TCEQ EDWARDS AQUIFER ROADWAY APPLICATION

CR 143 AT DRY BERRY CREEK

CSJ: 0914-05-203, ETC.

Williamson County, Texas

FEBRUARY 2025

Prepared For:

Texas Department of Transportation

AUSTIN DISTRICT

Prepared By:

Kimley»Horn

Texas Registration F-928

SECTION 1

EDWARDS AQUIFER APPLICATION COVER PAGE (TCEQ-20705)

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: County Road (CR) 143 at Dry Berry Creek Bridge Replacement; CSJ 0914-05-203							2. Regulated Entity No.:		
3. Customer Name: TxDOT							4. Customer No.: CN 600803456		
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):		4.53
9. Application Fee:	N/A (TxDOT)		10. Permanent BMP(s):					Vegetative Filter Strips	
11. SCS (Linear Ft.):	N/A		12. AST/UST (No. Tanks):					N/A	
13. County:	Williamson		14. Watershed:					Dry Berry Creek	

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.)	__	__	_X_
Region (1 req.)	__	__	_X_
County(ies)	__	__	_X_
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 __San Antonio (SAWS) __Shavano Park	__Bulverde __Fair Oaks Ranch __Garden Ridge __New Braunfels __Schertz	NA	__San Antonio ETJ (SAWS)	NA

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. Elizabeth W. Wagner, P.E.
Print Name of Customer/Authorized Agent  2/4/2025
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):	

SECTION 2

EDWARDS AQUIFER PROTECTION PROGRAM ROADWAY APPLICATION (TCEQ-20872)

Edwards Aquifer Protection Program Roadway Application

Texas Commission on Environmental Quality

This application is intended only for projects which a major roadway is designed for construction, such as State highways, County roads, and City thoroughfares.

Designed for Regulated Activities on the Contributing Zone to the Edwards Aquifer in relation to 30 TAC §213.24, Regulated Activities on the Edwards Aquifer Recharge Zone, in relation to 30 TAC §213.5(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

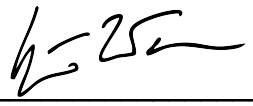
To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer.

The application was prepared by:

Print Name of Customer/Agent: Elizabeth W. Wagner, P.E

Date: 2/4/24

Signature of Customer/Agent:



Project Information

1. Regulated Entity (Project) Name: County Road (CR) 143 at Dry Berry Creek Bridge Replacement; CSJ 0914-05-203
2. County: Williamson
3. Stream Basin(s): Dry Berry Creek
4. Groundwater Conservation District (if applicable): N/A
5. Customer (Applicant):

   Contact Person: Lorena Roque Martinez, P.G.
   Entity: Texas Department of Transportation - Austin District
   Mailing Address: 7901 N Interstate Hwy 35
   City, State: Austin, TX Zip: 78753
   Telephone: 737-291-8601
   Email Address: lorena.roquemartinez@txdot.gov

6. Agent (Representative):

Contact Person: Elizabeth W. Wagner, P.E
Entity: Kimley-Horn
Mailing Address: 10814 Jollyville Rd, Bldg 4, Ste 200
City, State: Austin, TX Zip: 78759
Telephone: 737-400-9846
Email Address: elizabeth.wagner@kimley-horn.com

7. Landowner of R.O.W. (Right of Way)
Person or entity responsible for maintenance of water quality Best Management Practices (BMPs), if not applicant.

Contact Person: John C. Peters, P.E.
Entity: Texas Department of Transportation - Georgetown Area Office
Mailing Address: 2727 S. Austin Ave
City, State: Georgetown, TX Zip: 78626
Telephone: 512-930-6002
Email Address: John.Peters@TxDOT.gov

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

   ☒ Survey marking will be completed by this date: Geological features will be identified during the site assessment using GPS coordinates.

9. ☒ Attachment A - Road Map. A road map showing directions to and the location of the project site is attached. The map clearly shows the boundary of the project site.

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

    ☒ Project site boundaries
    ☒ USGS Quadrangle Name(s)
    ☒ All drainage paths from site to surface waters

11. ☒ This project extends into (Check all that apply):

    ☒ Recharge Zone (RZ)
    ☐ Contributing Zone (CZ)
    ☐ Transition Zone (TZ)
    ☐ Contributing Zone within Transition Zone (CZ/TZ)
    ☐ Zone not regulated by EAPP

12. ☒ Attachment C - Project Description. A detailed narrative description of the proposed project is attached. The project description is consistent throughout the application and contains, at a minimum, the following details:

- ☒ Complete site area [Acres]
- ☐ Offsite upgradient stormwater areas to be captured
- ☒ Impervious area [Acres]
- ☒ Permanent BMP(s)
- ☒ Proposed site use
- ☒ Existing roadway (paved and/or unpaved)
- ☒ Structures to be demolished [Include demo phase]
- ☐ Major interim phases

13. Existing project site conditions are noted below:

- ☒ Existing paved and/or unpaved roads
- ☐ Undeveloped (Cleared)
- ☒ Undeveloped (Undisturbed/Not cleared)
- ☐ Existing commercial site
- ☐ Existing industrial site
- ☐ Existing residential site
- ☐ Other: _____

14. ☒ Attachment D - Factors Affecting Surface Water Quality. A detailed description of all factors that could affect surface water quality is attached.

15. ☒ Only inert materials as defined by 30 TAC §330.3 will be used as fill material.

16. Type of pavement or road surface to be used:

- ☐ Concrete
- ☒ Asphaltic concrete pavement
- ☐ Permeable Friction Course (PFC)
- ☐ Other: _____

17. Right of Way (R.O.W.) and Pavement Area:

R.O.W. for project: 4.53 (ac.)
Length: 1614 ft.
Width: varies from 97 ft. to 136 ft.
Impervious cover (IC): 0.93 (ac.)
Total of Pavement area 0.93 (ac.) ÷ R.O.W. area 4.53 (ac.) x 100 = 21% IC.

- ☒ CAD program was used to determine areas.
- ☒ Number of travel lanes: proposed: 2 travel lanes, existing: 2 travel lanes
- ☒ Typical widths of lanes: 12 (ft.)
- ☒ Are intersections also being improved? (Y/N) N

Site Plan Requirements

Items 18 - 28 must be included on the Site Plan.

18. ☒ The Site Plan must have a minimum scale of 1" = 400'.
    Site Plan Scale: 1" = 50'

19. 100-year floodplain boundaries:

    ☒ Some part(s) of the project site is located within the 100-year floodplain. The floodplain is shown and labeled. The 100-year floodplain boundaries are based on the following specific (including date of material) source(s):Federal Emergency Management Agency Federal Insurance Rate Map #48491C0285F, dated December 20, 2019.

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

20. ☒ A layout of the development with existing and finished contours at appropriate, but not greater than ten-foot contour intervals is shown. Sensitive features, lots, wells, buildings, roads, culverts, etc. are shown on the site plan.

21. ☒ A figure (map) indicating all paths of drainage from the site to surface waters.

    ☒ Name all stream crossings: Dry Berry Creek
    ☒ Drainage patterns and approximate slopes.
    ☐ There will be no discharge to surface waters.

22. ☒ Distinguish between areas of soil disturbance and areas which will not be disturbed.

23. ☒ Show locations of major structural and nonstructural controls. These are the temporary and permanent best management practices. Include the following:

    ☐ Show design and location of any hazardous materials traps.
    ☒ Show design at outfalls of major control structures and conveyances.
    ☒ A description of the BMPs and measures that prevent pollutants from entering surface streams.

24. Show locations of staging areas or project specific locations (PSL). Are they:

    ☐ Onsite, within project R.O.W.
    ☐ Offsite.
    ☒ Not yet determined. (Requires future authorization)

25. ☒ Show locations where soil stabilization practices are expected to occur.

26. ☒ Show surface waters (including wetlands).

27. Temporary aboveground storage tank facilities:

    ☐ Temporary aboveground storage tank facilities will be located on this site. Show on site plan.
    ☒ Temporary aboveground storage tank facilities will not be located on this site.

28. ☐ Plan(s) also include:

    ☐ Sidewalks
    ☐ Related turn lanes
    ☐ Demolition plans
    ☐ Shared-use paths
    ☐ Off-site improvements and staging areas
    ☐ Utility relocations

☐ Other improved areas: _____

Permanent Best Management Practices (BMPs)

Description of practices and measures that will be used after construction is completed.

29. ☒ Permanent BMPs and measures have been designed, and will be constructed, operated, and maintained to ensure that 80% of the incremental increase in the annual mass loading of total suspended solids (TSS) from the site caused by the regulated activity is removed. These quantities have been calculated in accordance with technical guidance accepted by the executive director.

