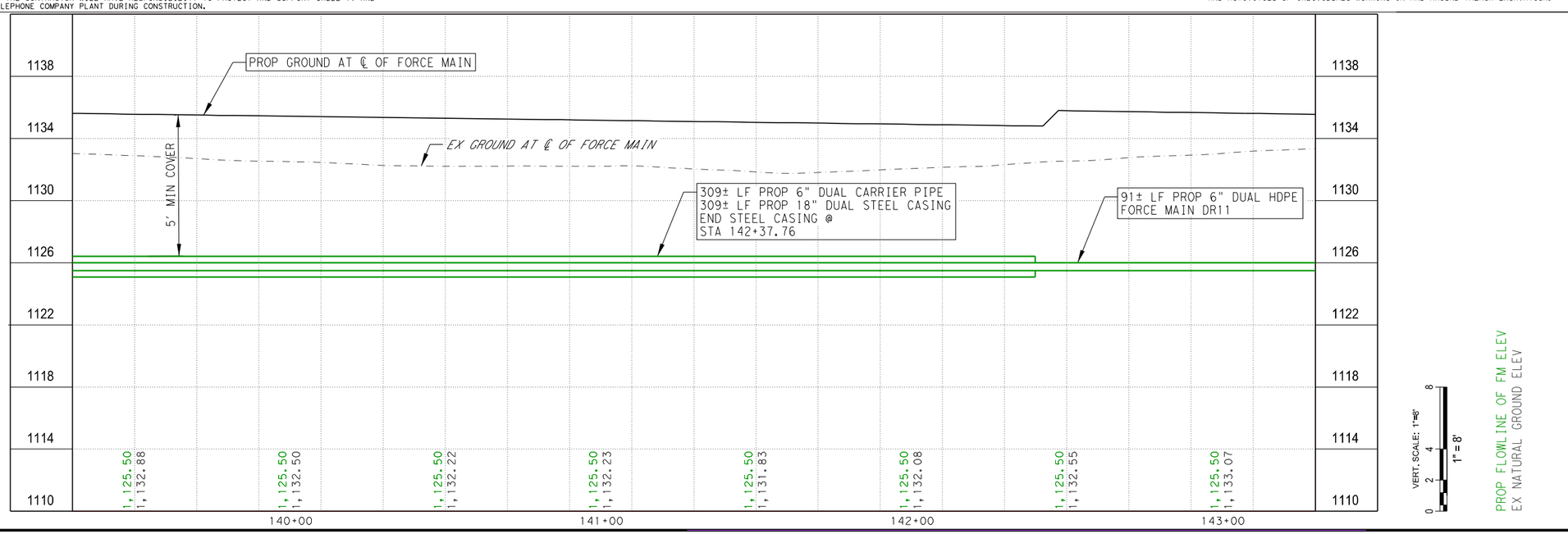
TRENCH EXCAVATION SAFETY PROTECTION:
CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAIN EMPLOYEE OR STRUCTURAL/ DESIGN/GEOTECHNICAL/SAFETY/ EQUIPMENT CONSULTANT, IF ANY SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA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



GRAPHIC SCALE
(IN FEET)
20 10 0 20 40 60
1" = 40'

STATE OF TEXAS
DAVID J. RUSSELL II
123318
LICENSED PROFESSIONAL ENGINEER
01/24/2025

KCI TECHNOLOGIES, INC.
2806 W. BITTERS RD. - SUITE 218
SAN ANTONIO, TX 78248 - 210.641.9999
TEXAS REGISTERED ENGINEERING FIRM
TBPE FIRM No. F-10573
www.kci.com

NO.		DRAWN	APPROVED	DATE

REVISIONS

SAWS BLANCO RD PHASE III SEWER

PLAN & PROFILE
STA 430+00 TO STA 434+00

SHT 11 OF 16

DEVELOPER:

CONT. | BUDGET PROJ.

SUBMITTED 100% SUBMITTAL

APPROVED

MAP No. | SHEET OF 16 / 21

SECT No. | JOB No.: 23-5584 | PROJ SEQ

DRN: JC | DSGN: DR2 | CHK: DR2

PLOTTED BY: Marco.Meraz
PLOTTED SCALE: 1:39.9999
PLOTTED ON: 1/23/2025 @ 8:15:41 PM
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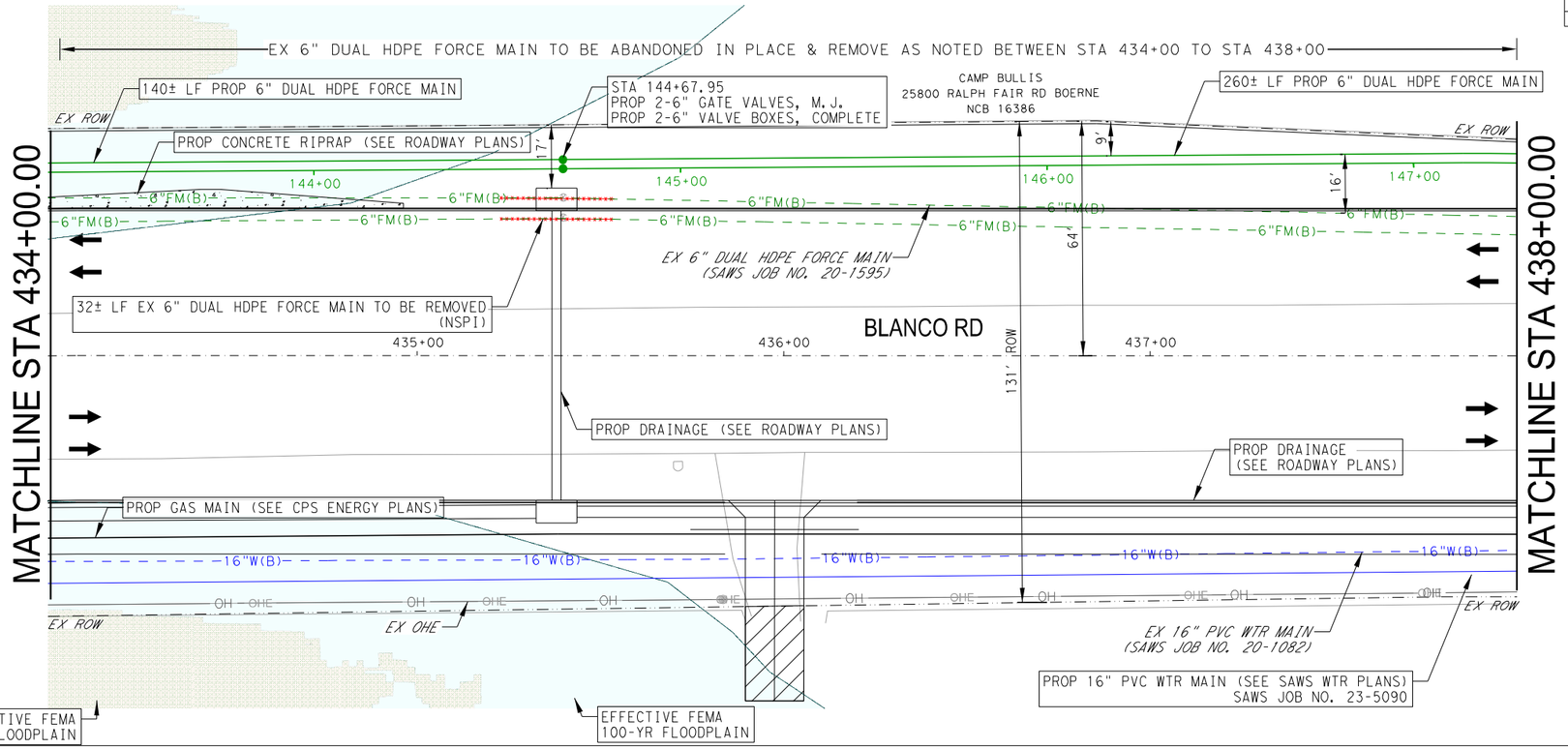
ITEM NO.	DESCRIPTION	UNITS	QUANTITY
550.0	TRENCH EXCAVATION SAFETY PROTECTION	LF	800
815.0	6" HDPE PIPE INSTALLATION DIRECT BURY FORCE MAIN	LF	800
828.0	6" GATE VALVES	EA	2



CONTRACTOR NOTE:
**CONSTRUCTION OF PROPOSED UTILITIES IS NEXT TO CAMP BULLIS & FENCE; LIMITED ROW & OTHER EX. UTILITIES ARE PRESENT IN THE AREA.

NOTES:
1.PIPE STIFFENERS TO BE REQUIRED AT TRANSTITION COUPLINGS WHERE APPLICABLE
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LEGEND

- PROP FORCE MAIN
- PROP WATER MAIN
- PROP STEEL CASING
- PROP FLOWABLE FILL
- REMOVAL LIMITS
- EXIST FORCE MAIN
- EXIST WATER MAIN
- EXIST GAS MAIN
- EXIST OVERHEAD ELEC
- EXIST APPARENT ROW
- UTILITY CROSSING
- EFFECTIVE FEMA 5-YR FLOODPLAIN
- EFFECTIVE FEMA 100-YR FLOODPLAIN

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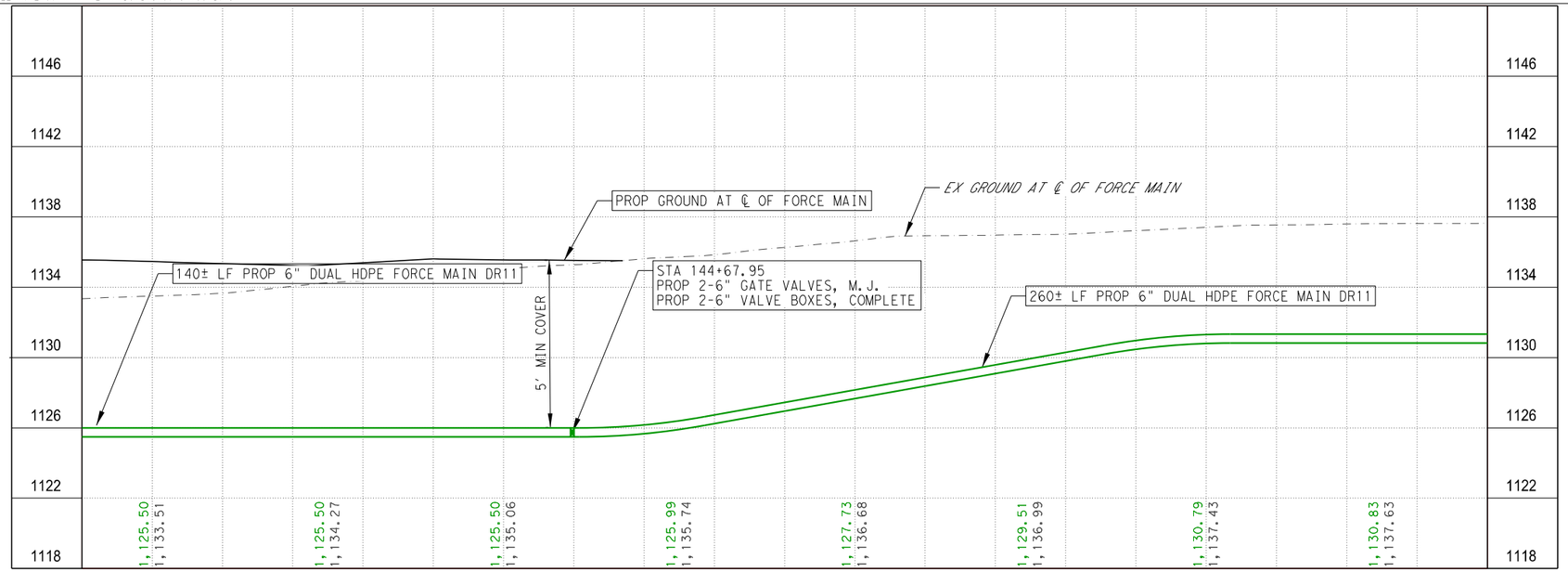

VERT. SCALE: 1"=8'
1" = 8'
PROP FLOWLINE OF FM ELEV
EX NATURAL GROUND ELEV

GRAPHIC SCALE
(IN FEET)
20 10 0 20 40 60
1" = 40'

STATE OF TEXAS
DAVID J. RUSSELL II
123318
LICENSED
PROFESSIONAL ENGINEER
01/24/2025

KCI TECHNOLOGIES, INC.
2806 W. BITTERS RD. - SUITE 218
SAN ANTONIO, TX 78248 - 210.641.9999
TEXAS REGISTERED ENGINEERING FIRM
TBPE FIRM No. F-10573
www.kci.com

NO.		DRAWN	APPROVED	DATE

REVISIONS

SAWS BLANCO RD PHASE III SEWER

PLAN & PROFILE
STA 434+00 TO STA 438+00

SHT 12 OF 16

DEVELOPER:
CONT. | BUDGET PROJ.
SUBMITTED 100% SUBMITTAL
APPROVED
MAP No. | SHEET OF 17 / 21
SECT No. | JOB No.: 23-5584 | PROJ SEQ
DRN: JC | DSGN: DR2 | CHK: DR2

PLOTTED BY: Marco.Meraz
PLOTTED SCALE: 1:39.9999
PLOTTED ON: 1/23/2025 @ 8:16:03 PM
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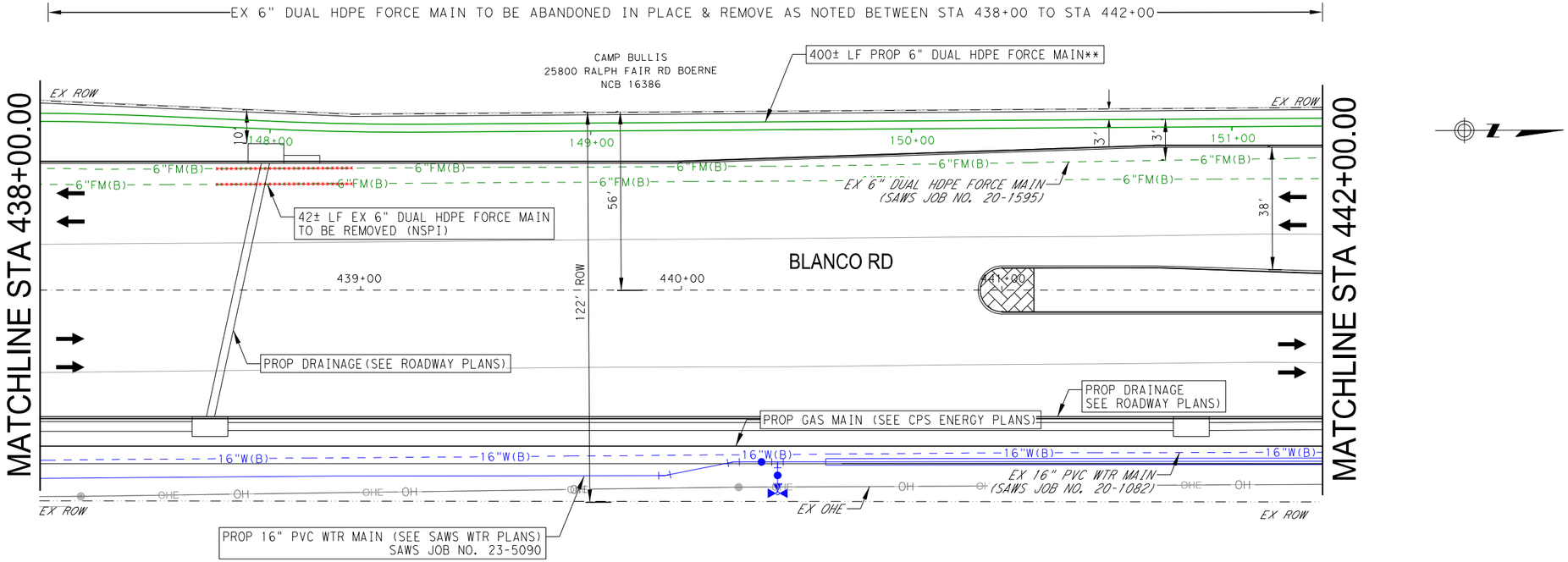
ITEM NO.	DESCRIPTION	UNITS	QUANTITY
550.0	TRENCH EXCAVATION SAFETY PROTECTION	LF	800
815.0	6" HDPE PIPE INSTALLATION DIRECT BURY FORCE MAIN	LF	800



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- PROP FORCE MAIN
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- PROP FLOWABLE FILL
- REMOVAL LIMITS
- EXIST FORCE MAIN — FM
- EXIST WATER MAIN — W
- EXIST GAS MAIN — G
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- EXIST APPARENT ROW
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- EFFECTIVE FEMA 5-YR FLOODPLAIN
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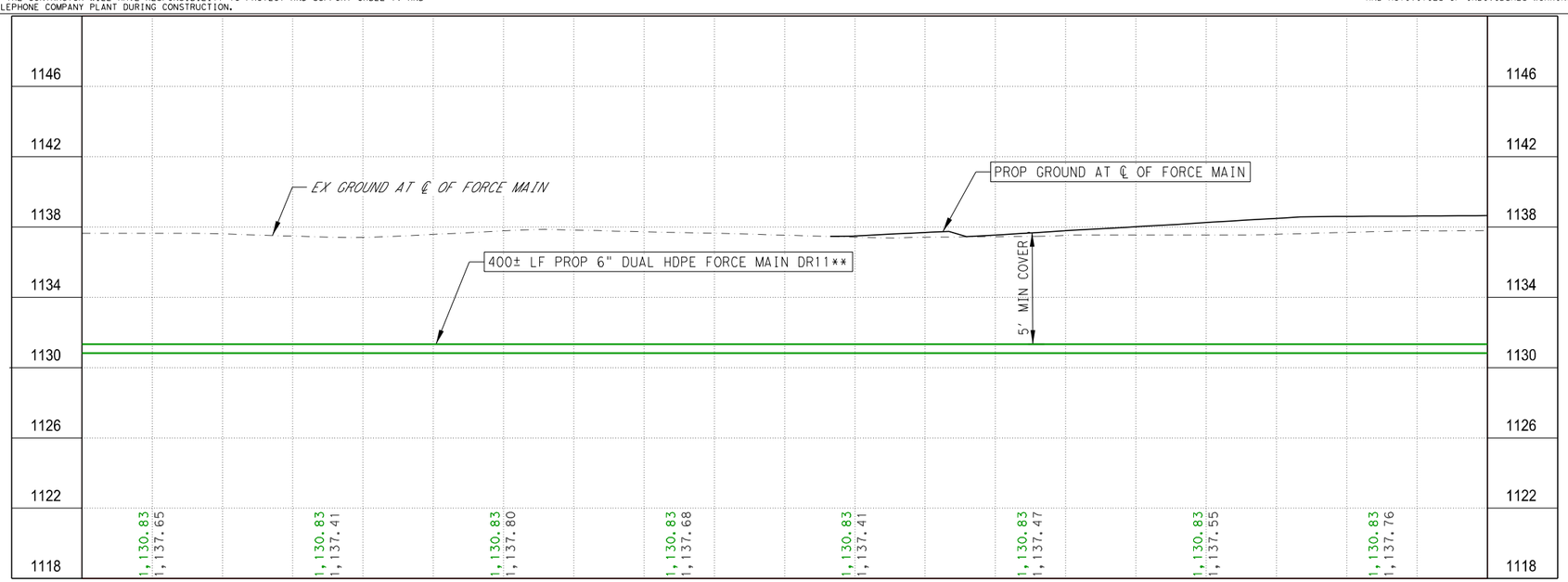

GRAPHIC SCALE
(IN FEET)
20 10 0 20 40 60
1" = 40'

STATE OF TEXAS
DAVID J. RUSSELL II
123318
LICENSED
PROFESSIONAL ENGINEER
01/24/2025

KCI TECHNOLOGIES, INC.
2806 W. BITTERS RD. - SUITE 218
SAN ANTONIO, TX 78248 - 210.641.9999
TEXAS REGISTERED ENGINEERING FIRM
TBPE FIRM No. F-10573
www.kci.com
KCI TECHNOLOGIES

NO.		DRAWN	APPROVED	DATE

REVISIONS

SAWS BLANCO RD PHASE III SEWER

PLAN & PROFILE
STA 438+00 TO STA 442+00

SHT 13 OF 16

DEVELOPER:

CONT. | BUDGET PROJ.

SUBMITTED 100% SUBMITTAL

APPROVED

MAP No. | SHEET OF 18 / 21

SECT No. | JOB No.: 23-5584 | PROJ SEQ

DRN: JC | DSGN: DR2 | CHK: DR2

PLOTTED BY: Marco.Meraz
PLOTTED SCALE: 1:39.9999
PLOTTED ON: 1/23/2025 @ 8:16:24 PM
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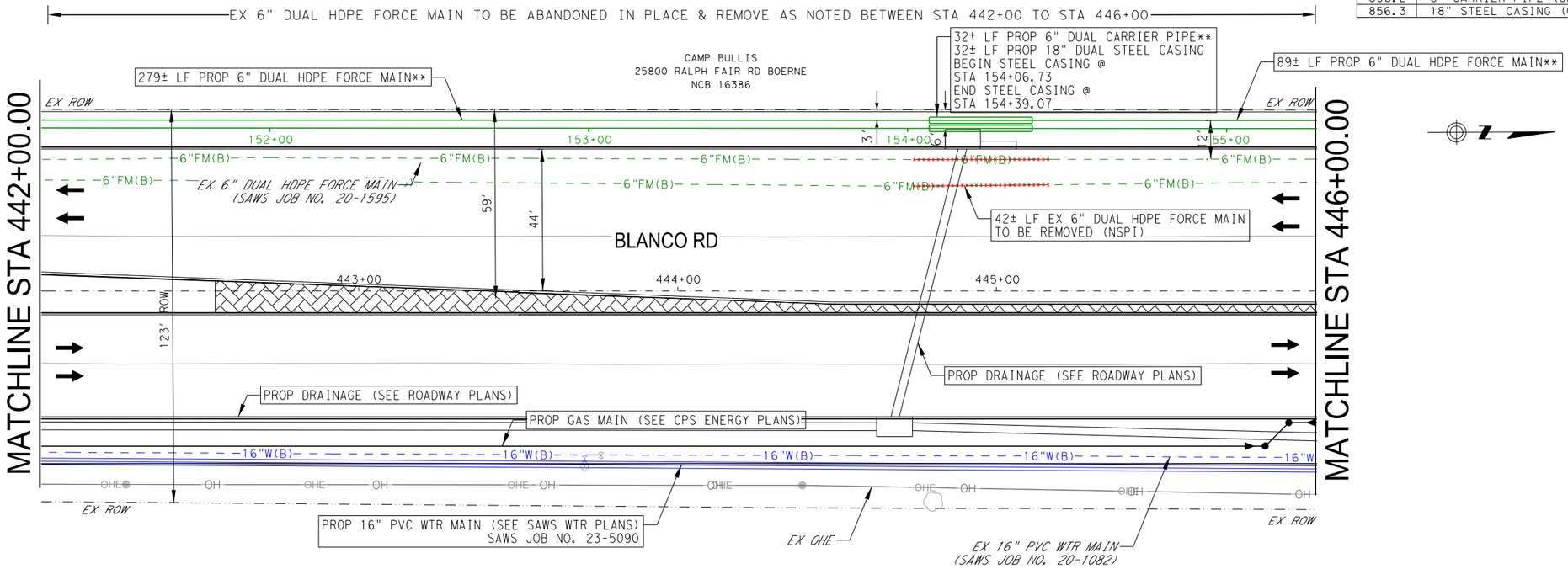
ITEM NO.	DESCRIPTION	UNITS	QUANTITY
550.0	TRENCH EXCAVATION SAFETY PROTECTION	LF	800
815.0	6" HDPE PIPE INSTALLATION DIRECT BURY FORCE MAIN	LF	736
856.2	6" CARRIER PIPE (OPEN CUT)	LF	64
856.3	18" STEEL CASING (OPEN CUT)	LF	64



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LEGEND

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- PROP WATER MAIN
- PROP STEEL CASING
- PROP FLOWABLE FILL
- REMOVAL LIMITS
- EXIST FORCE MAIN — FM
- EXIST WATER MAIN — W
- EXIST GAS MAIN — G
- EXIST OVERHEAD ELEC — OHE
- EXIST APPARENT ROW
- UTILITY CROSSING
- EFFECTIVE FEMA 5-YR FLOODPLAIN
- EFFECTIVE FEMA 100-YR FLOODPLAIN

NOTES

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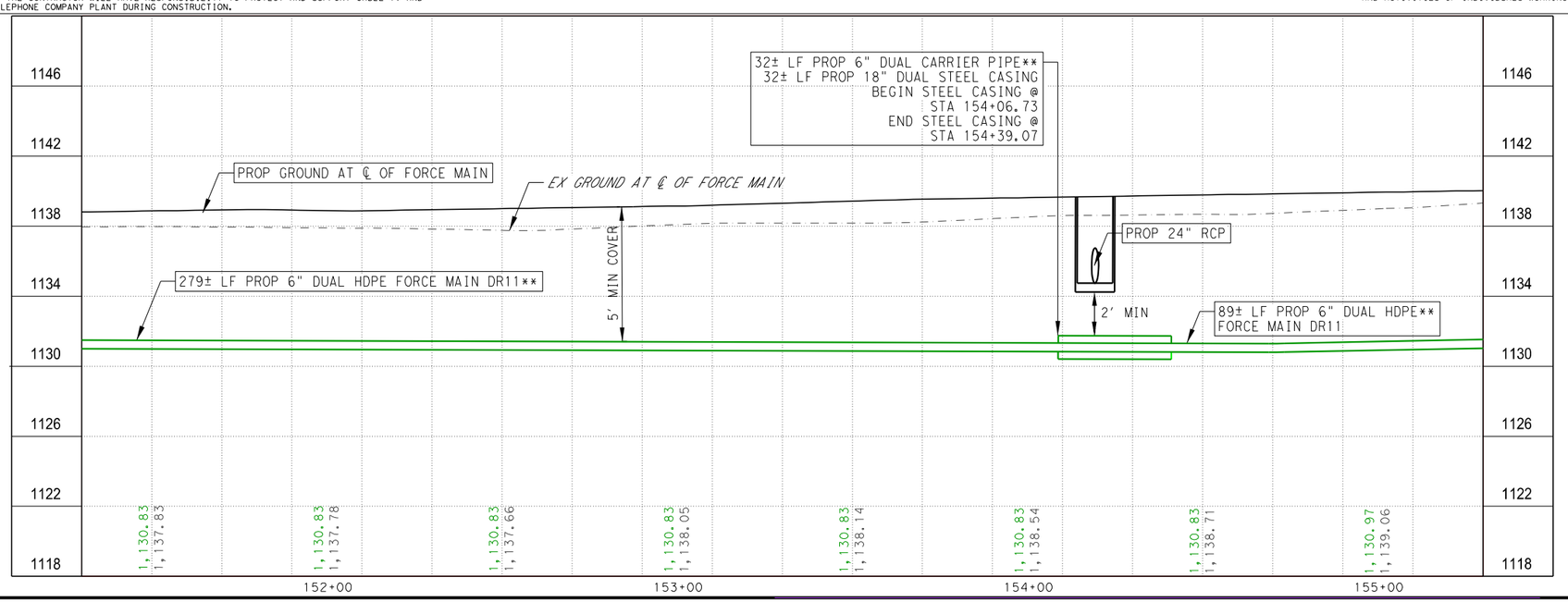

VERT. SCALE: 1"=8'
0 2 4 8
1" = 8'

PROP FLOWLINE OF FM ELEV
EX NATURAL GROUND ELEV

STATE OF TEXAS
DAVID J. RUSSELL II
123318
LICENSED
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01/24/2025

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NO.		DRAWN	APPROVED	DATE

REVISIONS

SAWS BLANCO RD PHASE III SEWER

PLAN & PROFILE
STA 442+00 TO STA 446+00

SHT 14 OF 16

DEVELOPER:

CONT. | BUDGET PROJ.

SUBMITTED 100% SUBMITTAL

APPROVED

MAP No. | SHEET OF 19 / 21

SECT No. | JOB No.: 23-5584 | PROJ SEQ

DRN: JC | DSGN: DR2 | CHK: DR2

PLOTTED BY: Marco.Meraz
PLOTTED SCALE: 1:39.9999
PLOTTED ON: 1/23/2025 @ 8:16:43 PM
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ITEM NO.	DESCRIPTION	UNITS	QUANTITY
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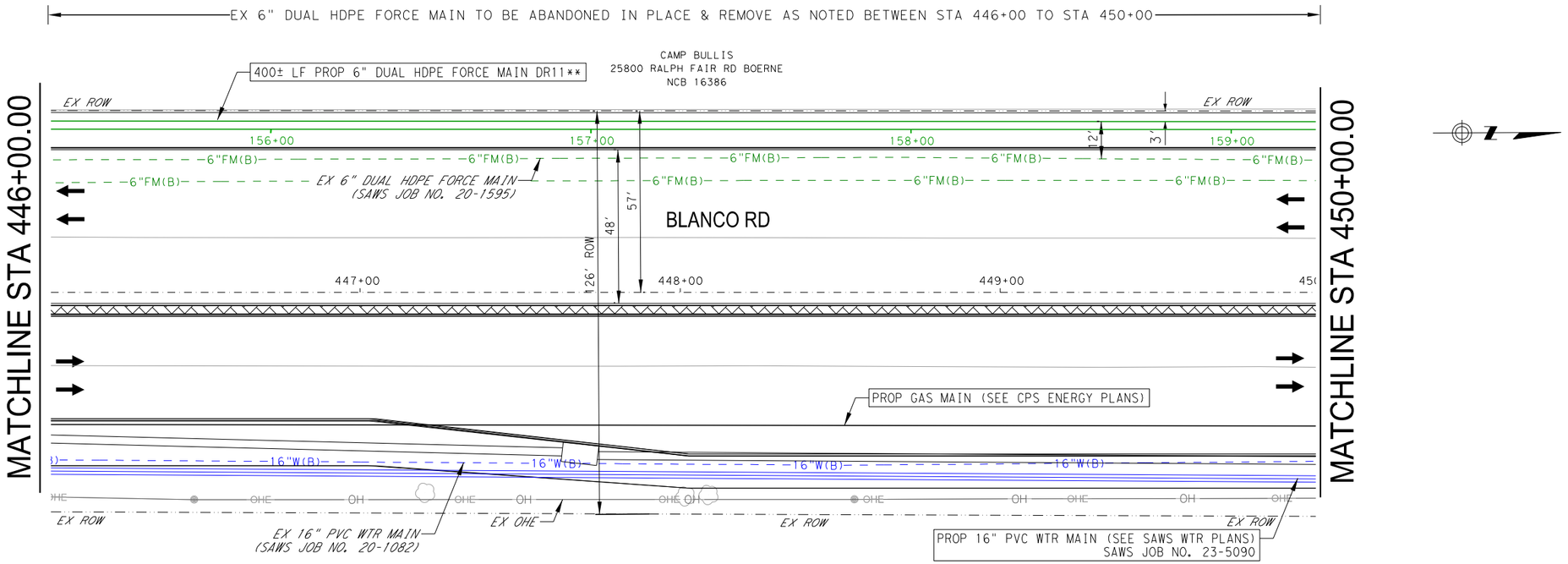
815.0	6" HDPE PIPE INSTALLATION DIRECT BURY FORCE MAIN	LF	800



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- EXIST FORCE MAIN (FM)
- EXIST WATER MAIN (W)
- EXIST GAS MAIN (G)
- EXIST OVERHEAD ELEC (OHE)
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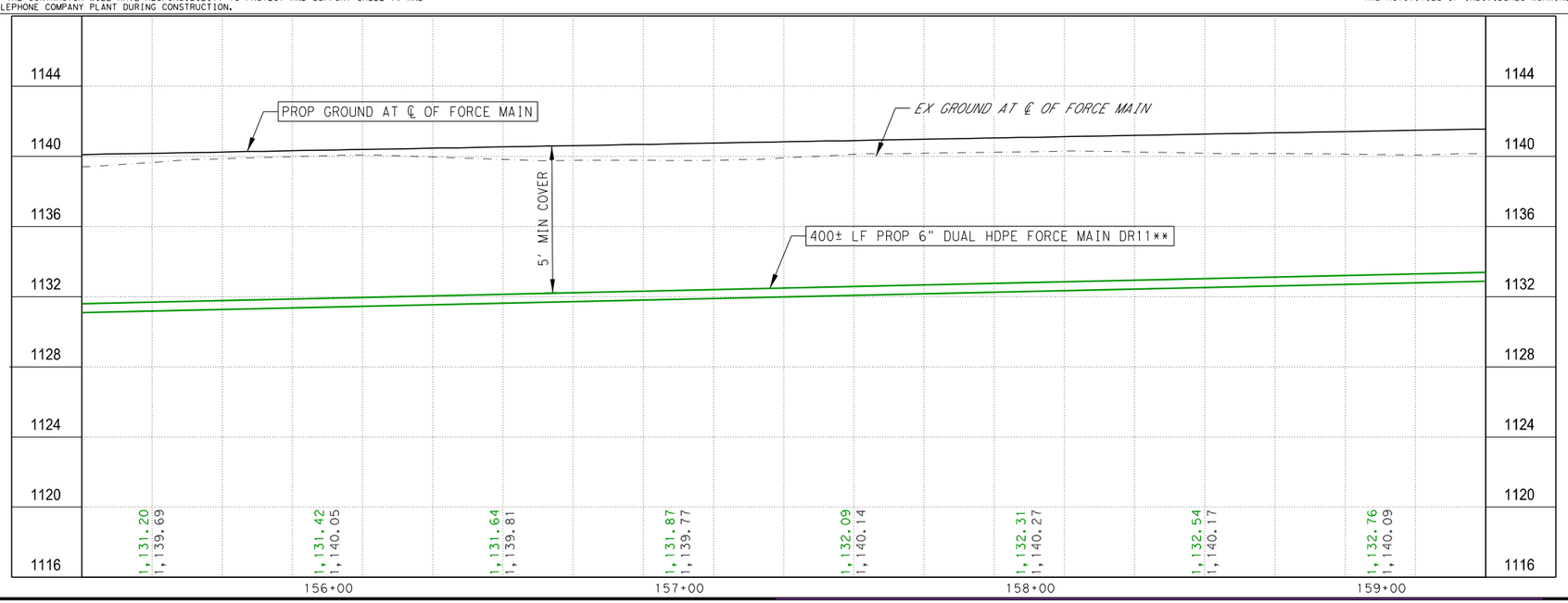
TRENCH EXCAVATION SAFETY PROTECTION:
CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAIN EMPLOYEE OR STRUCTURAL/ DESIGN/GEOTECHNICAL/SAFETY/ EQUIPMENT CONSULTANT, IF ANY SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES. THE CONTRACTOR'S IMPLEMENTATION OF THE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLIES WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAIN EMPLOYEE OF SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.



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1" = 40'

STATE OF TEXAS
DAVID J. RUSSELL II
123318
LICENSED
PROFESSIONAL ENGINEER
01/24/2025

KCI TECHNOLOGIES, INC.
2806 W. BITTERS RD. - SUITE 218
SAN ANTONIO, TX 78248 - 210.641.9999
TEXAS REGISTERED ENGINEERING FIRM
TBPE FIRM No. F-10573
www.kci.com

NO.		DRAWN	APPROVED	DATE

REVISIONS

SAWS BLANCO RD PHASE III SEWER

PLAN & PROFILE
STA 446+00 TO STA 450+00

SHT 15 OF 16

DEVELOPER:

CONT. | BUDGET PROJ.

SUBMITTED 100% SUBMITTAL

APPROVED

MAP No. | SHEET OF 20 / 21

SECT No. | JOB No.: 23-5584 | PROJ SEQ

DRN: JC | DSGN: DR2 | CHK: DR2

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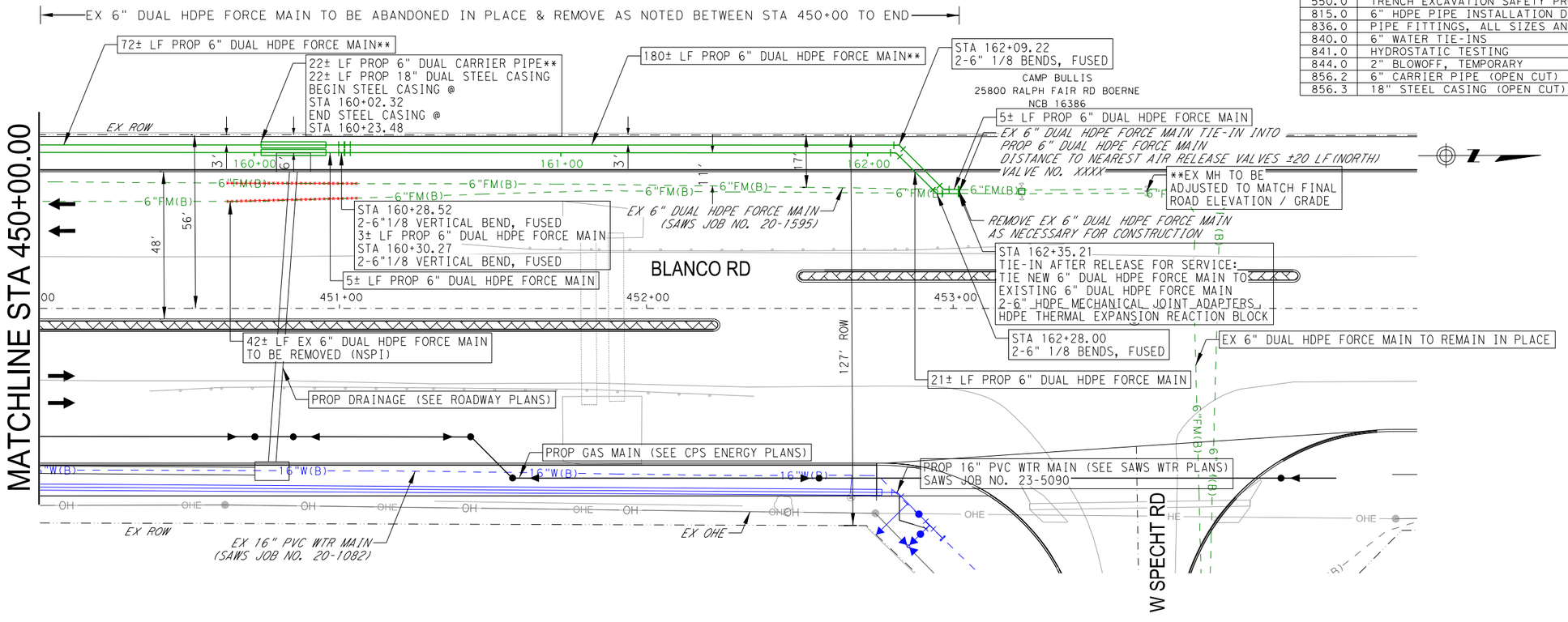
ITEM NO.	DESCRIPTION	UNITS	QUANTITY
550.0	TRENCH EXCAVATION SAFETY PROTECTION	LF	616
815.0	6" HDPE PIPE INSTALLATION DIRECT BURY FORCE MAIN	LF	572
836.0	PIPE FITTINGS, ALL SIZES AND TYPES	TON	0.17
840.0	6" WATER TIE-INS	EA	2
841.0	HYDROSTATIC TESTING	EA	2
844.0	2" BLOWOFF, TEMPORARY	EA	2
856.2	6" CARRIER PIPE (OPEN CUT)	LF	44
856.3	18" STEEL CASING (OPEN CUT)	LF	44



CONTRACTOR NOTE:
**CONSTRUCTION OF PROPOSED UTILITIES IS NEXT TO CAMP BULLIS & FENCE; LIMITED ROW & OTHER EX. UTILITIES ARE PRESENT IN THE AREA.

NOTES:
1. PIPE STIFFENERS TO BE REQUIRED AT TRANSTITION COUPLINGS WHERE APPLICABLE
2. PROPOSED FORCE MAIN PIPE SHALL BE 6" HDPE DR11. DUCTILE IRON PIPE SIZE (DIPS).
3. CONTRACTOR TO REFER TO JOINT RESTRAINTS & THRUST BEARING DETAILS DD-839-01 & DD-839-02 FOR TIE-IN LOCATIONS & CONNECTIONS AT INTERSECTIONS. REFER TO THRUST BLOCK TABLE (SOIL MATERIALS OTHER THAN ROCK) REQUIREMENTS AT THESE LOCATIONS

LEGEND

- PROP FORCE MAIN
- PROP WATER MAIN
- PROP STEEL CASING
- PROP FLOWABLE FILL
- REMOVAL LIMITS
- EXIST FORCE MAIN
- EXIST WATER MAIN
- EXIST GAS MAIN
- EXIST OVERHEAD ELEC
- EXIST APPARENT ROW
- UTILITY CROSSING
- EFFECTIVE FEMA 5-YR FLOODPLAIN
- EFFECTIVE FEMA 100-YR FLOODPLAIN

NOTES

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

2. DUE TO FEDERAL REGULATION TITLE 49, PART 91.181 CPS 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.

3. THE CONTRACTOR WILL BE RESPONSIBLE FOR PROTECTING CPS OVERHEAD AND UNDERGROUND ELECTRIC FACILITIES ADJACENT TO THE WORK AREAS.