    ☒ The TCEQ Technical Guidance Manual (TGM) was used to design permanent BMPs and measures for this site.

    ☐ A technical guidance other than the TCEQ TGM was used to design permanent BMPs and measures for this site. The complete citation for the technical guidance that was used: _____

30. ☒ Attachment E - BMPs for Upgradient (Offsite) Stormwater.

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

    ☐ No surface water, groundwater or stormwater originates upgradient from the site and flows across the site, and an explanation is attached.

    ☒ Permanent BMPs or measures are not required to prevent pollution of surface water, groundwater, or stormwater that originates upgradient from the site and flows across the site, and an explanation is attached.

31. ☒ Attachment F - BMPs for On-site Stormwater.

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

    ☐ Permanent BMPs or measures are not required to prevent pollution of surface water or groundwater that originates on-site or flows off the site, including pollution caused by contaminated stormwater runoff, and an explanation is attached.

32. ☒ Attachment G - Construction Plans. Construction plans and design calculations for the proposed permanent BMPs and measures have been prepared by or under the direct supervision of a Texas Licensed Professional Engineer, and are signed, sealed, and dated. Construction plans for the proposed permanent BMPs and measures are attached and include all proposed structural plans and specifications, and appropriate details.

    ☒ Major bridge cross-sections, and roadway plan and profiles

    ☒ BMP plans and details

    ☒ Design calculations

    ☒ Erosion control

    ☒ TCEQ Construction Notes

    ☒ SW3P

    ☒ EPIC, as necessary

33. ☒ Attachment H - Inspection, Maintenance, Repair and Retrofit Plan. A site and BMP specific plan for the inspection, maintenance, repair, and, if necessary, retrofit of the permanent BMPs and measures is attached. The plan fulfills all the following:

    ☒ Prepared and certified by the engineer designing the permanent BMPs and measures.
    ☒ Signed by the owner or responsible party.
    ☒ Outlines specific procedures for documenting inspections, maintenance, repairs, and, if necessary, retrofit.
    ☒ Contains a discussion of recordkeeping procedures.

34. ☐ Attachment I - Pilot-Scale Field Testing Plan. Pilot studies for BMPs that are not recognized by the Executive Director require prior approval from the TCEQ. A plan for pilot-scale field testing is attached.

    ☒ N/A

35. ☒ Attachment J - Measures for Minimizing Surface Stream Contamination. A description of the measures that will be used to avoid or minimize surface stream contamination and changes in the way in which water enters a stream as a result of the construction and development is attached. The measures address increased stream flashing, the creation of stronger flows, and in-stream effects caused by the regulated activity which increase erosion or may result in water quality degradation.

    ☒ Include permanent spill measures used to contain hydrocarbons or hazardous substances by way of traps, or response contingencies.

36. The applicant is responsible for maintaining the permanent BMPs after construction until such time as the maintenance obligation is either assumed in writing by another entity.

    If the applicant intends to transfer responsibility, check the box below.

    ☐ Yes

    A copy of the transfer of responsibility must be filed with the executive director at the appropriate regional office within 30 days.

Stormwater to be generated by the Proposed Project

Description of practices and measures that will be used during construction.

37. ☒ The site description, controls, maintenance, and inspection requirements for the Storm Water Pollution Prevention Plan (SWPPP or SW3P) developed under the Texas Pollutant Discharge Elimination System (TPDES) general permits for stormwater discharges have been submitted to fulfill paragraphs 30 TAC §213.24(1-5) & §213.5(b) of the technical report.

    ☒ The Temporary Stormwater Section (TCEQ-0602) is included with the application.
    ☒ The SWPPP (SW3P) will serve as the Temporary Stormwater Section (TCEQ-0602).

38. ☒ Attachment K - Volume and Character of Stormwater. A detailed description of the volume (quantity) and character (quality) of the stormwater runoff expected to occur from the proposed project is attached. The estimates of stormwater runoff quality and quantity are based on area and type of impervious cover.

    ☒ Include the pre-construction runoff coefficient.
    ☒ Include the post-construction runoff coefficient.

Administrative Information

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

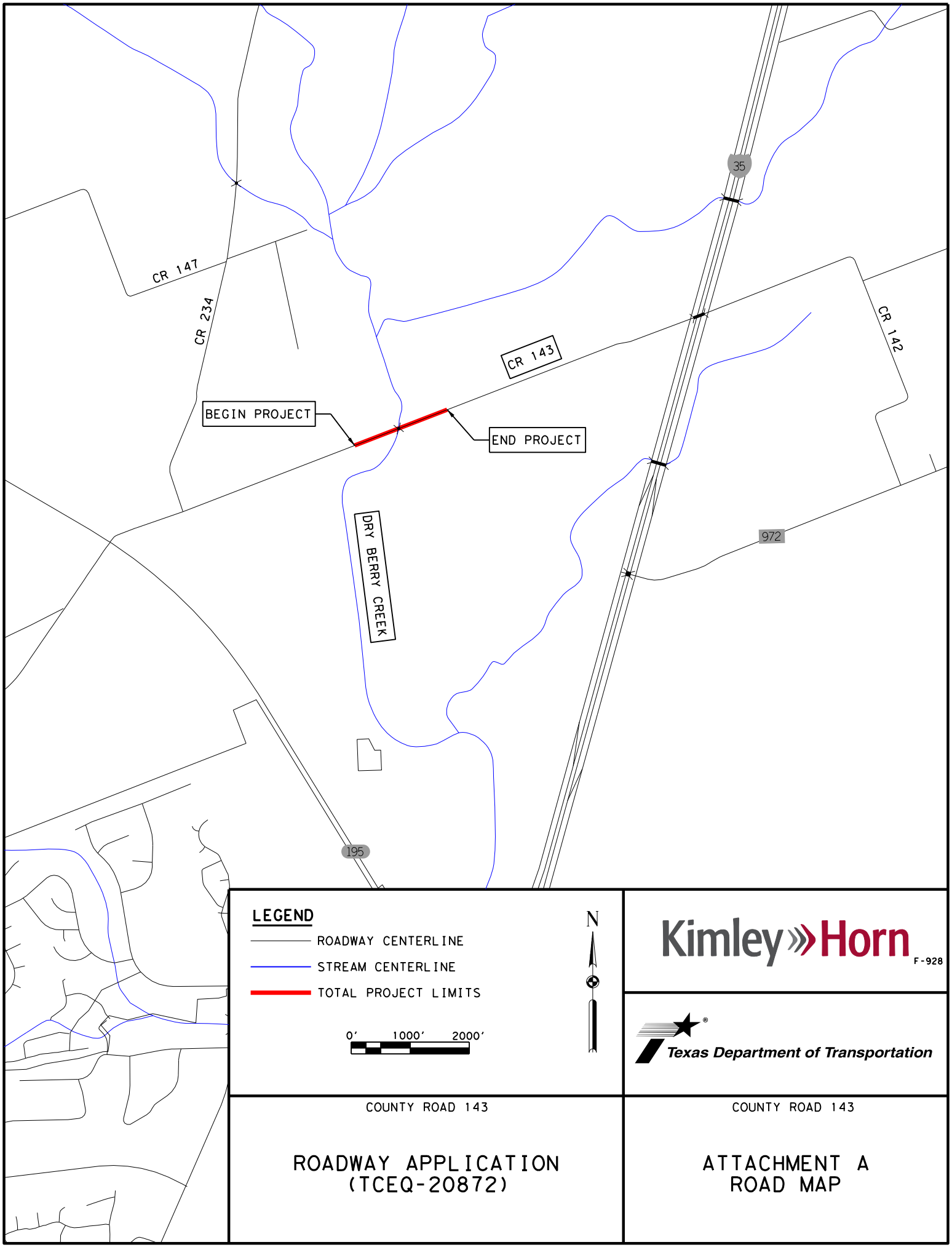
40. The fee for the plan(s) is based on:

    ☐ The total R.O.W. (as in Item 17).

    ☒ TxDOT roadway project.

ATTACHMENT A

ROAD MAP



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Texas Department of Transportation

COUNTY ROAD 143

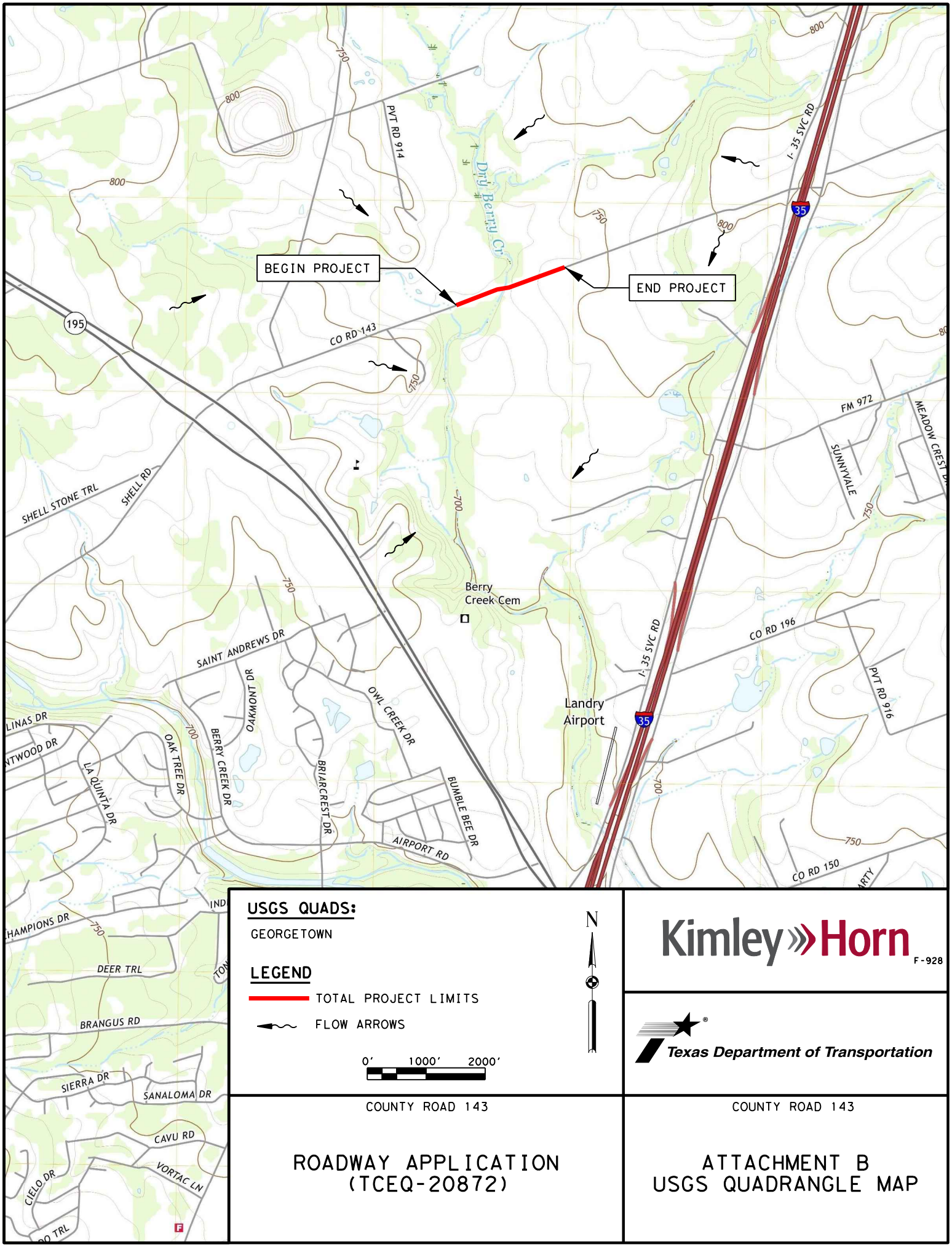
ROADWAY APPLICATION
(TCEQ-20872)

COUNTY ROAD 143

ATTACHMENT A
ROAD MAP

ATTACHMENT B

USGS QUADRANGLE MAP



USGS QUADS:

GEORGETOWN

LEGEND

TOTAL PROJECT LIMITS

FLOW ARROWS

N

0' 1000' 2000'

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Texas Department of Transportation

COUNTY ROAD 143

ROADWAY APPLICATION (TCEQ-20872)

COUNTY ROAD 143

ATTACHMENT B USGS QUADRANGLE MAP

ATTACHMENT C

PROJECT DESCRIPTION

The Texas Department of Transportation (TxDOT) proposes improvements to County Road 143 (CR 143) in Williamson County approximately 7 miles northeast of Georgetown, Texas. The project begins 3,200 feet east of County Road 234 and ends 4,814 feet west of IH 35 Service Road (STA 100+56.00 to STA 116+70.00).

CR 143 is classified as local road, with the ultimate condition classified as a minor arterial. The existing roadway has a typical section of two 11-foot lanes with no shoulders. The proposed improvements include widening for two 12-foot lanes and 2-foot shoulders from station 100+56.00 to station 107+38.00 and from station 109+38.00 to station 116+70.00, and widening for two 12-foot lanes and 5-foot shoulders from station 107+38.00 to station 109+38.00, roadway signage and markings, and a bridge replacement. The project will increase the impervious cover by 0.40 acres, or 8%. The overall site area is approximately 4.53 acres based on the right-of-way to right-of-way limits of the project.

The project is located within the Dry Berry Creek watershed and includes the CR 143 Dry Berry Creek crossing. The project resides within the Edwards Aquifer Recharge Zone, regulated by the Texas Commission on Environmental Quality (TCEQ). Water quality Best Management Practices (BMPs) will be implemented to comply with TCEQ Edwards Aquifer Rules. The permanent BMPs designed to handle the impervious cover will be Vegetative Filter Strips (VFS). The total provided TSS removal per year is 358 lbs, which exceeds the required removal of 348 lbs.

ATTACHMENT D

FACTORS AFFECTING SURFACE WATER QUALITY

The following factors may affect water quality during both the construction and operation phases of the project:

1. The increase in impervious cover could result in an increase in runoff, potentially altering the quality and/or quantity of recharge to the aquifer.
2. Increase sediment loading in runoff due to erosion of sediment and pollutants from exposed soil due to preparation activities such as grading, excavating, and clearing vegetation. In addition to this disturbance of native soil, new soil will be brought onto the site for fill in the roadbed and other components of the project. Increased sediment loading may occur prior to full establishment of vegetation. Temporary erosion and sedimentation controls will be in place to minimize this effect.
3. Runoff from construction product staging, storage, and waste.
4. Runoff from hazardous material spills. These may contain metals, nutrients, bacteria, herbicides, hydrocarbons, and other toxic constituents. Pesticides, de-icing salts, paint, and fertilizers introduce pollutants into the runoff. Standard vehicle use may also add to pollutants through normal operations including braking and fuel combustion as well as through oil and fuel leaks. Runoff from automotive fluids, lubricants, and fuel leaks from standard vehicle use. Additionally, vehicles can transfer pollutants from source to source across the project site via vehicle tracking.

ATTACHMENT E

BMPS FOR UPGRADIENT STORMWATER

The surrounding topography generally drains from north to south. The mixing of offsite and untreated runoff is negligible. CR 143 is an elevated crowned roadway which prevents mixing of offsite and untreated onsite runoff. The BMPs are located in areas with little to no offsite water collected in the roadside ditches. Offsite runoff is contained primarily along the southbound lanes and conveyed through ditches which discharge to receiving waters. For locations with VFS, onsite runoff will sheet flow from the crown of the roadway across the VFS to the proposed ditches. For project drainage patterns see the Drainage Area map sheet in *Attachment G – Construction Plans.*

ATTACHMENT F

BMPS FOR ON-SITE STORMWATER

On-site stormwater will be treated as dictated by the TCEQ, complying with the Edwards Aquifer Rules Technical Guidance document on Best Management Practices (RG-348, dated July 2005). Per 30 Texas Administrative Code (TAC) Chapter 13, 80% of the Total Dissolved Solids (TSS) generated by the increase in impervious cover due to the project must be removed.

Following the calculation methodology in the TCEQ Technical Guidance RG-348, the minimum amount of TSS that must be removed due to the proposed roadway widening of CR 143 is 348 lbs. of TSS per year. Existing and proposed impervious cover were delineated for the full extent of the project within the existing Right-Of-Way (ROW). Existing impervious cover was delineated using the topographical survey edge of pavement for mainlanes and driveways. Proposed impervious cover was delineated based on the CR 143 roadway design and increase in impervious cover was calculated within project limits.