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

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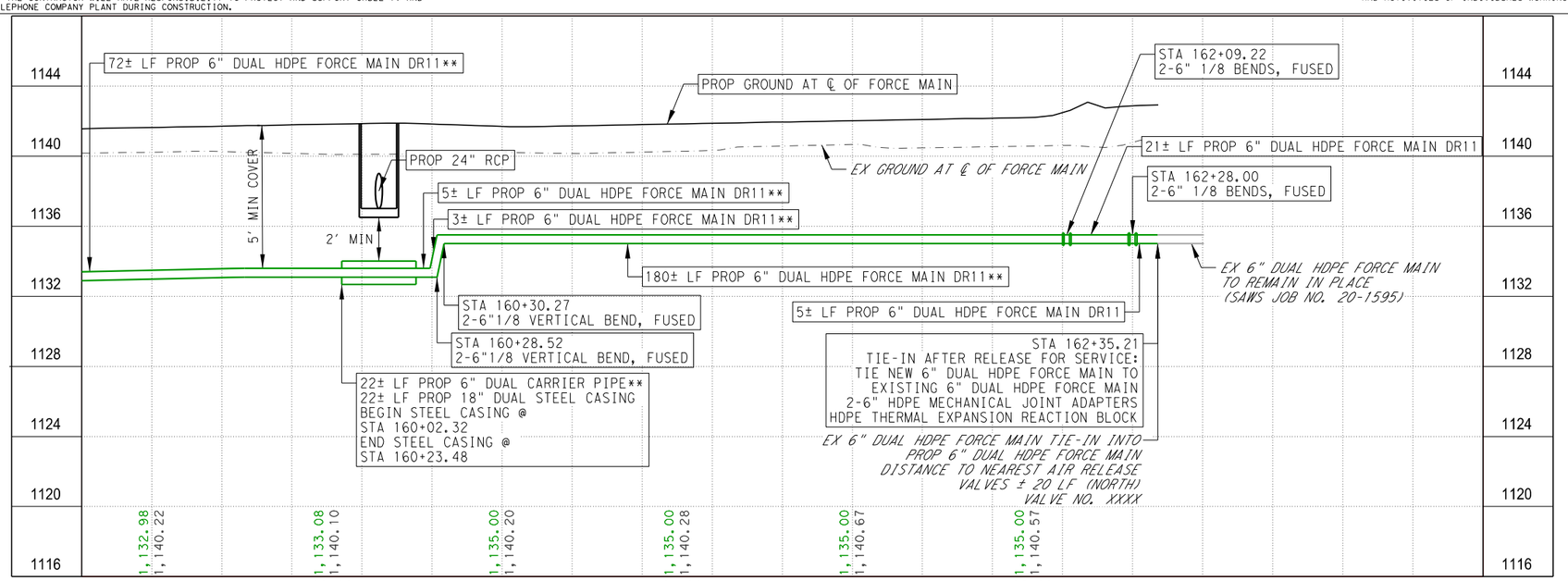

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PLAN & PROFILE
STA 450+00 TO END

SHT 16 OF 16

DEVELOPER:

CONT. | BUDGET PROJ.

SUBMITTED 100% SUBMITTAL

APPROVED

MAP No. | SHEET OF 21 / 21

SECT No. | JOB No.: 23-5584 | PROJ SEQ

DRN: JC | DSGN: DR2 | CHK: DR2

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Temporary Stormwater Section

Texas Commission on Environmental Quality

for Regulated Activities on the Edwards Aquifer Recharge Zone and Relating to 30 TAC §213.5(b)(4)(A), (B), (D)(I) and (G); Effective June 1, 1999

To ensure that the application is administratively complete, confirm that all fields in the form are complete, verify that all requested information is provided, consistently reference the same site and contact person in all forms in the application, and ensure forms are signed by the appropriate party.

Note: Including all the information requested in the form and attachments contributes to more streamlined technical reviews.

Signature

To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. This **Temporary Stormwater Section** is hereby submitted for TCEQ review and executive director approval. The application was prepared by:

Print Name of Customer/Agent: San Antonio Water System (SAWS)

Date: 4-25-2025

Signature of Customer/Agent:

Regulated Entity Name: Blanco Road Phase III

Project Information

Potential Sources of Contamination

Examples: Fuel storage and use, chemical storage and use, use of asphaltic products, construction vehicles tracking onto public roads, and existing solid waste.

1. Fuels for construction equipment and hazardous substances which will be used during construction:

   ☐ The following fuels and/or hazardous substances will be stored on the site: _____

   These fuels and/or hazardous substances will be stored in:

   ☐ Aboveground storage tanks with a cumulative storage capacity of less than 250 gallons will be stored on the site for less than one (1) year.

☐ Aboveground storage tanks with a cumulative storage capacity between 250 gallons and 499 gallons will be stored on the site for less than one (1) year.

☐ Aboveground storage tanks with a cumulative storage capacity of 500 gallons or more will be stored on the site. An Aboveground Storage Tank Facility Plan application must be submitted to the appropriate regional office of the TCEQ prior to moving the tanks onto the project.

☒ Fuels and hazardous substances will not be stored on the site.

2. ☒ **Attachment A - Spill Response Actions**. A site specific description of the measures to be taken to contain any spill of hydrocarbons or hazardous substances is attached.

3. ☐ Temporary aboveground storage tank systems of 250 gallons or more cumulative storage capacity must be located a minimum horizontal distance of 150 feet from any domestic, industrial, irrigation, or public water supply well, or other sensitive feature.

4. ☒ **Attachment B - Potential Sources of Contamination**. A description of any activities or processes which may be a potential source of contamination affecting surface water quality is attached.

Sequence of Construction

5. ☒ **Attachment C - Sequence of Major Activities**. A description of the sequence of major activities which will disturb soils for major portions of the site (grubbing, excavation, grading, utilities, and infrastructure installation) is attached.

   ☒ For each activity described, an estimate (in acres) of the total area of the site to be disturbed by each activity is given.

   ☒ For each activity described, include a description of appropriate temporary control measures and the general timing (or sequence) during the construction process that the measures will be implemented.

6. ☒ Name the receiving water(s) at or near the site which will be disturbed or which will receive discharges from disturbed areas of the project: Cibolo Creek Watershed

Temporary Best Management Practices (TBMPs)

Erosion control examples: tree protection, interceptor swales, level spreaders, outlet stabilization, blankets or matting, mulch, and sod. Sediment control examples: stabilized construction exit, silt fence, filter dikes, rock berms, buffer strips, sediment traps, and sediment basins. Please refer to the Technical Guidance Manual for guidelines and specifications. All structural BMPs must be shown on the site plan.

7. ☒ **Attachment D – Temporary Best Management Practices and Measures**. TBMPs and measures will prevent pollution of surface water, groundwater, and stormwater. The construction-phase BMPs for erosion and sediment controls have been designed to retain sediment on site to the extent practicable. The following information is attached:

☐ A description of how BMPs and measures will prevent pollution of surface water, groundwater or stormwater that originates upgradient from the site and flows across the site.

☒ A description of how BMPs and measures will prevent pollution of surface water or groundwater that originates on-site or flows off site, including pollution caused by contaminated stormwater runoff from the site.

☐ A description of how BMPs and measures will prevent pollutants from entering surface streams, sensitive features, or the aquifer.

☐ A description of how, to the maximum extent practicable, BMPs and measures will maintain flow to naturally-occurring sensitive features identified in either the geologic assessment, TCEQ inspections, or during excavation, blasting, or construction.

8. ☐ The temporary sealing of a naturally-occurring sensitive feature which accepts recharge to the Edwards Aquifer as a temporary pollution abatement measure during active construction should be avoided.

☐ **Attachment E - Request to Temporarily Seal a Feature**. A request to temporarily seal a feature is attached. The request includes justification as to why no reasonable and practicable alternative exists for each feature.

☒ There will be no temporary sealing of naturally-occurring sensitive features on the site.

9. ☒ **Attachment F - Structural Practices**. A description of the structural practices that will be used to divert flows away from exposed soils, to store flows, or to otherwise limit runoff discharge of pollutants from exposed areas of the site is attached. Placement of structural practices in floodplains has been avoided.

10. ☒ **Attachment G - Drainage Area Map**. A drainage area map supporting the following requirements is attached:

☐ For areas that will have more than 10 acres within a common drainage area disturbed at one time, a sediment basin will be provided.

☐ For areas that will have more than 10 acres within a common drainage area disturbed at one time, a smaller sediment basin and/or sediment trap(s) will be used.

☒ For areas that will have more than 10 acres within a common drainage area disturbed at one time, a sediment basin or other equivalent controls are not attainable, but other TBMPs and measures will be used in combination to protect down slope and side slope boundaries of the construction area.

☐ There are no areas greater than 10 acres within a common drainage area that will be disturbed at one time. A smaller sediment basin and/or sediment trap(s) will be used in combination with other erosion and sediment controls within each disturbed drainage area.

☐ There are no areas greater than 10 acres within a common drainage area that will be disturbed at one time. Erosion and sediment controls other than sediment basins or sediment traps within each disturbed drainage area will be used.

11. ☐ **Attachment H - Temporary Sediment Pond(s) Plans and Calculations**. Temporary sediment pond or basin construction plans and design calculations for a proposed temporary BMP or measure have been prepared by or under the direct supervision of a Texas Licensed Professional Engineer. All construction plans and design information must be signed, sealed, and dated by the Texas Licensed Professional Engineer. Construction plans for the proposed temporary BMPs and measures are attached.

☒ N/A

12. ☒ **Attachment I - Inspection and Maintenance for BMPs.** A plan for the inspection of each temporary BMP(s) and measure(s) and for their timely maintenance, repairs, and, if necessary, retrofit is attached. A description of the documentation procedures, recordkeeping practices, and inspection frequency are included in the plan and are specific to the site and/or BMP.

13. ☒ All control measures must be properly selected, installed, and maintained in accordance with the manufacturer's specifications and good engineering practices. If periodic inspections by the applicant or the executive director, or other information indicate a control has been used inappropriately, or incorrectly, the applicant must replace or modify the control for site situations.

14. ☒ If sediment escapes the construction site, off-site accumulations of sediment must be removed at a frequency sufficient to minimize offsite impacts to water quality (e.g., fugitive sediment in street being washed into surface streams or sensitive features by the next rain).

15. ☒ Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been reduced by 50%. A permanent stake will be provided that can indicate when the sediment occupies 50% of the basin volume.

16. ☒ Litter, construction debris, and construction chemicals exposed to stormwater shall be prevented from becoming a pollutant source for stormwater discharges (e.g., screening outfalls, picked up daily).

Soil Stabilization Practices

Examples: establishment of temporary vegetation, establishment of permanent vegetation, mulching, geotextiles, sod stabilization, vegetative buffer strips, protection of trees, or preservation of mature vegetation.

17. ☒ **Attachment J - Schedule of Interim and Permanent Soil Stabilization Practices**. A schedule of the interim and permanent soil stabilization practices for the site is attached.

18. ☒ Records must be kept at the site of the dates when major grading activities occur, the dates when construction activities temporarily or permanently cease on a portion of the site, and the dates when stabilization measures are initiated.

19. ☒ Stabilization practices must be initiated as soon as practicable where construction activities have temporarily or permanently ceased.

Administrative Information

20. ☒ All structural controls will be inspected and maintained according to the submitted and approved operation and maintenance plan for the project.

21. ☒ If any geologic or manmade features, such as caves, faults, sinkholes, etc., are discovered, all regulated activities near the feature will be immediately suspended. The appropriate TCEQ Regional Office shall be immediately notified. Regulated activities must cease and not continue until the TCEQ has reviewed and approved the methods proposed to protect the aquifer from any adverse impacts.

22. ☒ Silt fences, diversion berms, and other temporary erosion and sediment controls will be constructed and maintained as appropriate to prevent pollutants from entering sensitive features discovered during construction.

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Attachment A

Spill Response Actions
Blanco Road Phase III

Spill Prevention and Control

The objective of this section is to describe measures to prevent or reduce the discharge of pollutants to drainage systems or watercourses from leaks and spills by reducing the chance for spills, stopping the source of spills, containing and cleaning up spills, properly disposing of spill materials, and training employees.

The following steps will help reduce the stormwater impacts of leaks and spills:

Education

(1) Be aware that different materials pollute in different amounts. Make sure that each employee knows what a "significant spill" is for each material they use, and what is the appropriate response for "significant" and "insignificant" spills. Employees should also be aware of when spill must be reported to the TCEQ. Information available in 30 TAC 327.4 and 40 CFR 302.4.

(2) Educate employees and subcontractors on potential dangers to humans and the environment from spills and leaks.

(3) Hold regular meetings to discuss and reinforce appropriate disposal procedures (incorporate into regular safety meetings).

(4) Establish a continuing education program to indoctrinate new employees.

(5) Have contractor's superintendent or representative oversee and enforce proper spill prevention and control measures.

General Measures

(1) To the extent that the work can be accomplished safely, spills of oil, petroleum products, substances listed under 40 CFR parts 110,117, and 302, and sanitary and septic wastes should be contained and cleaned up immediately.

(2) Store hazardous materials and wastes in covered containers and protect from vandalism.

(3) Place a stockpile of spill cleanup materials where it will be readily accessible.

(4) Train employees in spill prevention and cleanup.

(5) Designate responsible individuals to oversee and enforce control measures.

(6) Spills should be covered and protected from stormwater runon during rainfall to the extent that it doesn't compromise clean up activities.

(7) Do not bury or wash spills with water.

(8) Store and dispose of used clean up materials, contaminated materials, and recovered spill material that is no longer suitable for the intended purpose in conformance with the provisions in applicable BMPs.

(9) Do not allow water used for cleaning and decontamination to enter storm drains or watercourses. Collect and dispose of contaminated water in accordance with applicable regulations.

(10) Contain water overflow or minor water spillage and do not allow it to discharge into drainage facilities or watercourses.

(11) Place Material Safety Data Sheets (MSDS), as well as proper storage, cleanup, and spill reporting instructions for hazardous materials stored or used on the project site in an open, conspicuous, and accessible location.

(12) Keep waste storage areas clean, well organized, and equipped with ample cleanup supplies as appropriate for the materials being stored. Perimeter controls, containment structures, covers, and liners should be repaired or replaced as needed to maintain proper function.

Cleanup

(1) Clean up leaks and spills immediately.

(2) Use a rag for small spills on paved surfaces, a damp mop for general cleanup, and absorbent material for larger spills. If the spilled material is hazardous, then the used cleanup materials are also hazardous and must be disposed of as hazardous waste.

(3) Never hose down or bury dry material spills. Clean up as much of the material as possible and dispose of properly. See the waste management BMPs in this section for specific information.

Minor Spills

(1) Minor spills typically involve small quantities of oil, gasoline, paint, etc. which can be controlled by the first responder at the discovery of the spill.

(2) Use absorbent materials on small spills rather than hosing down or burying the spill.

(3) Absorbent materials should be promptly removed and disposed of properly.

(4) Follow the practice below for a minor spill:

(5) Contain the spread of the spill.

(6) Recover spilled materials.

(7) Clean the contaminated area and properly dispose of contaminated materials.

Semi-Significant Spills

Semi-significant spills still can be controlled by the first responder along with the aid of other personnel such as laborers and the foreman, etc.

Spills should be cleaned up immediately:

(1) Contain spread of the spill.

(2) Notify the project foreman immediately.

(3) If the spill occurs on paved or impermeable surfaces, clean up using "dry" methods (absorbent materials, cat litter and/or rags). Contain the spill by encircling with absorbent materials and do not let the spill spread widely.

(4) If the spill occurs in dirt areas, immediately contain the spill by constructing an earthen dike. Dig up and properly dispose of contaminated soil.

(5) If the spill occurs during rain, cover spill with tarps or other material to prevent contaminating runoff.

Significant/Hazardous Spills

For significant or hazardous spills that are in reportable quantities:

(1) Notify the TCEQ by telephone as soon as possible and within 24 hours at 512- 339-2929 (Austin) or 210-490-3096 (San Antonio) between 8 AM and 5 PM. After hours, contact the Environmental Release Hotline at 1-800-832-8224. It is the contractor's responsibility to have all emergency phone numbers at the construction site.

(2) For spills of federal reportable quantities, in conformance with the requirements in 40 CFR parts 110,119, and 302, the contractor should notify the National Response Center at (800) 424-8802.

(3) Notification should first be made by telephone and followed up with a written report.

(4) The services of a spills contractor or a Haz-Mat team should be obtained immediately. Construction personnel should not attempt to clean up until the appropriate and qualified staffs have arrived at the job site.

(5) Other agencies which may need to be consulted include, but are not limited to, the City Police Department, County Sheriff Office, Fire Departments, etc.

More information on spill rules and appropriate responses is available on the TCEQ website at: https://www.tceq.texas.gov/response

Vehicle and Equipment Maintenance

(1) If maintenance must occur onsite, use a designated area and a secondary containment, located away from drainage courses, to prevent the runon of stormwater and the runoff of spills.

(2) Regularly inspect onsite vehicles and equipment for leaks and repair immediately

(3) Check incoming vehicles and equipment (including delivery trucks, and employee and subcontractor vehicles) for leaking oil and fluids. Do not allow leaking vehicles or equipment onsite.

(4) Always use secondary containment, such as a drain pan or drop cloth, to catch spills or leaks when removing or changing fluids.

(5) Place drip pans or absorbent materials under paving equipment when not in use.

(6) Use absorbent materials on small spills rather than hosing down or burying the spill. Remove promptly and dispose of properly.

(7) Promptly transfer used fluids to the proper waste or recycling drums. Don't leave full drip pans or other open containers lying around.

(8) Oil filters disposed of in trashcans or dumpsters can leak oil and pollute stormwater. Place the oil filter in a funnel over a waste oil-recycling drum to drain excess oil before disposal.

(9) Store cracked batteries in a non-leaking secondary container.

Vehicle and Equipment Fueling

(1) If fueling must occur on site, use designated areas, located away from drainage courses, to prevent the runon of stormwater and the runoff of spills.

(2) Discourage "topping off" of fuel tanks.

(3) Always use secondary containment, such as a drain pan, when fueling to catch spills/ leaks.

Product Specific Practices

(1) Petroleum Products: All on site vehicles will be monitored for leaks and will receive regular preventive maintenance to reduce the chance of leakage. If petroleum products will be present at the site, they will be stored in tightly sealed containers which are clearly labeled. Any asphalt substances used on site will be applied according to the manufacturer's recommendations.

(2) Concrete trucks: Ready/Transit Mix Trucks will be allowed to wash out or discharge surplus concrete or drum wash water except in the designated location on site as shown on the SW3P site plan.

(3) Paints: All containers will be tightly sealed and stored when not required for use. Excess paint will not be poured into the storm sewer system or drainage channels but will be properly disposed of according to manufacturers' instructions or state/local regulations.

(4) Fertilizers: Fertilizers will be applied only in the minimum amounts recommended by the manufacturer. Once applied, fertilizer will be worked into the soil to limit exposure to storm water. The fertilizer will be stored in a covered area, and any partially used bags will be transferred to a sealable plastic bin to avoid spills.

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Attachment B

Potential Sources of Contamination

Blanco Road Phase III

Potential Source: Stock piled top soil, and fill material.

Preventive Measure: Stock piles shall be placed away from any steep slopes, sensitive features, surface or groundwater. The down gradient side shall be protected with silt fencing.

Potential Source: Miscellaneous litter and debris from construction workers and construction materials.

Preventive Measure: Trash receptacles will be placed on site for proper disposal. Receptacles will be emptied or replaced by a registered trash hauler as necessary.

Potential Source: Petroleum Products (diesel, oil, hydraulic fluid, gun grease).

Preventive Measure: All on site vehicles will be monitored for leaks and will receive regular preventive maintenance to reduce the chance of leakage. No petroleum products will be stored onsite. Service vehicles will come on site to fuel all equipment. All oil, and hydraulic fluid will be stored on work or service vehicles in original sealed containers.

Potential Source: Concrete.

Preventive Measure: Concrete trucks: Ready/Transit Mix Trucks will not be allowed to wash out or discharge surplus concrete or drum wash water except in the designated concrete washout area as shown on the SW3P site plan.

Potential Source: Paint.

Preventive Measure: All containers will be tightly sealed and stored when not required for use. Excess paint will not be poured into the storm sewer system or drainage channels, but will be properly disposed of according to manufacturers' instructions or state/local regulations.

Potential Source: Asphalt & Asphaltic Products.

Preventive Measure: All asphalt paving, roofing, and sealers may be brought onsite only as it is being applied. Application will be in accordance to the manufacturer's recommendations and City of San Antonio specifications.

Potential Source: Fertilizer.

Preventive Measure: Fertilizers will be applied only in the minimum amounts recommended by the manufacturer. Revegetated areas that are seeded and fertilized will be protected by a hydraulic mulch, hay and tackifier or binder, or erosion control mat. Fertilizer will not be stored onsite.

Potential Source: Sewage from Portable Toilets.

Preventive Measure: Sewage from the units will be properly removed on a regular basis, will be inspected on a regular basis, and will be disposed of by a licensed waste collection service. Note that any spills should be contained within the respective BMP installed and any spill outside the containment area will be cleaned up in accordance with current state / local regulations as well as reported to TCEQ.

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Attachment C

Sequence of Major Activities

Blanco Road Phase III

Construction Sequencing:

A. Installation of Temporary BMPs as shown on the "Storm Water Pollution Plan" (SW3P)".
B. Clearing and Grading of site. (Approximately 18.40 Acre)
C. Install sewer and water.
D. Reestablishment of vegetation in areas beyond the grading/construction envelope.
E. Removal of temporary BMPs once area is established or when the temporary BMP measure is no longer required (i.e. Slit Fence).

Attachment D

Temporary Best Management Practices and Measures

Blanco Road Phase III

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Slit Fence

B. Rock Berm

C. Erosion Control Log

D. Stabilized Construction Access

1.02 REGULATORY REQUIREMENTS

A. Conform to applicable City, State, and Federal codes for environmental requirements of erosion and sediment control.

B. Contractor will be required to keep a log on site with recordings of rainfall, SWPPP maintenance procedures, and other events affecting the erosion and pollution control facilities. Sample forms will be provided by the Engineer. As part of record keeping the Contractor shall maintain a rain gauge at the site and log all rainfall events.

C. No work shall begin until both the Owner and Contractor have submitted NOI's (form furnished by Engineer) to the TCEQ and the San Antonio Water System. Contractor shall submit annual renewals as required.

D. SWPPP shall be posted on site adjacent to a public right-of-way and the supporting documentation shall be maintained on site.

1.03 SUBMITTALS

A. Provide Engineer with copy of complete NOI and NOT.

B. Provide copies of manufacturer's data on filter fabric for approval

C. Provide Engineer with any revisions to SWPPP Plan for informational purposes only.

1.04 RELATED SECTIONS

A. Section 02230 – Site Clearing

PART 2 - PRODUCTS

2.01 FILTER FABRIC

A. Woven Polypropylene Fabric conforming to the following specifications:

1.	Grab Tensile Strength	120 lbs.
2.	Grab Tensile Elongation	30% (Max)
3.	Burst Strength	280 PSI
4.	Trapezoid Tear Strength	65 lbs.
5.	Water Flow Rate	35 GPM/ft2
6.	Thickness	17 Mils
7.	Weight	3.0 oz/sy

B. The fabric shall conform to the following test methods:

1. ASTM D-4632
2. ASTM D-4533
3. ASTM D-3786
4. ASTM D-4833
5. ASTM D-3776
6. ASTM D-4491
7. ASTM D-4751
8. ASTM D-4355

2.02 ROCK BERM

A. Rock:

Open graded rock four inches (4”) to eight inches (8”) in diameter.

B. Wire Fabric:

20 gauge woven wire with one inch (1") openings.

PART 3 - EXECUTION

3.01 IMPLEMENTATION

This item shall govern the implementation of the erosion and sedimentation control plan and schedule.

A. Phasing:

Construction phasing within specified work areas shall be the responsibility of the Contractor. Contractor shall prepare a Phasing Plan that will be acceptable to the Architect and Owner. Should the Contractor realize a need to deviate from this plan, it will be his/her responsibility to provide a revised plan complete with any required revisions to the erosion and sediment control plan. It will be his/her sole responsibility to ensure that all revisions comply with the Storm Water Pollution Prevention Plan and TCEQs Stormwater Requirements for Construction Activities. The revised plan shall be reviewed by the Engineer. Any costs associated with the revisions shall be borne by the Contractor. The Contractor shall maintain a log of all installations and revisions.

B. Hazardous and Excess Material Storage:

Prior to the start of construction, the Contractor shall submit a plan showing the method for hazardous and excess material storage. The plan shall comply with the provisions shown on the drawings and as a minimum, show the site location, size, topography, drainage channels, adjacent streets, and other pertinent features required to properly evaluate the plan. No work shall commence until this plan has been approved by the Owner.

C. Maintenance:

On a weekly basis, and after every measurable rainfall, the Contractor shall inspect and identify all erosion and sediment controls which require cleaning, repair, or other maintenance. Items identified as requiring maintenance shall immediately be repaired or cleaned as needed. This provision applies to all site controls as well as controls installed for the material storage site. Contractor shall keep a log of the inspections, noting any repairs and cleaning of controls.

D. Filter Fabric Fence (Silt Fence):

Provide filter fabric fence systems in such a manner that surface runoff will percolate through the system in sheet flow fashion and allow sediment to be retained and accumulated. Attach the filter fabric to one inch (1") x two inch (2") wooden stakes or metal stakes spaced a maximum of 3 feet apart and embedded a minimum of twelve inches (12"). The wooden stakes shall be installed at a slight angle toward the source of anticipated runoff. Trench in the toe of the filter fabric fence with a spade or mechanical trencher so that the downward face of the trench is flat and perpendicular to the direction of flow or the V-trench configuration. Lay filter fabric along edges of the trench. Backfill and compact trench. The filter fabric should be spliced together only at a support post with a minimum six inch (6") overlap and sealed securely. Inspect sediment filter fabric barrier systems after each rainfall, daily during periods of prolonged rainfall, and at minimum once a week. Repair or replace damaged section immediately to restore the requirements of this item. Remove sediment deposits when silt has reached one-third the height of the fence in depth.

E. Rock Berms:

Prior to the start of construction, all rock berm components of the erosion/sedimentation control system shall be installed in accordance with the following:

1. Excavate thirty-six inch (36”) x three inch (3”) trench along rock berm alignment.
2. Place woven wire fabric centered along trench.
3. Place rock along trench alignment and on top of wire fabric.
4. Wrap wire fabric around rock, maintaining shape of berm.
5. Overlap wire fabric and tie securely with wire ties.

F. Erosion Control Log:

1. The erosion control log shall be installed in accordance with the SWPPP details and shall be used at inlet locations and other locations as determined by the contractor.
2. Inspect systems after each rainfall, daily during periods of prolonged rainfall, and at minimum once a week. Repair or replace damaged section immediately to restore the requirements of this item. Remove sediment deposits when silt has reached one-third the height of the bag in depth.

G. Stabilized Construction Access:

The Stabilized Construction Access shall be at least eight inches (8”) thick and of full width for all points of ingress and egress. Length shall be a minimum of 30 feet.

1. When mud-tracking conditions exist, traffic shall not be allowed to cross or leave the construction site and move directly onto a public roadway, alley, sidewalk, parking area, other right-of-way in areas other than at locations of construction exits. Stabilized construction access must be properly graded to incorporate a drainage swale to prevent runoff from leaving the construction site.
2. The stabilized construction access shall be maintained in a condition which will prevent tracking or flowing of sediment onto public rights-of-way. This may require periodic top dressing with additional stone as conditions demand and repair and/or clean out of any measures used to trap sediment. All sediment spilled, dropped, washed, or tracked onto public streets outside of the project limits must be removed immediately by the Contractor. When necessary, wheels must be cleaned to remove sediment prior to entrance onto public rights-of-way. When washing is required, it shall be done on an area stabilized with crushed stone which drains into an approved sediment trap or sediment basin. All sediment shall be prevented from entering any storm drain, ditch, or watercourse using approved methods.

3.02 FINAL CLEANUP

A. Upon completion and acceptance of the project and prior to final payment, the Contractor shall remove and legally dispose of all components of the erosion/sedimentation control system, together with any and all dirt, material, and debris accumulated along the system during construction.

3.03 NOI, NOT

A. The Engineer will furnish NOI and NOT forms with the project information on them to the Contractor. It shall be the Contractor's responsibility to complete and submit the NOI prior to commencing work and to submit the NOT upon completion and acceptance of the work covered by that contract. The Owner will submit a separate NOI and NOT as necessary.

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Attachment E

Request to Temporarily Seal a Feature

Blanco Road Phase III

N/A

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Attachment F

Structural Practices

Blanco Road Phase III

On-site structural practices, which are continuous (on-going) until the site is permanently stabilized, may include the following (SWPPP):

i) Erection of silt fences, inlet protection, rock berms, and construction entrance/exit.

These storm water pollution control features will slow the velocity of runoff thereby enhancing sedimentation and capture of contaminants that may accumulate in the storm water runoff exiting this construction site. There are no structures to divert storm water and no structures to store storm water on this project.

It is to be understood that modifications to the Storm Water Pollution Prevention Plan may have to be made in the field to adjust for field conditions and to provide the intended effect. All changes to the plan must be shown on the SWPPP sheets, dated and signed by the responsible party or described and included in the Plan Modifications section of this Storm Water Pollution Prevention Plan.

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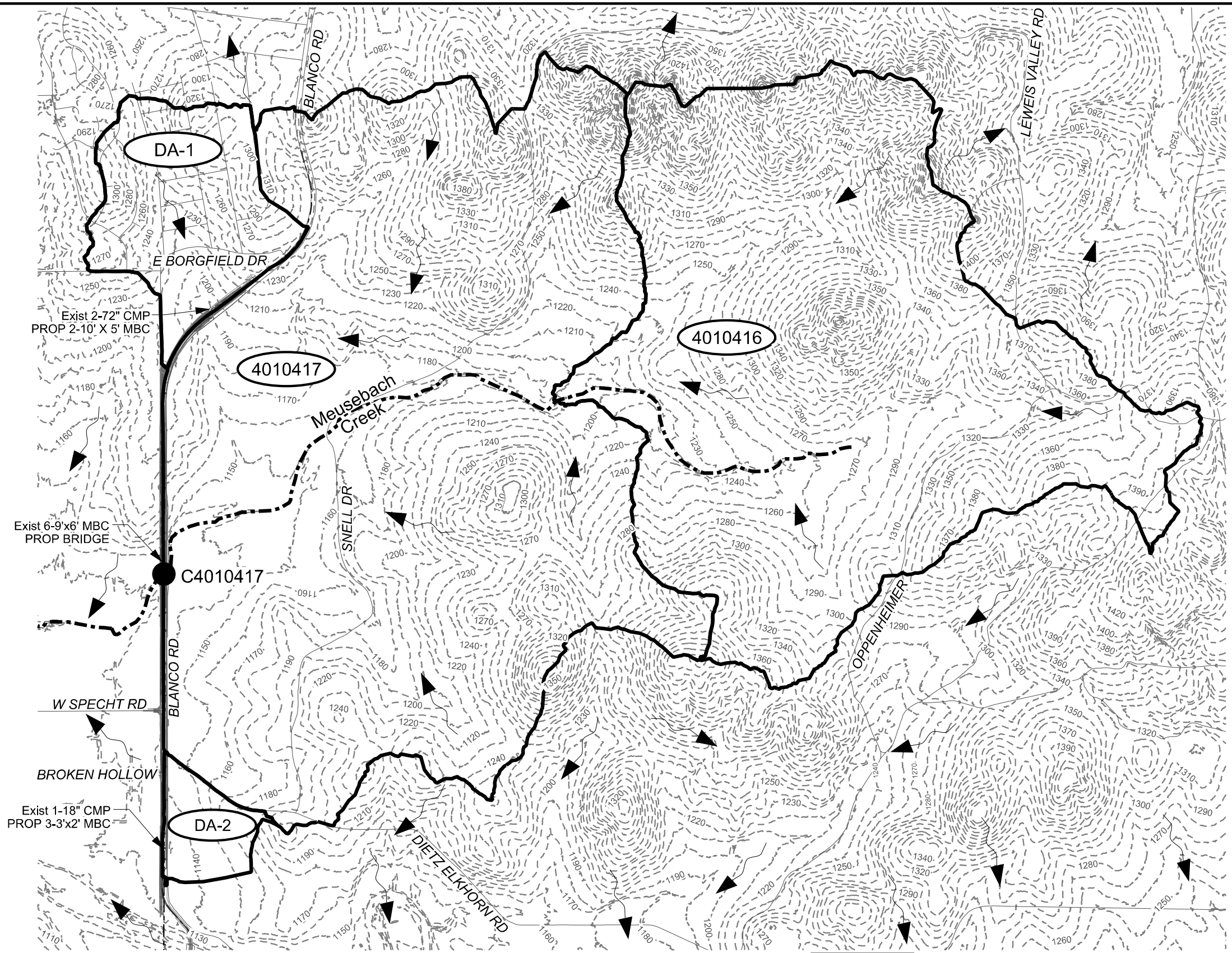
Attachment G

Drainage Area Map

Blanco Road Phase III



1,000 500 0 1,000 2,000
SCALE HORIZ. FEET

LEGEND

- X-00 — DRAINAGE AREA I.D.
- FLOW PATH
- DRAINAGE AREA BOUNDARY
- 10 FT EXIST CONTOUR
- FLOW ARROW

NOTES:

1. INTERNAL DRAINAGE AREA BOUNDARIES DELINEATED TO BLANCO RD BASED OF 1' CONTOURS FROM 2021 LIDAR DATA.
2. INTERNAL DRAINAGE AREA BOUNDARIES DELINEATED ALONG BLANCO RD BASED ON PROPOSED ROAD PROFILE AND SECTION. SEE ROADWAY P&P SHEETS.
3. THE BLANCO MODEL WAS DERIVED FROM SARA'S BEST AVAILABLE MODELS (BAM MODELS) WHICH USE GREEN AND AMPT SOIL PARAMETERS, SNYDER LAG TIME, ATLAS 14 HYDROLOGY. PROJECT IS LOCATED WITHIN PRECIPITATION AREA #1.
4. COMPARISON OF HYDROLOGIC METHODOLOGIES, INCLUDING TXDOT REGRESSION EQUATIONS, WAS PERFORMED FOR THE MEUSEBACH CREEK CROSSING. REFER TO BLANCO PHASE III DRAINAGE REPORT FOR ADDITIONAL INFORMATION.
4. SUBBASIN DA-1 IS DELINEATED FOR CULVERT #1 CROSSING AND IS INCLUDED IN TOTAL CONTRIBUTING AREA FOR 4010417.
5. DA-2 IS DELINEATED FOR CULVERT #2 CROSSING AND IS NOT INCLUDED AS PART OF CONTRIBUTING AREA FOR 4010417.

Subbasin ID	%IC	X (%IC x 1.75)	Ct (1.4224e^-0.0088X)	L (mi)	Lc (mi)	LFP Start Elev. (ft)	LFP End Elev (ft)	S (ft/mi)	Tlag (hrs)	Cp	Calibration Changes Cp	Calibration Changes Tlag (hrs)
4010416	0.52	0.91	1.41	2.93	1.44	1429.43	1186.53	82.9	1.095	0.710		1.595
4010417	6.59	11.53	1.29	3.16	1.11	1473.87	1128.94	109.2	0.896	0.710		1.396

Initial Values, Existing Conditions							
Sub ID	Area (sq mi)	Initial Content (Effective Porosity)	Saturated Content (Porosity)	Suction Head (in)	Conductivity (in/hr)	Impervious Cover, Existing (%)	Surface Storage, Existing (in)
4010416	2.6199	0.27	0.47	22.63	0.18	0.52	0.36
4010417	4.0056	0.27	0.47	24.61	0.14	6.59	0.34

HMS ID	Area (sq mi)	10-year Flow (cfs)	25-year Flow (cfs)	50-year Flow (cfs)	100-year Flow (cfs)
** C4010417	6.6255	3,243.90	4,817.50	6,476.20	8,255.10

** HMS NODE AT BLANCO ROAD CROSSING OF MEUSEBACH CREEK

STATE OF TEXAS
CARLOS LUNA III
125042
LICENSED
PROFESSIONAL ENGINEER
1/8/2025

BEXAR COUNTY
PUBLIC WORKS DEPARTMENT

NO.	REVISION	BY	DATE

MAESTAS
8122 DATAPOINT DR., STE. 840
SAN ANTONIO, TX 78229
(210) 366-1988
TBPE No.: F-333
TBPLS No.: 10194506

stv
TEXAS REGISTERED
ENGINEERING FIRM
F-204

BLANCO ROAD PHASE III

OVERALL DRAINAGE AREA MAP

SHEET 2 OF 3

PROJECT NUMBER	SHEET NO.
CSJ: 0915 - 12 - 618	196

DESIGNED BY:	ROADWAY/HIGHWAY	
CHECKED BY:	BLANCO ROAD	
DRAWN BY:	STATE	COUNTY
CHECKED BY:	TEXAS	BEXAR

DATE: 1/8/2025 4:22:47 PM
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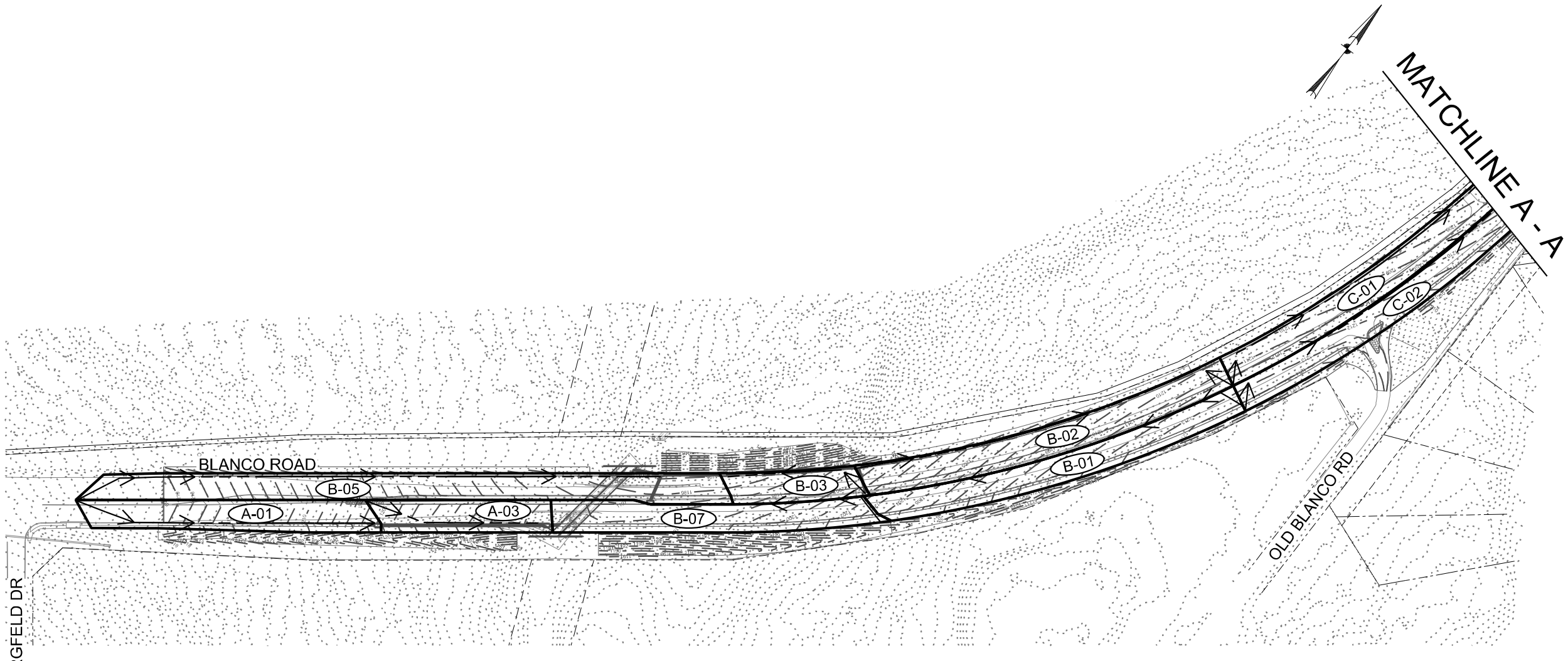

100 50 0 100 200
SCALE HORIZ. FEET

Proposed Time of Concentration

Basin	Precipitaion Area	Sheet Flow					Shallow Concentrated				Total Tc
		L (ft)	n	S (ft/ft)	P (in)	Tc (sheet)	L (ft)	S (ft/ft)	Surface	Tc (shallow)	
A-01	1	30	0.011	0.020	4.10	0.4	425	0.038	Type 1	1.8	2.20
A-03	1	30	0.011	0.020	4.10	0.4	230	0.020	Type 1	1.3	1.74
B-01	1	30	0.011	0.020	4.10	0.4	578	0.026	Type 1	2.9	3.33
B-02	1	30	0.011	0.020	4.10	0.4	580	0.026	Type 1	2.9	3.36
B-03	1	30	0.011	0.020	4.10	0.4	797	0.020	Type 1	4.6	5.03
B-05	1	30	0.011	0.020	4.10	0.4	909	0.020	Type 1	5.3	5.68
B-07	1	30	0.011	0.020	4.10	0.4	309	0.020	Type 1	1.8	2.20
C-01	1	30	0.011	0.020	4.10	0.4	623	0.010	Type 1	5.1	5.52
C-02	1	30	0.011	0.020	4.10	0.4	623	0.010	Type 1	5.1	5.52