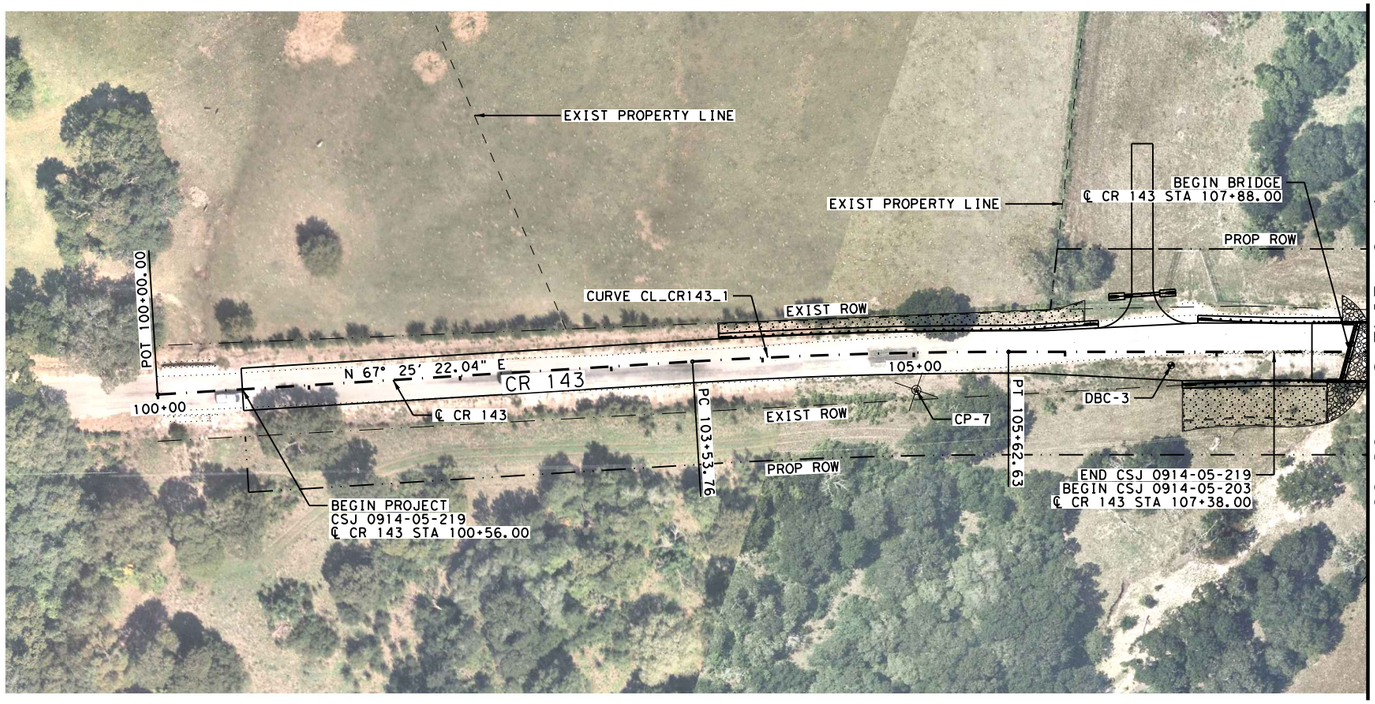
VFS were selected to meet removal requirements for the project due to their removal efficiency and low construction cost. VFS were designed with a 15 foot minimum width and a 5:1 max side slope in accordance with TCEQ design criteria. Contributing impervious cover for proposed VFS does not exceed the 72 foot maximum allowable.

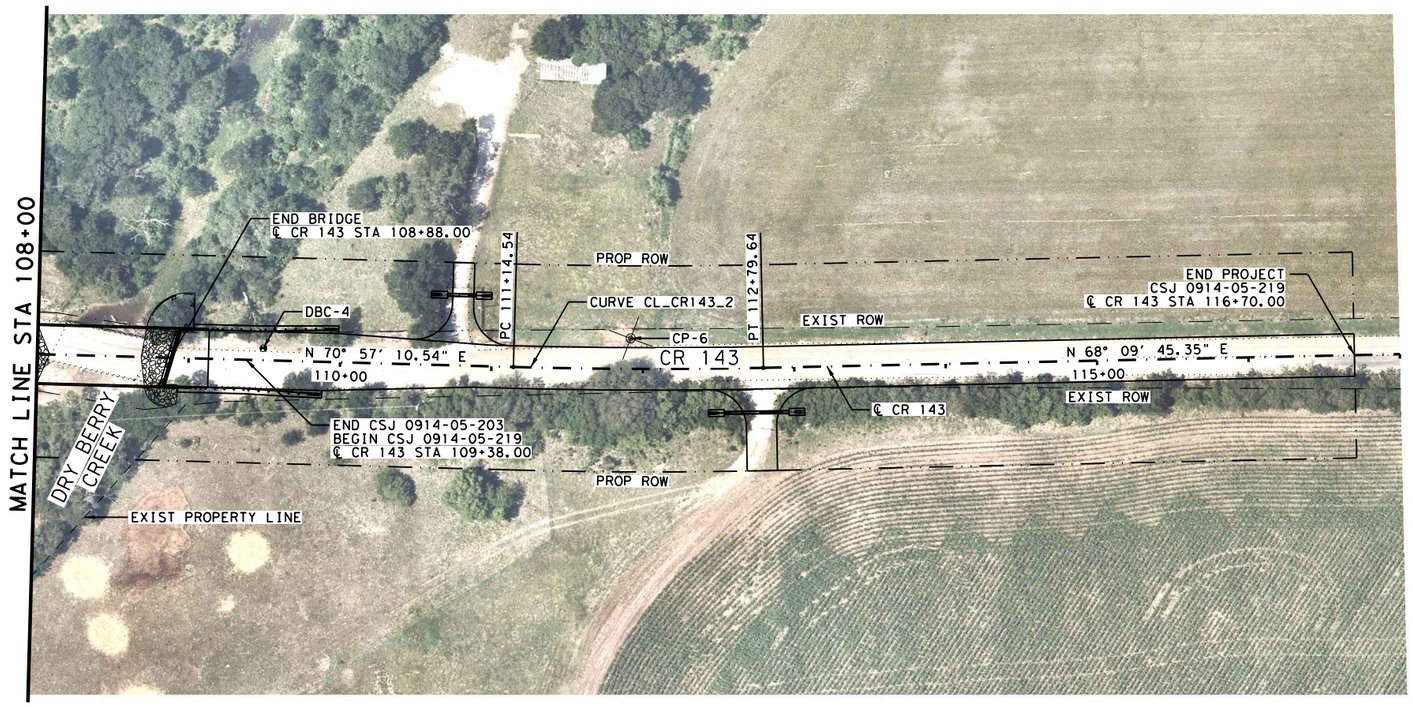
VFS were placed on the southbound side of CR 143 adjacent to the proposed edge of pavement. Proposed VFS will treat 358 lbs of TSS per year, which exceeds the required removal of 348 lbs. Proposed RSS load removal was calculated following Equation 3.7 of TCEQ Technical Guidance RG-348.

ATTACHMENT G

CONSTRUCTION PLANS

Please reference attached construction plans.





N

0′ 50′ 100′

SCALE

LEGEND

SURVEY CONTROL POINT

BORING LOCATION

2/3/2025

ELIZABETH W. WAGNER
149380
LICENSED
PROFESSIONAL ENGINEER
STATE OF TEXAS

Kimley»Horn F-928

Texas Department of Transportation

CR 143 AT DRY BERRY CREEK

PROJECT LAYOUT

SHEET 1 OF 1

FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
6	BR2020(732)		CR 143
STATE	DIST.	COUNTY	SHEET NO.
TEXAS	AUS	WILLIAMSON	3
CONT.	SECT.	JOB	
0914	05	203, ETC.	

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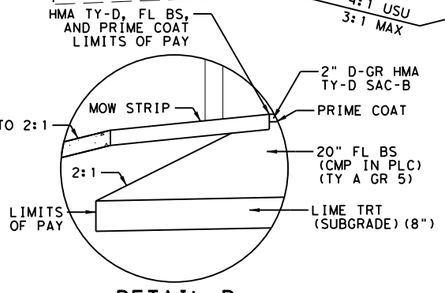
EXISTING TYPICAL SECTION

STA 10+56.00 TO STA 18+12.91
EXIST BRIDGE STA 18+12.91 TO STA 18+74.81
STA 18+74.81 TO STA 26+71.71

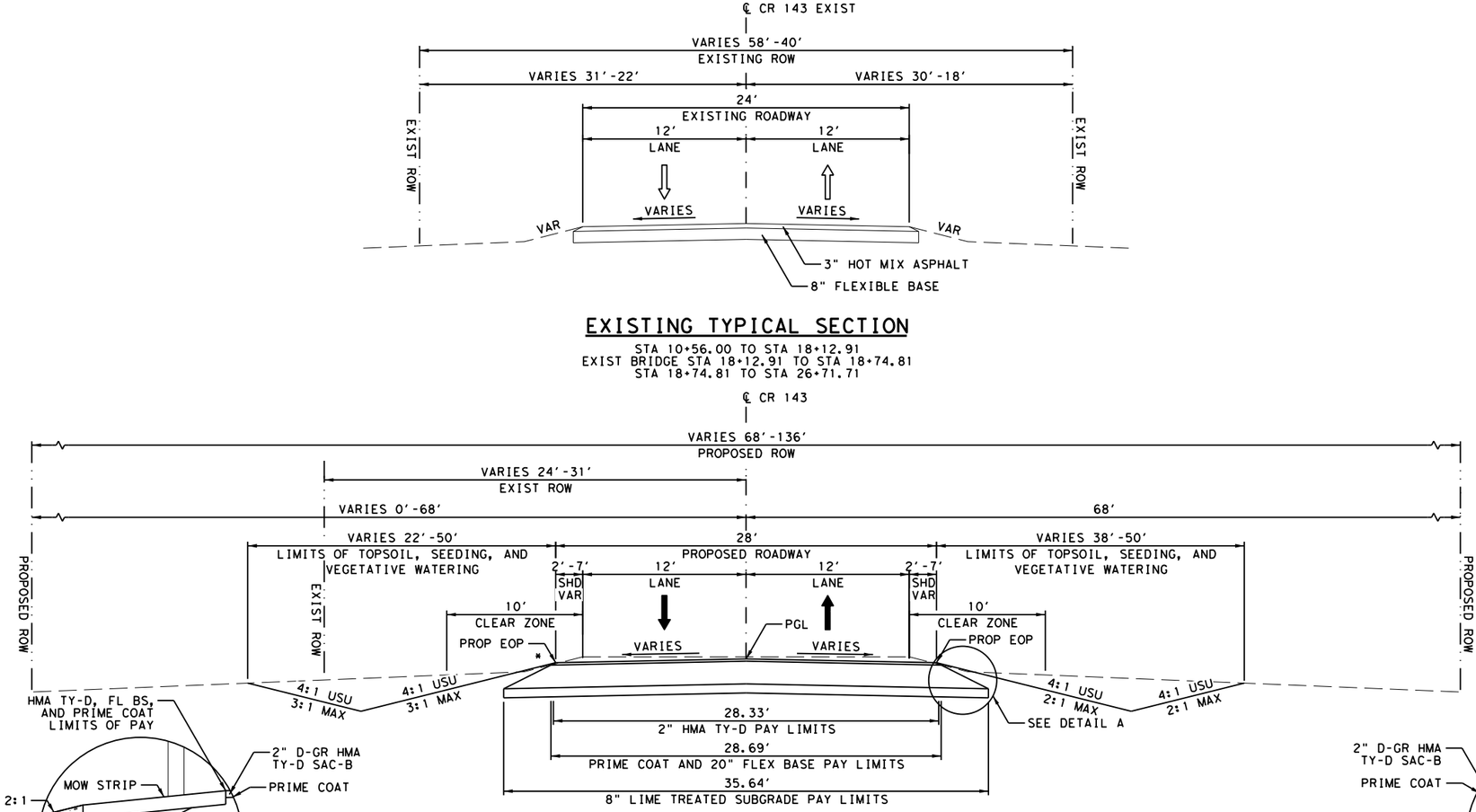
CR 143 SUPERELEVATION TABLE			
STATION	WB LANE	EB LANE	COMMENTS
100+56.00	-1.5%	-2.5%	MATCH EXIST / BEGIN EXIST CROSS SLOPE TRANSITION
100+96.00	-2.0%	-2.0%	END EXIST CROSS SLOPE TRANSITION/BEGIN SUPERELEVATION TRANSITION
103+83.00	4.0%	-4.0%	END SUPERELEVATION TRANSITION
FULL SUPERELEVATION			
104+76.00	4.0%	-4.0%	BEGIN CROSS SLOPE TRANSITION
107+62.00	-2.0%	-2.0%	END CROSS SLOPE TRANSITION
NORMAL CROWN			
109+14.00	-2.0%	-2.0%	BEGIN SUPERELEVATION TRANSITION
112+00.00	-4.0%	4.0%	END SUPERELEVATION TRANSITION
FULL SUPERELEVATION			
112+50.00	-4.0%	4.0%	BEGIN CROSS SLOPE TRANSITION
115+36.00	-2.0%	-2.0%	END CROSS SLOPE TRANSITION/BEGIN EXIST CROSS SLOPE TRANSITION
116+70.00	-4.3%	-4.5%	END EXIST CROSS SLOPE TRANSITION/MATCH EXIST

NOTES:

1. SEE PLAN AND PROFILE SHEETS FOR MORE INFORMATION ON SUPERELEVATION TRANSITION RANGES.
2. PROPOSED BRIDGE FROM ℄ CR 143 STATION 107+88.00 TO STATION 108+88.00. SEE BRIDGE TYPICAL SECTION FOR MORE INFORMATION.
3. SEE WATER POLLUTION ABATEMENT PLAN SHEETS FOR PROPOSED VFS DETAILS.



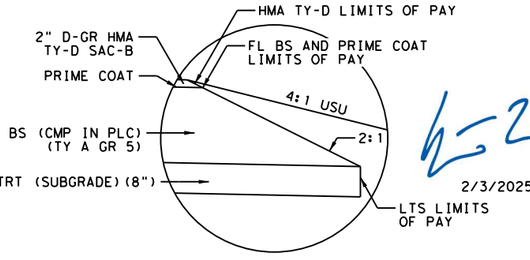
DETAIL B



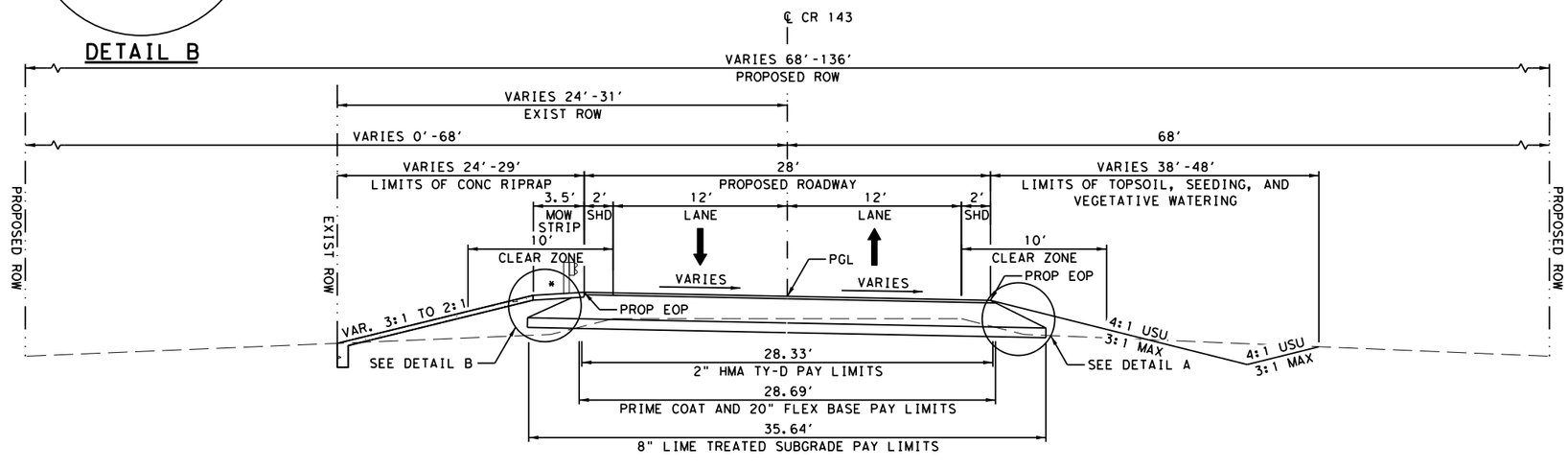
PROPOSED TYPICAL SECTION

STA 100+56.00 TO STA 103+71.96
STA 106+13.00 TO STA 107+38.00

*SEE PLAN AND PROFILE FOR LIMITS OF MBGF



DETAIL A



PROPOSED TYPICAL SECTION

STA 103+71.96 TO STA 106+13.00

*SEE PLAN AND PROFILE FOR LIMITS OF MBGF

2/3/2025

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CR 143 AT DRY BERRY CREEK

TYPICAL SECTIONS

SHEET 1 OF 2

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	BR2020(732)	CR 143

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	AUS	WILLIAMSON	4
CONT.	SECT.	JOB	
0914	05	203, ETC.	