Rational Q Values

Basin	Precipitation Area	AREA (AC)	Tc (min)	C	Intensity (in/hr)					Flows (cfs)				
					I - 2YR	I - 5YR	I - 10YR	I - 25YR	I - 100YR	Q - 2YR	Q - 5YR	Q - 10YR	Q - 25YR	Q - 100YR
A-01	1	0.56	10.0	0.95	5.05	6.36	7.44	9.00	11.43	2.69	3.39	3.97	4.80	6.09
A-03	1	0.92	10.0	0.95	5.05	6.36	7.44	9.00	11.43	4.43	5.58	6.53	7.90	10.03
B-01	1	0.68	10.0	0.95	5.05	6.36	7.44	9.00	11.43	3.26	4.11	4.81	5.82	7.39
B-02	1	0.76	10.0	0.95	5.05	6.36	7.44	9.00	11.43	3.63	4.57	5.35	6.47	8.22
B-03	1	0.27	10.0	0.95	5.05	6.36	7.44	9.00	11.43	1.29	1.63	1.90	2.30	2.92
B-05	1	1.10	10.0	0.95	5.05	6.36	7.44	9.00	11.43	5.26	6.63	7.76	9.39	11.92
B-07	1	0.60	10.0	0.95	5.05	6.36	7.44	9.00	11.43	2.88	3.63	4.24	5.13	6.51
C-01	1	0.83	10.0	0.95	5.05	6.36	7.44	9.00	11.43	3.99	5.03	5.89	7.12	9.04
C-02	1	0.76	10.0	0.95	5.05	6.36	7.44	9.00	11.43	3.62	4.56	5.34	6.46	8.20

LEGEND

- X-00 — DRAINAGE AREA I.D.
- FLOW PATH
- DRAINAGE AREA BOUNDARY
- -XX- — 1 FT PROP CONTOUR
- - -XX- - — 5 FT EXIST CONTOUR

STATE OF TEXAS
CARLOS LUNA III
125042
LICENSED
PROFESSIONAL ENGINEER
1/8/2025

BEXAR COUNTY
PUBLIC WORKS DEPARTMENT

NO.	REVISION	BY	DATE

MAESTAS
8122 DATAPOINT DR., STE. 840
SAN ANTONIO, TX 78229
(210) 366-1988
TBPE No.: F-333
TBPLS No.: 10194506

stv
TEXAS REGISTERED
ENGINEERING FIRM
F-204

BLANCO ROAD PHASE III

INTERIOR DRAINAGE AREA MAP

SHEET 01 OF 05

PROJECT NUMBER	SHEET NO.
CSJ: 0915 - 12 - 618	198

DESIGNED BY:	ROADWAY/HIGHWAY	
CHECKED BY:	BLANCO ROAD	
DRAWN BY:	STATE	COUNTY
CHECKED BY:	TEXAS	BEXAR

DATE: 1/8/2025 4:22:53 PM
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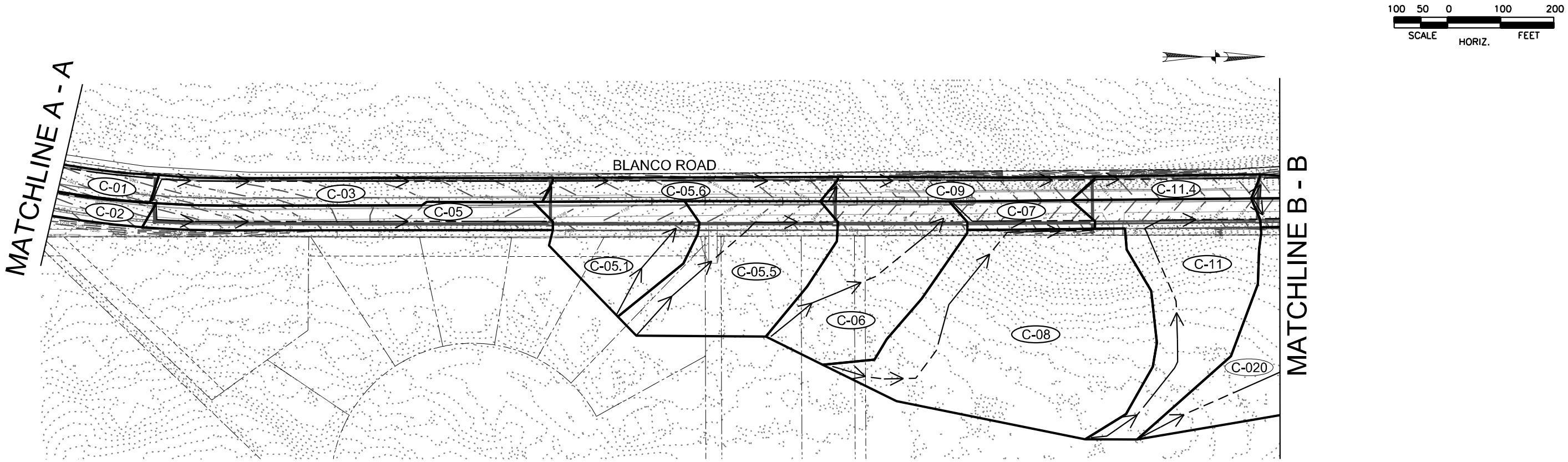

100 50 0 100 200
SCALE HORIZ. FEET

Proposed Time of Concentration

Basin	Precipitaion Area	Sheet Flow					Shallow Concentrated				Total Tc
		L (ft)	n	S (ft/ft)	P (in)	Tc (sheet)	L (ft)	S (ft/ft)	Surface	Tc (shallow)	
C-03	1	30	0.011	0.020	4.10	0.4	679	0.010	Type 1	5.6	5.98
C-05	1	30	0.011	0.020	4.10	0.4	851	0.010	Type 1	7.0	7.39
C-05.1	1	100	0.240	0.006	4.10	19.8	95	0.010	Type 7	6.3	26.20
							24	0.023	Type 1	0.1	
C-05.5	1	100	0.240	0.004	4.10	24.8	189	0.010	Type 7	12.5	38.15
							158	0.023	Type 1	0.9	
C-05.6	1	30	0.011	0.020	4.10	0.4	460	0.023	Type 1	2.5	2.90
C-06	1	100	0.240	0.022	4.10	12.1	189	0.053	Type 7	5.4	17.79
							45	0.023	Type 1	0.2	
C-07	1	50	0.011	0.020	4.10	0.6	250	0.023	Type 1	1.4	1.97
C-08	1	100	0.240	0.028	4.10	11.1	389	0.038	Type 7	13.1	26.70
							160	0.023	Type 5	2.5	
C-09	1	44	0.011	0.020	4.10	0.6	1046	0.023	Type 1	5.7	6.27
C-11	1	100	0.240	0.004	4.10	24.0	385	0.041	Type 7	12.5	37.35
							210	0.044	Type 1	0.8	
C-11.4	1	30	0.011	0.020	4.10	0.4	285	0.044	Type 1	1.1	1.52

Rational Q Values

Basin	Precipitation Area	AREA (AC)	Tc (min)	C	Intensity (in/hr)					Flows (cfs)				
					I - 2YR	I - 5YR	I - 10YR	I - 25YR	I - 100YR	Q - 2YR	Q - 5YR	Q - 10YR	Q - 25YR	Q - 100YR
C-03	1	0.84	10.0	0.95	5.05	6.36	7.44	9.00	11.43	4.04	5.09	5.96	7.21	9.15
C-05	1	0.83	10.0	0.95	5.05	6.36	7.44	9.00	11.43	3.99	5.03	5.88	7.11	9.03
C-05.1	1	0.97	26.2	0.69	3.22	4.02	4.67	5.59	7.04	2.15	2.69	3.12	3.74	4.71
C-05.5	1	1.59	38.2	0.63	2.65	3.30	3.83	4.60	5.79	2.65	3.31	3.84	4.60	5.80
C-05.6	1	0.55	10.0	0.95	5.05	6.36	7.44	9.00	11.43	2.63	3.31	3.87	4.69	5.95
C-06	1	1.56	17.8	0.63	3.86	4.84	5.63	6.75	8.53	3.78	4.73	5.50	6.60	8.35
C-07	1	0.29	10.0	0.95	5.05	6.36	7.44	9.00	11.43	1.39	1.76	2.06	2.49	3.16
C-08	1	3.69	26.7	0.55	3.16	3.94	4.58	5.49	6.91	6.42	8.01	9.30	11.14	14.03
C-09	1	0.44	10.0	0.95	5.05	6.36	7.44	9.00	11.43	2.10	2.65	3.10	3.74	4.76
C-11	1	1.86	37.4	0.62	2.68	3.35	3.89	4.66	5.87	3.11	3.88	4.51	5.40	6.80
C-11.4	1	0.34	10.0	0.95	5.05	6.36	7.44	9.00	11.43	1.61	2.02	2.37	2.86	3.64

LEGEND

- X-00 — DRAINAGE AREA I.D.
- FLOW PATH
- DRAINAGE AREA BOUNDARY
- -XX- — 1 FT PROP CONTOUR
- - -XX- - — 5 FT EXIST CONTOUR

STATE OF TEXAS
CARLOS LUNA III
125042
LICENSED
PROFESSIONAL ENGINEER
1/8/2025

BEXAR COUNTY
PUBLIC WORKS DEPARTMENT

NO.	REVISION	BY	DATE

MAESTAS
8122 DATAPOINT DR., STE. 840
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TBPE No.: F-333
TBPLS No.: 10194506

stv
TEXAS REGISTERED
ENGINEERING FIRM
F-204

BLANCO ROAD PHASE III

INTERIOR DRAINAGE AREA MAP

SHEET 02 OF 05

PROJECT NUMBER	SHEET NO.
CSJ: 0915 - 12 - 618	199

DESIGNED BY:	ROADWAY/HIGHWAY	
CHECKED BY:	BLANCO ROAD	
DRAWN BY:	STATE	COUNTY
CHECKED BY:	TEXAS	BEXAR

DATE: 1/8/2025 4:22:55 PM
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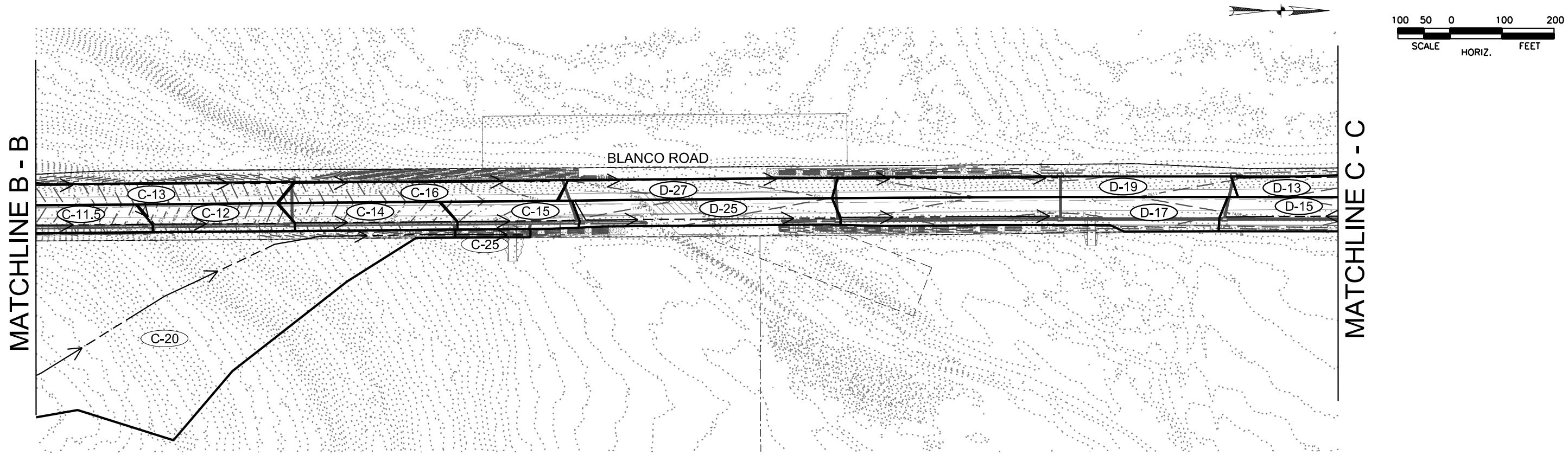

Proposed Time of Concentration

Basin	Precipitaion Area	Sheet Flow					Shallow Concentrated				Total Tc
		L (ft)	n	S (ft/ft)	P (in)	Tc (sheet)	L (ft)	S (ft/ft)	Surface	Tc (shallow)	
C-11.5	1	30	0.011	0.020	4.10	0.4	220	0.044	Type 1	0.9	1.27
C-12	1	30	0.011	0.075	4.10	0.2	240	0.044	Type 1	0.9	1.18
C-13	1	100	0.011	0.023	4.10	1.0	883	0.038	Type 1	3.7	4.73
C-14	1	30	0.011	0.020	4.10	0.4	250	0.004	Type 1	3.5	3.87
C-15	1	30	0.011	0.020	4.10	0.4	225	0.004	Type 1	2.9	3.33
C-16	1	30	0.011	0.020	4.10	0.4	480	0.004	Type 1	6.7	7.06
C-20	1	100	0.240	0.010	4.10	16.6	1082	0.053	Type 6	15.5	32.18
C-25	1	86	0.011	0.020	4.10	0.9	50	0.005	Type 1	0.6	1.53
D-13	1	42	0.011	0.020	4.10	0.5	425	0.004	Type 1	5.9	6.42
D-15	1	42	0.011	0.020	4.10	0.5	220	0.004	Type 1	3.0	3.54
D-17	1	42	0.011	0.020	4.10	0.5	420	0.004	Type 1	5.5	6.01
D-19	1	42	0.011	0.020	4.10	0.5	422	0.004	Type 1	5.3	5.85
D-25	1	42	0.011	0.020	4.10	0.5	480	0.004	Type 1	6.6	7.15
D-27	1	42	0.011	0.020	4.10	0.5	510	0.004	Type 1	6.9	7.48

Rational Q Values

Basin	Precipitation Area	AREA (AC)	Tc (min)	C	Intensity (in/hr)					Flows (cfs)				
					I - 2YR	I - 5YR	I - 10YR	I - 25YR	I - 100YR	Q - 2YR	Q - 5YR	Q - 10YR	Q - 25YR	Q - 100YR
C-11.5	1	0.31	10.0	0.95	5.05	6.36	7.44	9.00	11.43	1.50	1.89	2.21	2.68	3.40
C-12	1	0.34	10.0	0.95	5.05	6.36	7.44	9.00	11.43	1.61	2.02	2.37	2.86	3.64
C-13	1	0.49	10.0	0.95	5.05	6.36	7.44	9.00	11.43	2.36	2.98	3.48	4.22	5.35
C-14	1	0.39	10.0	0.95	5.05	6.36	7.44	9.00	11.43	1.85	2.33	2.72	3.29	4.18
C-15	1	0.30	10.0	0.95	5.05	6.36	7.44	9.00	11.43	1.42	1.79	2.09	2.53	3.21
C-16	1	0.49	10.0	0.95	5.05	6.36	7.44	9.00	11.43	2.32	2.93	3.43	4.15	5.27
C-20	1	5.00	32.2	0.35	2.90	3.62	4.20	5.03	6.33	5.07	6.33	7.35	8.81	11.09
C-25	1	0.05	10.0	0.95	5.05	6.36	7.44	9.00	11.43	0.24	0.31	0.36	0.44	0.55
D-13	1	0.61	10.0	0.95	5.05	6.36	7.44	9.00	11.43	2.92	3.68	4.30	5.21	6.61
D-15	1	0.47	10.0	0.95	5.05	6.36	7.44	9.00	11.43	2.27	2.86	3.34	4.04	5.14
D-17	1	0.97	10.0	0.95	5.05	6.36	7.44	9.00	11.43	4.63	5.84	6.83	8.26	10.49
D-19	1	0.70	10.0	0.95	5.05	6.36	7.44	9.00	11.43	3.34	4.21	4.92	5.95	7.56
D-25	1	0.58	10.0	0.95	5.05	6.36	7.44	9.00	11.43	2.78	3.50	4.10	4.96	6.30
D-27	1	0.47	10.0	0.95	5.05	6.36	7.44	9.00	11.43	2.27	2.86	3.35	4.05	5.15

LEGEND

- (X-00) — DRAINAGE AREA I.D.
- ← — FLOW PATH
- ——— DRAINAGE AREA BOUNDARY
- —·XX— 1 FT PROP CONTOUR
- – – ·XX – – 5 FT EXIST CONTOUR

STATE OF TEXAS
CARLOS LUNA III
125042
LICENSED
PROFESSIONAL ENGINEER

1/8/2025

BEXAR COUNTY
PUBLIC WORKS DEPARTMENT

NO.	REVISION	BY	DATE

MAESTAS
8122 DATAPOINT DR., STE. 840
SAN ANTONIO, TX 78229
(210) 366-1988
TBPE No.: F-333
TBPLS No.: 10194506

stv
TEXAS REGISTERED
ENGINEERING FIRM
F-204

BLANCO ROAD PHASE III

INTERIOR DRAINAGE AREA MAP

SHEET 03 *OF* 05

PROJECT NUMBER	SHEET NO.
CSJ: 0915 - 12 - 618	200

DESIGNED BY:	ROADWAY/HIGHWAY	
CHECKED BY:	BLANCO ROAD	
DRAWN BY:	STATE	COUNTY
CHECKED BY:	TEXAS	BEXAR

DATE: 1/8/2025 4:22:58 PM
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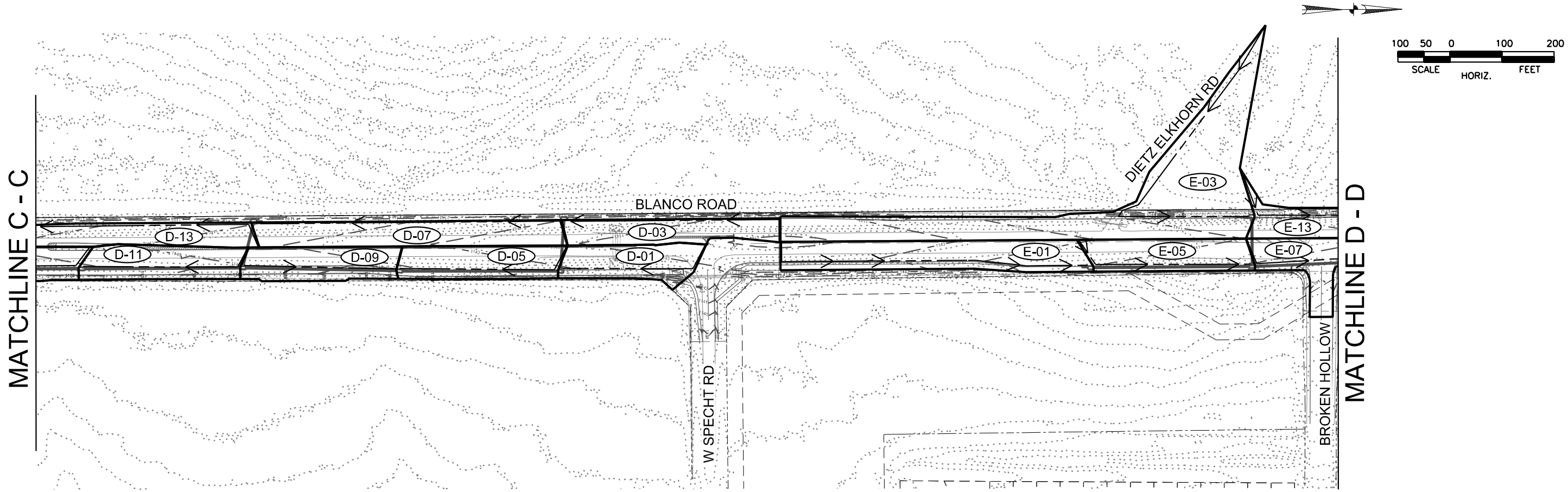

Proposed Time of Concentration

Basin	Precipitaion Area	Sheet Flow					Shallow Concentrated				Total Tc
		L (ft)	n	S (ft/ft)	P (in)	Tc (sheet)	L (ft)	S (ft/ft)	Surface	Tc (shallow)	
D-01	1	42	0.011	0.020	4.10	0.5	266	0.004	Type 1	3.5	4.03
D-03	1	42	0.011	0.020	4.10	0.5	365	0.004	Type 1	5.0	5.51
D-05	1	42	0.011	0.020	4.10	0.5	215	0.004	Type 1	3.0	3.49
D-07	1	42	0.011	0.020	4.10	0.5	392	0.004	Type 1	5.4	5.93
D-09	1	42	0.011	0.020	4.10	0.5	209	0.003	Type 1	3.0	3.57
D-11	1	42	0.011	0.020	4.10	0.5	215	0.004	Type 1	2.9	3.47
E-01	1	42	0.011	0.020	4.10	0.5	259	0.004	Type 1	3.4	3.89
E-03	1	100	0.240	0.009	4.10	17.4	369	0.015	Type 5	7.3	28.09
							250	0.004	Type 1	3.5	
E-05	1	42	0.011	0.020	4.10	0.5	217	0.004	Type 1	2.8	3.30
E-07	1	42	0.011	0.020	4.10	0.5	201	0.004	Type 1	2.6	3.11

Rational Q Values

Basin	Precipitation Area	10	Tc (min)	C	Intensity (in/hr)					Flows (cfs)				
					I - 2YR	I - 5YR	I - 10YR	I - 25YR	I - 100YR	Q - 2YR	Q - 5YR	Q - 10YR	Q - 25YR	Q - 100YR
D-01	1	0.40	10.0	0.95	5.05	6.36	7.44	9.00	11.43	1.93	2.43	2.84	3.44	4.36
D-03	1	0.43	10.0	0.95	5.05	6.36	7.44	9.00	11.43	2.08	2.62	3.06	3.70	4.70
D-05	1	0.45	10.0	0.95	5.05	6.36	7.44	9.00	11.43	2.16	2.72	3.19	3.86	4.90
D-07	1	0.56	10.0	0.95	5.05	6.36	7.44	9.00	11.43	2.70	3.40	3.98	4.81	6.11
D-09	1	0.44	10.0	0.95	5.05	6.36	7.44	9.00	11.43	2.09	2.63	3.08	3.73	4.73
D-11	1	0.45	10.0	0.95	5.05	6.36	7.44	9.00	11.43	2.16	2.72	3.19	3.86	4.90
E-01	1	0.76	10.0	0.95	5.05	6.36	7.44	9.00	11.43	3.63	4.58	5.36	6.48	8.23
E-03	1	1.92	28.1	0.75	3.10	3.87	4.49	5.39	6.78	4.46	5.56	6.46	7.74	9.74
E-05	1	0.44	10.0	0.95	5.05	6.36	7.44	9.00	11.43	2.13	2.68	3.14	3.80	4.82
E-07	1	0.50	10.0	0.95	5.05	6.36	7.44	9.00	11.43	2.41	3.03	3.55	4.29	5.45

LEGEND

- X-00 — DRAINAGE AREA I.D.
- FLOW PATH
- DRAINAGE AREA BOUNDARY
- -XX- — 1 FT PROP CONTOUR
- - -XX- - — 5 FT EXIST CONTOUR

STATE OF TEXAS
CARLOS LUNA III
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1/8/2025

BEXAR COUNTY
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MAESTAS
8122 DATAPOINT DR., STE. 840
SAN ANTONIO, TX 78229
(210) 366-1988
TBPE No.: F-333
TBPLS No.: 10194506

stv
TEXAS REGISTERED
ENGINEERING FIRM
F-204

BLANCO ROAD PHASE III

INTERIOR DRAINAGE AREA MAP

SHEET 04 OF 05

PROJECT NUMBER	SHEET NO.
CSJ: 0915 - 12 - 618	201

DESIGNED BY:	ROADWAY/HIGHWAY	
CHECKED BY:	BLANCO ROAD	
DRAWN BY:	STATE	COUNTY
CHECKED BY:	TEXAS	BEXAR

DATE: 1/8/2025 4:23:01 PM
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ISO 9001:2015 CERTIFIED
ENGINEERS • PLANNERS • SCIENTISTS • CONSTRUCTION MANAGERS
2806 W. Bitters Road, Suite 218 • San Antonio, Texas 78248 • Phone (210) 641-9999

Attachment H

Temporary Sediment Pond(s) Plans and Calculations

Blanco Road Phase III

N/A

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Attachment I

Inspections and Maintenance for BMPs

Blanco Road Phase III

There will be several types of Temporary BMPs used for this project: Silt Fencing, inlet protection, and rock berm. Items listed below must be inspected every 7 days and within 24 hours of a rainfall event of 0.5 inches or more. These inspections and if any maintenance is performed on such BMPs, it must be documented within the inspection and maintenance report form and kept on site. The forms can be found at the end of this section.

Silt Fencing, Rock Berm, Inlet Protection, and Temporary Construction Entrance/Exit

Refer to TCEQ "Edwards Aquifer Technical Guidance Manual" Rev. Jul05, pages 1-66 to 1-68 (Silt Fencing), pages 1-72 to 1-74 (Rock Berms), pages 1-89 to 1-92 (Inlet Protection), for standards, and also refer to Storm Water Pollution Prevention Plan (SWPPP) of the construction plans for locations/details/guidance.

Contractor shall maintain a log and document the following items for all BMP's on site:

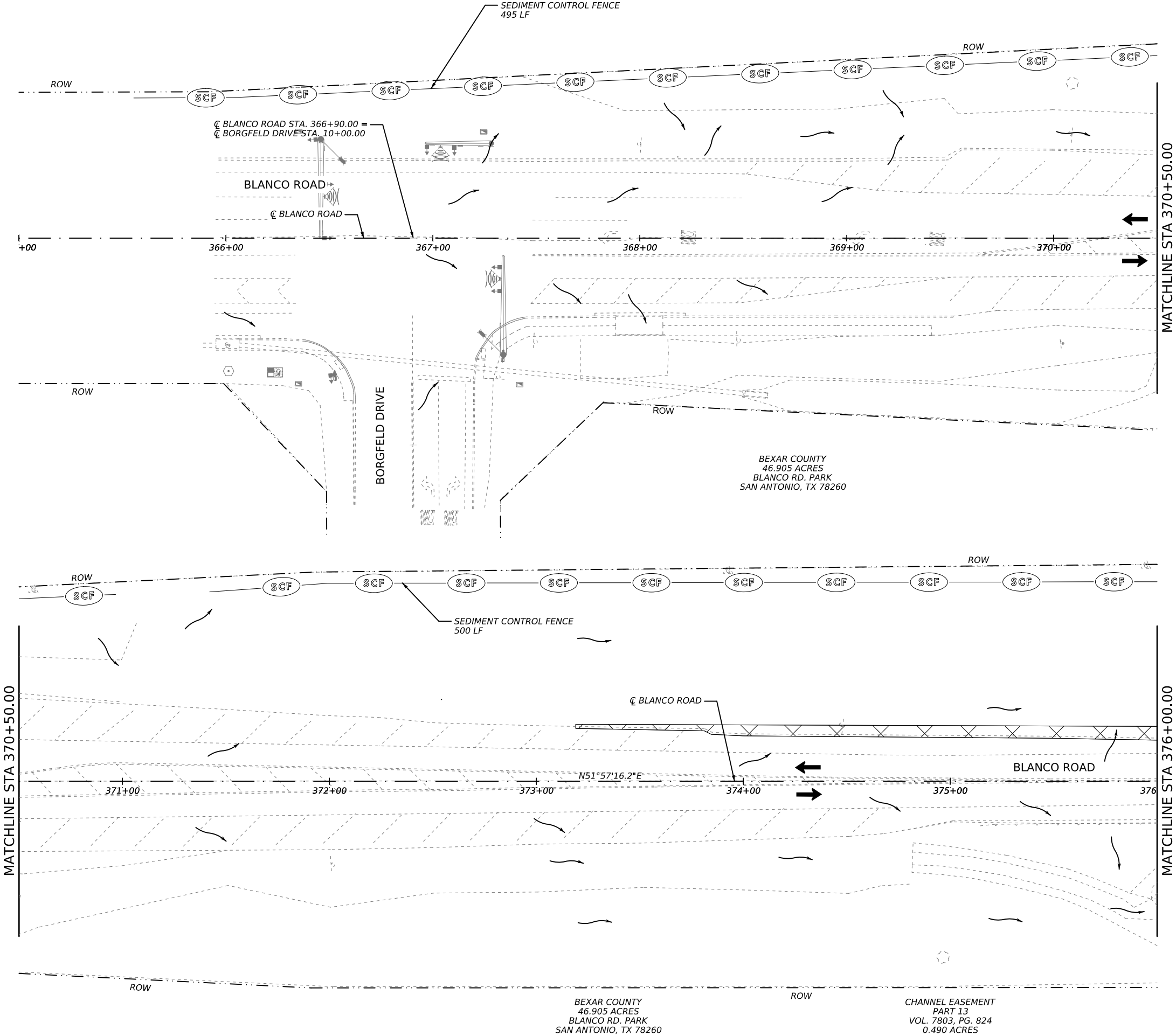
1) Inspection of all fencing/berms/bags/dikes weekly, and after any rainfall event.
2) Removal of sediment when buildup reaches 6" on any temporary BMP, or the installation of a second line of fencing parallel to the old fence. Dispose of the accumulated silt in an approved manner.
3) Replacement of any torn fabric or installation of a second line of fencing parallel to the old fence.
4) Replacement/repair of any sections crushed, torn, or collapsed temporary BMPs in the course of construction activity. If a section of fence/berm is obstructing vehicular access, document the relocation to a spot where it will provide equal protection, but will not obstruct vehicles.
5) For installations of rock berms in streambeds, additional daily inspections should be made.
6) For rock berms, any lose wire sheathing shall be repaired or replaced as needed and the berm reshaped as needed during inspection.
7) Any rock berms are to be replaced when the structure ceases to function as intended due to silt accumulation among the rocks, washout, construction traffic damage, etc.
8) Any rock berm shall be left in place until all upstream areas are stabilized and accumulated silt removed.
9) Any erosion control logs torn allowing contents to come out of the constraints of the log shall be

replaced immediately.

These temporary BMPs as shown on the "Storm Water Pollution Prevention Plan (SWPPP) / Erosion and Sediment Control Plan / Details on the construction plans will intercept any storm water borne pollutants originating onsite, including upstream offsite runoff, therefore preventing them from entering roadways, Geological Features, and drainage structures that ultimately enter Cibolo Creek.

Temporary Construction Entrance/Exit

Contractor shall establish and maintain a Temporary Construction Entrance/Exit throughout the construction period to protect the site from pollutants brought onto the site from other sources or leaving the site. Contractor shall ensure rocks are maintained free of trash and sediment.



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SCALE FEET

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LEGEND

WORK ZONE	
TEMPORARY PAVEMENT	
CONSTRUCTED PREVIOUS PHASE	
CONSTRUCTED TEMPORARY PAVEMENT	
DRAINAGE FLOW ARROWS	
EROSION CONTROL LOG	ECL
SEDIMENT CONTROL FENCE	SCF
ROCK FILTER DAM	RFD#
EROSION CONTROL LOG (PREVIOUS PHASE)	ECL
SEDIMENT CONTROL FENCE (PREVIOUS PHASE)	SCF
ROCK FILTER DAM (PREVIOUS PHASE)	RFD#

NOTES:

1. THE INFORMATION SHOWN CONCERNING TYPE AND LOCATION OF UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING DETERMINATIONS AS TO THE TYPE AND LOCATION OF ALL UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERE TO.

STATE OF TEXAS
JUAN CARLOS SANCHEZ
93954
LICENSED
PROFESSIONAL ENGINEER
1/24/2025

BEXAR COUNTY
PUBLIC WORKS DEPARTMENT

SANCHEZ-SALAZAR & ASSOCIATES, LLC
4630 N. Loop 1604 W. Ste. 115
San Antonio, TX 78249
Phone: (210) 314-5458
TBPELS Registration No. 15685

NO.	REVISION	BY	DATE

stv
TEXAS REGISTERED
ENGINEERING FIRM
F-204

BLANCO ROAD PHASE III

STORMWATER POLLUTION PREVENTION PLAN PHASE 1
BEGIN TO STA 376+00

SHEET 1 OF 12

PROJECT NUMBER	SHEET NO.
CSJ: 0915 - 12 - 618	355

DESIGNED BY:	ROADWAY/HIGHWAY	
CHECKED BY:	BLANCO ROAD	
DRAWN BY:	STATE	COUNTY
CHECKED BY:	TEXAS	BEXAR

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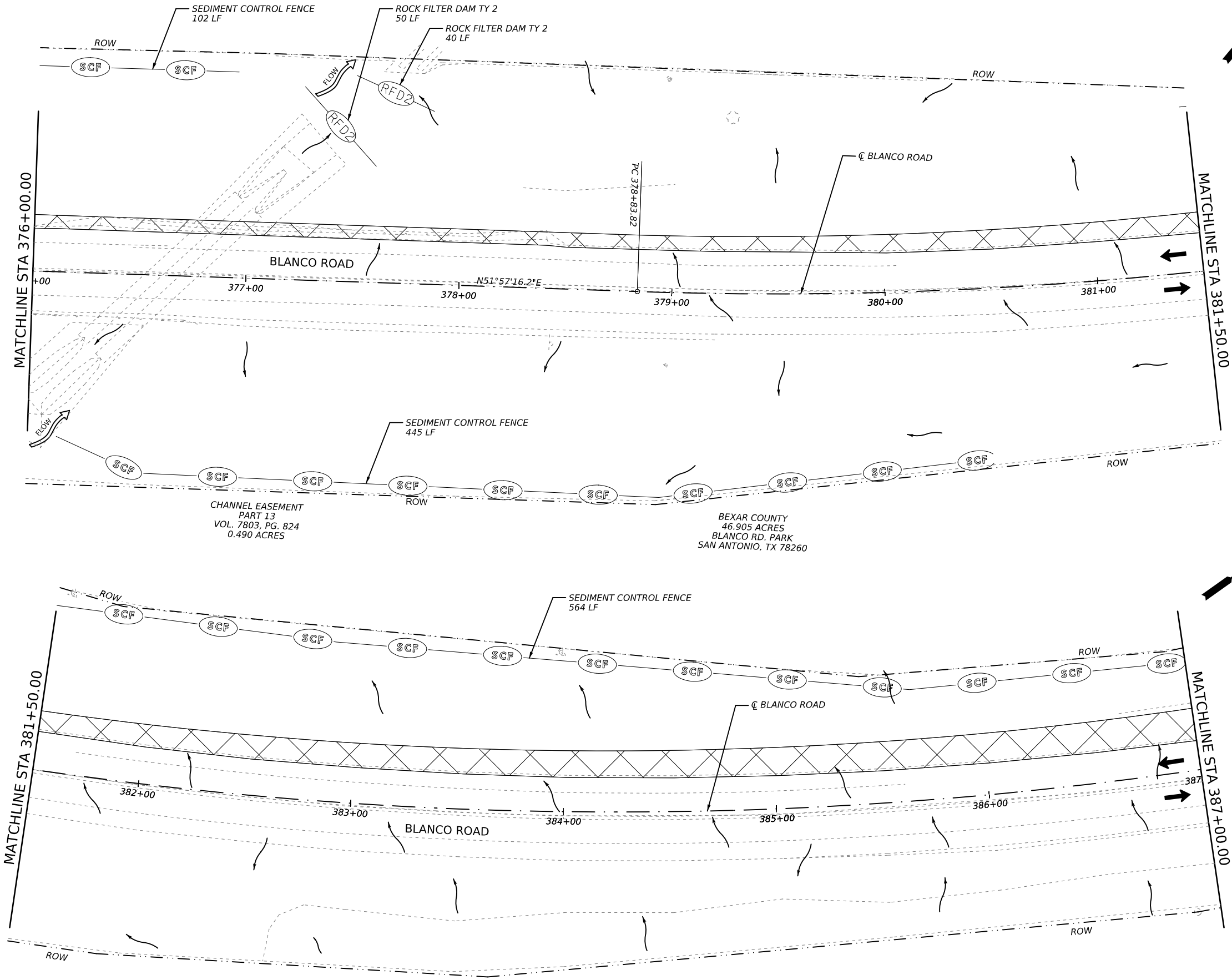

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SCALE FEET

LEGEND

WORK ZONE	
TEMPORARY PAVEMENT	
CONSTRUCTED PREVIOUS PHASE	
CONSTRUCTED TEMPORARY PAVEMENT	
DRAINAGE FLOW ARROWS	
EROSION CONTROL LOG	ECL
SEDIMENT CONTROL FENCE	SCF
ROCK FILTER DAM	RFD#
EROSION CONTROL LOG (PREVIOUS PHASE)	ECL
SEDIMENT CONTROL FENCE (PREVIOUS PHASE)	SCF
ROCK FILTER DAM (PREVIOUS PHASE)	RFD#

NOTES:

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STATE OF TEXAS
JUAN CARLOS SANCHEZ
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1/24/2025

BEXAR COUNTY
PUBLIC WORKS DEPARTMENT

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San Antonio, TX 78249
Phone: (210) 314-5458
TBPELS Registration No. 15685

NO.	REVISION	BY	DATE

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TEXAS REGISTERED
ENGINEERING FIRM
F-204

BLANCO ROAD PHASE III

STORMWATER POLLUTION PREVENTION PLAN PHASE 1
STA 376+00 TO STA 387+00

SHEET 2 OF 12

PROJECT NUMBER		SHEET NO.
CSJ: 0915 - 12 - 618		356
DESIGNED BY:	ROADWAY/HIGHWAY	
CHECKED BY:	BLANCO ROAD	
DRAWN BY:	STATE	COUNTY
CHECKED BY:	TEXAS	BEXAR

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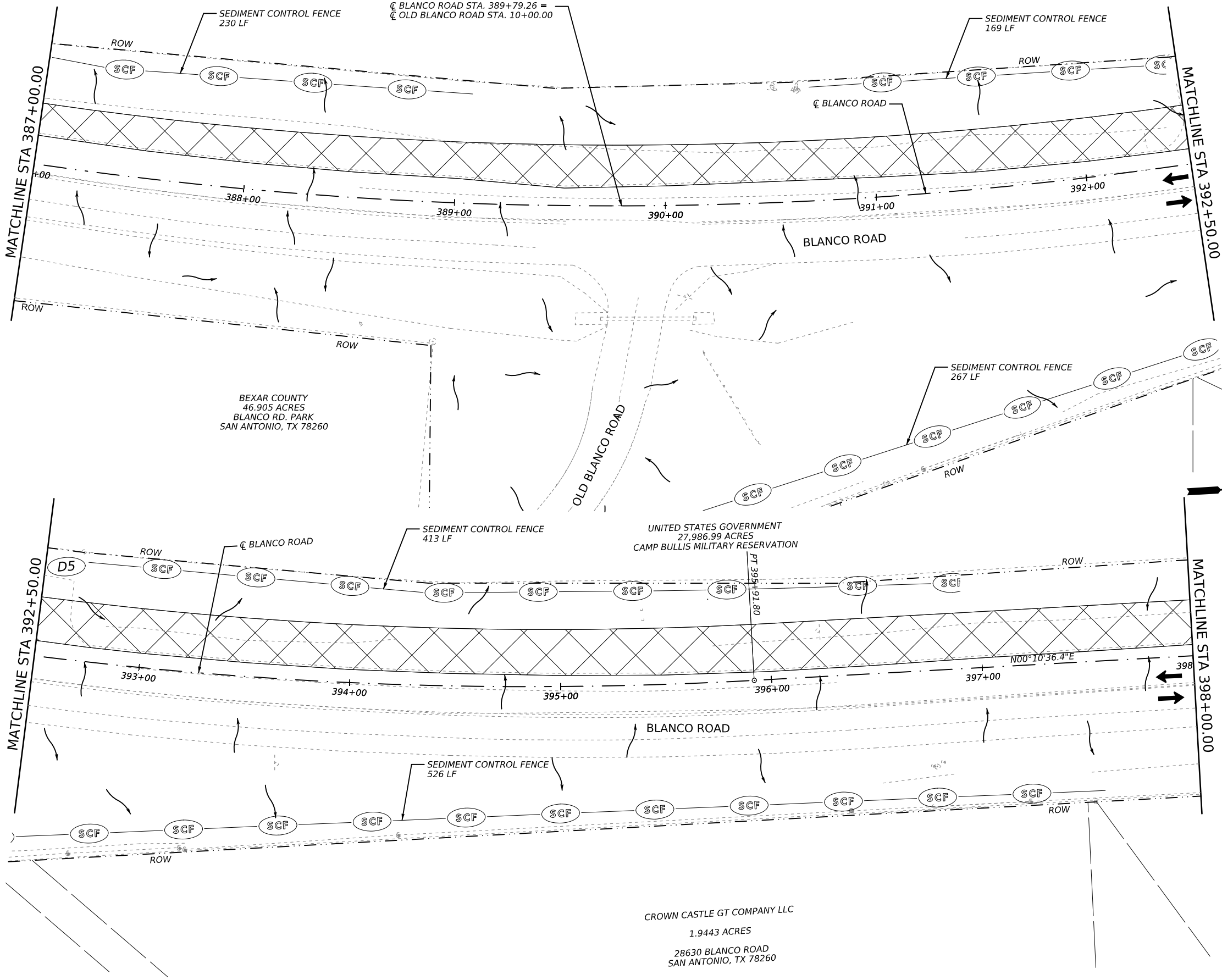

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SCALE FEET

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LEGEND

WORK ZONE	
TEMPORARY PAVEMENT	
CONSTRUCTED PREVIOUS PHASE	
CONSTRUCTED TEMPORARY PAVEMENT	
DRAINAGE FLOW ARROWS	
EROSION CONTROL LOG	ECL
SEDIMENT CONTROL FENCE	SCF
ROCK FILTER DAM	RFD#
EROSION CONTROL LOG (PREVIOUS PHASE)	ECL
SEDIMENT CONTROL FENCE (PREVIOUS PHASE)	SCF
ROCK FILTER DAM (PREVIOUS PHASE)	RFD#

NOTES:

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1/24/2025

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PUBLIC WORKS DEPARTMENT

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4630 N. Loop 1604 W. Ste. 115
San Antonio, TX 78249
Phone: (210) 314-5458
TBPELS Registration No. 15685

NO.	REVISION	BY	DATE

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TEXAS REGISTERED ENGINEERING FIRM F-204

BLANCO ROAD PHASE III

STORMWATER POLLUTION PREVENTION PLAN PHASE 1
STA 387+00 TO STA 398+00

SHEET 3 OF 12

PROJECT NUMBER	SHEET NO.
CSJ: 0915 - 12 - 618	357

DESIGNED BY:	ROADWAY/HIGHWAY	
CHECKED BY:	BLANCO ROAD	
DRAWN BY:	STATE	COUNTY
CHECKED BY:	TEXAS	BEXAR

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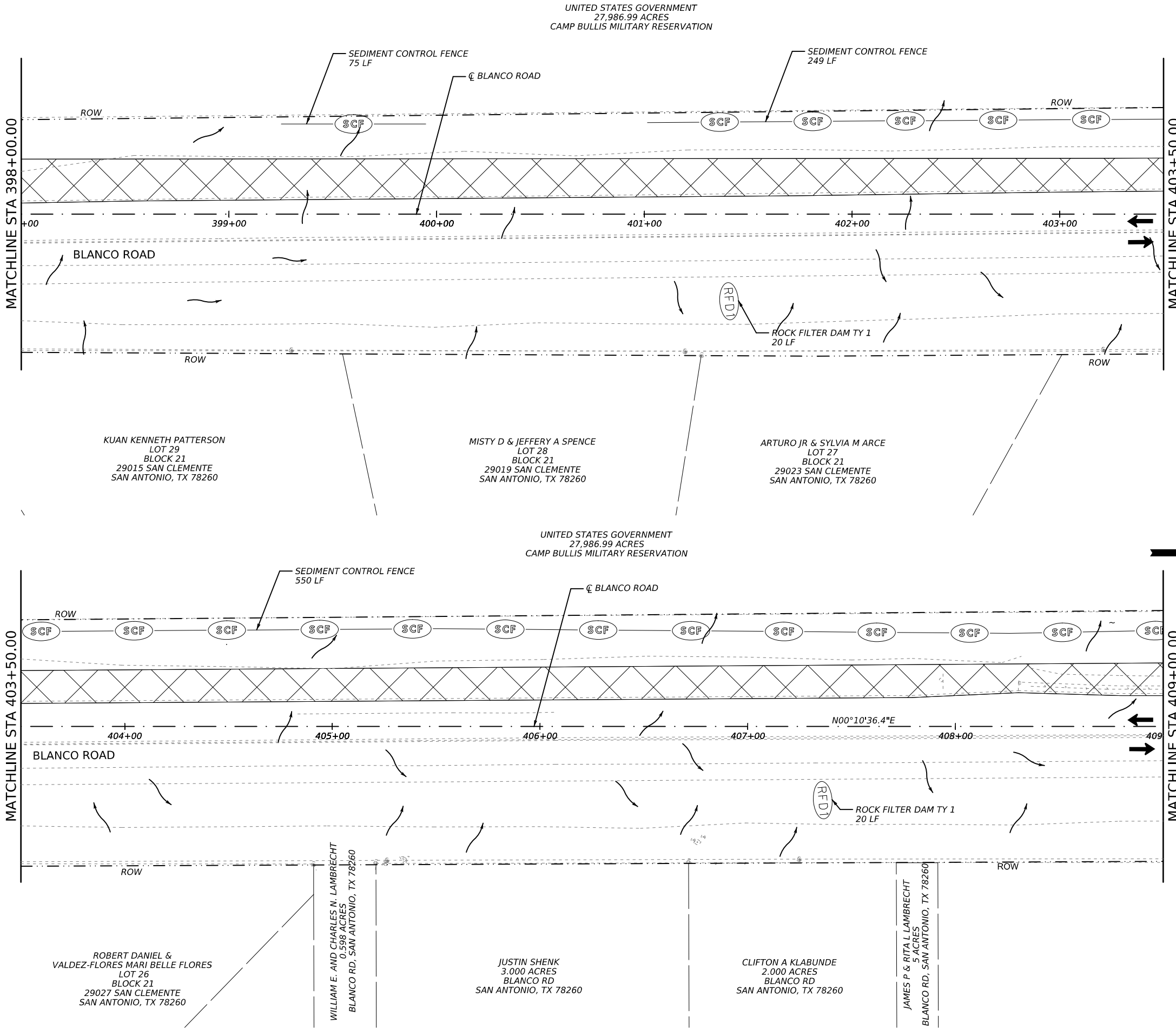

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25 12.5 0 25 50
SCALE FEET

LEGEND

WORK ZONE	
TEMPORARY PAVEMENT	
CONSTRUCTED PREVIOUS PHASE	
CONSTRUCTED TEMPORARY PAVEMENT	
DRAINAGE FLOW ARROWS	
EROSION CONTROL LOG	ECL
SEDIMENT CONTROL FENCE	SCF
ROCK FILTER DAM	RFD#
EROSION CONTROL LOG (PREVIOUS PHASE)	ECL
SEDIMENT CONTROL FENCE (PREVIOUS PHASE)	SCF
ROCK FILTER DAM (PREVIOUS PHASE)	RFD#

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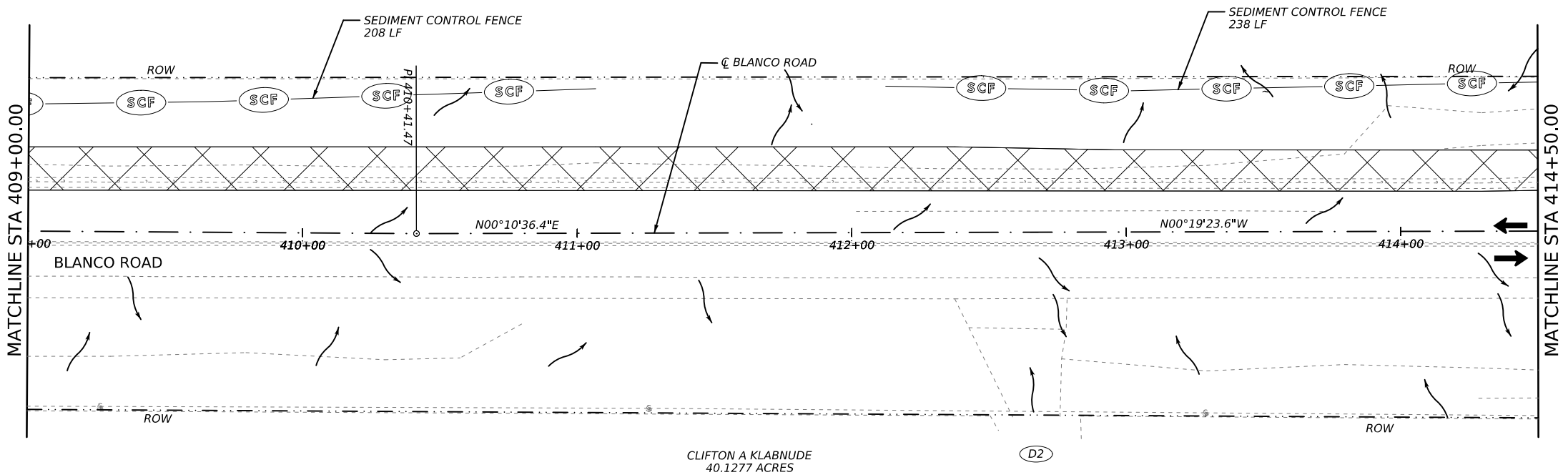
BLANCO ROAD PHASE III

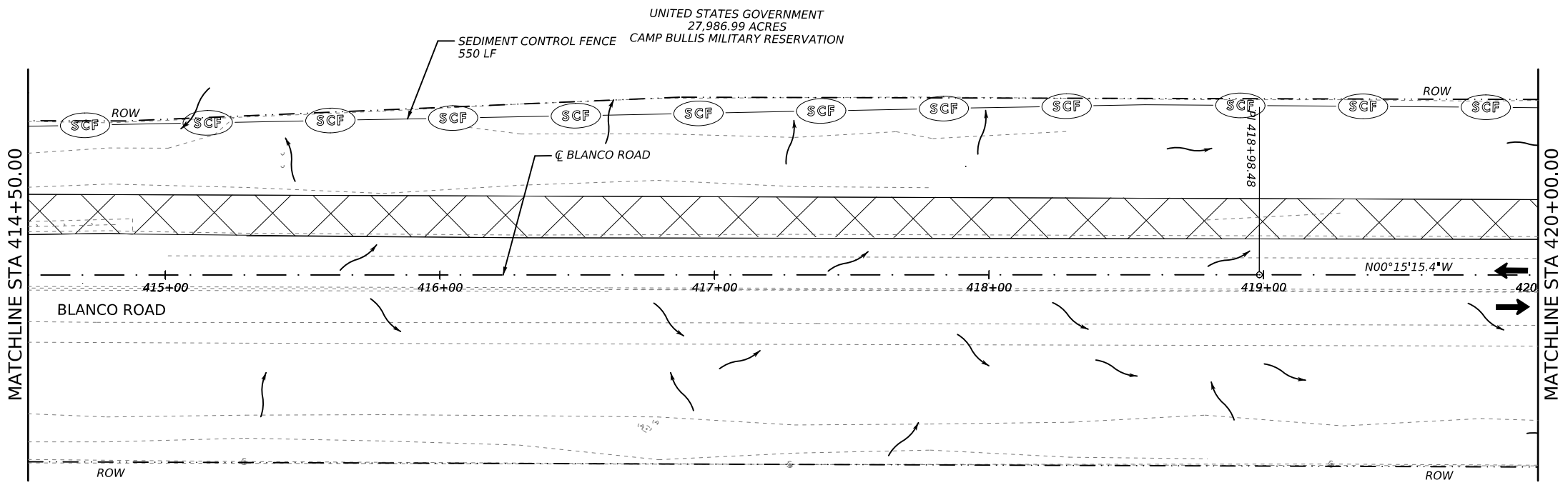
STORMWATER POLLUTION PREVENTION PLAN PHASE 1
STA 398+00 TO STA 409+00

SHEET 4 OF 12

PROJECT NUMBER	SHEET NO.
CSJ: 0915 - 12 - 618	358

DESIGNED BY:	ROADWAY/HIGHWAY	
CHECKED BY:	BLANCO ROAD	
DRAWN BY:	STATE	COUNTY
CHECKED BY:	TEXAS	BEXAR





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25 12.5 0 25 50
SCALE FEET

LEGEND

WORK ZONE	
TEMPORARY PAVEMENT	
CONSTRUCTED PREVIOUS PHASE	
CONSTRUCTED TEMPORARY PAVEMENT	
DRAINAGE FLOW ARROWS	
EROSION CONTROL LOG	ECL
SEDIMENT CONTROL FENCE	SCF
ROCK FILTER DAM	RFD#
EROSION CONTROL LOG (PREVIOUS PHASE)	ECL
SEDIMENT CONTROL FENCE (PREVIOUS PHASE)	SCF
ROCK FILTER DAM (PREVIOUS PHASE)	RFD#

NOTES:

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Phone: (210) 314-5458
TBPELS Registration No. 15685

NO.	REVISION	BY	DATE

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ENGINEERING FIRM
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BLANCO ROAD PHASE III

STORMWATER POLLUTION PREVENTION PLAN PHASE 1
STA 409+00 TO STA 420+00

SHEET 5 OF 12

PROJECT NUMBER	SHEET NO.
CSJ: 0915 - 12 - 618	359

DESIGNED BY:	ROADWAY/HIGHWAY	
CHECKED BY:	BLANCO ROAD	
DRAWN BY:	STATE	COUNTY
CHECKED BY:	TEXAS	BEXAR

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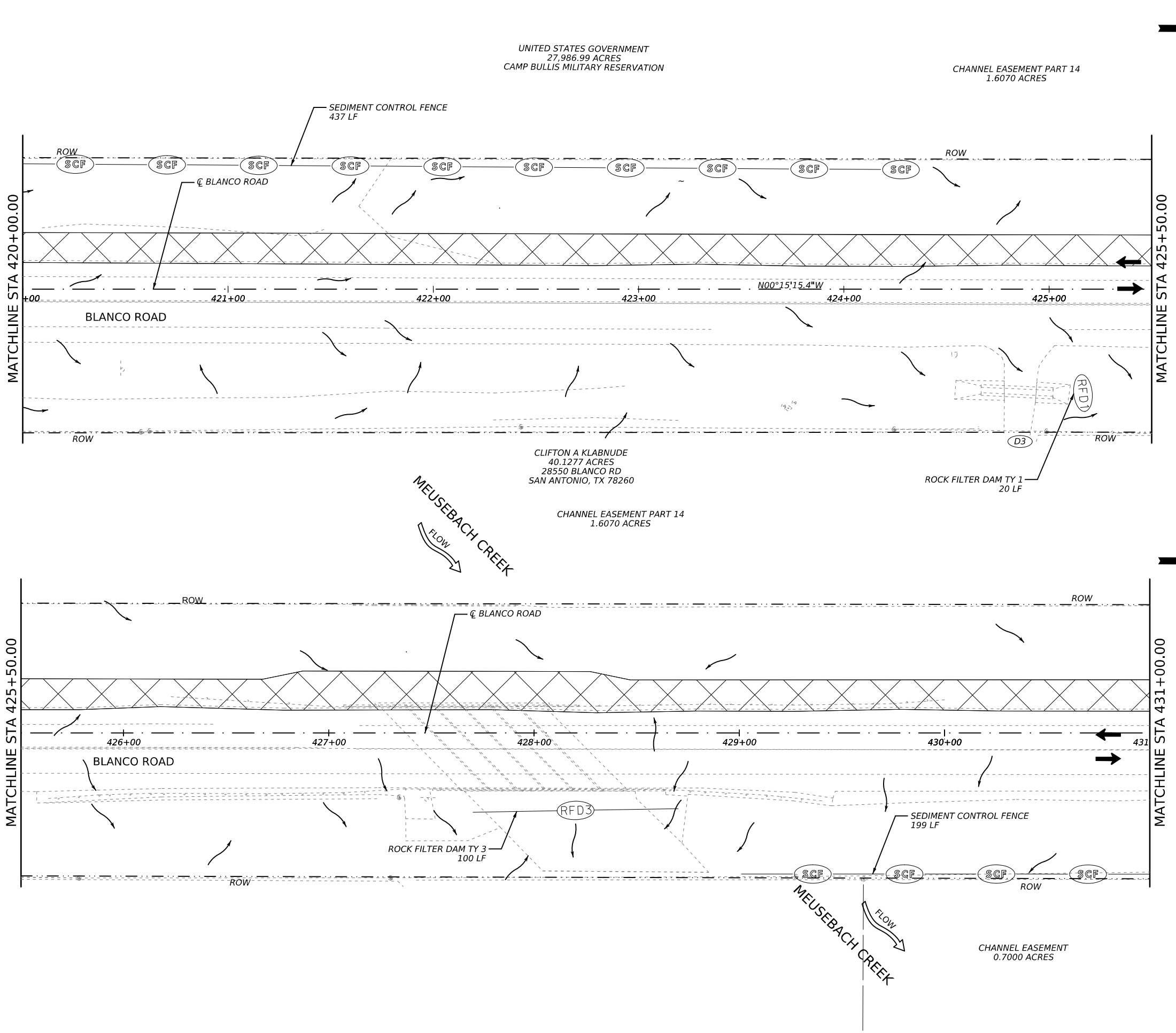

LEGEND

WORK ZONE	
TEMPORARY PAVEMENT	
CONSTRUCTED PREVIOUS PHASE	
CONSTRUCTED TEMPORARY PAVEMENT	
DRAINAGE FLOW ARROWS	
EROSION CONTROL LOG	ECL
SEDIMENT CONTROL FENCE	SCF
ROCK FILTER DAM	RFD#
EROSION CONTROL LOG (PREVIOUS PHASE)	ECL
SEDIMENT CONTROL FENCE (PREVIOUS PHASE)	SCF
ROCK FILTER DAM (PREVIOUS PHASE)	RFD#

NOTES:

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STATE OF TEXAS
JUAN CARLOS SANCHEZ
93954
LICENSED
PROFESSIONAL ENGINEER
1/24/2025

BEXAR COUNTY
PUBLIC WORKS DEPARTMENT

SANCHEZ-SALAZAR & ASSOCIATES, LLC
4630 N. Loop 1604 W. Ste. 115
San Antonio, TX 78249
Phone: (210) 314-5458
TBPELS Registration No. 15685

NO.	REVISION	BY	DATE

stv
TEXAS REGISTERED ENGINEERING FIRM F-204

BLANCO ROAD PHASE III

STORMWATER POLLUTION PREVENTION PLAN PHASE 1
STA 420+00 TO STA 431+00

SHEET 6 OF 12

PROJECT NUMBER	SHEET NO.
CSJ: 0915 - 12 - 618	360

DESIGNED BY:	ROADWAY/HIGHWAY	
CHECKED BY:	BLANCO ROAD	
DRAWN BY:	STATE	COUNTY
CHECKED BY:	TEXAS	BEXAR

DATE: 1/24/2025 12:42:52 AM
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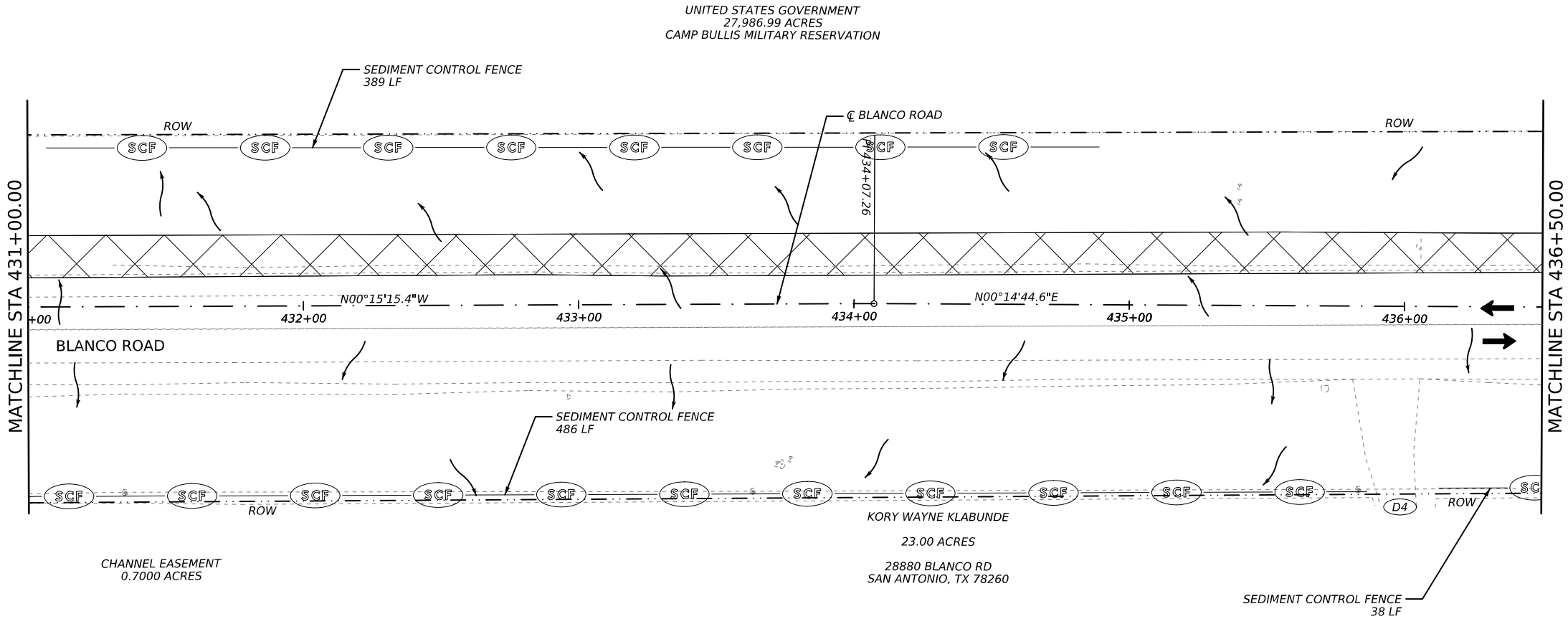

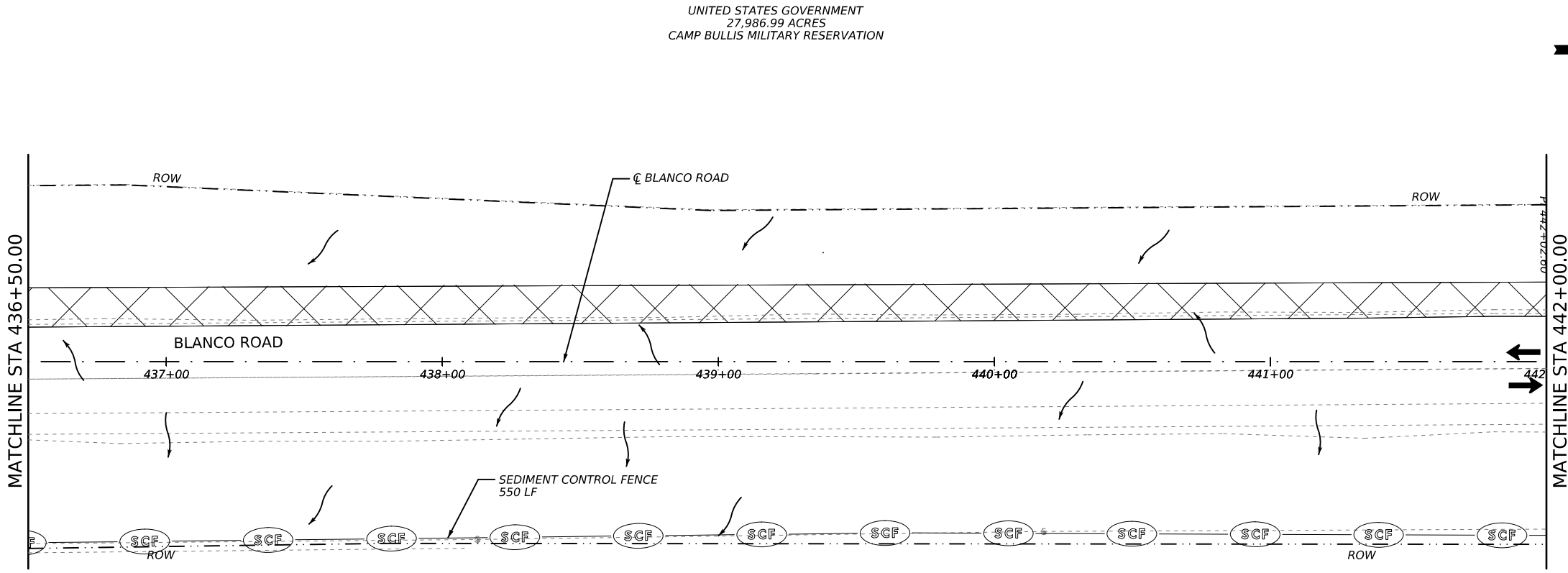

25 12.5 0 25 50
SCALE FEET

LEGEND

WORK ZONE	
TEMPORARY PAVEMENT	
CONSTRUCTED PREVIOUS PHASE	
CONSTRUCTED TEMPORARY PAVEMENT	
DRAINAGE FLOW ARROWS	
EROSION CONTROL LOG	ECL
SEDIMENT CONTROL FENCE	SCF
ROCK FILTER DAM	RFD#
EROSION CONTROL LOG (PREVIOUS PHASE)	ECL
SEDIMENT CONTROL FENCE (PREVIOUS PHASE)	SCF
ROCK FILTER DAM (PREVIOUS PHASE)	RFD#

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4630 N. Loop 1604 W. Ste. 115
San Antonio, TX 78249
Phone: (210) 314-5458
TBPELS Registration No. 15685

NO.	REVISION	BY	DATE

stv
TEXAS REGISTERED
ENGINEERING FIRM
F-204

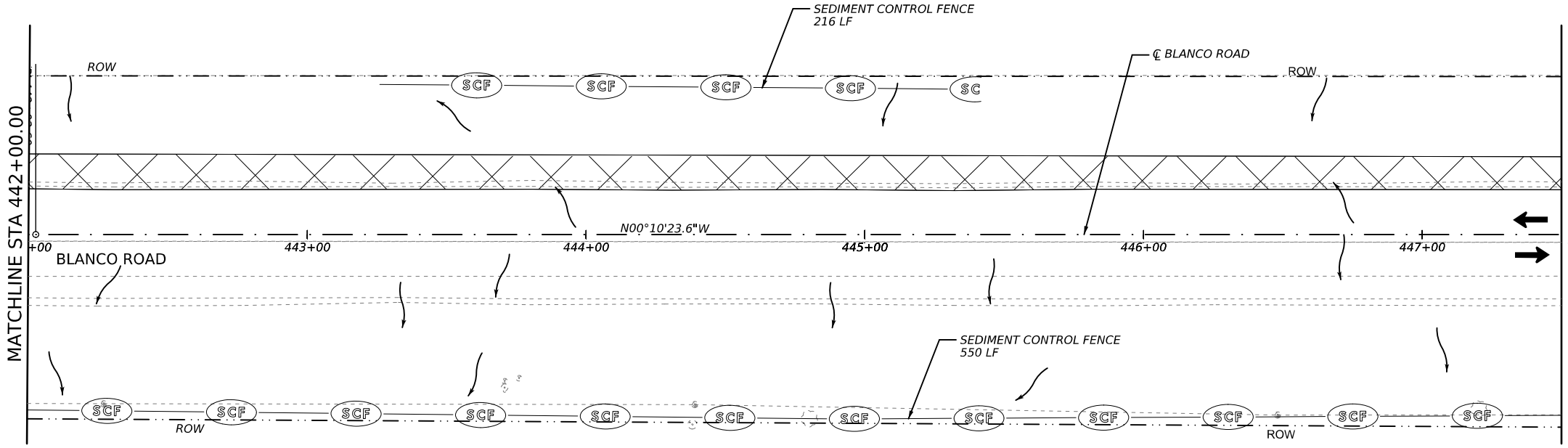
BLANCO ROAD PHASE III

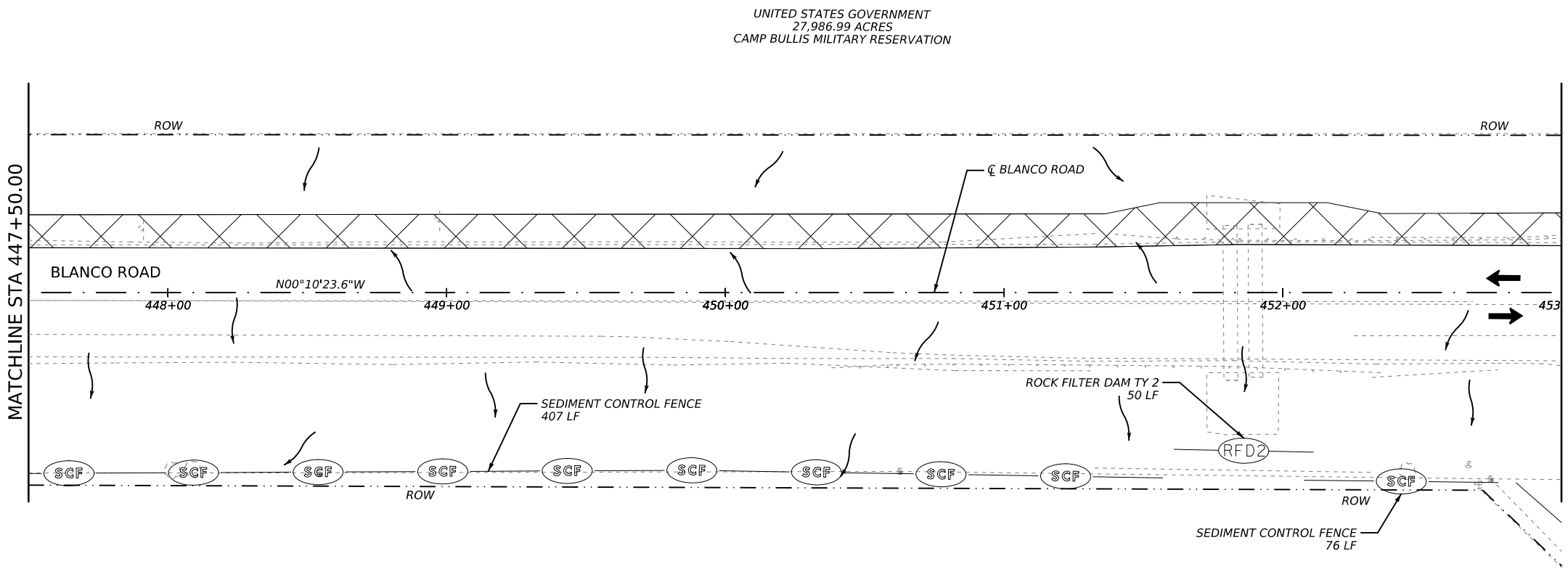
STORMWATER POLLUTION PREVENTION PLAN PHASE 1
STA 431+00 TO STA 442+00

SHEET 7 OF 12

PROJECT NUMBER	SHEET NO.
CSJ: 0915 - 12 - 618	361

DESIGNED BY:	ROADWAY/HIGHWAY	
CHECKED BY:	BLANCO ROAD	
DRAWN BY:	STATE	COUNTY
CHECKED BY:	TEXAS	BEXAR





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25 12.5 0 25 50
SCALE FEET

LEGEND

WORK ZONE	
TEMPORARY PAVEMENT	
CONSTRUCTED PREVIOUS PHASE	
CONSTRUCTED TEMPORARY PAVEMENT	
DRAINAGE FLOW ARROWS	
EROSION CONTROL LOG	ECL
SEDIMENT CONTROL FENCE	SCF
ROCK FILTER DAM	RFD#
EROSION CONTROL LOG (PREVIOUS PHASE)	ECL
SEDIMENT CONTROL FENCE (PREVIOUS PHASE)	SCF
ROCK FILTER DAM (PREVIOUS PHASE)	RFD#

NOTES:

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4630 N. Loop 1604 W. Ste. 115
San Antonio, TX 78249
Phone: (210) 314-5458
TBPELS Registration No. 15685

NO.	REVISION	BY	DATE

stv
TEXAS REGISTERED ENGINEERING FIRM F-204

BLANCO ROAD PHASE III

STORMWATER POLLUTION PREVENTION PLAN PHASE 1
STA 442+00 TO STA 453+00

SHEET 8 OF 12

PROJECT NUMBER	SHEET NO.
CSJ: 0915 - 12 - 618	362

DESIGNED BY:	ROADWAY/HIGHWAY	
CHECKED BY:	BLANCO ROAD	
DRAWN BY:	STATE	COUNTY
CHECKED BY:	TEXAS	BEXAR

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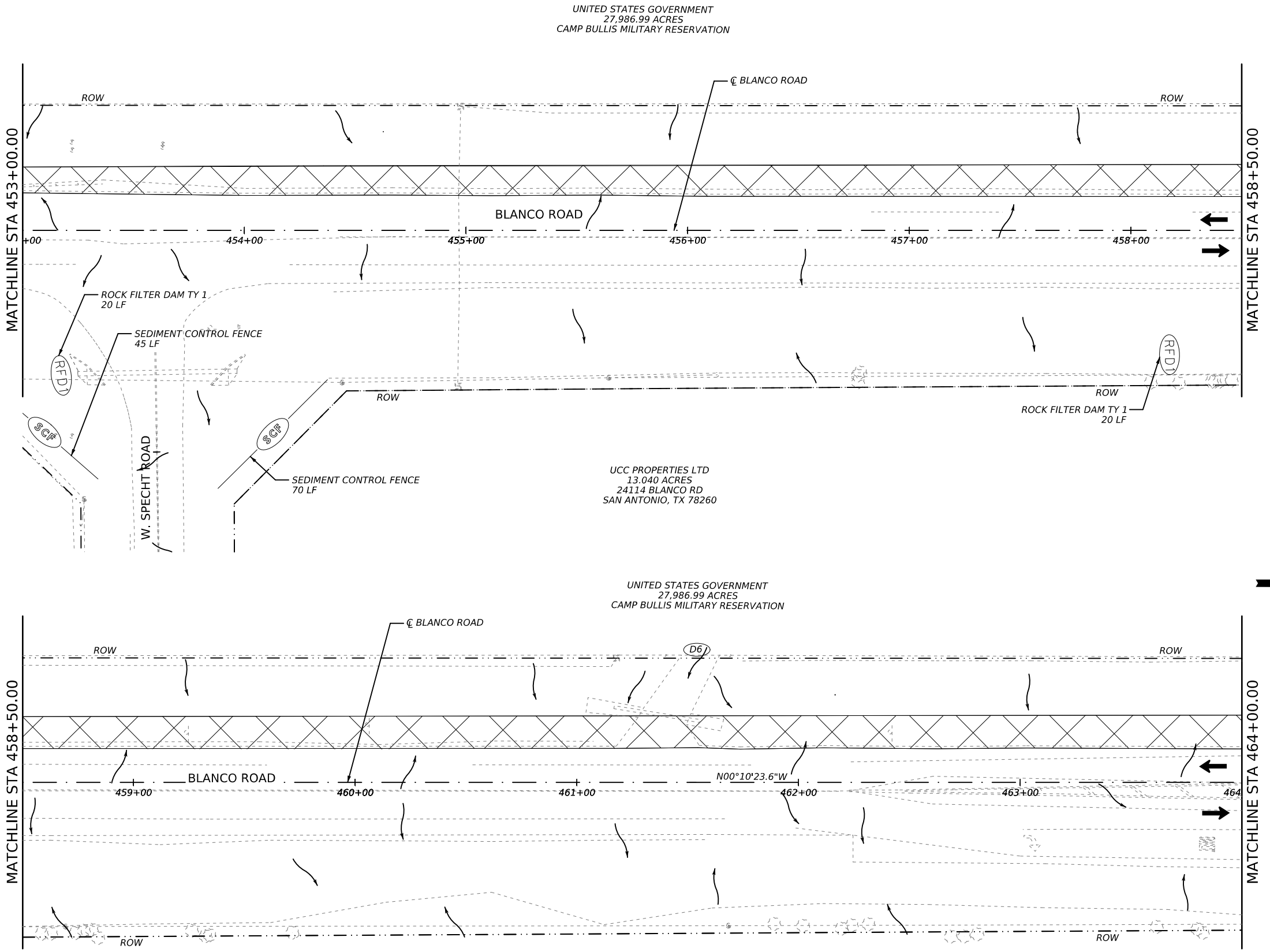
ck | ow | ck



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25 12.5 0 25 50
SCALE FEET

LEGEND

WORK ZONE	
TEMPORARY PAVEMENT	
CONSTRUCTED PREVIOUS PHASE	
CONSTRUCTED TEMPORARY PAVEMENT	
DRAINAGE FLOW ARROWS	
EROSION CONTROL LOG	ECL
SEDIMENT CONTROL FENCE	SCF
ROCK FILTER DAM	RFD#
EROSION CONTROL LOG (PREVIOUS PHASE)	ECL
SEDIMENT CONTROL FENCE (PREVIOUS PHASE)	SCF
ROCK FILTER DAM (PREVIOUS PHASE)	RFD#

NOTES:

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San Antonio, TX 78249
Phone: (210) 314-5458
TBPELS Registration No. 15685

NO.	REVISION	BY	DATE

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TEXAS REGISTERED
ENGINEERING FIRM
F-204

BLANCO ROAD PHASE III

STORMWATER POLLUTION PREVENTION PLAN PHASE 1
STA 453+00 TO STA 464+00

SHEET 9 OF 12

PROJECT NUMBER	SHEET NO.
CSJ: 0915 - 12 - 618	363

DESIGNED BY:	ROADWAY/HIGHWAY	
CHECKED BY:	BLANCO ROAD	
DRAWN BY:	STATE	COUNTY
CHECKED BY:	TEXAS	BEXAR

DATE: 1/24/2025 12:43:19 AM
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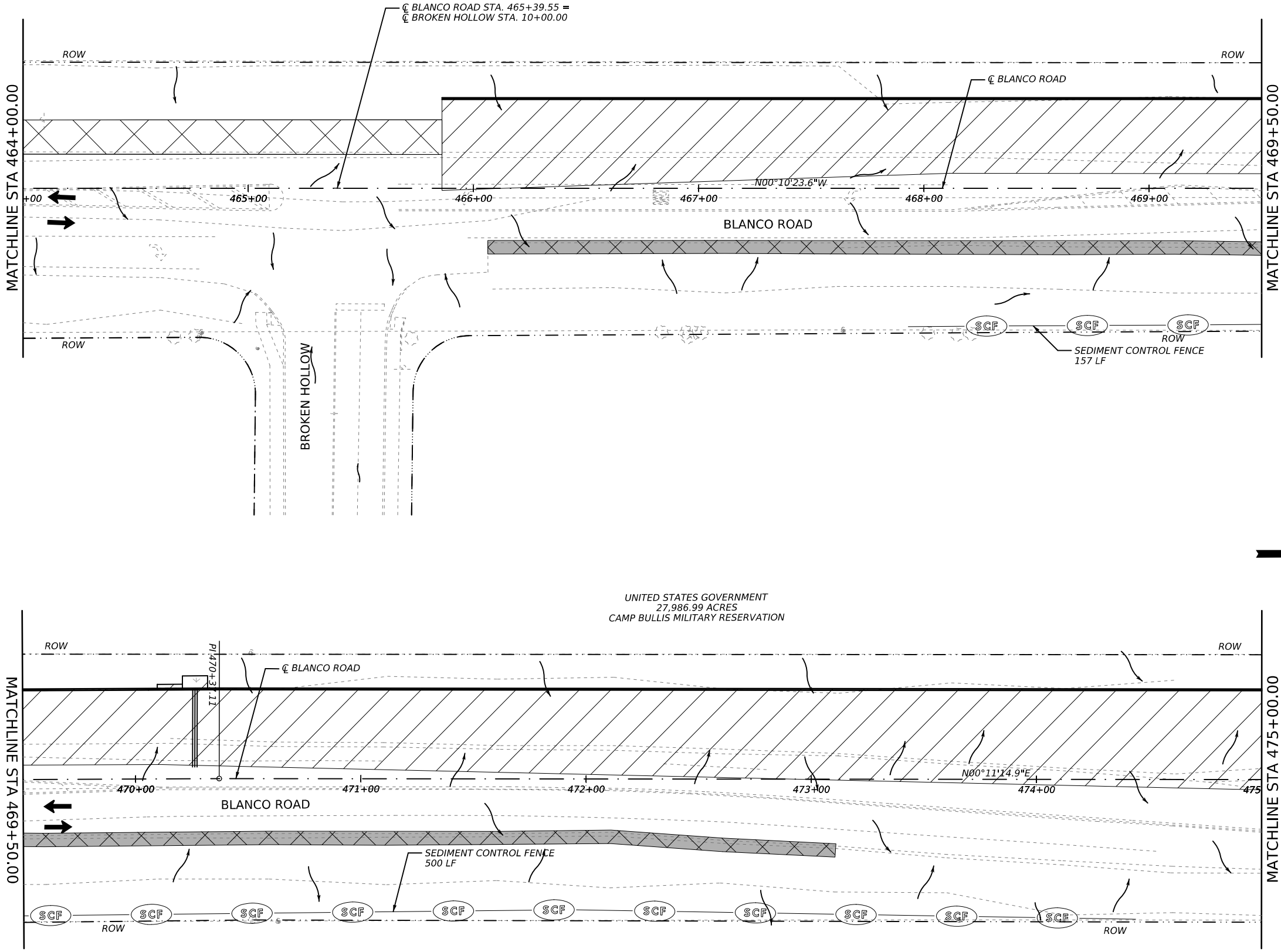