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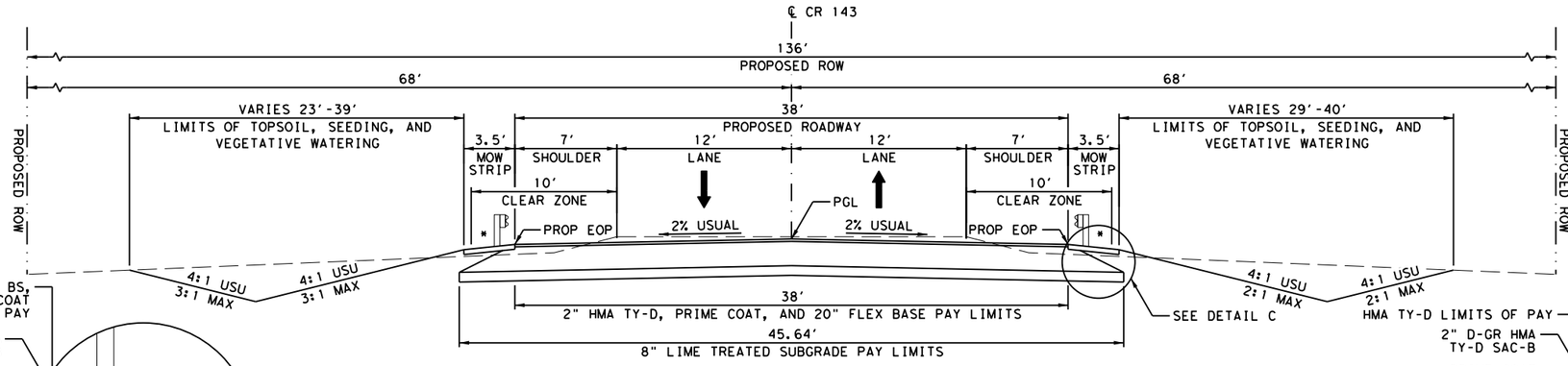
CR 143 SUPERELEVATION TABLE			
STATION	WB LANE	EB LANE	COMMENTS
100+56.00	-1.5%	-2.5%	MATCH EXIST / BEGIN EXIST CROSS SLOPE TRANSITION
100+96.00	-2.0%	-2.0%	END EXIST CROSS SLOPE TRANSITION/BEGIN SUPERELEVATION TRANSITION
103+83.00	4.0%	-4.0%	END SUPERELEVATION TRANSITION
FULL SUPERELEVATION			
104+76.00	4.0%	-4.0%	BEGIN CROSS SLOPE TRANSITION
107+62.00	-2.0%	-2.0%	END CROSS SLOPE TRANSITION
NORMAL CROWN			
109+14.00	-2.0%	-2.0%	BEGIN SUPERELEVATION TRANSITION
112+00.00	-4.0%	4.0%	END SUPERELEVATION TRANSITION
FULL SUPERELEVATION			
112+50.00	-4.0%	4.0%	BEGIN CROSS SLOPE TRANSITION
115+36.00	-2.0%	-2.0%	END CROSS SLOPE TRANSITION/BEGIN EXIST CROSS SLOPE TRANSITION
116+70.00	-4.3%	-4.5%	END EXIST CROSS SLOPE TRANSITION/MATCH EXIST

NOTES:

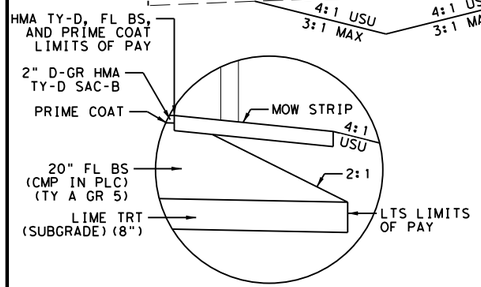
1. SEE PLAN AND PROFILE SHEETS FOR MORE INFORMATION ON SUPERELEVATION TRANSITION RANGES.
2. PROPOSED BRIDGE FROM ℄ CR 143 STATION 107+88.00 TO STATION 108+88.00. SEE BRIDGE TYPICAL SECTION FOR MORE INFORMATION.
3. SEE WATER POLLUTION ABATEMENT PLAN SHEETS FOR PROPOSED VFS DETAILS.



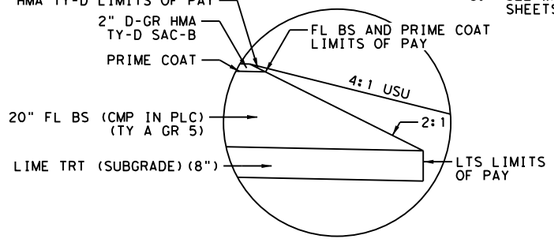
PROPOSED TYPICAL SECTION

STA 107+38.00 TO STA 107+88.00
SEE NOTE 2 FOR BRIDGE LIMITS
STA 108+88.00 TO STA 109+38.00 (SEE NOTE 3)

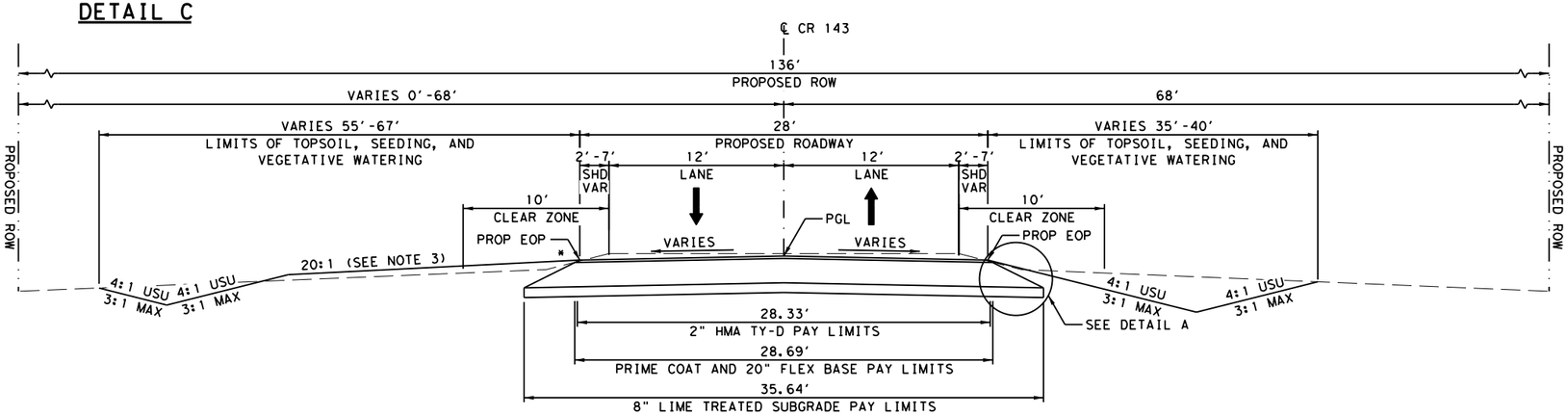
*SEE PLAN AND PROFILE FOR LIMITS OF MBGF



DETAIL C



DETAIL A



PROPOSED TYPICAL SECTION

STA 109+38.00 TO STA 116+70.00

*SEE PLAN AND PROFILE FOR LIMITS OF MBGF

2/3/2025

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Texas Department of Transportation

CR 143 AT DRY BERRY CREEK

TYPICAL SECTIONS

SHEET 2 OF 2

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	BR2020(732)	CR 143

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	AUS	WILLIAMSON	5
CONT.	SECT.	JOB	
0914	05	203, ETC.	