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25 12.5 0 25 50
SCALE FEET

LEGEND

WORK ZONE	
TEMPORARY PAVEMENT	
CONSTRUCTED PREVIOUS PHASE	
CONSTRUCTED TEMPORARY PAVEMENT	
DRAINAGE FLOW ARROWS	
EROSION CONTROL LOG	ECL
SEDIMENT CONTROL FENCE	SCF
ROCK FILTER DAM	RFD#
EROSION CONTROL LOG (PREVIOUS PHASE)	ECL
SEDIMENT CONTROL FENCE (PREVIOUS PHASE)	SCF
ROCK FILTER DAM (PREVIOUS PHASE)	RFD#

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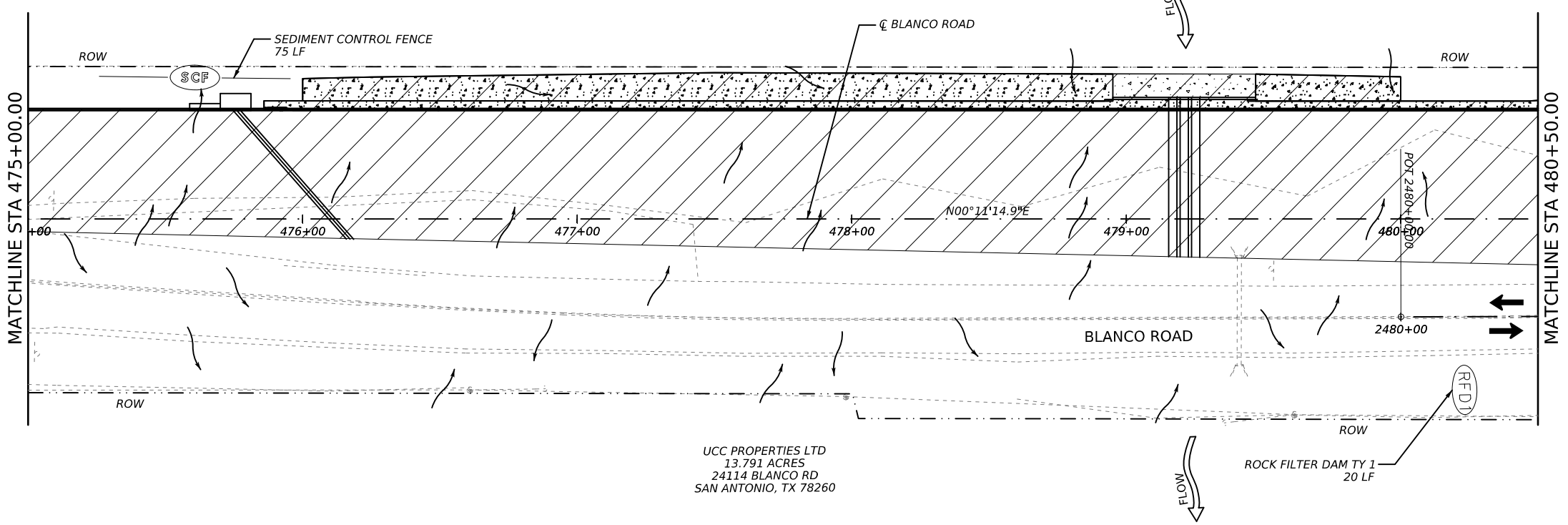
BLANCO ROAD PHASE III

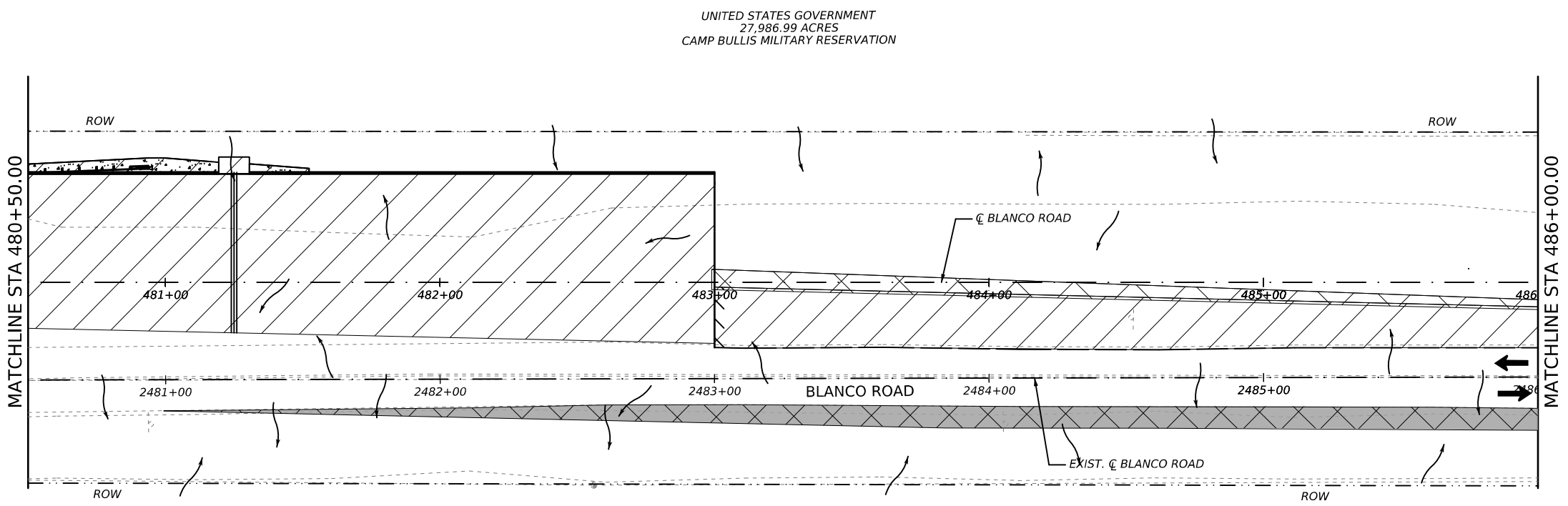
STORMWATER POLLUTION PREVENTION PLAN PHASE 1
STA 464+00 TO STA 475+00

SHEET 10 OF 12

PROJECT NUMBER	SHEET NO.
CSJ: 0915 - 12 - 618	364

DESIGNED BY:	ROADWAY/HIGHWAY	
CHECKED BY:	BLANCO ROAD	
DRAWN BY:	STATE	COUNTY
CHECKED BY:	TEXAS	BEXAR





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SCALE 25 12.5 0 25 50 FEET

LEGEND

WORK ZONE	
TEMPORARY PAVEMENT	
CONSTRUCTED PREVIOUS PHASE	
CONSTRUCTED TEMPORARY PAVEMENT	
DRAINAGE FLOW ARROWS	
EROSION CONTROL LOG	ECL
SEDIMENT CONTROL FENCE	SCF
ROCK FILTER DAM	RFD#
EROSION CONTROL LOG (PREVIOUS PHASE)	ECL
SEDIMENT CONTROL FENCE (PREVIOUS PHASE)	SCF
ROCK FILTER DAM (PREVIOUS PHASE)	RFD#

NOTES:

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BLANCO ROAD PHASE III

STORMWATER POLLUTION PREVENTION PLAN PHASE 1
STA 475+00 TO STA 486+00

SHEET 11 OF 12

PROJECT NUMBER	SHEET NO.
CSJ: 0915 - 12 - 618	365

DESIGNED BY:	ROADWAY/HIGHWAY	
CHECKED BY:	BLANCO ROAD	
DRAWN BY:	STATE	COUNTY
CHECKED BY:	TEXAS	BEXAR

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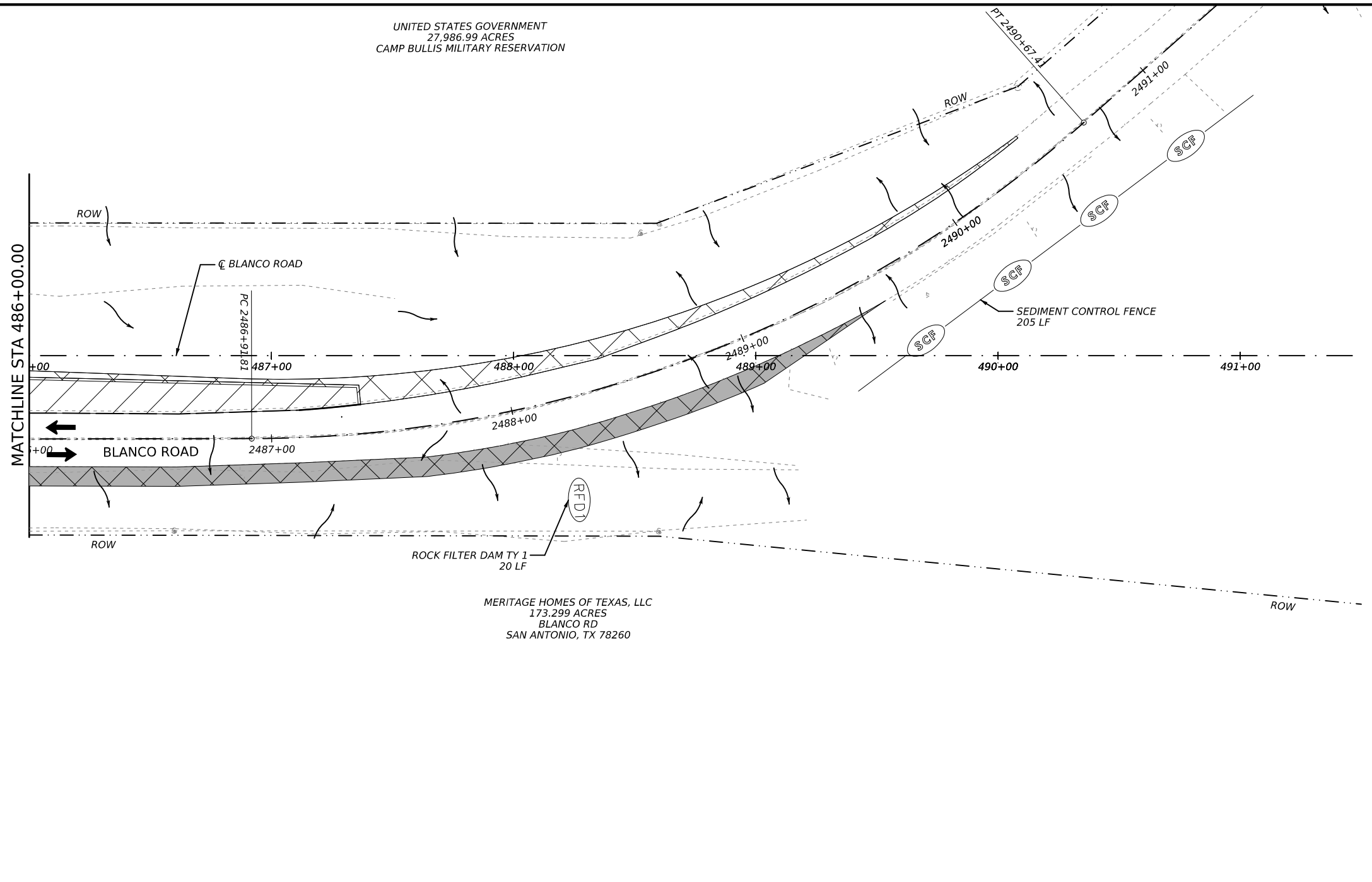

LEGEND

WORK ZONE	
TEMPORARY PAVEMENT	
CONSTRUCTED PREVIOUS PHASE	
CONSTRUCTED TEMPORARY PAVEMENT	
DRAINAGE FLOW ARROWS	
EROSION CONTROL LOG	ECL
SEDIMENT CONTROL FENCE	SCF
ROCK FILTER DAM	RFD#
EROSION CONTROL LOG (PREVIOUS PHASE)	ECL
SEDIMENT CONTROL FENCE (PREVIOUS PHASE)	SCF
ROCK FILTER DAM (PREVIOUS PHASE)	RFD#

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1/24/2025

BEXAR COUNTY
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San Antonio, TX 78249
Phone: (210) 314-5458
TBPELS Registration No. 15685

NO.	REVISION	BY	DATE

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TEXAS REGISTERED
ENGINEERING FIRM
F-204

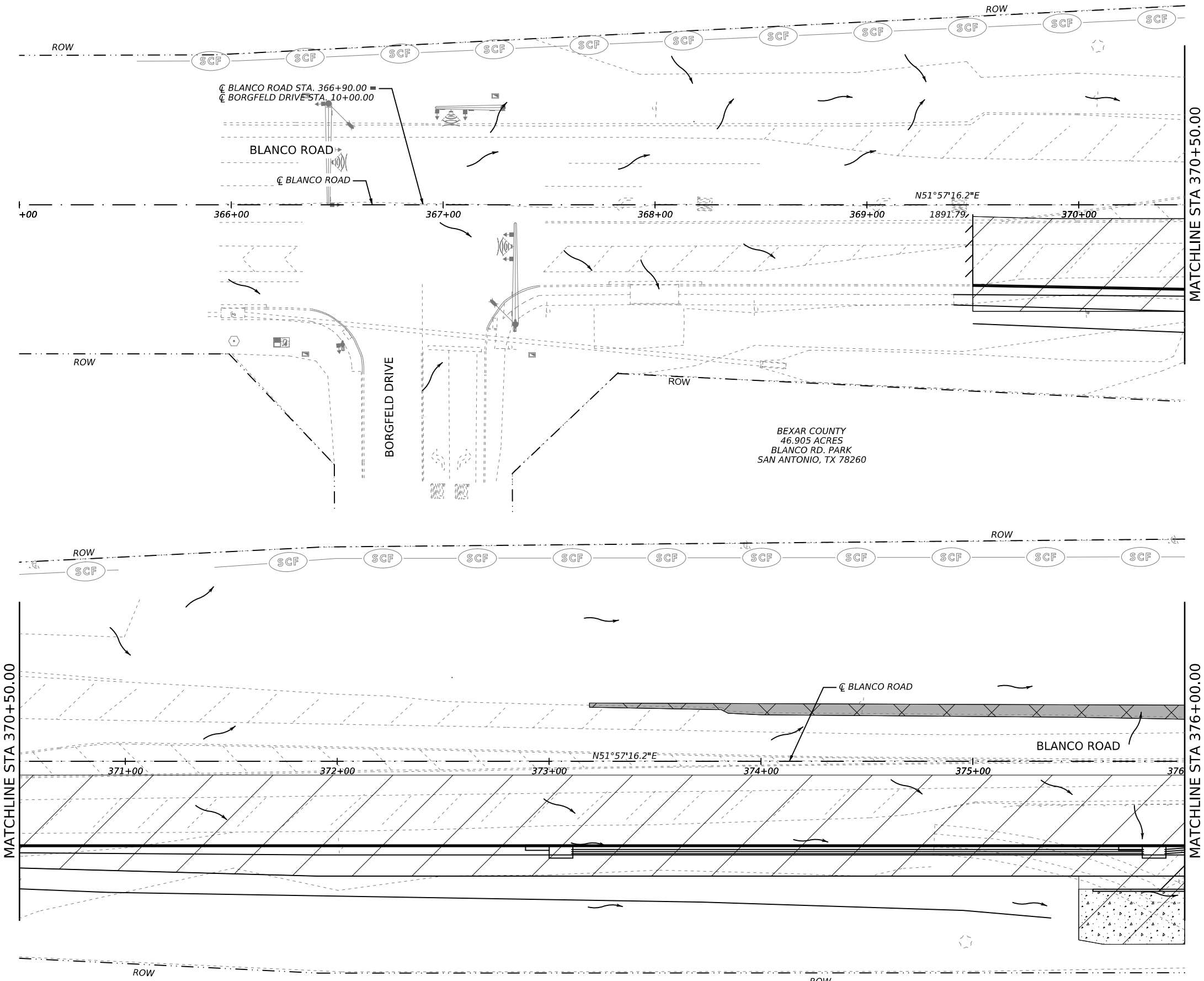
BLANCO ROAD PHASE III

STORMWATER POLLUTION PREVENTION PLAN PHASE 1 STA 486+00 TO END

SHEET 12 OF 12

PROJECT NUMBER	SHEET NO.
CSJ: 0915 - 12 - 618	366

DESIGNED BY:	ROADWAY/HIGHWAY	
CHECKED BY:	BLANCO ROAD	
DRAWN BY:	STATE	COUNTY
CHECKED BY:	TEXAS	BEXAR



25 12.5 0 25 50
SCALE FEET

N

LEGEND

WORK ZONE	
TEMPORARY PAVEMENT	
CONSTRUCTED PREVIOUS PHASE	
CONSTRUCTED TEMPORARY PAVEMENT	
DRAINAGE FLOW ARROWS	
EROSION CONTROL LOG	ECL
SEDIMENT CONTROL FENCE	SCF
ROCK FILTER DAM	RFD#
EROSION CONTROL LOG (PREVIOUS PHASE)	ECL
SEDIMENT CONTROL FENCE (PREVIOUS PHASE)	SCF
ROCK FILTER DAM (PREVIOUS PHASE)	RFD#

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San Antonio, TX 78249
Phone: (210) 314-5458
TBPELS Registration No. 15685

NO.	REVISION	BY	DATE

stv
TEXAS REGISTERED
ENGINEERING FIRM
F-204

BLANCO ROAD PHASE III

STORMWATER POLLUTION PREVENTION PLAN PHASE 2
BEGIN TO STA 376+00

SHEET 1 OF 12

PROJECT NUMBER	SHEET NO.
CSJ: 0915 - 12 - 618	367

DESIGNED BY:	ROADWAY/HIGHWAY	
CHECKED BY:	BLANCO ROAD	
DRAWN BY:	STATE	COUNTY
CHECKED BY:	TEXAS	BEXAR

DATE: 1/24/2025 12:44:11 AM
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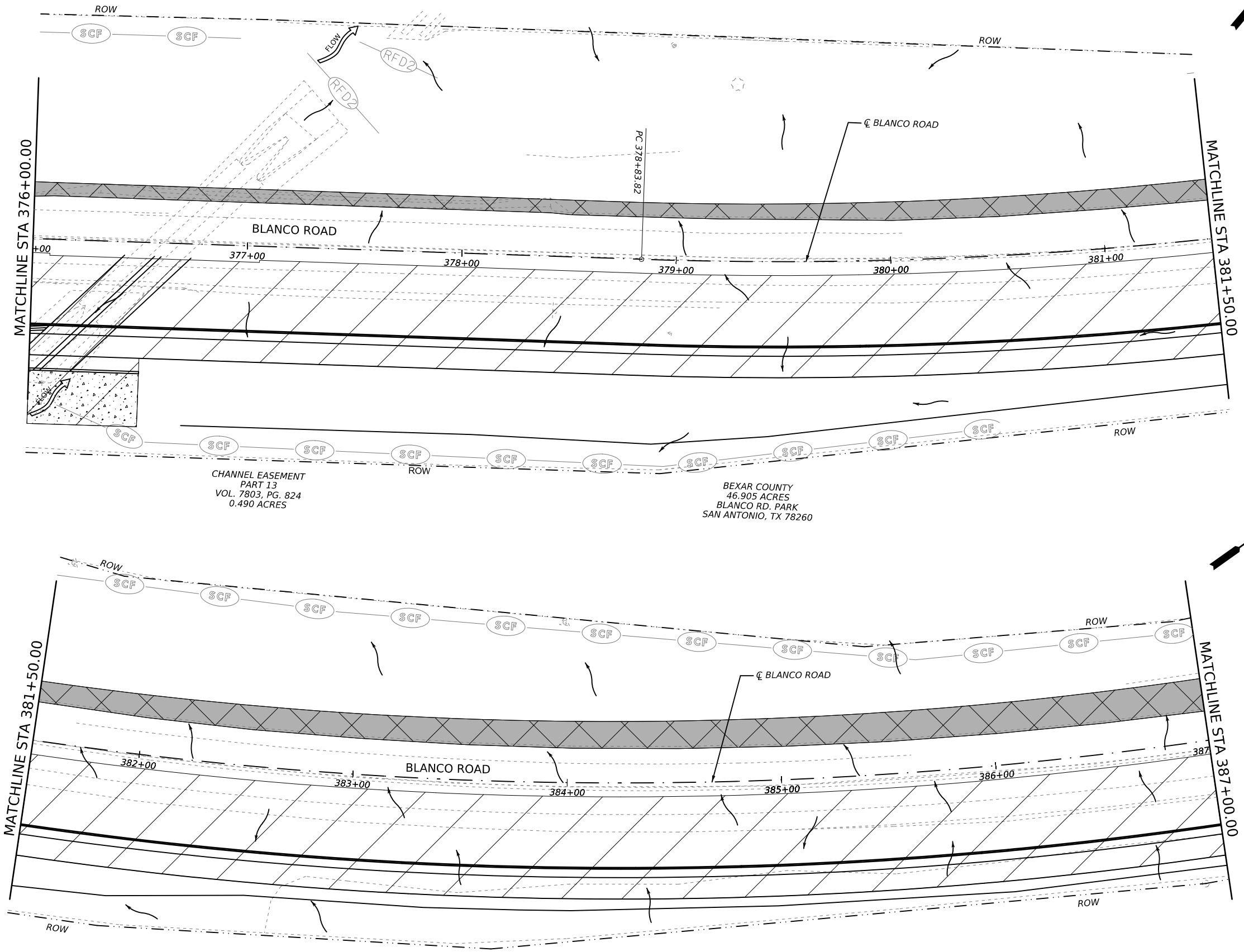

25 12.5 0 25 50
SCALE FEET

N

LEGEND

WORK ZONE	
TEMPORARY PAVEMENT	
CONSTRUCTED PREVIOUS PHASE	
CONSTRUCTED TEMPORARY PAVEMENT	
DRAINAGE FLOW ARROWS	
EROSION CONTROL LOG	ECL
SEDIMENT CONTROL FENCE	SCF
ROCK FILTER DAM	RFD#
EROSION CONTROL LOG (PREVIOUS PHASE)	ECL
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ROCK FILTER DAM (PREVIOUS PHASE)	RFD#

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TBPELS Registration No. 15685

NO.	REVISION	BY	DATE

stv
TEXAS REGISTERED
ENGINEERING FIRM
F-204

BLANCO ROAD PHASE III

STORMWATER POLLUTION PREVENTION PLAN PHASE 2
STA 376+00 TO STA 387+00

SHEET 2 OF 12

PROJECT NUMBER	SHEET NO.
CSJ: 0915 - 12 - 618	368

DESIGNED BY:	ROADWAY/HIGHWAY	
CHECKED BY:	BLANCO ROAD	
DRAWN BY:	STATE	COUNTY
CHECKED BY:	TEXAS	BEXAR

DATE: 1/24/2025 12:44:20 AM
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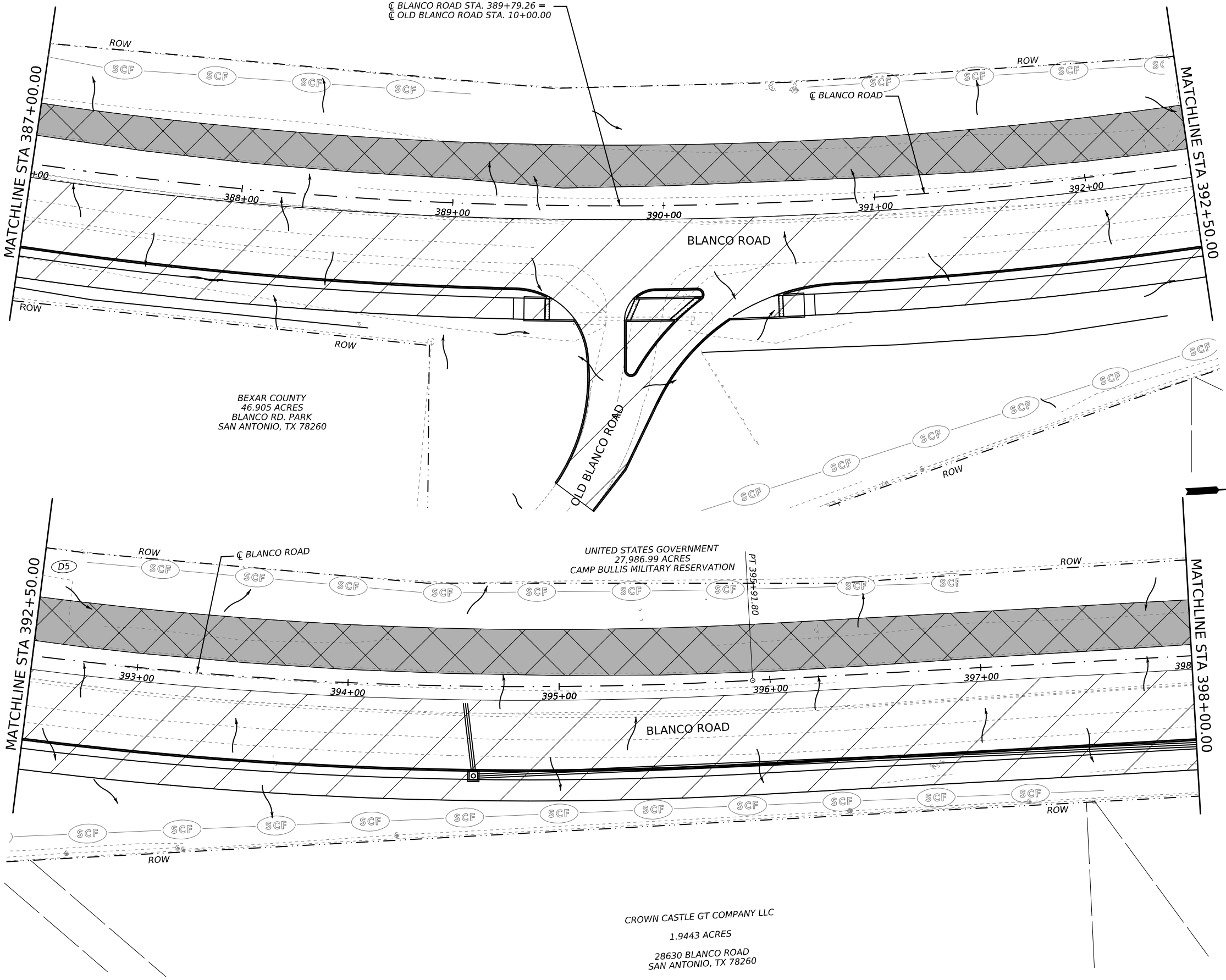

25 12.5 0 25 50
SCALE FEET

LEGEND

WORK ZONE	
TEMPORARY PAVEMENT	
CONSTRUCTED PREVIOUS PHASE	
CONSTRUCTED TEMPORARY PAVEMENT	
DRAINAGE FLOW ARROWS	
EROSION CONTROL LOG	ECL
SEDIMENT CONTROL FENCE	SCF
ROCK FILTER DAM	RFD#
EROSION CONTROL LOG (PREVIOUS PHASE)	ECL
SEDIMENT CONTROL FENCE (PREVIOUS PHASE)	SCF
ROCK FILTER DAM (PREVIOUS PHASE)	RFD#

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NO.	REVISION	BY	DATE

stv
TEXAS REGISTERED ENGINEERING FIRM F-204

BLANCO ROAD PHASE III

STORMWATER POLLUTION PREVENTION PLAN PHASE 2
STA 387+00 TO STA 398+00

SHEET 3 OF 12

PROJECT NUMBER	SHEET NO.
CSJ: 0915 - 12 - 618	369

DESIGNED BY:	ROADWAY/HIGHWAY	
CHECKED BY:	BLANCO ROAD	
DRAWN BY:	STATE	COUNTY
CHECKED BY:	TEXAS	BEXAR

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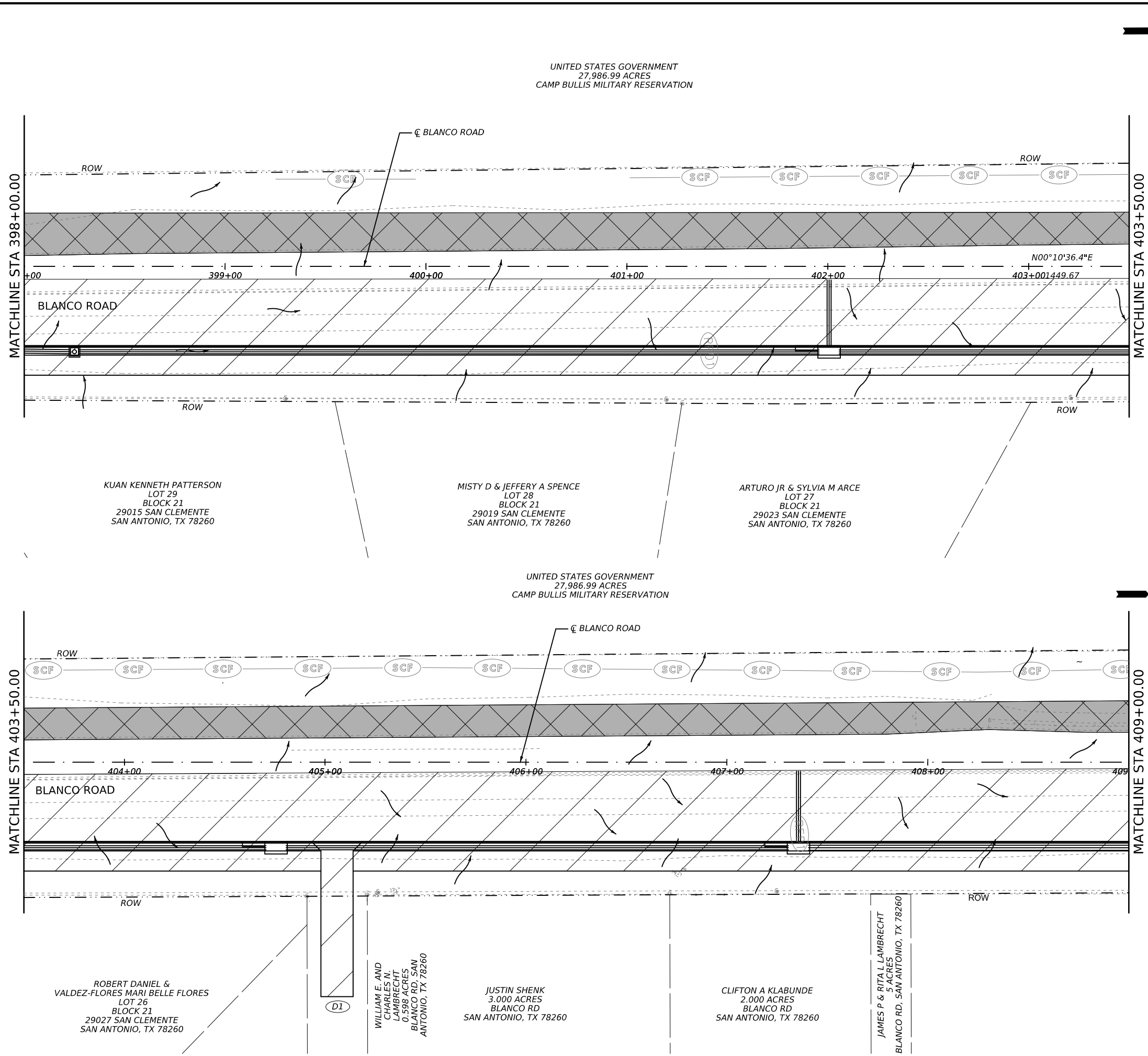

N

25 12.5 0 25 50
SCALE FEET

LEGEND

WORK ZONE	
TEMPORARY PAVEMENT	
CONSTRUCTED PREVIOUS PHASE	
CONSTRUCTED TEMPORARY PAVEMENT	
DRAINAGE FLOW ARROWS	
EROSION CONTROL LOG	ECL
SEDIMENT CONTROL FENCE	SCF
ROCK FILTER DAM	RFD#
EROSION CONTROL LOG (PREVIOUS PHASE)	ECL
SEDIMENT CONTROL FENCE (PREVIOUS PHASE)	SCF
ROCK FILTER DAM (PREVIOUS PHASE)	RFD#

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TEXAS REGISTERED
ENGINEERING FIRM
F-204

BLANCO ROAD PHASE III

STORMWATER POLLUTION PREVENTION PLAN PHASE 2
STA 398+00 TO STA 409+00

SHEET 4 OF 12

PROJECT NUMBER	SHEET NO.
CSJ: 0915 - 12 - 618	370

DESIGNED BY:	ROADWAY/HIGHWAY		
CHECKED BY:	BLANCO ROAD		
DRAWN BY:	STATE	COUNTY	
CHECKED BY:	TEXAS	BEXAR	

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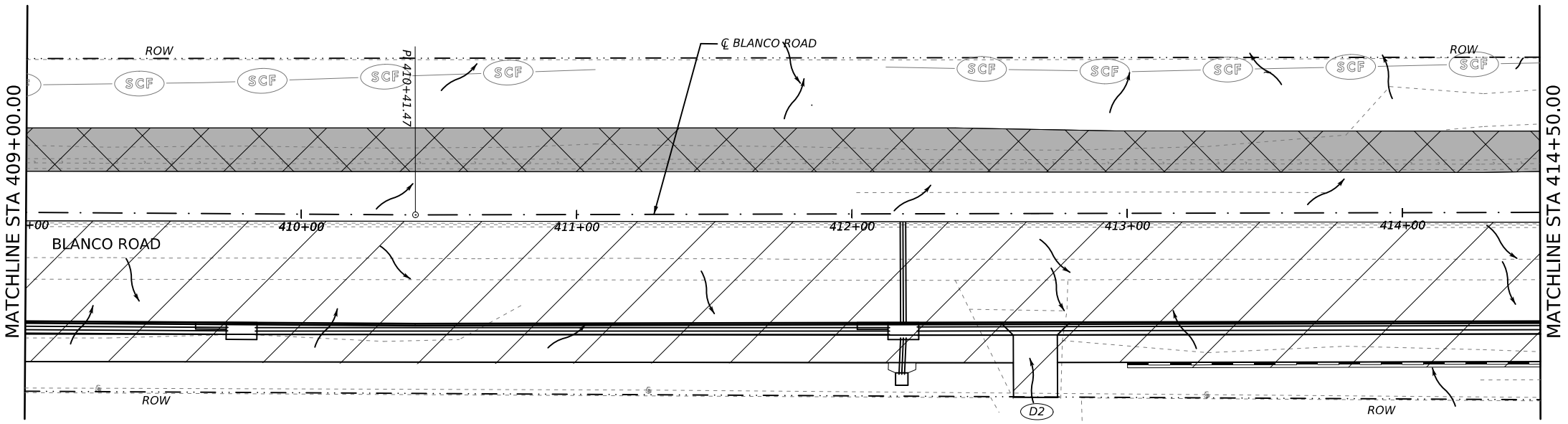
UNITED STATES GOVERNMENT
27,986.99 ACRES
CAMP BULLIS MILITARY RESERVATION



CLIFTON A KLABNUDE
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28550 BLANCO RD
SAN ANTONIO, TX 78260

N

25 12.5 0 25 50
SCALE FEET

LEGEND

WORK ZONE	
TEMPORARY PAVEMENT	
CONSTRUCTED PREVIOUS PHASE	
CONSTRUCTED TEMPORARY PAVEMENT	
DRAINAGE FLOW ARROWS	
EROSION CONTROL LOG	ECL
SEDIMENT CONTROL FENCE	SCF
ROCK FILTER DAM	RFD#
EROSION CONTROL LOG (PREVIOUS PHASE)	ECL
SEDIMENT CONTROL FENCE (PREVIOUS PHASE)	SCF
ROCK FILTER DAM (PREVIOUS PHASE)	RFD#

NOTES:

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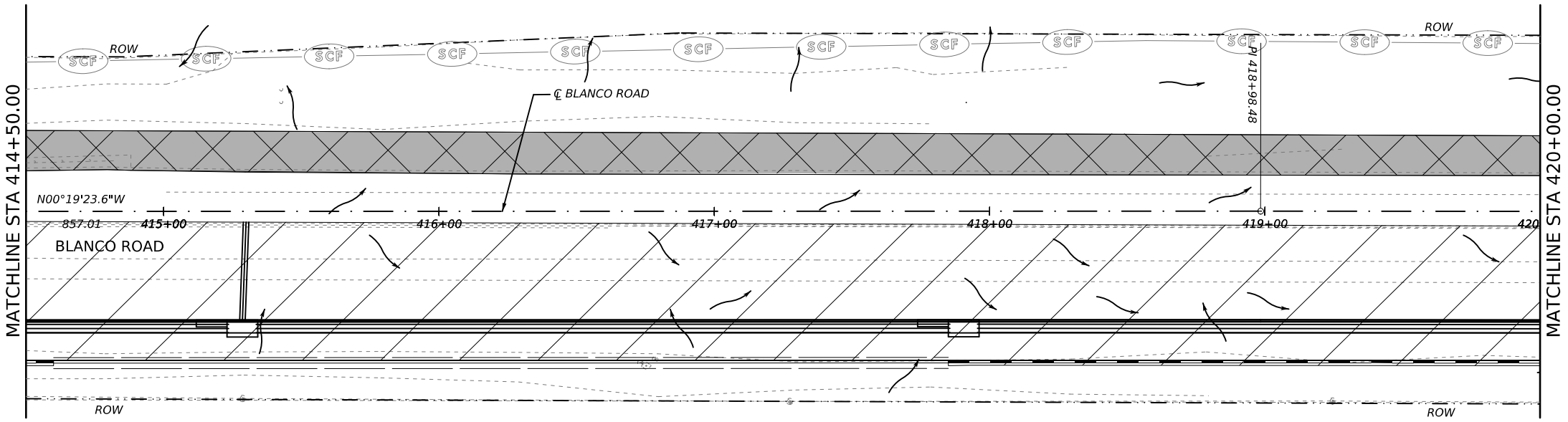
UNITED STATES GOVERNMENT
27,986.99 ACRES
CAMP BULLIS MILITARY RESERVATION



CLIFTON A KLABNUDE
40.1277 ACRES
28550 BLANCO RD
SAN ANTONIO, TX 78260

N

STATE OF TEXAS
JUAN CARLOS SANCHEZ
93954
LICENSED PROFESSIONAL ENGINEER
1/24/2025

BEXAR COUNTY
PUBLIC WORKS DEPARTMENT

SANCHEZ-SALAZAR & ASSOCIATES, LLC
4630 N. Loop 1604 W. Ste. 115
San Antonio, TX 78249
Phone: (210) 314-5458
TBPELS Registration No. 15685

NO.	REVISION	BY	DATE

stv
TEXAS REGISTERED ENGINEERING FIRM F-204

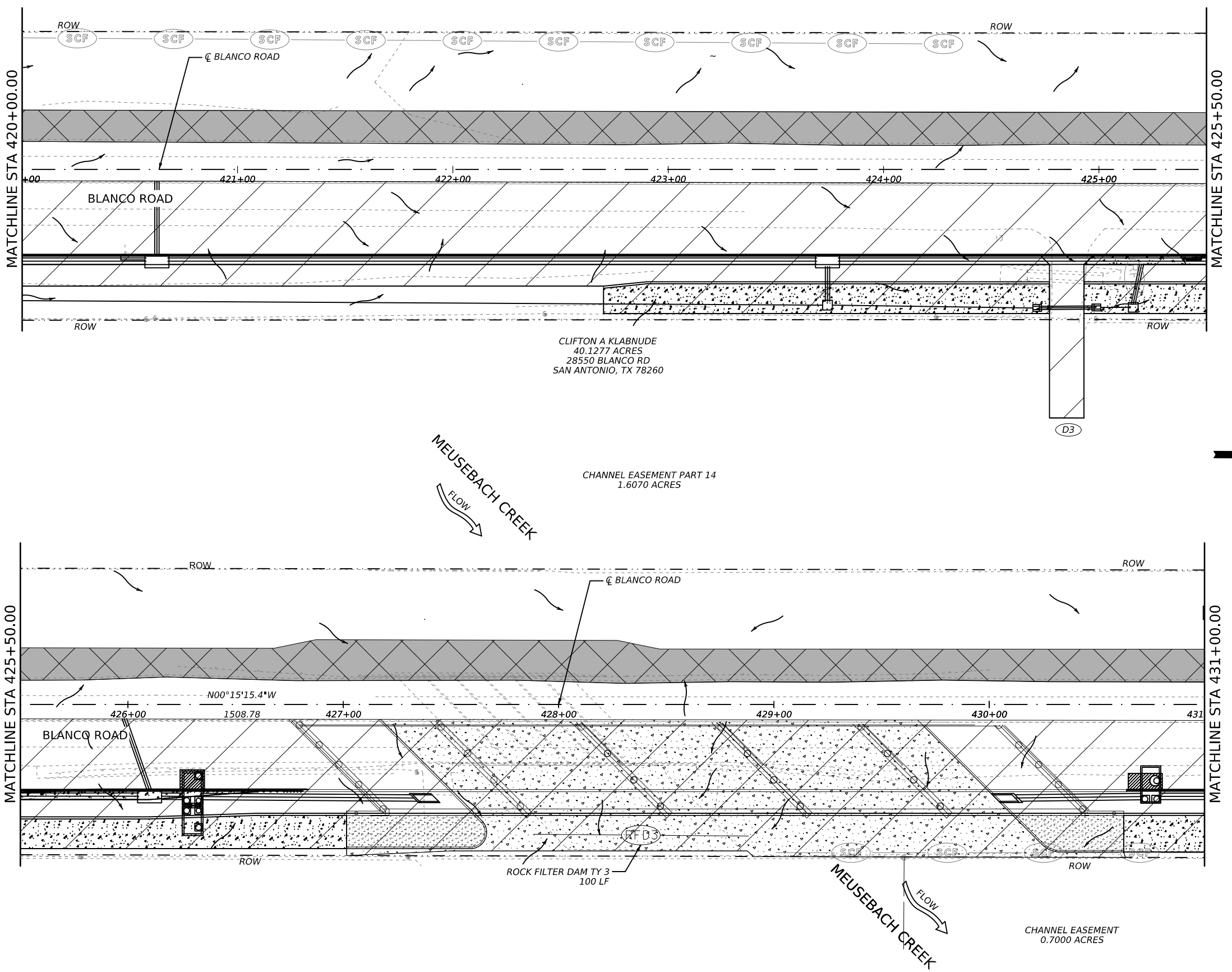
BLANCO ROAD PHASE III

STORMWATER POLLUTION PREVENTION PLAN PHASE 2
STA 409+00 TO STA 420+00

SHEET 5 OF 12

PROJECT NUMBER	SHEET NO.
CSJ: 0915 - 12 - 618	371

DESIGNED BY:	ROADWAY/HIGHWAY	
CHECKED BY:	BLANCO ROAD	
DRAWN BY:	STATE	COUNTY
CHECKED BY:	TEXAS	BEXAR



LEGEND

WORK ZONE	
TEMPORARY PAVEMENT	
CONSTRUCTED PREVIOUS PHASE	
CONSTRUCTED TEMPORARY PAVEMENT	
DRAINAGE FLOW ARROWS	
EROSION CONTROL LOG	ECL
SEDIMENT CONTROL FENCE	SCF
ROCK FILTER DAM	RFD#
EROSION CONTROL LOG (PREVIOUS PHASE)	ECL
SEDIMENT CONTROL FENCE (PREVIOUS PHASE)	SCF
ROCK FILTER DAM (PREVIOUS PHASE)	RFD#