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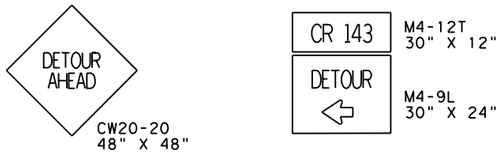


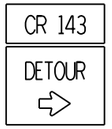
CW20-20
48" X 48"

1

M4-12T
30" X 12"

M4-9L
30" X 24"

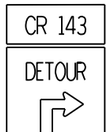
2



M4-12T
30" X 12"

M4-9R
30" X 24"

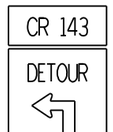
3



M4-12T
30" X 12"

M4-9TR
30" X 30"

4



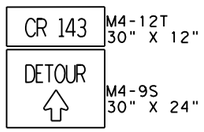
M4-12T
30" X 12"

M4-9TL
30" X 30"

5

R11-2
48" X 30"

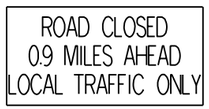
6



M4-12T
30" X 12"

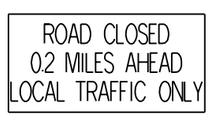
M4-9S
30" X 24"

7



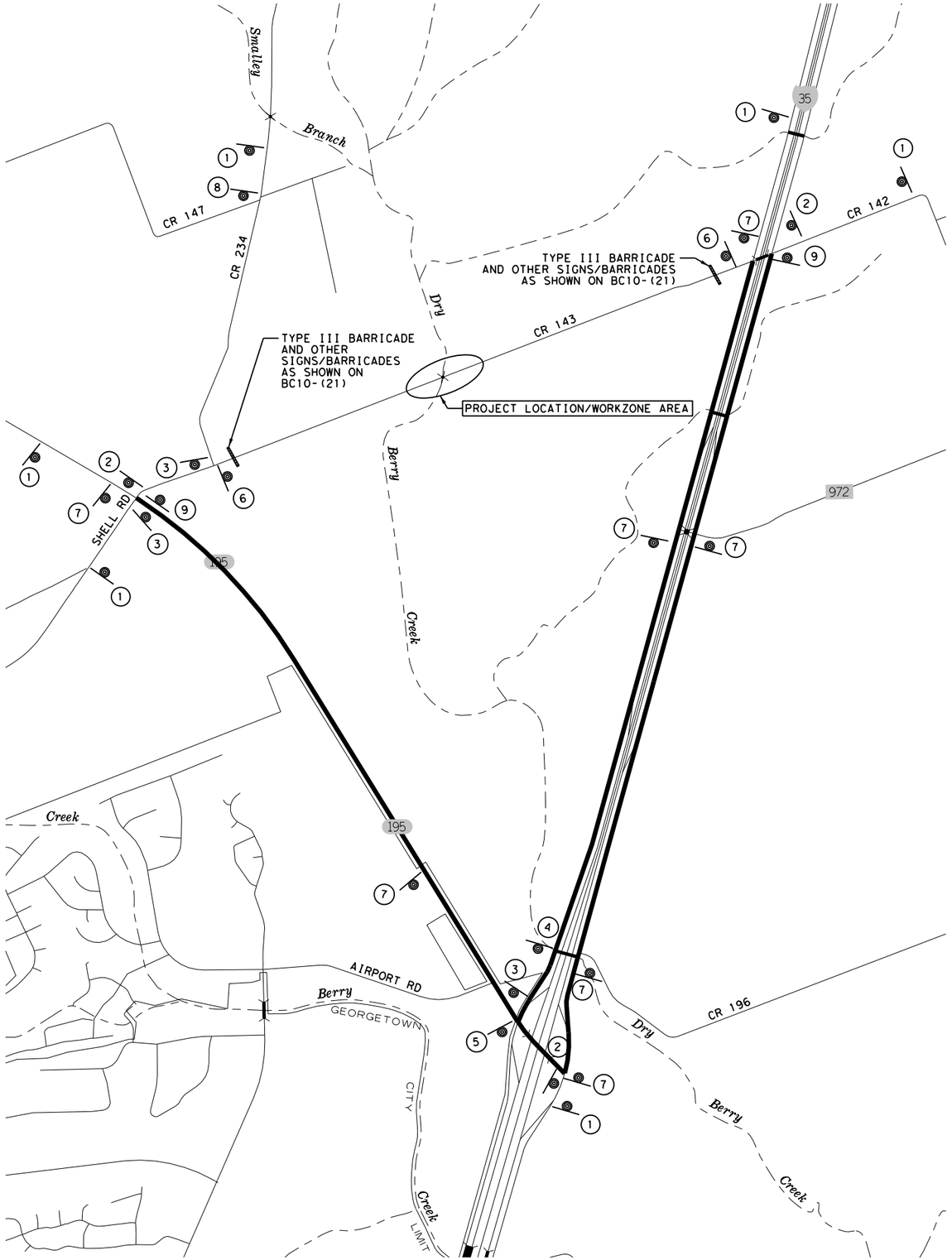
R11-3a
60" X 30"

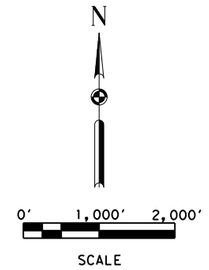
8



R11-3a
60" X 30"

9





GENERAL NOTES

THE CONTRACTOR SHALL NOTIFY THE PROPER CITY, COUNTY, EMERGENCY MEDICAL SERVICES, FIRE DEPARTMENT, POLICE DEPARTMENT, TEXAS DEPARTMENT OF PUBLIC SAFETY, AND THE ENGINEER WHEN MAJOR TRAFFIC CHANGES ARE TO BE PERFORMED. THE NOTIFICATION MUST BE PROVIDED AT LEAST FOURTEEN (14) DAYS PRIOR TO THE CHANGE.

TCP NARRATIVE

1. PLACE WORK ZONE APPROACH SIGNAGE IN ACCORDANCE WITH BC STANDARD SHEETS.
2. PLACE DETOUR SIGNAGE AND BARRICADES AS NOTED ON THE DETOUR LAYOUT.
3. PLACE EROSION CONTROL MEASURES AS NOTED ON SW3P SHEETS.
4. REMOVE EXISTING COUNTY ROAD 143 BRIDGE AND ROADWAY AS SHOWN IN THE PLANS.
5. CONSTRUCT PROPOSED COUNTY ROAD 143 BRIDGE AND ROADWAY AS SHOWN IN THE PLANS.
6. REOPEN ROAD UPON COMPLETION OF CONSTRUCTION.

SIGNS MAY BE ADJUSTED TO FIT EXISTING DRIVEWAYS WITH PERMISSION OF ENGINEER.

ACCESS TO ADJOINING DRIVEWAYS MUST BE MAINTAINED AT ALL TIMES.

2/3/2025

Kimley»Horn F-928

Texas Department of Transportation

CR 143 AT DRY BERRY CREEK

TRAFFIC CONTROL PLAN
DETOUR LAYOUT

SHEET 1 OF 1

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	BR2020(732)	CR 143

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	AUS	WILLIAMSON	9
CONT.	SECT.	JOB	
0914	05	203, ETC.	

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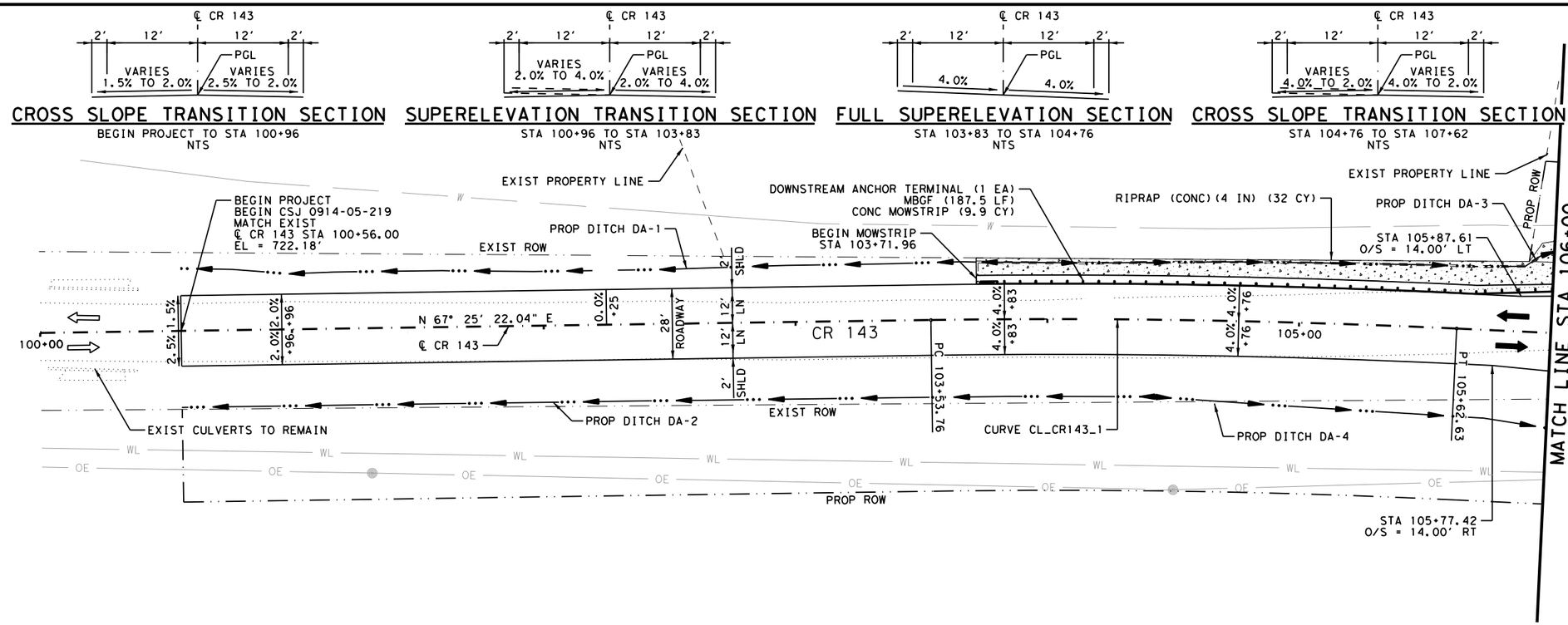