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STATE OF TEXAS
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LICENSED
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1/24/2025

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4630 N. Loop 1604 W. Ste. 115
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Phone: (210) 314-5458
TBPELS Registration No. 15685

NO.	REVISION	BY	DATE

stv
TEXAS REGISTERED
ENGINEERING FIRM
F-204

BLANCO ROAD PHASE III

STORMWATER POLLUTION PREVENTION PLAN PHASE 2
STA 420+00 TO STA 431+00

SHEET 6 OF 12

PROJECT NUMBER	SHEET NO.
CSJ: 0915 - 12 - 618	372

DESIGNED BY:	ROADWAY/HIGHWAY	
CHECKED BY:	BLANCO ROAD	
DRAWN BY:	STATE	COUNTY
CHECKED BY:	TEXAS	BEXAR

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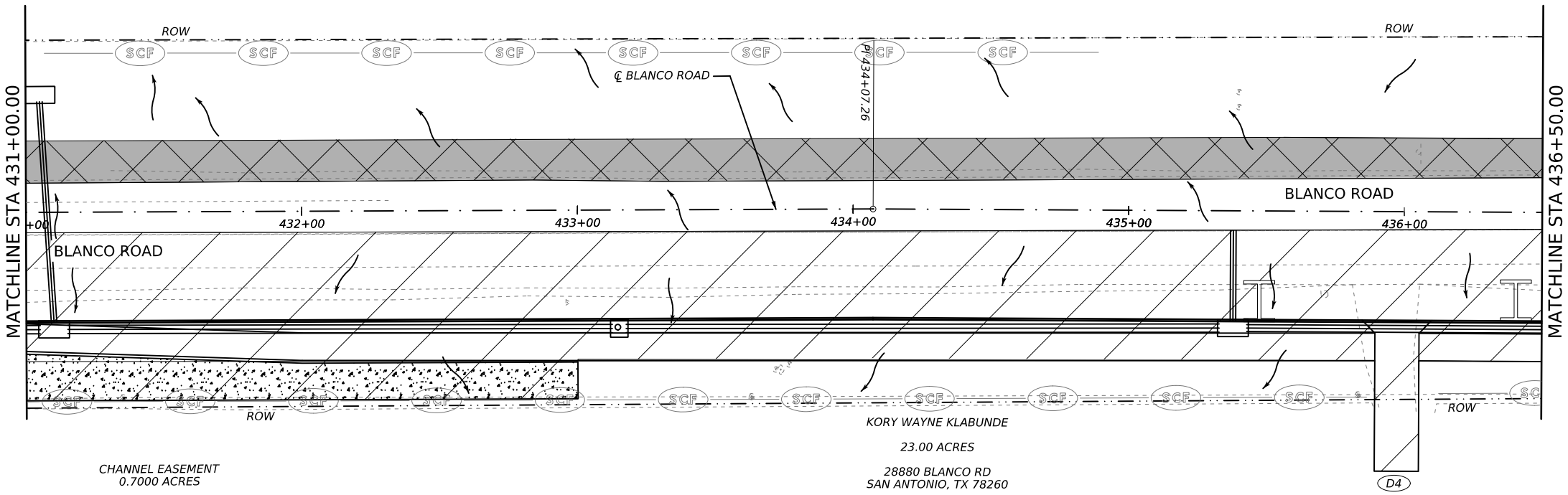

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SCALE FEET

LEGEND

WORK ZONE	
TEMPORARY PAVEMENT	
CONSTRUCTED PREVIOUS PHASE	
CONSTRUCTED TEMPORARY PAVEMENT	
DRAINAGE FLOW ARROWS	
EROSION CONTROL LOG	ECL
SEDIMENT CONTROL FENCE	SCF
ROCK FILTER DAM	RFD#
EROSION CONTROL LOG (PREVIOUS PHASE)	ECL
SEDIMENT CONTROL FENCE (PREVIOUS PHASE)	SCF
ROCK FILTER DAM (PREVIOUS PHASE)	RFD#

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1/24/2025

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4630 N. Loop 1604 W. Ste. 115
San Antonio, TX 78249
Phone: (210) 314-5458
TBPELS Registration No. 15685

NO.	REVISION	BY	DATE

stv
TEXAS REGISTERED ENGINEERING FIRM F-204

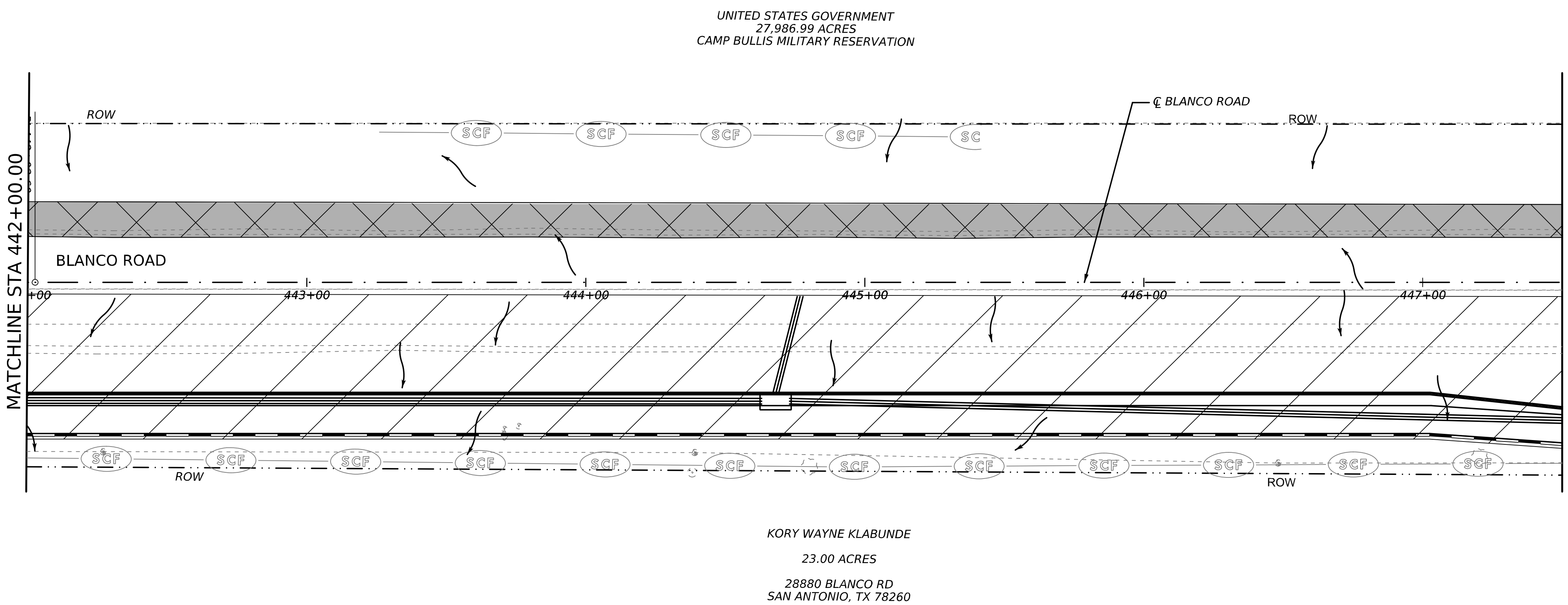
BLANCO ROAD PHASE III

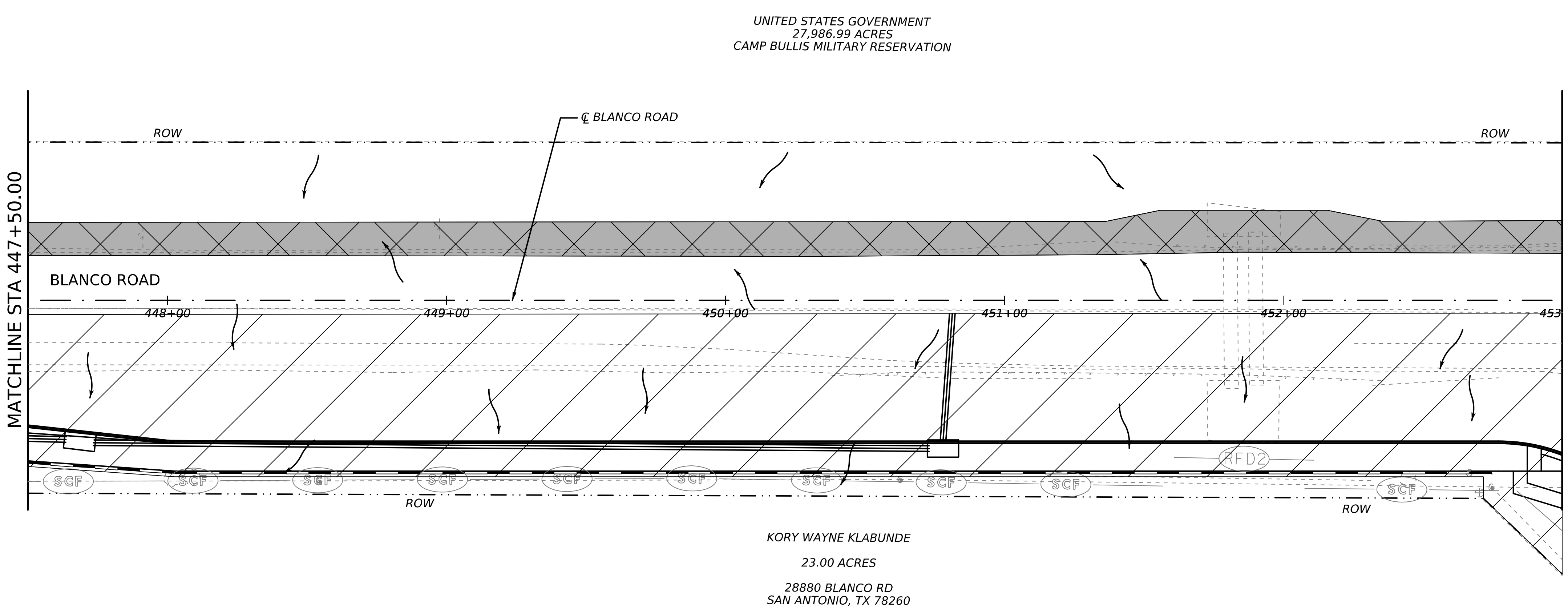
STORMWATER POLLUTION PREVENTION PLAN PHASE 2
STA 431+00 TO STA 442+00

SHEET 7 OF 12

PROJECT NUMBER	SHEET NO.
CSJ: 0915 - 12 - 618	373

DESIGNED BY:	ROADWAY/HIGHWAY	
CHECKED BY:	BLANCO ROAD	
DRAWN BY:	STATE	COUNTY
CHECKED BY:	TEXAS	BEXAR





25 12.5 0 25 50
SCALE FEET

LEGEND

WORK ZONE	
TEMPORARY PAVEMENT	
CONSTRUCTED PREVIOUS PHASE	
CONSTRUCTED TEMPORARY PAVEMENT	
DRAINAGE FLOW ARROWS	
EROSION CONTROL LOG	ECL
SEDIMENT CONTROL FENCE	SCF
ROCK FILTER DAM	RFD#
EROSION CONTROL LOG (PREVIOUS PHASE)	ECL
SEDIMENT CONTROL FENCE (PREVIOUS PHASE)	SCF
ROCK FILTER DAM (PREVIOUS PHASE)	RFD#

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STATE OF TEXAS
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1/24/2025

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SANCHEZ-SALAZAR & ASSOCIATES, LLC
4630 N. Loop 1604 W. Ste. 115
San Antonio, TX 78249
Phone: (210) 314-5458
TBPELS Registration No. 15685

NO.	REVISION	BY	DATE

stv
TEXAS REGISTERED ENGINEERING FIRM F-204

BLANCO ROAD PHASE III

STORMWATER POLLUTION PREVENTION PLAN PHASE 2
STA 442+00 TO STA 453+00

SHEET 8 OF 12

PROJECT NUMBER	SHEET NO.
CSJ: 0915 - 12 - 618	374

DESIGNED BY:	ROADWAY/HIGHWAY
CHECKED BY:	BLANCO ROAD
DRAWN BY:	STATE: TEXAS / COUNTY: BEXAR
CHECKED BY:	

DATE: 1/24/2025 12:45:17 AM
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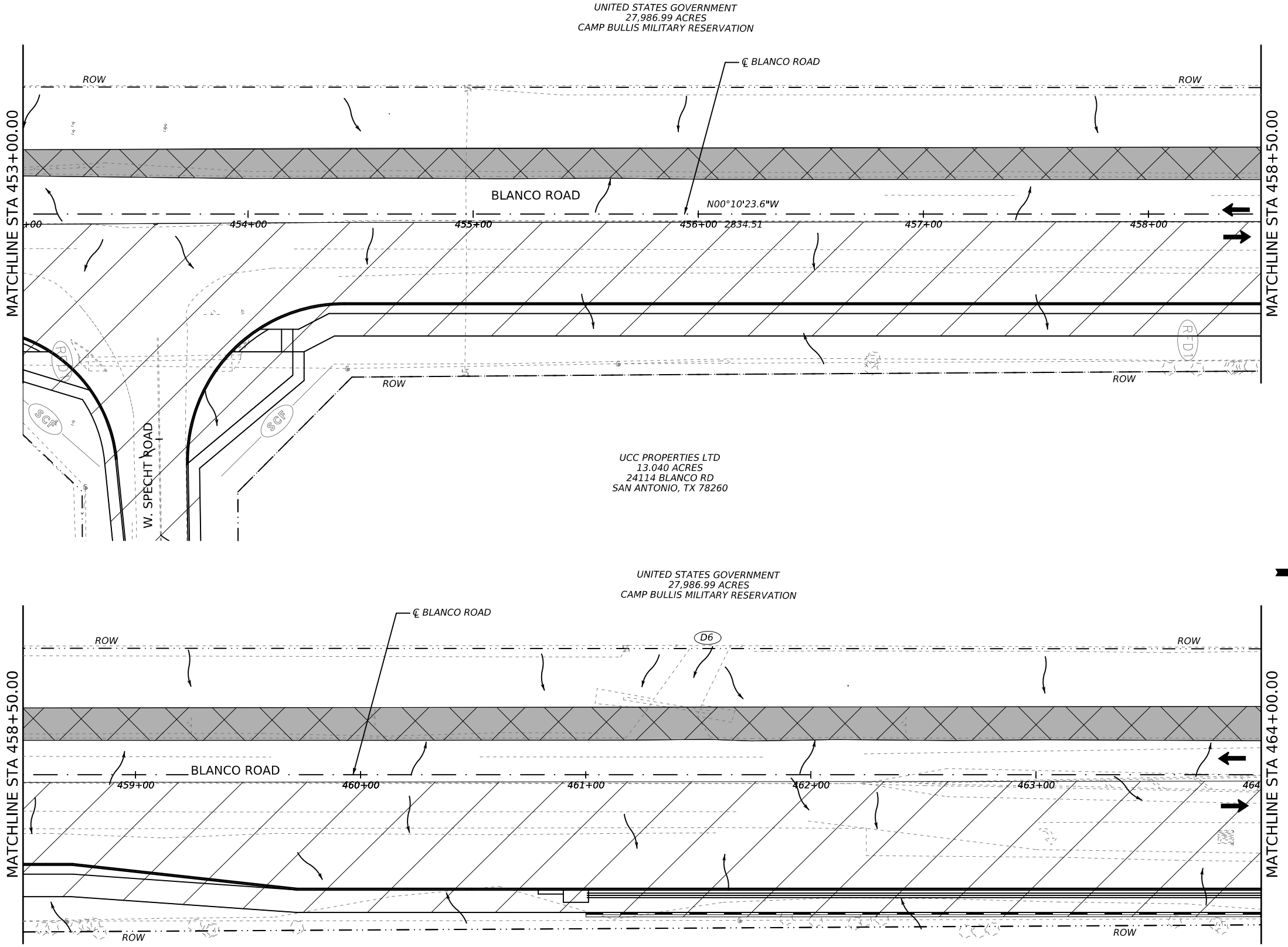

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25 12.5 0 25 50
SCALE FEET

LEGEND

WORK ZONE	
TEMPORARY PAVEMENT	
CONSTRUCTED PREVIOUS PHASE	
CONSTRUCTED TEMPORARY PAVEMENT	
DRAINAGE FLOW ARROWS	
EROSION CONTROL LOG	ECL
SEDIMENT CONTROL FENCE	SCF
ROCK FILTER DAM	RFD#
EROSION CONTROL LOG (PREVIOUS PHASE)	ECL
SEDIMENT CONTROL FENCE (PREVIOUS PHASE)	SCF
ROCK FILTER DAM (PREVIOUS PHASE)	RFD#

NOTES:

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1/24/2025

BEXAR COUNTY
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San Antonio, TX 78249
Phone: (210) 314-5458
TBPELS Registration No. 15685

NO.	REVISION	BY	DATE

stv
TEXAS REGISTERED
ENGINEERING FIRM
F-204

BLANCO ROAD PHASE III

STORMWATER POLLUTION PREVENTION PLAN PHASE 2
STA 453+00 TO STA 464+00

SHEET 9 OF 12

PROJECT NUMBER	SHEET NO.
CSJ: 0915 - 12 - 618	375

DESIGNED BY:	ROADWAY/HIGHWAY	
CHECKED BY:	BLANCO ROAD	
DRAWN BY:	STATE	COUNTY
CHECKED BY:	TEXAS	BEXAR

DATE: 1/24/2025 12:45:27 AM
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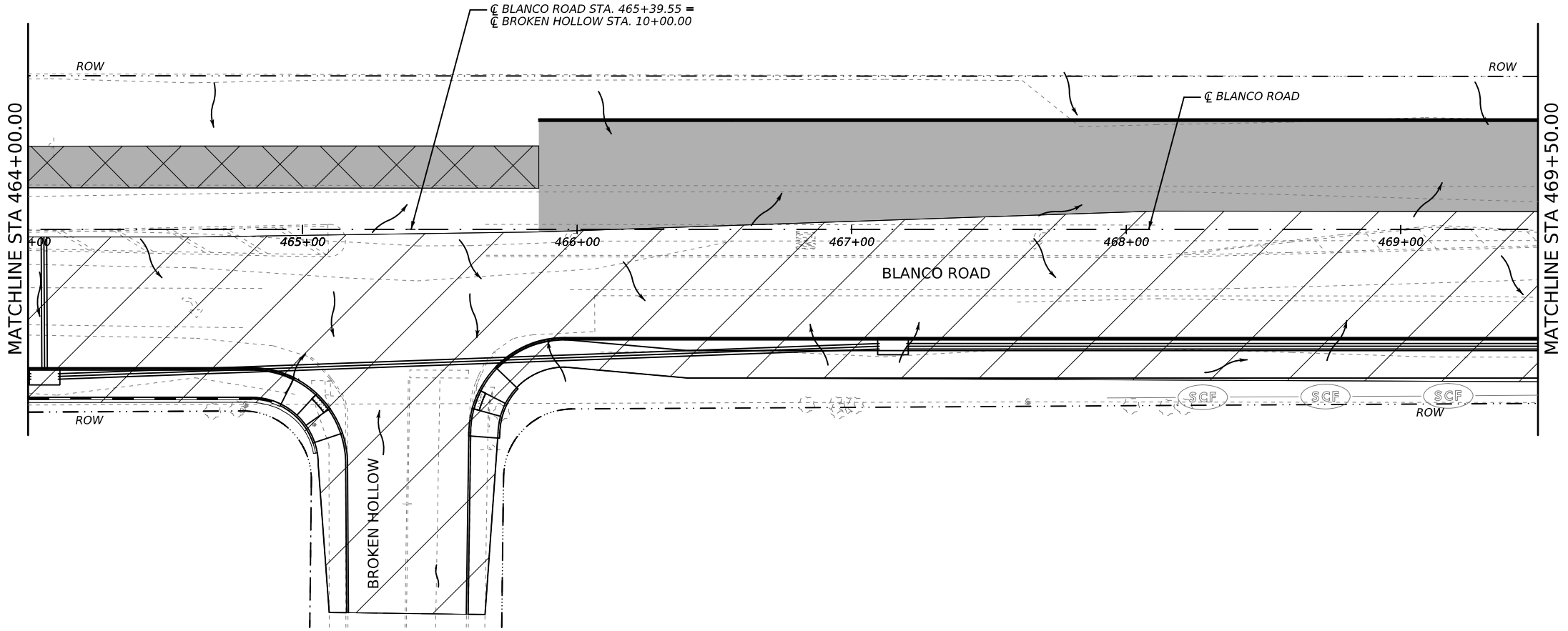

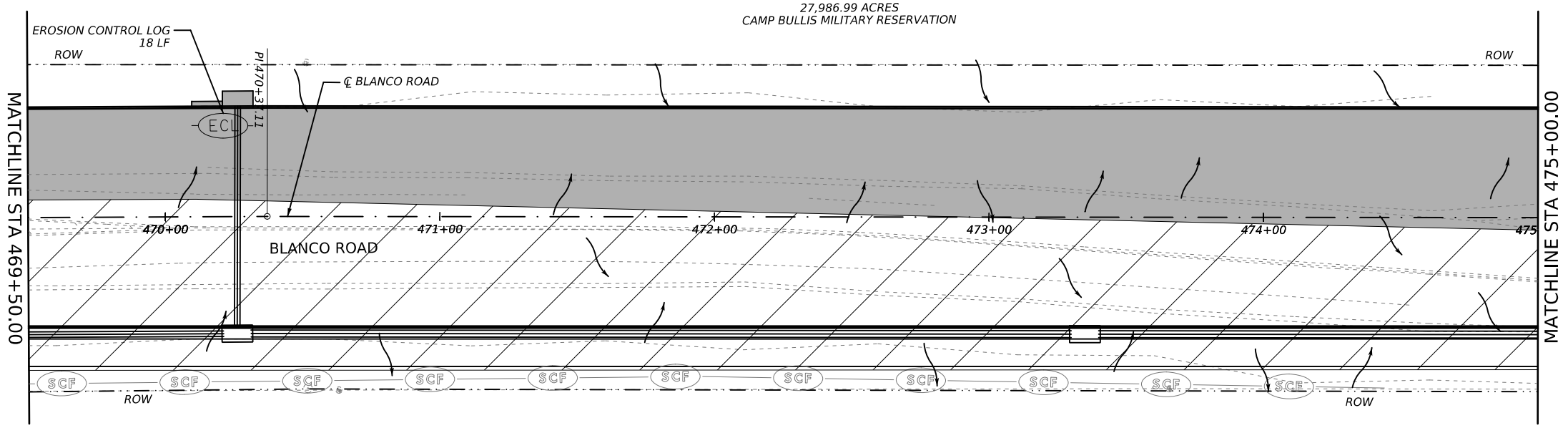

UCC PROPERTIES LTD
13.791 ACRES
24114 BLANCO RD
SAN ANTONIO, TX 78260

25 12.5 0 25 50
SCALE FEET

LEGEND

WORK ZONE	
TEMPORARY PAVEMENT	
CONSTRUCTED PREVIOUS PHASE	
CONSTRUCTED TEMPORARY PAVEMENT	
DRAINAGE FLOW ARROWS	
EROSION CONTROL LOG	ECL
SEDIMENT CONTROL FENCE	SCF
ROCK FILTER DAM	RFD#
EROSION CONTROL LOG (PREVIOUS PHASE)	ECL
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ROCK FILTER DAM (PREVIOUS PHASE)	RFD#

NOTES:

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STATE OF TEXAS
JUAN CARLOS SANCHEZ
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LICENSED PROFESSIONAL ENGINEER
1/24/2025

BEXAR COUNTY
PUBLIC WORKS DEPARTMENT

SANCHEZ-SALAZAR & ASSOCIATES, LLC
4630 N. Loop 1604 W. Ste. 115
San Antonio, TX 78249
Phone: (210) 314-5458
TBPELS Registration No. 15685

NO.	REVISION	BY	DATE

stv
TEXAS REGISTERED ENGINEERING FIRM F-204

BLANCO ROAD PHASE III

STORMWATER POLLUTION PREVENTION PLAN PHASE 2
STA 464+00 TO STA 475+00

SHEET 10 OF 12

PROJECT NUMBER	SHEET NO.
CSJ: 0915 - 12 - 618	376

DESIGNED BY:	ROADWAY/HIGHWAY	
CHECKED BY:	BLANCO ROAD	
DRAWN BY:	STATE	COUNTY
CHECKED BY:	TEXAS	BEXAR

DATE: 1/24/2025 12:45:37 AM
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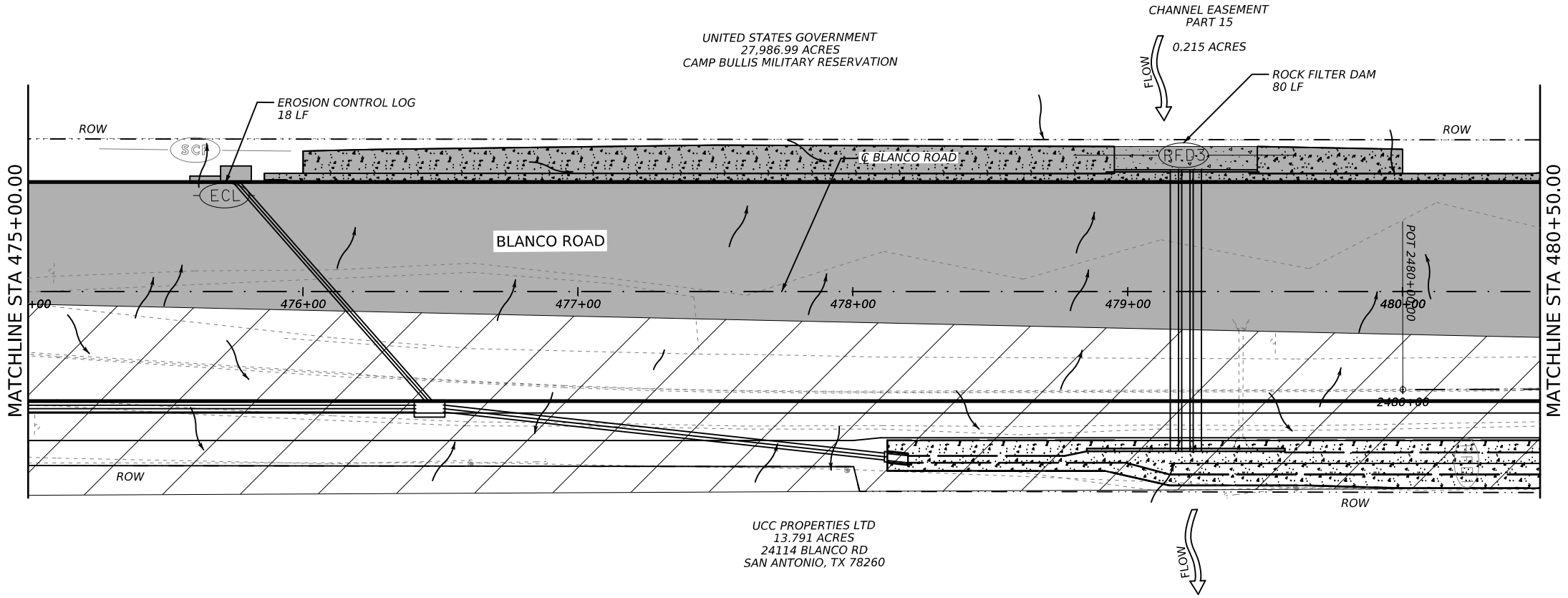

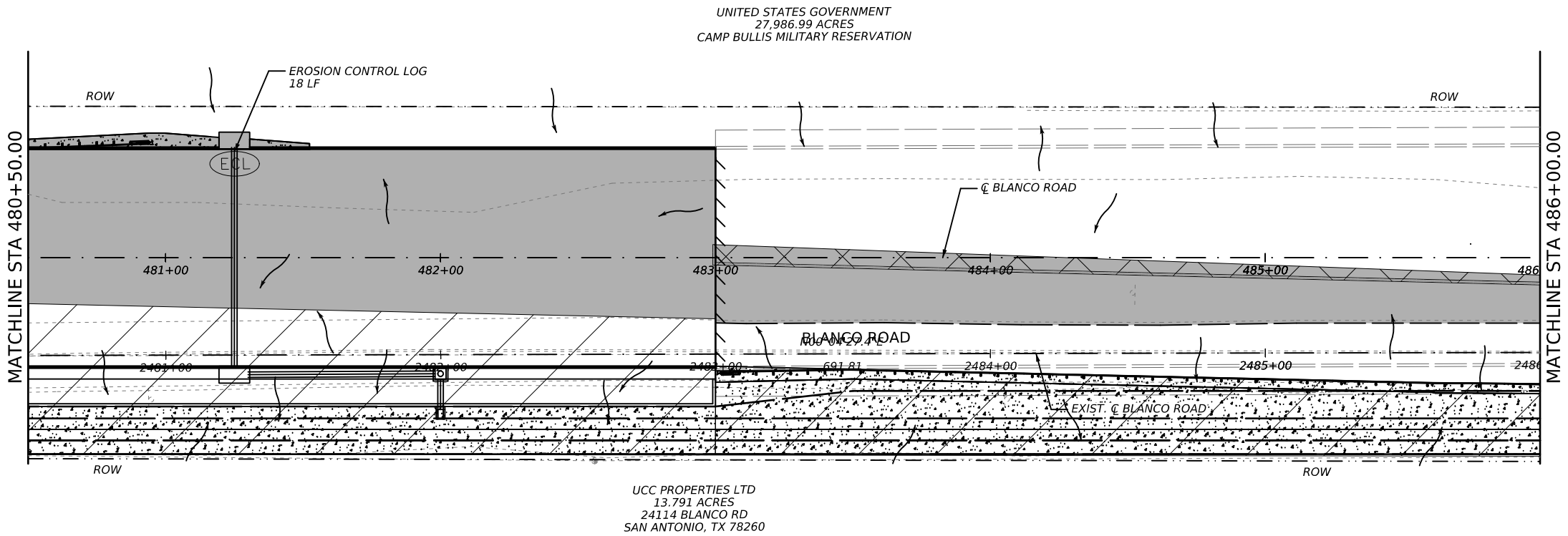

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25 12.5 0 25 50
SCALE FEET

LEGEND

WORK ZONE	
TEMPORARY PAVEMENT	
CONSTRUCTED PREVIOUS PHASE	
CONSTRUCTED TEMPORARY PAVEMENT	
DRAINAGE FLOW ARROWS	
EROSION CONTROL LOG	ECL
SEDIMENT CONTROL FENCE	SCF
ROCK FILTER DAM	RFD#
EROSION CONTROL LOG (PREVIOUS PHASE)	ECL
SEDIMENT CONTROL FENCE (PREVIOUS PHASE)	SCF
ROCK FILTER DAM (PREVIOUS PHASE)	RFD#

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1/24/2025

BEXAR COUNTY
PUBLIC WORKS DEPARTMENT

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4630 N. Loop 1604 W. Ste. 115
San Antonio, TX 78249
Phone: (210) 314-5458
TBPELS Registration No. 15685

NO.	REVISION	BY	DATE

stv
TEXAS REGISTERED ENGINEERING FIRM F-204

BLANCO ROAD PHASE III

STORMWATER POLLUTION PREVENTION PLAN PHASE 2
STA 475+00 TO STA 486+00

SHEET 11 OF 12

PROJECT NUMBER	SHEET NO.
CSJ: 0915 - 12 - 618	377

DESIGNED BY:	ROADWAY/HIGHWAY	
CHECKED BY:	BLANCO ROAD	
DRAWN BY:	STATE	COUNTY
CHECKED BY:	TEXAS	BEXAR

DATE: 1/24/2025 12:45:47 AM
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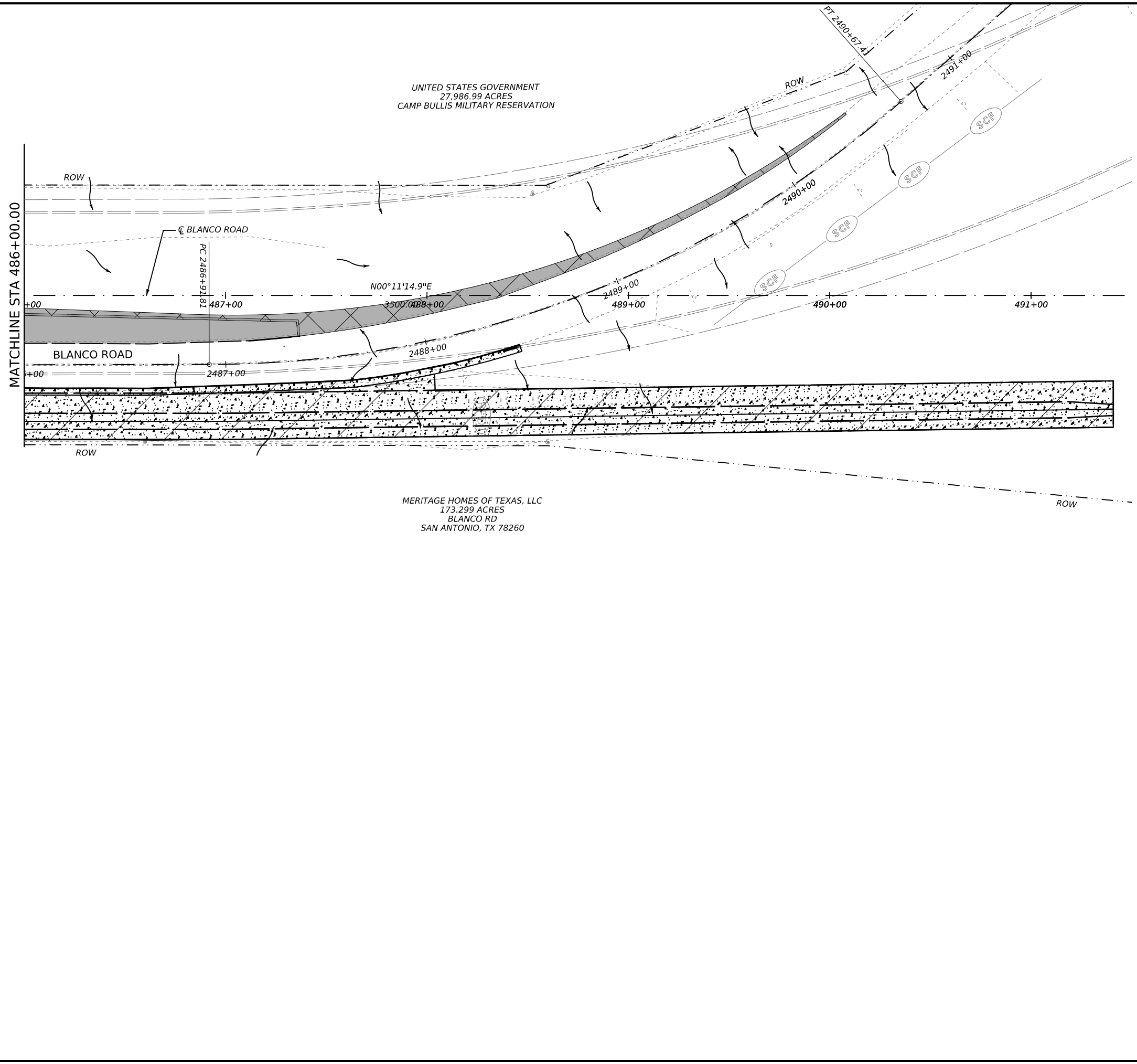

25 12.5 0 25 50
SCALE FEET

N

LEGEND

WORK ZONE	
TEMPORARY PAVEMENT	
CONSTRUCTED PREVIOUS PHASE	
CONSTRUCTED TEMPORARY PAVEMENT	
DRAINAGE FLOW ARROWS	
EROSION CONTROL LOG	ECL
SEDIMENT CONTROL FENCE	SCF
ROCK FILTER DAM	RFD#
EROSION CONTROL LOG (PREVIOUS PHASE)	ECL
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ROCK FILTER DAM (PREVIOUS PHASE)	RFD#

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1/24/2025

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San Antonio, TX 78249
Phone: (210) 314-5458
TBPELS Registration No. 15685

NO.	REVISION	BY	DATE

stv
TEXAS REGISTERED
ENGINEERING FIRM
F-204

BLANCO ROAD PHASE III

STORMWATER POLLUTION PREVENTION PLAN PHASE 2 STA 486+00 TO END

SHEET 12 OF 12

PROJECT NUMBER	SHEET NO.
CSJ: 0915 - 12 - 618	378

DESIGNED BY:	ROADWAY/HIGHWAY	
CHECKED BY:	BLANCO ROAD	
DRAWN BY:	STATE	COUNTY
CHECKED BY:	TEXAS	BEXAR

DATE: 1/24/2025 12:45:57 AM
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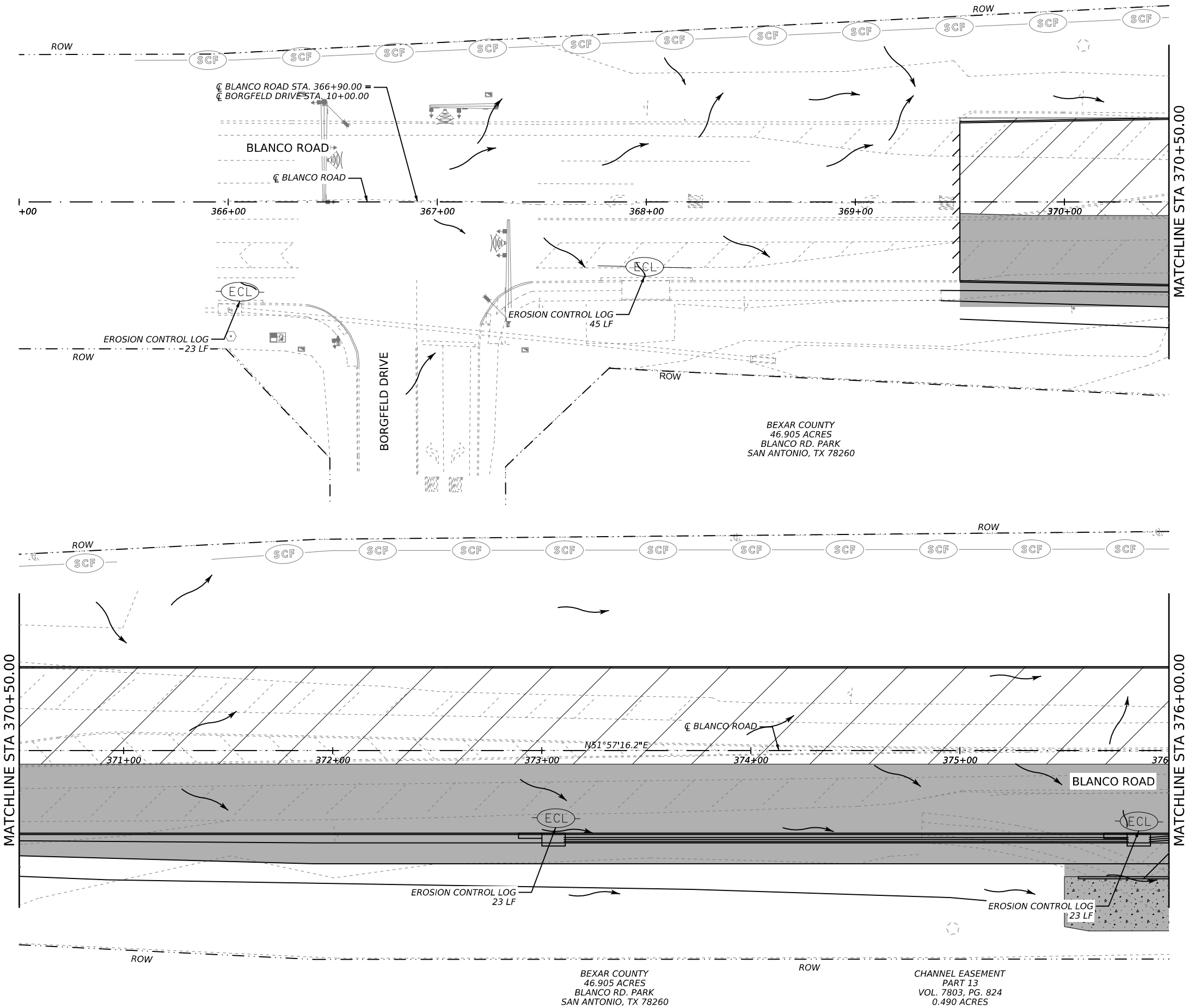

25 12.5 0 25 50
SCALE FEET

N

LEGEND

WORK ZONE	
TEMPORARY PAVEMENT	
CONSTRUCTED PREVIOUS PHASE	
CONSTRUCTED TEMPORARY PAVEMENT	
DRAINAGE FLOW ARROWS	
EROSION CONTROL LOG	ECL
SEDIMENT CONTROL FENCE	SCF
ROCK FILTER DAM	RFD#
EROSION CONTROL LOG (PREVIOUS PHASE)	ECL
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ROCK FILTER DAM (PREVIOUS PHASE)	RFD#

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1/24/2025

BEXAR COUNTY
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San Antonio, TX 78249
Phone: (210) 314-5458
TBPELS Registration No. 15685

NO.	REVISION	BY	DATE

stv
TEXAS REGISTERED
ENGINEERING FIRM
F-204

BLANCO ROAD PHASE III

STORMWATER POLLUTION PREVENTION PLAN PHASE 3 BEGIN TO STA 376+00

SHEET 1 OF 12

PROJECT NUMBER	SHEET NO.
CSJ: 0915 - 12 - 618	379

DESIGNED BY:	ROADWAY/HIGHWAY	
CHECKED BY:	BLANCO ROAD	
DRAWN BY:	STATE	COUNTY
CHECKED BY:	TEXAS	BEXAR

DATE: 1/24/2025 12:46:08 AM
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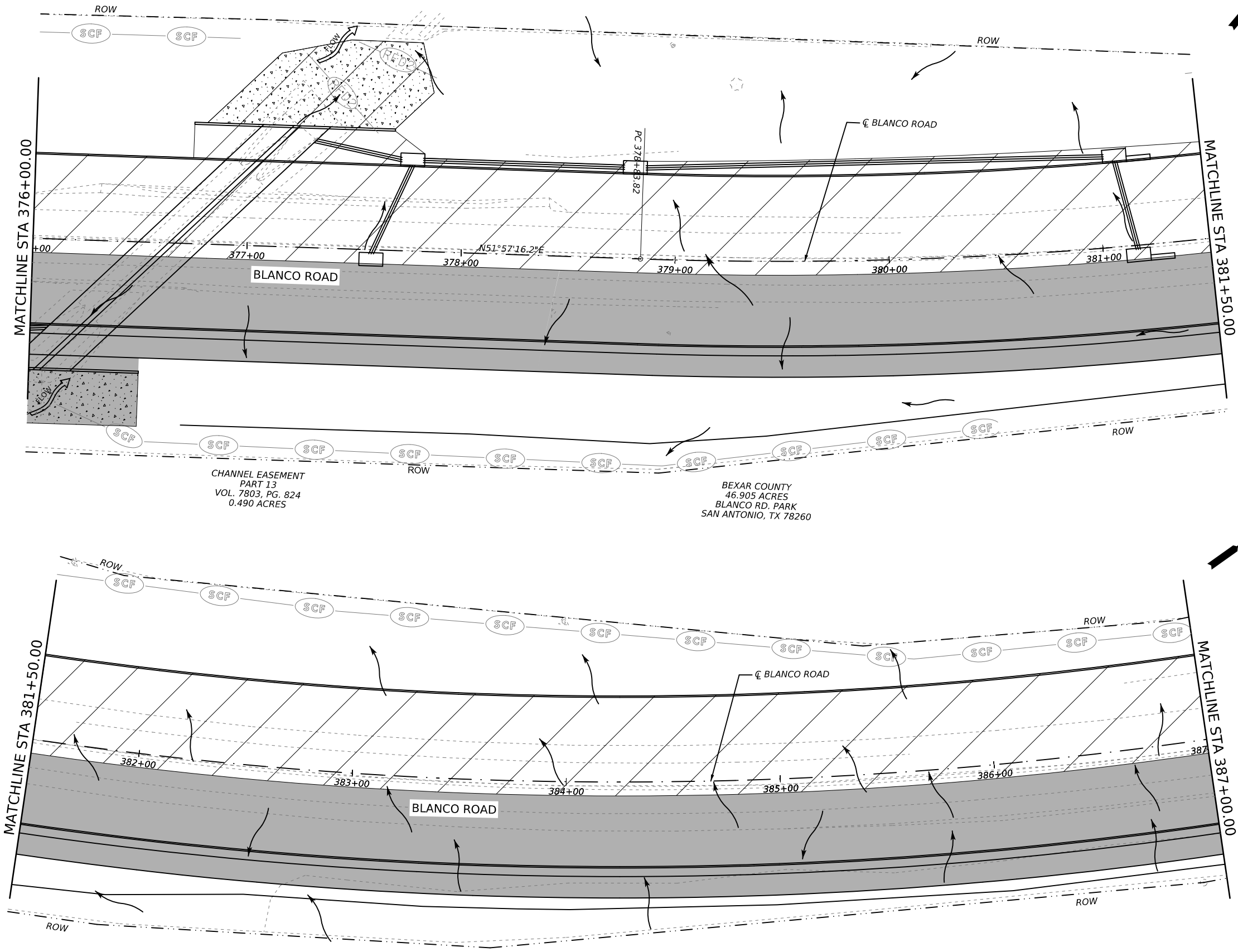

25 12.5 0 25 50
SCALE FEET

LEGEND

WORK ZONE	
TEMPORARY PAVEMENT	
CONSTRUCTED PREVIOUS PHASE	
CONSTRUCTED TEMPORARY PAVEMENT	
DRAINAGE FLOW ARROWS	
EROSION CONTROL LOG	ECL
SEDIMENT CONTROL FENCE	SCF
ROCK FILTER DAM	RFD#
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ROCK FILTER DAM (PREVIOUS PHASE)	RFD#

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San Antonio, TX 78249
Phone: (210) 314-5458
TBPELS Registration No. 15685

NO.	REVISION	BY	DATE

stv
TEXAS REGISTERED
ENGINEERING FIRM
F-204

BLANCO ROAD PHASE III

STORMWATER POLLUTION PREVENTION PLAN PHASE 3
STA 376+00 TO STA 387+00

SHEET 2 OF 12

PROJECT NUMBER		SHEET NO.
CSJ: 0915 - 12 - 618		380
DESIGNED BY:	ROADWAY/HIGHWAY	
CHECKED BY:	BLANCO ROAD	
DRAWN BY:	STATE	COUNTY
CHECKED BY:	TEXAS	BEXAR

DATE: 1/24/2025 12:46:18 AM
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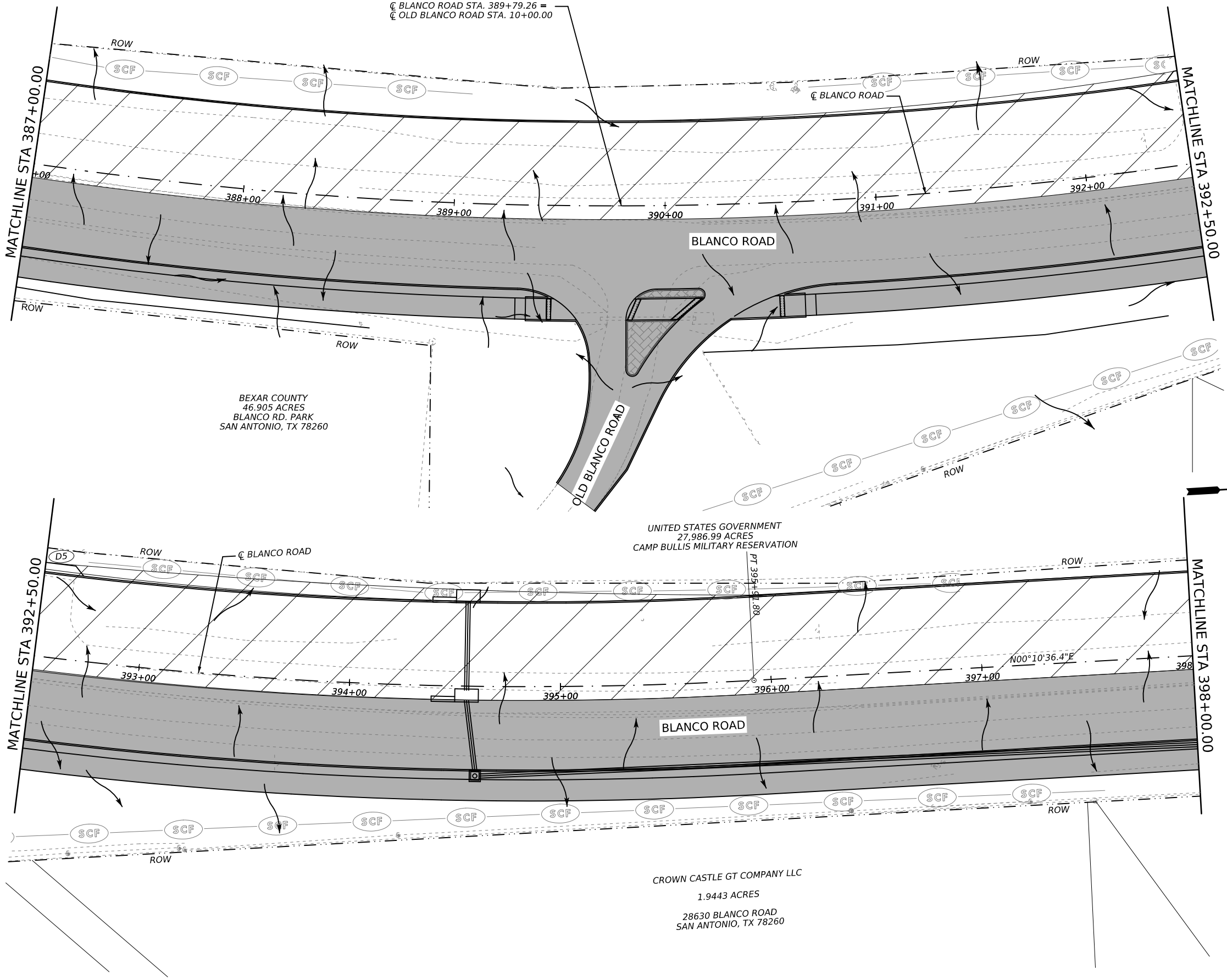

LEGEND

WORK ZONE	
TEMPORARY PAVEMENT	
CONSTRUCTED PREVIOUS PHASE	
CONSTRUCTED TEMPORARY PAVEMENT	
DRAINAGE FLOW ARROWS	
EROSION CONTROL LOG	ECL
SEDIMENT CONTROL FENCE	SCF
ROCK FILTER DAM	RFD#
EROSION CONTROL LOG (PREVIOUS PHASE)	ECL
SEDIMENT CONTROL FENCE (PREVIOUS PHASE)	SCF
ROCK FILTER DAM (PREVIOUS PHASE)	RFD#

NOTES:

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STATE OF TEXAS
JUAN CARLOS SANCHEZ
93954
LICENSED PROFESSIONAL ENGINEER
1/24/2025

BEXAR COUNTY
PUBLIC WORKS DEPARTMENT

SANCHEZ-SALAZAR & ASSOCIATES, LLC
4630 N. Loop 1604 W. Ste. 115
San Antonio, TX 78249
Phone: (210) 314-5458
TBPELS Registration No. 15685

NO.	REVISION	BY	DATE

stv
TEXAS REGISTERED ENGINEERING FIRM F-204

BLANCO ROAD PHASE III

STORMWATER POLLUTION PREVENTION PLAN PHASE 3
STA 387+00 TO STA 398+00

SHEET 3 OF 12

PROJECT NUMBER	SHEET NO.
CSJ: 0915 - 12 - 618	381

DESIGNED BY:	ROADWAY/HIGHWAY	
CHECKED BY:	BLANCO ROAD	
DRAWN BY:	STATE	COUNTY
CHECKED BY:	TEXAS	BEXAR

DATE: 1/24/2025 12:46:27 AM
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dw: ck: ck:

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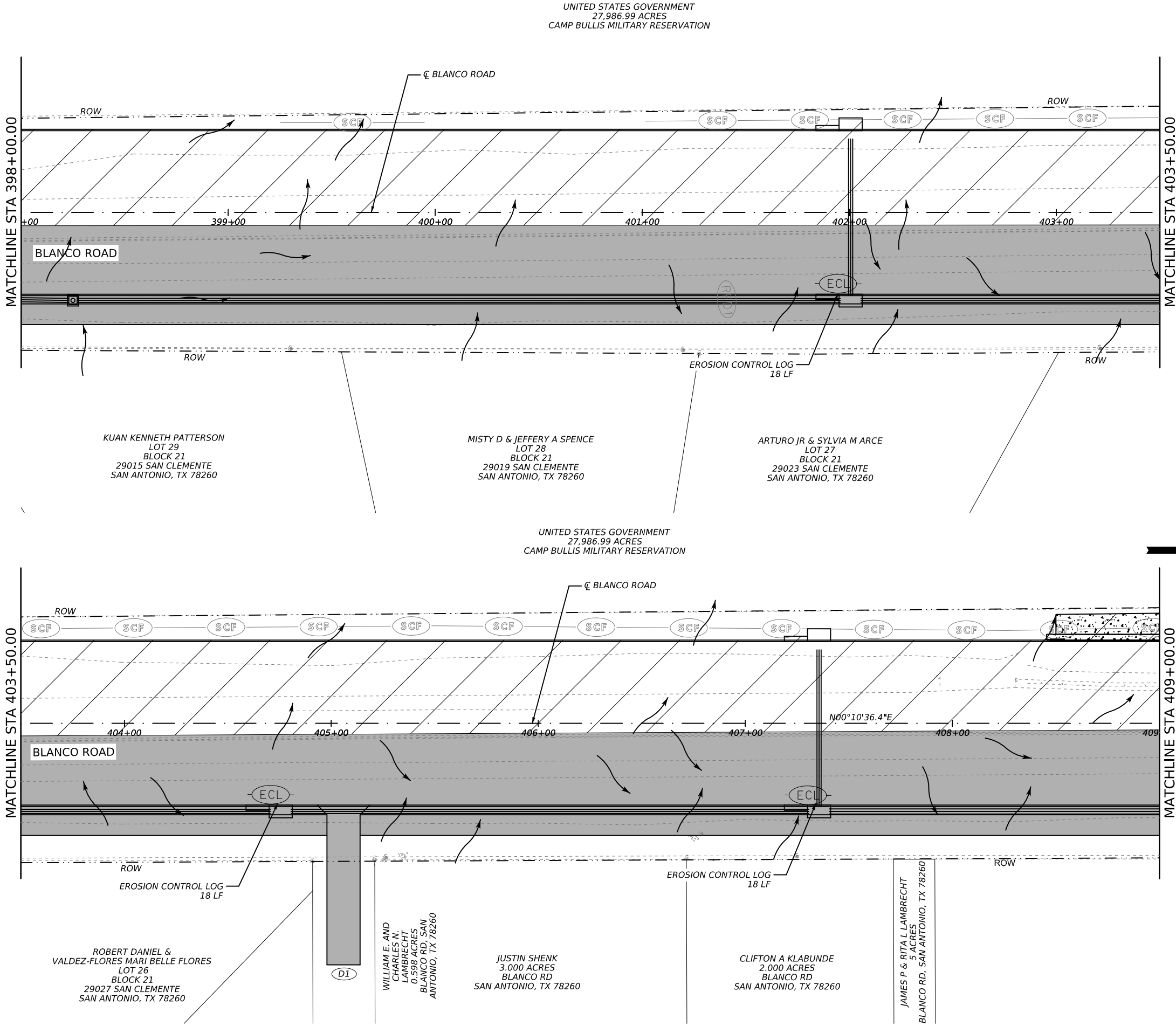

LEGEND

WORK ZONE	
TEMPORARY PAVEMENT	
CONSTRUCTED PREVIOUS PHASE	
CONSTRUCTED TEMPORARY PAVEMENT	
DRAINAGE FLOW ARROWS	
EROSION CONTROL LOG	ECL
SEDIMENT CONTROL FENCE	SCF
ROCK FILTER DAM	RFD#
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ROCK FILTER DAM (PREVIOUS PHASE)	RFD#

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Phone: (210) 314-5458
TBPELS Registration No. 15685

NO.	REVISION	BY	DATE

stv
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ENGINEERING FIRM
F-204

BLANCO ROAD PHASE III

STORMWATER POLLUTION PREVENTION PLAN PHASE 3
STA 398+00 TO STA 409+00

SHEET 4 OF 12

PROJECT NUMBER	SHEET NO.
CSJ: 0915 - 12 - 618	382

DESIGNED BY:	ROADWAY/HIGHWAY	
CHECKED BY:	BLANCO ROAD	
DRAWN BY:	STATE	COUNTY
CHECKED BY:	TEXAS	BEXAR

UNITED STATES GOVERNMENT
27,986.99 ACRES
CAMP BULLIS MILITARY RESERVATION

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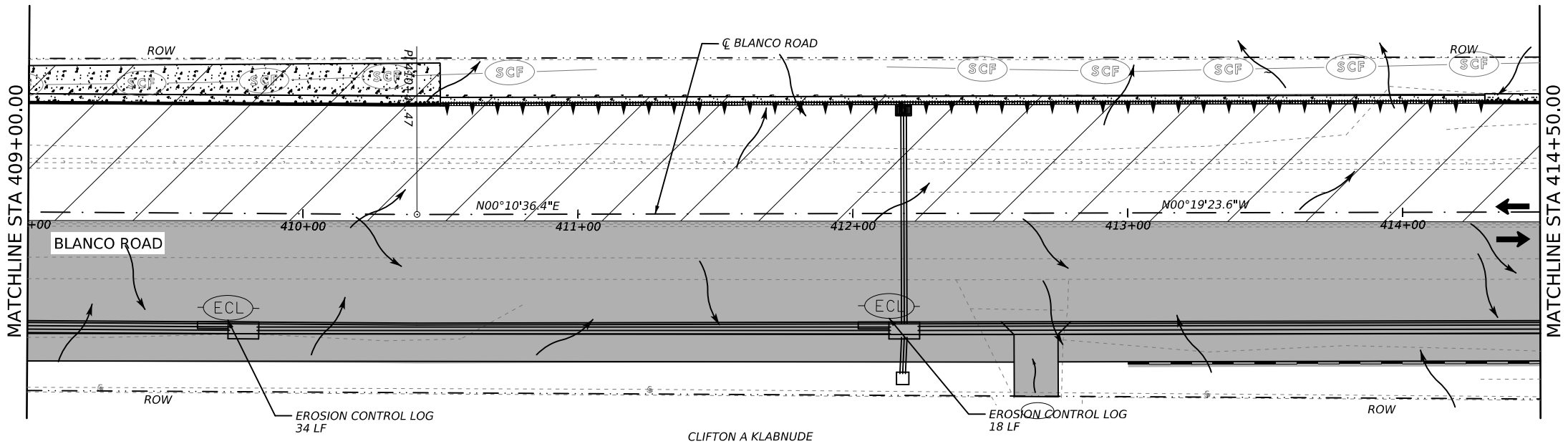

CLIFTON A KLABNUDE
40.1277 ACRES
28550 BLANCO RD
SAN ANTONIO, TX 78260

LEGEND

WORK ZONE	
TEMPORARY PAVEMENT	
CONSTRUCTED PREVIOUS PHASE	
CONSTRUCTED TEMPORARY PAVEMENT	
DRAINAGE FLOW ARROWS	
EROSION CONTROL LOG	ECL
SEDIMENT CONTROL FENCE	SCF
ROCK FILTER DAM	RFD#
EROSION CONTROL LOG (PREVIOUS PHASE)	ECL
SEDIMENT CONTROL FENCE (PREVIOUS PHASE)	SCF
ROCK FILTER DAM (PREVIOUS PHASE)	RFD#

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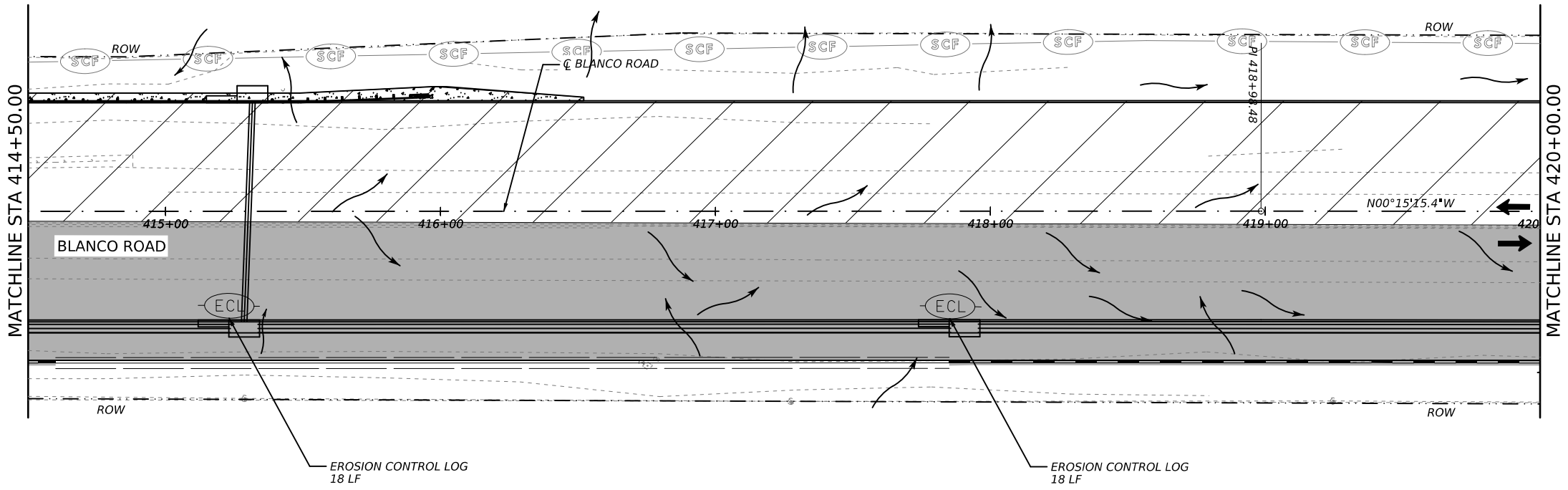
UNITED STATES GOVERNMENT
27,986.99 ACRES
CAMP BULLIS MILITARY RESERVATION



CLIFTON A KLABNUDE
40.1277 ACRES
28550 BLANCO RD
SAN ANTONIO, TX 78260

1/24/2025

BEXAR COUNTY
PUBLIC WORKS DEPARTMENT

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San Antonio, TX 78249
Phone: (210) 314-5458
TBPELS Registration No. 15685

NO.	REVISION	BY	DATE

stv
TEXAS REGISTERED
ENGINEERING FIRM
F-204

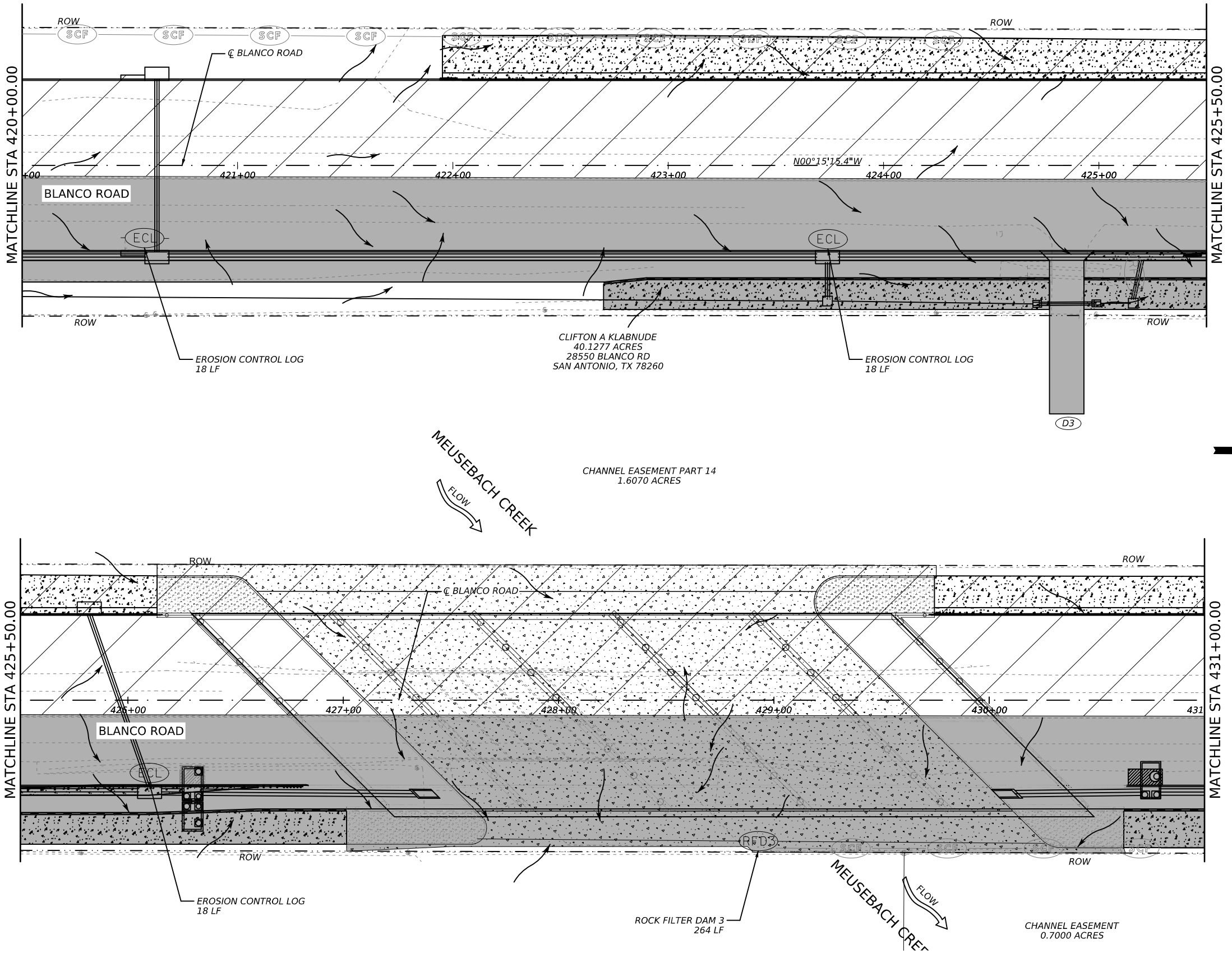
BLANCO ROAD PHASE III

STORMWATER POLLUTION PREVENTION PLAN PHASE 3
STA 409+00 TO STA 420+00

SHEET 5 OF 12

PROJECT NUMBER	SHEET NO.
CSJ: 0915 - 12 - 618	383

DESIGNED BY:	ROADWAY/HIGHWAY	
CHECKED BY:	BLANCO ROAD	
DRAWN BY:	STATE	COUNTY
CHECKED BY:	TEXAS	BEXAR



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SCALE FEET

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LEGEND

WORK ZONE	
TEMPORARY PAVEMENT	
CONSTRUCTED PREVIOUS PHASE	
CONSTRUCTED TEMPORARY PAVEMENT	
DRAINAGE FLOW ARROWS	
EROSION CONTROL LOG	ECL
SEDIMENT CONTROL FENCE	SCF
ROCK FILTER DAM	RFD#
EROSION CONTROL LOG (PREVIOUS PHASE)	ECL
SEDIMENT CONTROL FENCE (PREVIOUS PHASE)	SCF
ROCK FILTER DAM (PREVIOUS PHASE)	RFD#

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4630 N. Loop 1604 W. Ste. 115
San Antonio, TX 78249
Phone: (210) 314-5458
TBPELS Registration No. 15685

NO.	REVISION	BY	DATE

stv
TEXAS REGISTERED ENGINEERING FIRM F-204

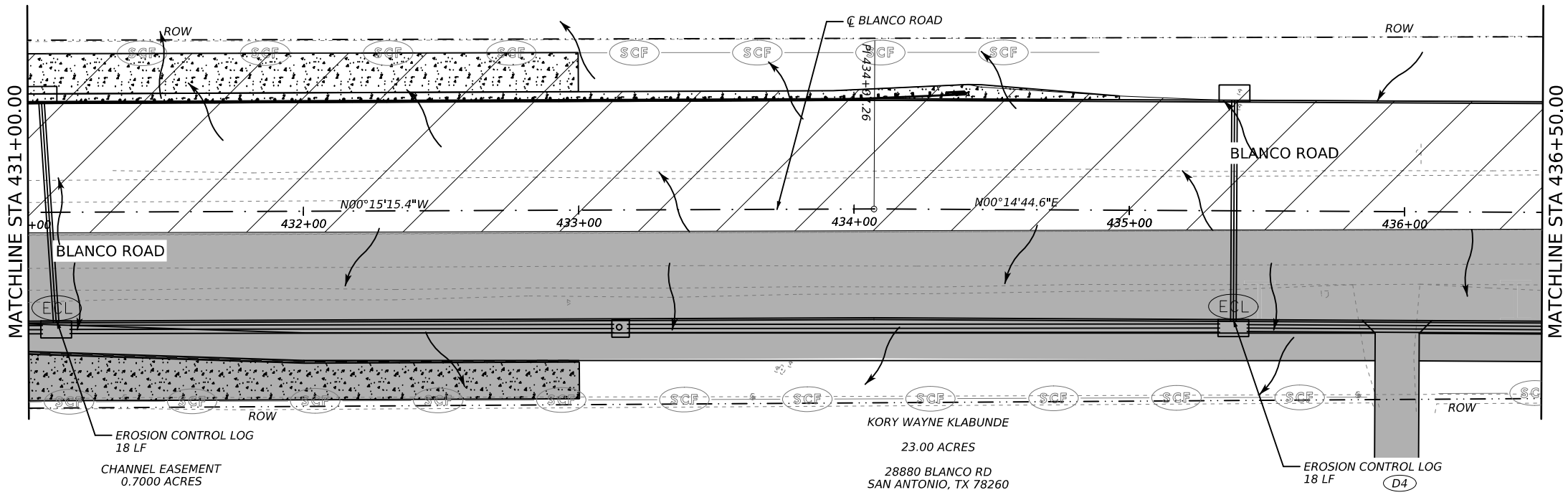
BLANCO ROAD PHASE III

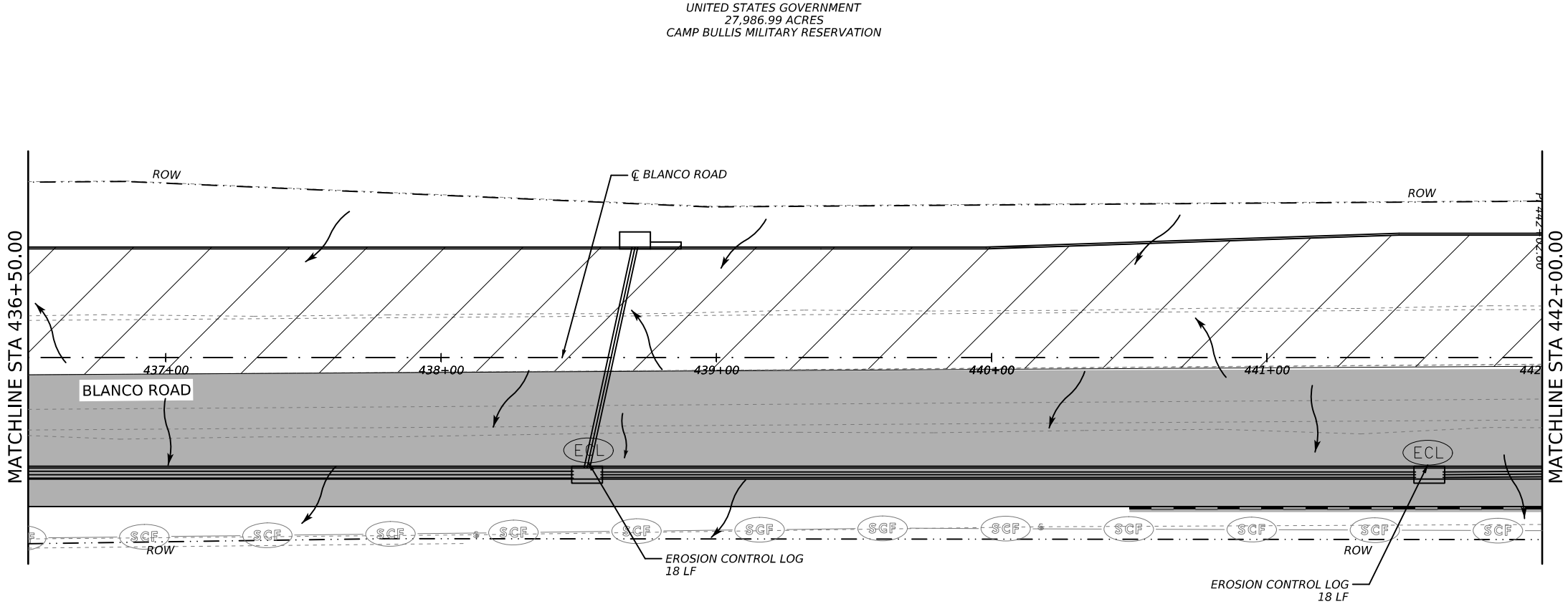
STORMWATER POLLUTION PREVENTION PLAN PHASE 3
STA 420+00 TO STA 431+00

SHEET 6 OF 12

PROJECT NUMBER	SHEET NO.
CSJ: 0915 - 12 - 618	384

DESIGNED BY:	ROADWAY/HIGHWAY	
CHECKED BY:	BLANCO ROAD	
DRAWN BY:	STATE	COUNTY
CHECKED BY:	TEXAS	BEXAR





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25 12.5 0 25 50
SCALE FEET

LEGEND

WORK ZONE	
TEMPORARY PAVEMENT	
CONSTRUCTED PREVIOUS PHASE	
CONSTRUCTED TEMPORARY PAVEMENT	
DRAINAGE FLOW ARROWS	
EROSION CONTROL LOG	ECL
SEDIMENT CONTROL FENCE	SCF
ROCK FILTER DAM	RFD#
EROSION CONTROL LOG (PREVIOUS PHASE)	ECL
SEDIMENT CONTROL FENCE (PREVIOUS PHASE)	SCF
ROCK FILTER DAM (PREVIOUS PHASE)	RFD#

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4630 N. Loop 1604 W. Ste. 115
San Antonio, TX 78249
Phone: (210) 314-5458
TBPELS Registration No. 15685

NO.	REVISION	BY	DATE

stv
TEXAS REGISTERED
ENGINEERING FIRM
F-204

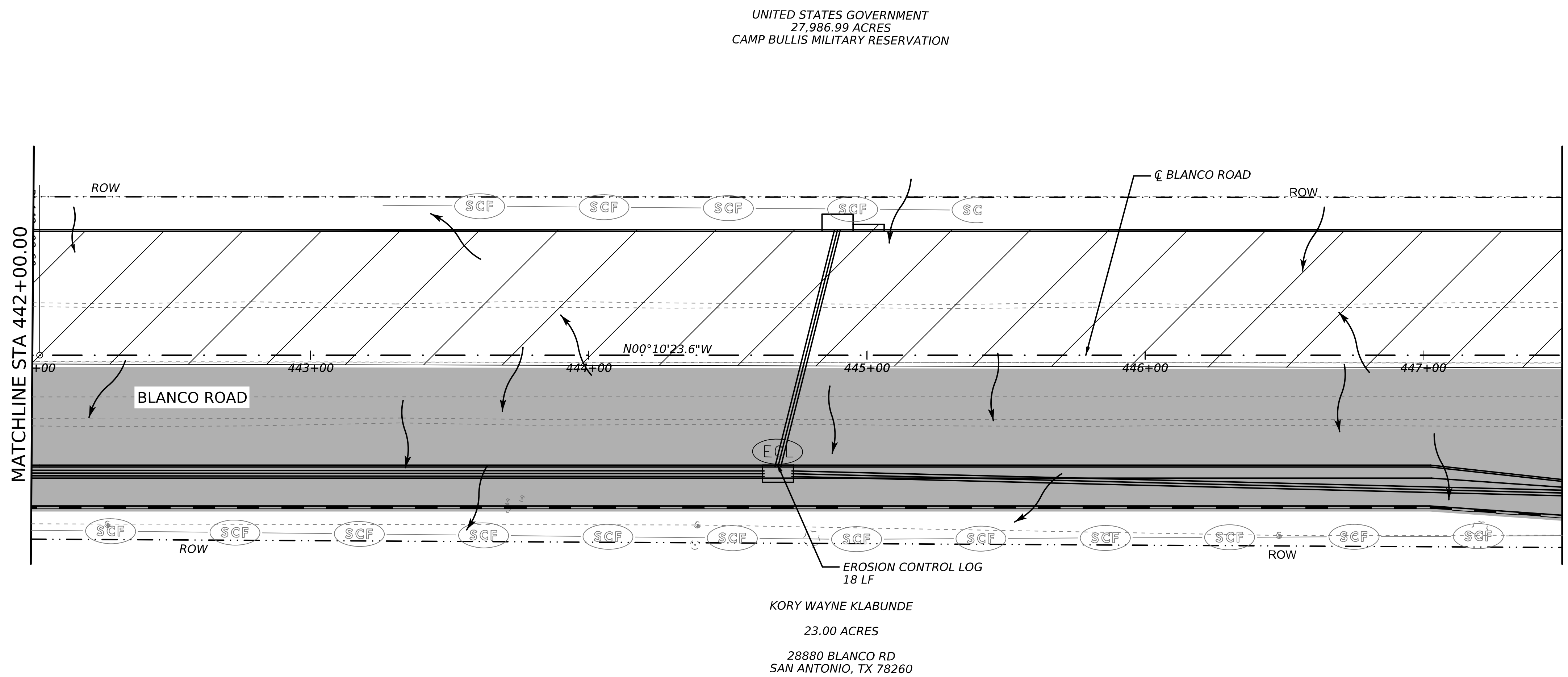
BLANCO ROAD PHASE III

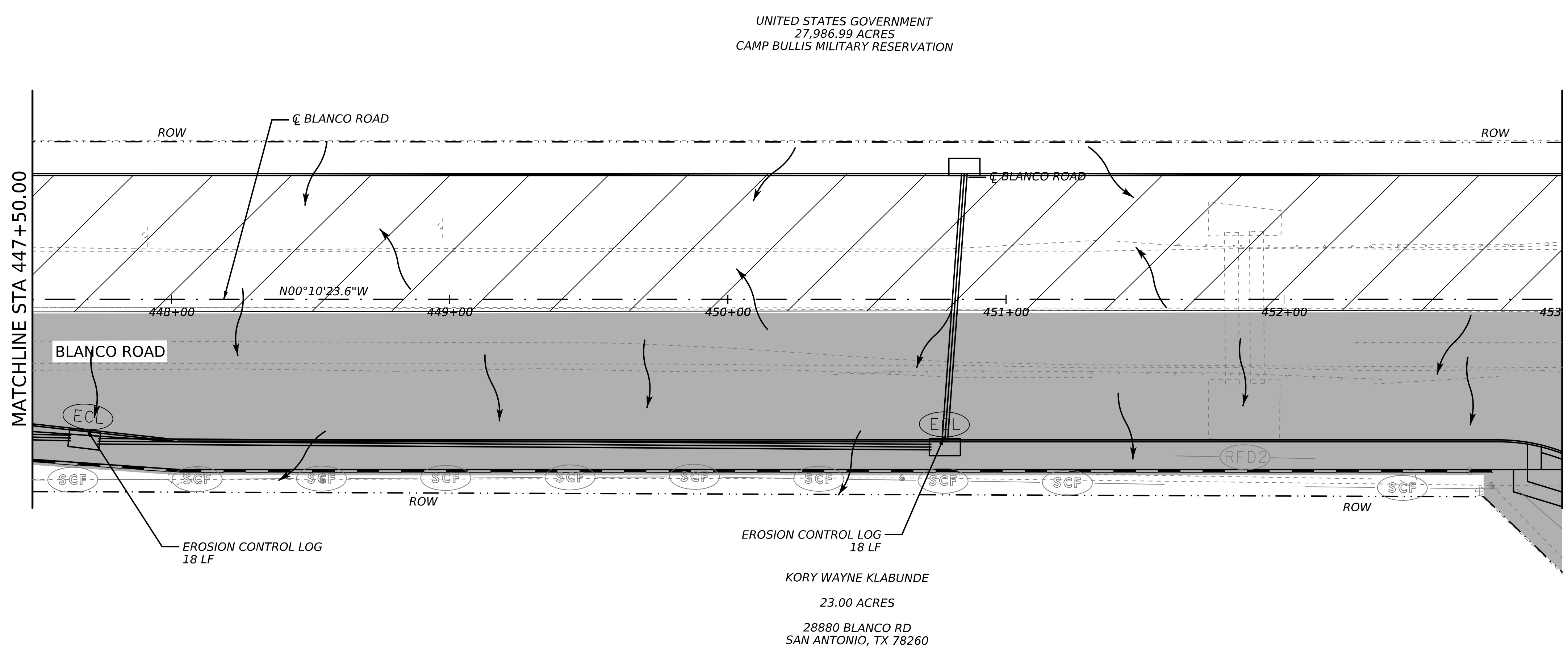
STORMWATER POLLUTION PREVENTION PLAN PHASE 3
STA 431+00 TO STA 442+00

SHEET 7 OF 12

PROJECT NUMBER	SHEET NO.
CSJ: 0915 - 12 - 618	385

DESIGNED BY:	ROADWAY/HIGHWAY	
CHECKED BY:	BLANCO ROAD	
DRAWN BY:	STATE	COUNTY
CHECKED BY:	TEXAS	BEXAR





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LEGEND

- WORK ZONE
- TEMPORARY PAVEMENT
- CONSTRUCTED PREVIOUS PHASE
- CONSTRUCTED TEMPORARY PAVEMENT
- DRAINAGE FLOW ARROWS
- EROSION CONTROL LOG (ECL)
- SEDIMENT CONTROL FENCE (SCF)
- ROCK FILTER DAM (RFD#)
- EROSION CONTROL LOG (PREVIOUS PHASE) (ECL)
- SEDIMENT CONTROL FENCE (PREVIOUS PHASE) (SCF)
- ROCK FILTER DAM (PREVIOUS PHASE) (RFD#)

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San Antonio, TX 78249
Phone: (210) 314-5458
TBPELS Registration No. 15685

NO.	REVISION	BY	DATE

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BLANCO ROAD PHASE III
STORMWATER POLLUTION PREVENTION PLAN PHASE 3
STA 442+00 TO STA 453+00
SHEET 8 OF 12

PROJECT NUMBER: CSJ: 0915 - 12 - 618		SHEET NO.: 386
DESIGNED BY:	ROADWAY/HIGHWAY	
CHECKED BY:	BLANCO ROAD	
DRAWN BY:	STATE: TEXAS	COUNTY: BEXAR
CHECKED BY:		

DATE: 1/24/2025 12:47:20 AM
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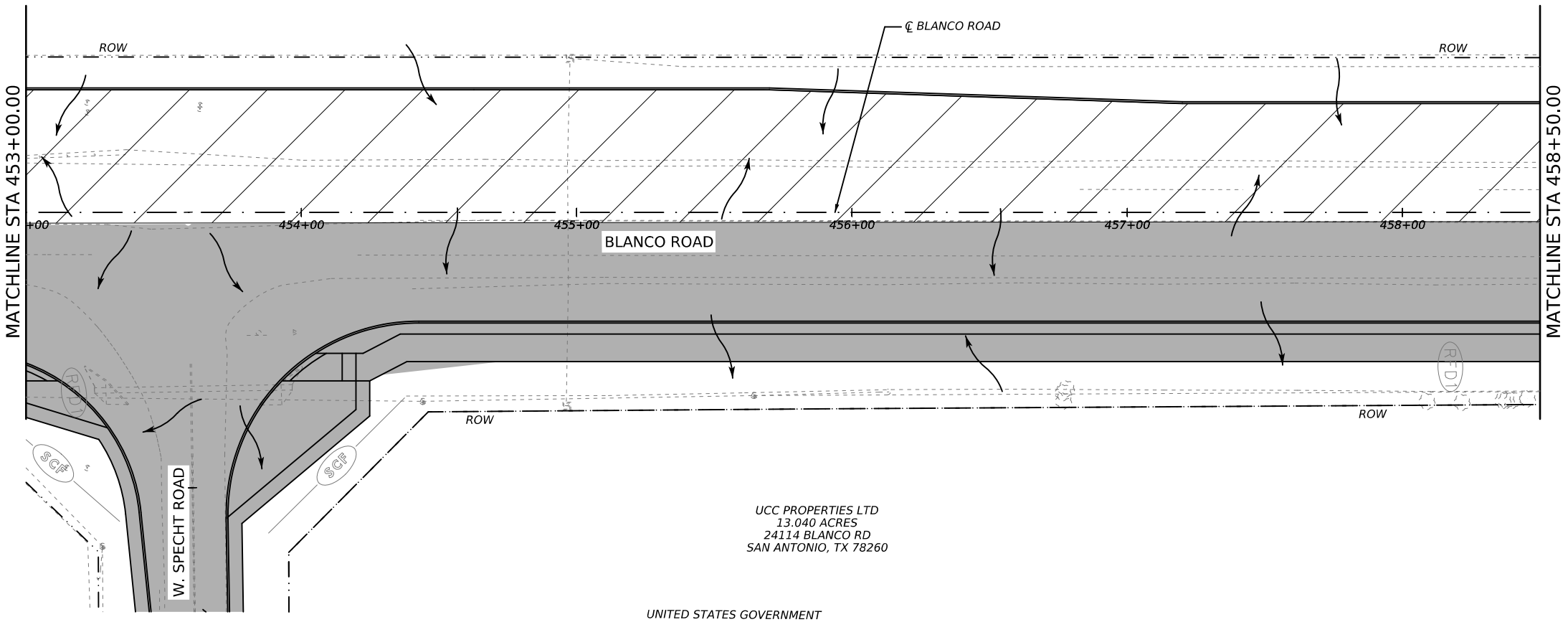

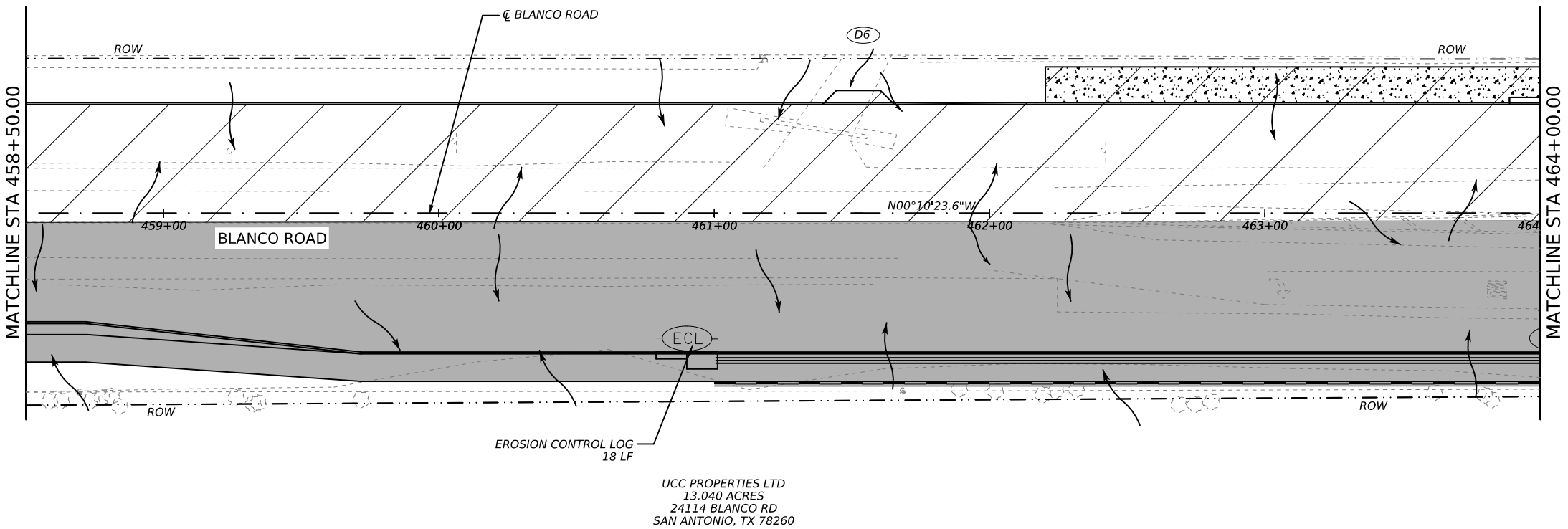

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SCALE FEET

LEGEND

WORK ZONE	
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CONSTRUCTED TEMPORARY PAVEMENT	
DRAINAGE FLOW ARROWS	
EROSION CONTROL LOG	ECL
SEDIMENT CONTROL FENCE	SCF
ROCK FILTER DAM	RFD#
EROSION CONTROL LOG (PREVIOUS PHASE)	ECL
SEDIMENT CONTROL FENCE (PREVIOUS PHASE)	SCF
ROCK FILTER DAM (PREVIOUS PHASE)	RFD#

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San Antonio, TX 78249
Phone: (210) 314-5458
TBPELS Registration No. 15685

NO.	REVISION	BY	DATE

stv
TEXAS REGISTERED
ENGINEERING FIRM
F-204

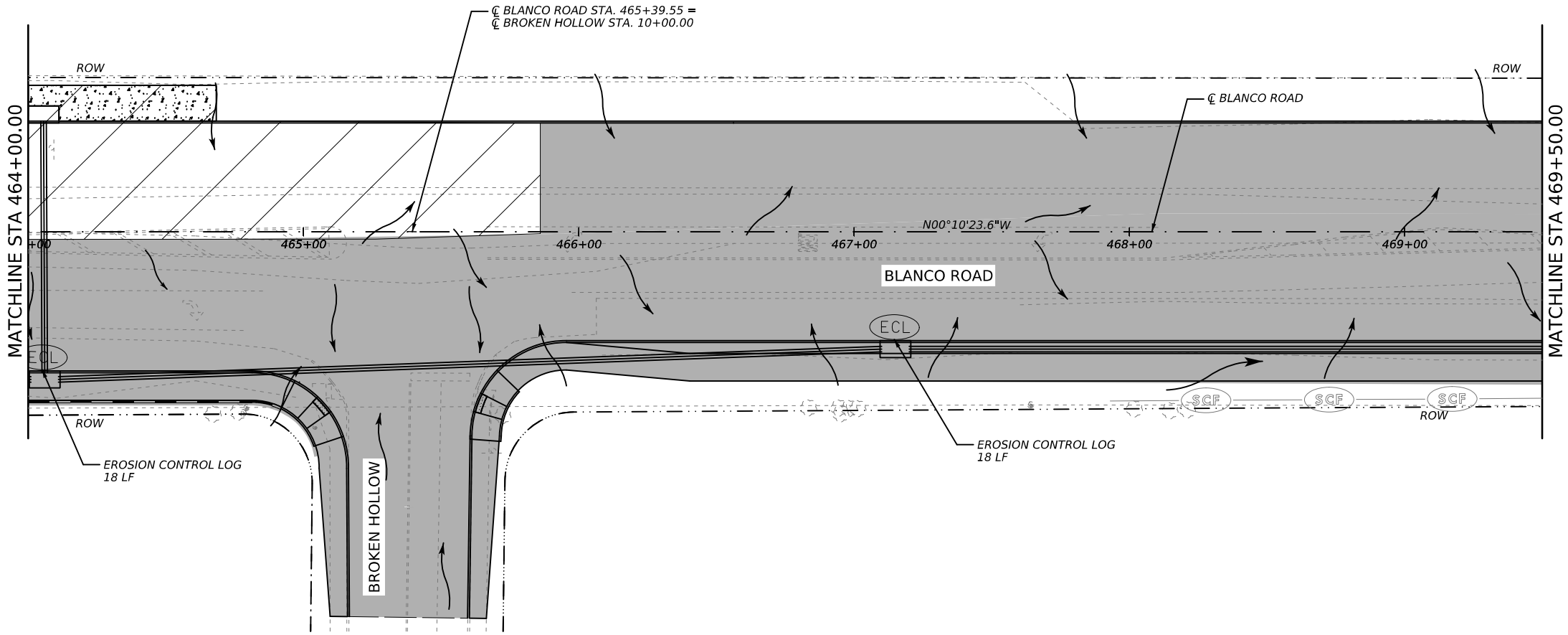
BLANCO ROAD PHASE III

STORMWATER POLLUTION PREVENTION PLAN PHASE 3
STA 453+00 TO STA 464+00

SHEET 9 OF 12

PROJECT NUMBER	SHEET NO.
CSJ: 0915 - 12 - 618	387

DESIGNED BY:	ROADWAY/HIGHWAY	
CHECKED BY:	BLANCO ROAD	
DRAWN BY:	STATE	COUNTY
CHECKED BY:	TEXAS	BEXAR



LEGEND

WORK ZONE	
TEMPORARY PAVEMENT	
CONSTRUCTED PREVIOUS PHASE	
CONSTRUCTED TEMPORARY PAVEMENT	
DRAINAGE FLOW ARROWS	
EROSION CONTROL LOG	ECL
SEDIMENT CONTROL FENCE	SCF
ROCK FILTER DAM	RFD#
EROSION CONTROL LOG (PREVIOUS PHASE)	ECL
SEDIMENT CONTROL FENCE (PREVIOUS PHASE)	SCF
ROCK FILTER DAM (PREVIOUS PHASE)	RFD#

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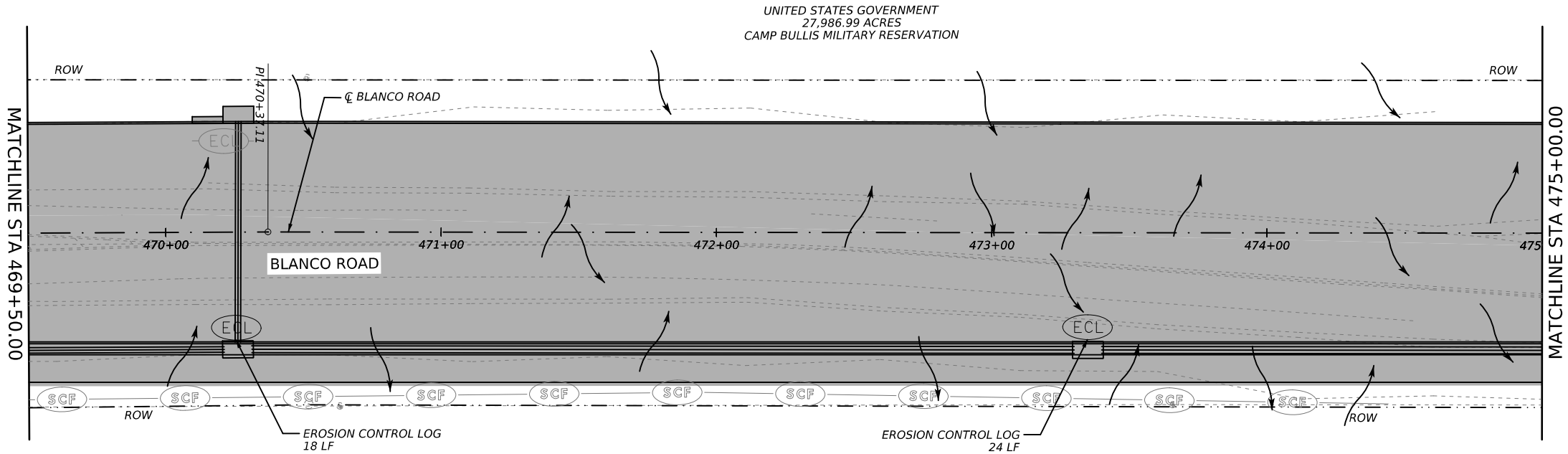

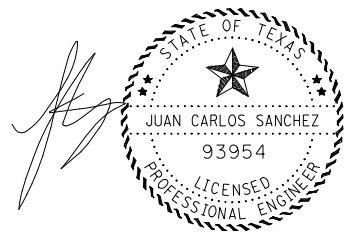

1/24/2025

UCC PROPERTIES LTD
13.791 ACRES
24114 BLANCO RD
SAN ANTONIO, TX 78260

BEXAR COUNTY
PUBLIC WORKS DEPARTMENT

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4630 N. Loop 1604 W. Ste. 115
San Antonio, TX 78249
Phone: (210) 314-5458
TBPELS Registration No. 15685

NO.	REVISION	BY	DATE

stv
TEXAS REGISTERED ENGINEERING FIRM F-204

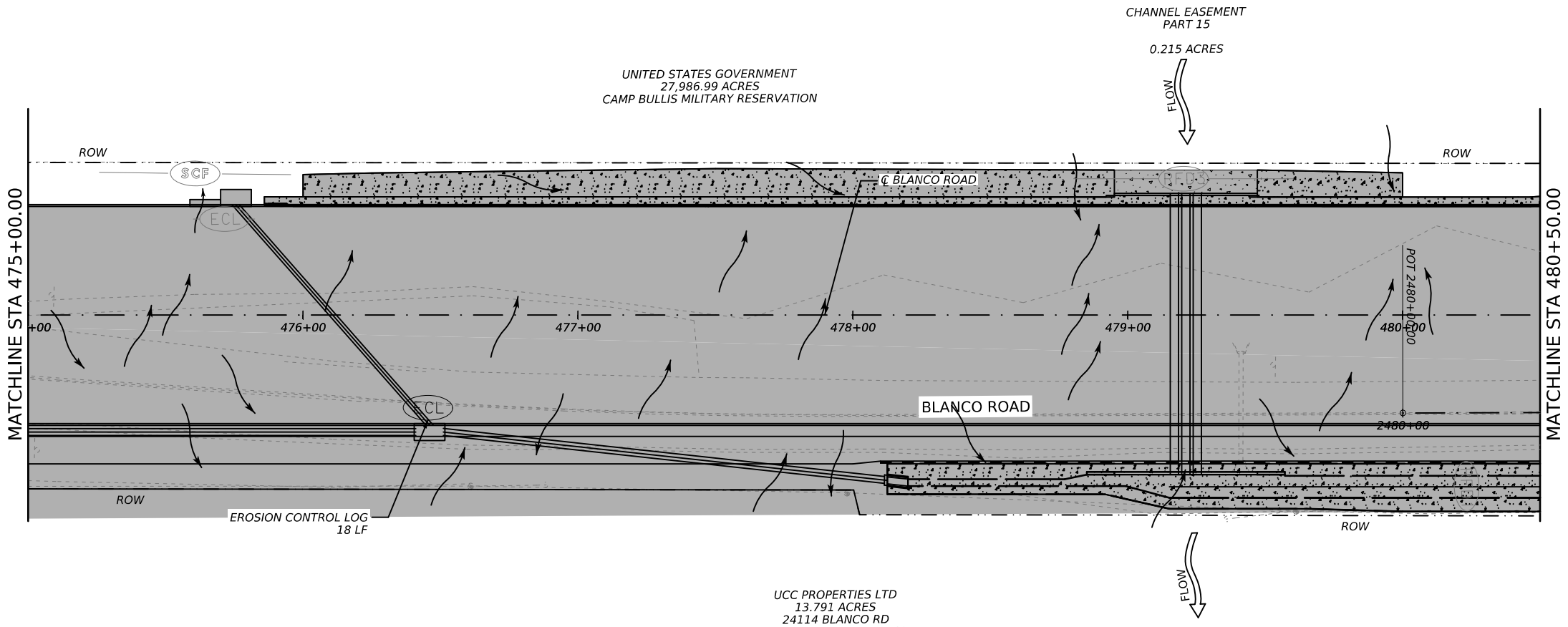
BLANCO ROAD PHASE III

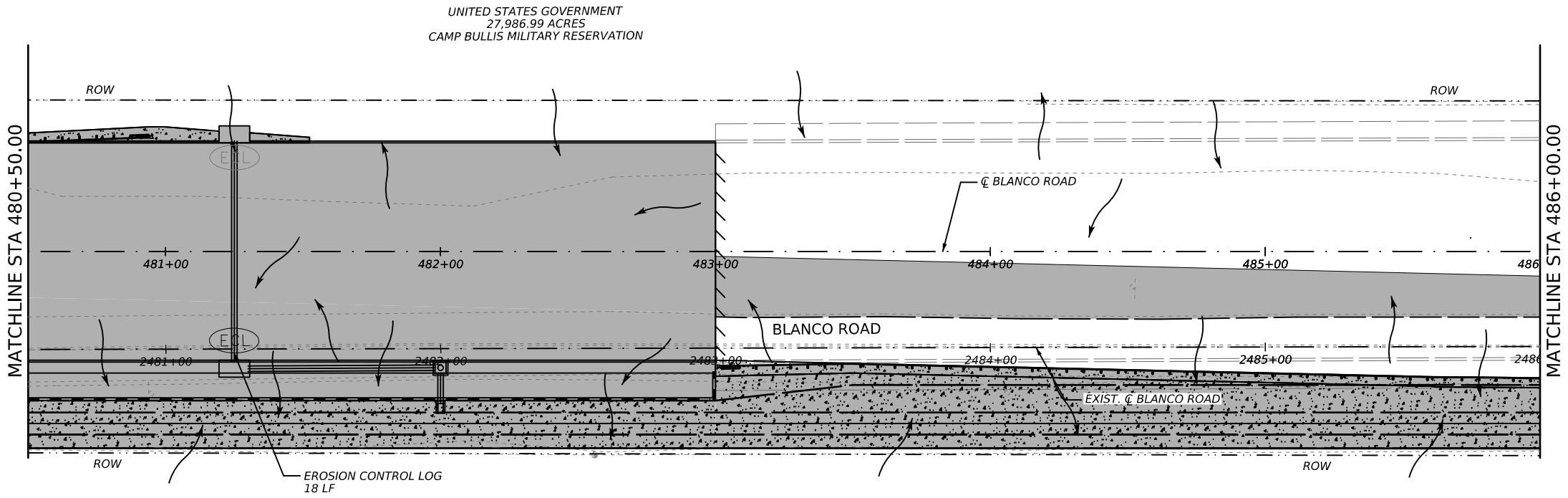
STORMWATER POLLUTION PREVENTION PLAN PHASE 3
STA 464+00 TO STA 475+00

SHEET 10 OF 12

PROJECT NUMBER	SHEET NO.
CSJ: 0915 - 12 - 618	388

DESIGNED BY:	ROADWAY/HIGHWAY	
CHECKED BY:	BLANCO ROAD	
DRAWN BY:	STATE	COUNTY
CHECKED BY:	TEXAS	BEXAR





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SCALE FEET

LEGEND

WORK ZONE	
TEMPORARY PAVEMENT	
CONSTRUCTED PREVIOUS PHASE	
CONSTRUCTED TEMPORARY PAVEMENT	
DRAINAGE FLOW ARROWS	
EROSION CONTROL LOG	ECL
SEDIMENT CONTROL FENCE	SCF
ROCK FILTER DAM	RFD#
EROSION CONTROL LOG (PREVIOUS PHASE)	ECL
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ROCK FILTER DAM (PREVIOUS PHASE)	RFD#

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NO.	REVISION	BY	DATE

stv
TEXAS REGISTERED ENGINEERING FIRM F-204

BLANCO ROAD PHASE III

STORMWATER POLLUTION PREVENTION PLAN PHASE 3
STA 475+00 TO STA 486+00

SHEET 11 OF 12

PROJECT NUMBER	SHEET NO.
CSJ: 0915 - 12 - 618	389

DESIGNED BY:	ROADWAY/HIGHWAY	
CHECKED BY:	BLANCO ROAD	
DRAWN BY:	STATE	COUNTY
CHECKED BY:	TEXAS	BEXAR

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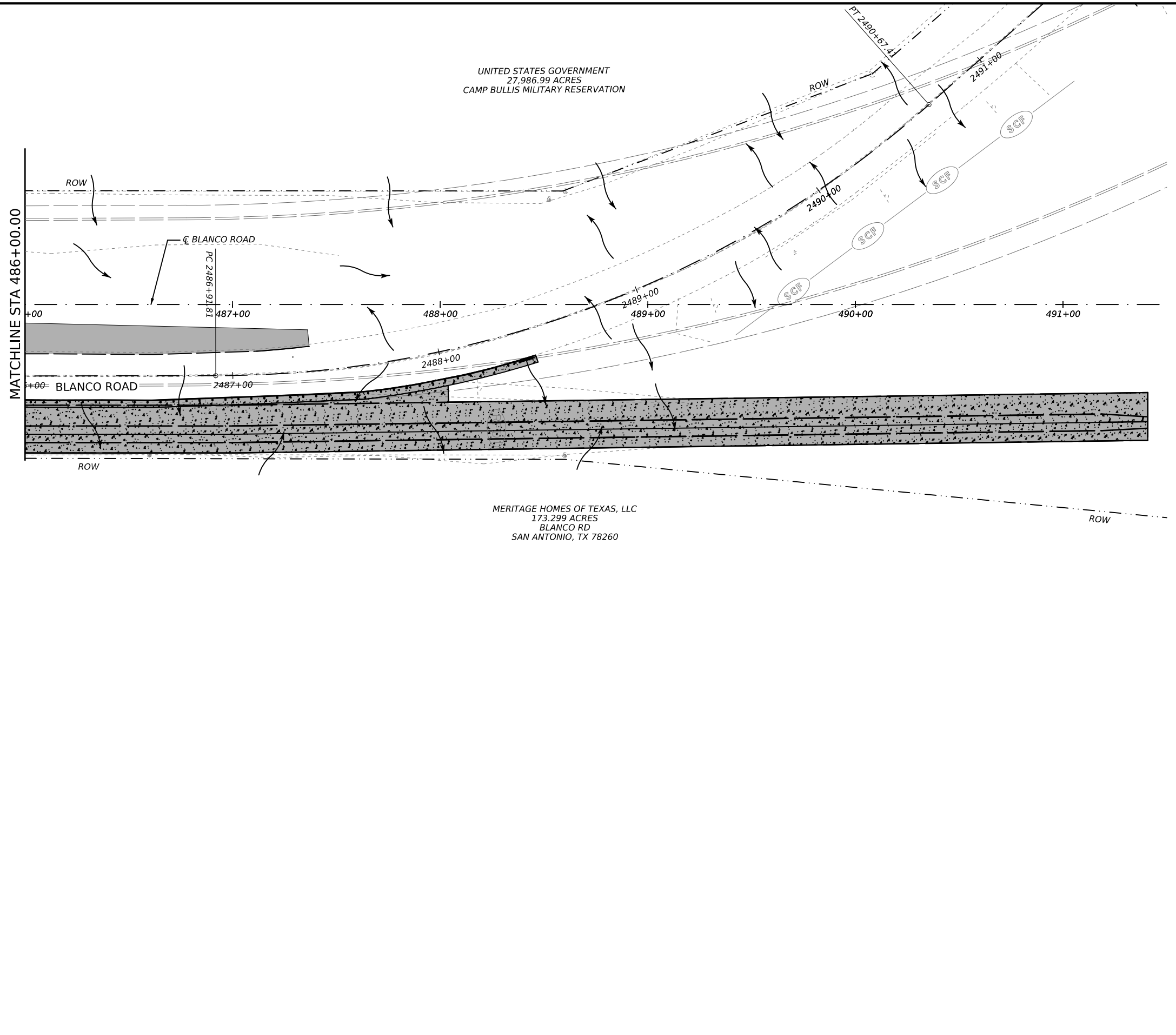

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SCALE FEET

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LEGEND

WORK ZONE	
TEMPORARY PAVEMENT	
CONSTRUCTED PREVIOUS PHASE	
CONSTRUCTED TEMPORARY PAVEMENT	
DRAINAGE FLOW ARROWS	
EROSION CONTROL LOG	ECL
SEDIMENT CONTROL FENCE	SCF
ROCK FILTER DAM	RFD#
EROSION CONTROL LOG (PREVIOUS PHASE)	ECL
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F-204

BLANCO ROAD PHASE III

STORMWATER POLLUTION PREVENTION PLAN PHASE 3 STA 486+00 TO END

SHEET 12 OF 12

PROJECT NUMBER	SHEET NO.
CSJ: 0915 - 12 - 618	390

DESIGNED BY:	ROADWAY/HIGHWAY	
CHECKED BY:	BLANCO ROAD	
DRAWN BY:	STATE	COUNTY
CHECKED BY:	TEXAS	BEXAR

ISO 9001:2015 CERTIFIED
ENGINEERS • PLANNERS • SCIENTISTS • CONSTRUCTION MANAGERS
2806 W. Bitters Road, Suite 218 • San Antonio, Texas 78248 • Phone (210) 641-9999

Attachment J

Schedule of Interim and Permanent Soil Stabilization Practices

Blanco Road Phase III

Interim Practices

All temporary BMPs as described in Attachment I.

Permanent Practices

Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than 14 days after the construction activity in that portion of the site has temporarily or permanently ceased. Where the initiation of stabilization measures by the 14th day after construction activity temporary or permanently cease is precluded by weather conditions, stabilization measures shall be initiated as soon as practicable. Where construction activity on a portion of the site is temporarily ceased, and earth disturbing activities will be resumed within 21 days, temporary stabilization measures do not have to be initiated on that portion of the site. In areas experiencing droughts where the initiation of stabilization measures by the 14th day after construction activity has temporarily or permanently ceased is precluded by seasonal arid conditions, stabilization measures shall be initiated as soon as practicable.

Areas to be sodded within the project limits include all disturbed areas associated with this project beyond the driveways, streets, sidewalks, and utility trenching.

Agent Authorization Form
For Required Signature
Edwards Aquifer Protection Program
Relating to 30 TAC Chapter 213
Effective June 1, 1999

I Cristina Brantley, P.E.,
Print Name

Director - Pipelines Engineering,
Title - Owner/President/Other

of San Antonio Water System (SAWS),
Corporation/Partnership/Entity Name

have authorized Mary P. Stewart, P.E.
Print Name of Agent/Engineer

of KCI Technologies, Inc.
Print Name of Firm

to represent and act on the behalf of the above named Corporation, Partnership, or Entity for the purpose of preparing and submitting this plan application to the Texas Commission on Environmental Quality (TCEQ) for the review and approval consideration of regulated activities for the Blanco Road Phase III project.

I also understand that:

1. The applicant is responsible for compliance with 30 Texas Administrative Code Chapter 213 and any condition of the TCEQ's approval letter. The TCEQ is authorized to assess administrative penalties of up to $10,000 per day per violation.

2. For those submitting an application who are not the property owner, but who have the right to control and possess the property, additional authorization is required from the owner.

3. Application fees are due and payable at the time the application is submitted. The application fee must be sent to the TCEQ cashier or to the appropriate regional office. The application will not be considered until the correct fee is received by the commission.

4. A notarized copy of the Agent Authorization Form must be provided for the person preparing the application, and this form must accompany the completed application.

5. No person shall commence any regulated activity on the Edwards Aquifer Recharge Zone, Contributing Zone or Transition Zone until the appropriate application for the activity has been filed with and approved by the Executive Director.

SIGNATURE PAGE:

Cristina Brantley
Applicant's Signature

3/12/2025
Date

THE STATE OF TEXAS §

County of Bexar §

BEFORE ME, the undersigned authority, on this day personally appeared Cristina Brantley known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that (s)he executed same for the purpose and consideration therein expressed.

GIVEN under my hand and seal of office on this 12th day of March, 2025.

Elvia Cortinas Guzman
NOTARY PUBLIC

ELVIA CORTINAS GUZMAN
Notary Public, State of Texas
Comm. Expires 12-09-2028
Notary ID 5955406

ELVIA CORTINAS GUZMAN
Typed or Printed Name of Notary

MY COMMISSION EXPIRES: 12/09/2028

Application Fee Form

Texas Commission on Environmental Quality

Name of Proposed Regulated Entity: Blanco Road Phase III

Regulated Entity Location: Near the intersection of Blanco Road and Old Blanco Road, within San Antonio ETJ, Bexar County, Texas

Name of Customer: San Antonio Water System (SAWS)

Contact Person: Mary P. Stewart, P.E. Phone: (210) 641-9999

Customer Reference Number (if issued):CN N/A

Regulated Entity Reference Number (if issued):RN N/A

Austin Regional Office (3373)

☐ Hays ☐ Travis ☐ Williamson

San Antonio Regional Office (3362)

☒ Bexar ☐ Medina ☐ Uvalde

☐ Comal ☐ Kinney

Application fees must be paid by check, certified check, or money order, payable to the **Texas Commission on Environmental Quality**. Your canceled check will serve as your receipt. **This form must be submitted with your fee payment**. This payment is being submitted to:

☐ Austin Regional Office

☐ Mailed to: TCEQ - Cashier
Revenues Section
Mail Code 214
P.O. Box 13088
Austin, TX 78711-3088

☒ San Antonio Regional Office

☐ Overnight Delivery to: TCEQ - Cashier
12100 Park 35 Circle
Building A, 3rd Floor
Austin, TX 78753
(512)239-0357

Site Location (Check All That Apply):

☒ Recharge Zone ☐ Contributing Zone ☐ Transition Zone

Type of Plan	*Size*	*Fee Due*
Water Pollution Abatement Plan, Contributing Zone Plan: One Single Family Residential Dwelling	Acres	$
Water Pollution Abatement Plan, Contributing Zone Plan: Multiple Single Family Residential and Parks	Acres	$
Water Pollution Abatement Plan, Contributing Zone Plan: Non-residential	Acres	$
Sewage Collection System	3,235 L.F.	$ 1,618
Lift Stations without sewer lines	Acres	$
Underground or Aboveground Storage Tank Facility	Tanks	$
Piping System(s)(only)	Each	$
Exception	Each	$
Extension of Time	Each	$

Signature: Mary P. Stewart

Application Fee Schedule

Texas Commission on Environmental Quality
Edwards Aquifer Protection Program 30 TAC Chapter 213 (effective 05/01/2008)

Water Pollution Abatement Plans and Modifications

Contributing Zone Plans and Modifications

Project	*Project Area in Acres*	*Fee*
One Single Family Residential Dwelling	< 5	$650
Multiple Single Family Residential and Parks	< 5 5 < 10 10 < 40 40 < 100 100 < 500 ≥ 500	$1,500 $3,000 $4,000 $6,500 $8,000 $10,000
Non-residential (Commercial, industrial, institutional, multi-family residential, schools, and other sites where regulated activities will occur)	< 1 1 < 5 5 < 10 10 < 40 40 < 100 ≥ 100	$3,000 $4,000 $5,000 $6,500 $8,000 $10,000

Organized Sewage Collection Systems and Modifications

Project	*Cost per Linear Foot*	*Minimum Fee-Maximum Fee*
Sewage Collection Systems	$0.50	$650 - $6,500

Underground and Aboveground Storage Tank System Facility Plans and Modifications

Project	*Cost per Tank or Piping System*	*Minimum Fee-Maximum Fee*
Underground and Aboveground Storage Tank Facility	$650	$650 - $6,500

Exception Requests

Project	*Fee*
Exception Request	$500

Extension of Time Requests

Project	*Fee*
Extension of Time Request	$150

TCEQ Use Only

TCEQ Core Data Form

For detailed instructions on completing this form, please read the Core Data Form Instructions or call 512-239-5175.

SECTION I: General Information

1. Reason for Submission (*If other is checked please describe in space provided.*)

☒ New Permit, Registration or Authorization (*Core Data Form should be submitted with the program application.*)

☐ Renewal *(Core Data Form should be submitted with the renewal form)*

☐ Other

2. Customer Reference Number *(if issued)*	Follow this link to search for CN or RN numbers in Central Registry**	**3. Regulated Entity Reference Number** *(if issued)*
CN 600529069		**RN 0**

SECTION II: Customer Information

4. General Customer Information | **5. Effective Date for Customer Information Updates** (mm/dd/yyyy)

☒ New Customer ☐ Update to Customer Information ☐ Change in Regulated Entity Ownership
☐ Change in Legal Name (Verifiable with the Texas Secretary of State or Texas Comptroller of Public Accounts)

The Customer Name submitted here may be updated automatically based on what is current and active with the Texas Secretary of State (SOS) or Texas Comptroller of Public Accounts (CPA).

6. Customer Legal Name *(If an individual, print last name first: eg: Doe, John)* — *If new Customer, enter previous Customer below:*

San Antonio Water System (SAWS)

7. TX SOS/CPA Filing Number	**8. TX State Tax ID** (11 digits)	**9. Federal Tax ID** (9 digits)	**10. DUNS Number** *(if applicable)*

11. Type of Customer: ☒ Corporation ☐ Individual Partnership: ☐ General ☐ Limited

Government: ☐ City ☐ County ☐ Federal ☒ Local ☐ State ☐ Other ☐ Sole Proprietorship ☐ Other:

12. Number of Employees

☐ 0-20 ☐ 21-100 ☐ 101-250 ☒ 251-500 ☐ 501 and higher

13. Independently Owned and Operated?

☐ **Yes** ☒ **No**

14. Customer Role (Proposed or Actual) – *as it relates to the Regulated Entity listed on this form. Please check one of the following*

☐ Owner ☐ Operator ☒ Owner & Operator
☐ Occupational Licensee ☒ Responsible Party ☐ VCP/BSA Applicant ☐ Other:

15. Mailing Address:

2800 U.S. Hwy 281 North

City	San Antonio	**State**	TX	**ZIP**	78212	**ZIP + 4**	

16. Country Mailing Information *(if outside USA)*	**17. E-Mail Address** *(if applicable)*
N/A	N/A

(210) 233-3507		( ) -

SECTION III: Regulated Entity Information

21. General Regulated Entity Information *(If 'New Regulated Entity" is selected, a new permit application is also required.)*

☒ New Regulated Entity ☐ Update to Regulated Entity Name ☐ Update to Regulated Entity Information

The Regulated Entity Name submitted may be updated, in order to meet TCEQ Core Data Standards (removal of organizational endings such as Inc, LP, or LLC).

22. Regulated Entity Name *(Enter name of the site where the regulated action is taking place.)*

Blanco Road Phase III

23. Street Address of the Regulated Entity: ***(No PO Boxes)***	N/A							
	City		**State**		**ZIP**		**ZIP + 4**	
24. County								

If no Street Address is provided, fields 25-28 are required.

25. Description to Physical Location:	Near the intersection of Blanco Road and Old Blanco Road				
26. Nearest City			**State**		**Nearest ZIP Code**
San Antonio			TX		78260

Latitude/Longitude are required and may be added/updated to meet TCEQ Core Data Standards. (Geocoding of the Physical Address may be used to supply coordinates where none have been provided or to gain accuracy).

27. Latitude (N) In Decimal:	29.713182		**28. Longitude (W) In Decimal:**	-98.513306	
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds
29	42	47.46	-98	30	47.9

29. Primary SIC Code (4 digits)	**30. Secondary SIC Code** (4 digits)	**31. Primary NAICS Code** (5 or 6 digits)	**32. Secondary NAICS Code** (5 or 6 digits)
4952	9631	221320	

33. What is the Primary Business of this entity? *(Do not repeat the SIC or NAICS description.)*

Relocating of existing sewer mains.

34. Mailing Address:								
	2800 U.S. Highway 281 North							
	City	**San Antonio**	**State**	**TX**	**ZIP**	**78212**	**ZIP + 4**	
35. E-Mail Address:	**cristina.brantley@saws.org**							

36. Telephone Number	**37. Extension or Code**	**38. Fax Number** *(if applicable)*
(210) 233-3507		( ) -

39. TCEQ Programs and ID Numbers Check all Programs and write in the permits/registration numbers that will be affected by the updates submitted on this form. See the Core Data Form instructions for additional guidance.

☐ Dam Safety	☐ Districts	☒ Edwards Aquifer	☐ Emissions Inventory Air	☐ Industrial Hazardous Waste
☐ Municipal Solid Waste	☐ New Source Review Air	☐ OSSF	☐ Petroleum Storage Tank	☐ PWS
☐ Sludge	☐ Storm Water	☐ Title V Air	☐ Tires	☐ Used Oil
☐ Voluntary Cleanup	☒ Wastewater	☐ Wastewater Agriculture	☐ Water Rights	☐ Other:

SECTION IV: Preparer Information

40. Name:	Mary P. Stewart, P.E.	**41. Title:**	Regional Practice Leader

42. Telephone Number	**43. Ext./Code**	**44. Fax Number**	**45. E-Mail Address**
(210 **)** 641-9999		**( ) -**	Mary.Stewart@kci.com

SECTION V: Authorized Signature

46. By my signature below, I certify, to the best of my knowledge, that the information provided in this form is true and complete, and that I have signature authority to submit this form on behalf of the entity specified in Section II, Field 6 and/or as required for the updates to the ID numbers identified in field 39.

Company:	KCI Technologies, Inc.	**Job Title:**	Regional Practive Leader
Name *(In Print):*	Mary P. Stewart, P.E.	**Phone:**	**(** 210 **)** 641- **9999**
Signature:		**Date:**	4-25-2025