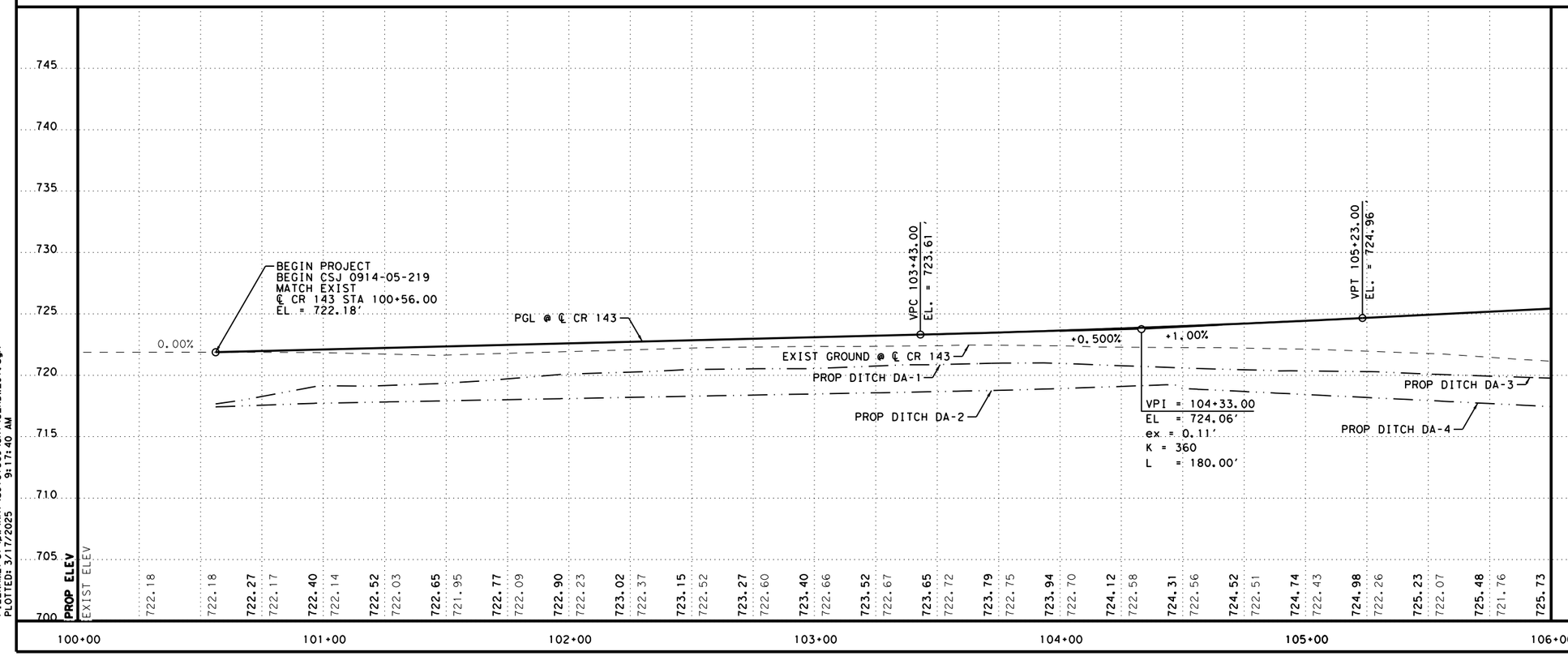

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3/17/2025

ELIZABETH W. WAGNER
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STATE OF TEXAS

Kimley»Horn F-928

Texas Department of Transportation

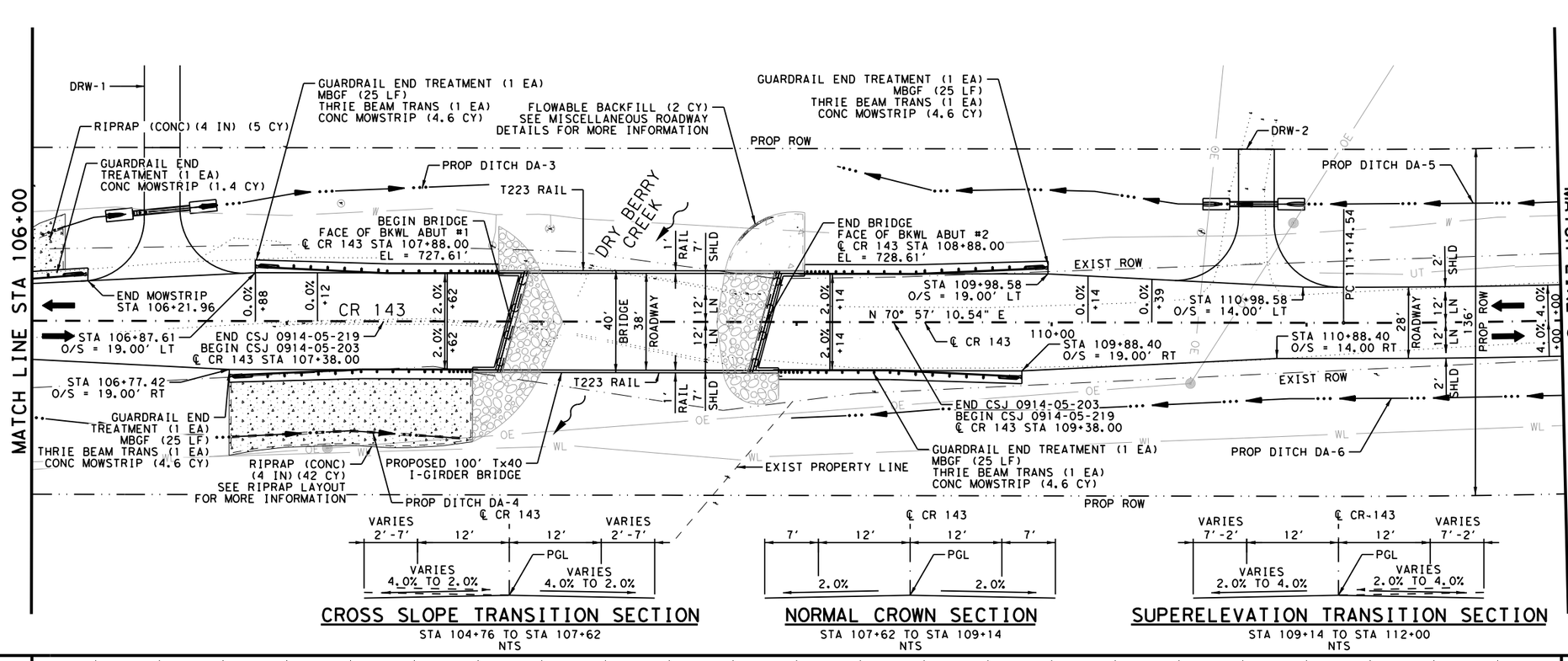
CR 143 AT DRY BERRY CREEK

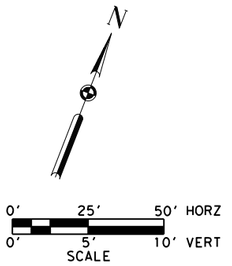
PLAN AND PROFILE

SHEET 1 OF 3

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6		CR 143

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	AUS	WILLIAMSON	43
CONT.	SECT.	JOB	
0914	05	203, ETC.	





LEGEND

- W — BRAZOS RIVER AUTHORITY 48" RAW WATER PIPELINE
- OE — PEDERNALES COOP OVERHEAD ELECTRIC
- WL — CITY OF GEORGETOWN 12" WATER LINE
- UT — FRONTIER TELECOM LINE (TO BE ABANDONED BY OTHERS)
- PROPOSED DIRECTION OF TRAVEL
- EXISTING DIRECTION OF TRAVEL

NOTES:

1. MOWSTRIP STATIONS BASED ON THE USE OF TXDOT STANDARD SGT(12S)31-18 SAFETY END TREATMENT.

CROSS SLOPE TRANSITION SECTION

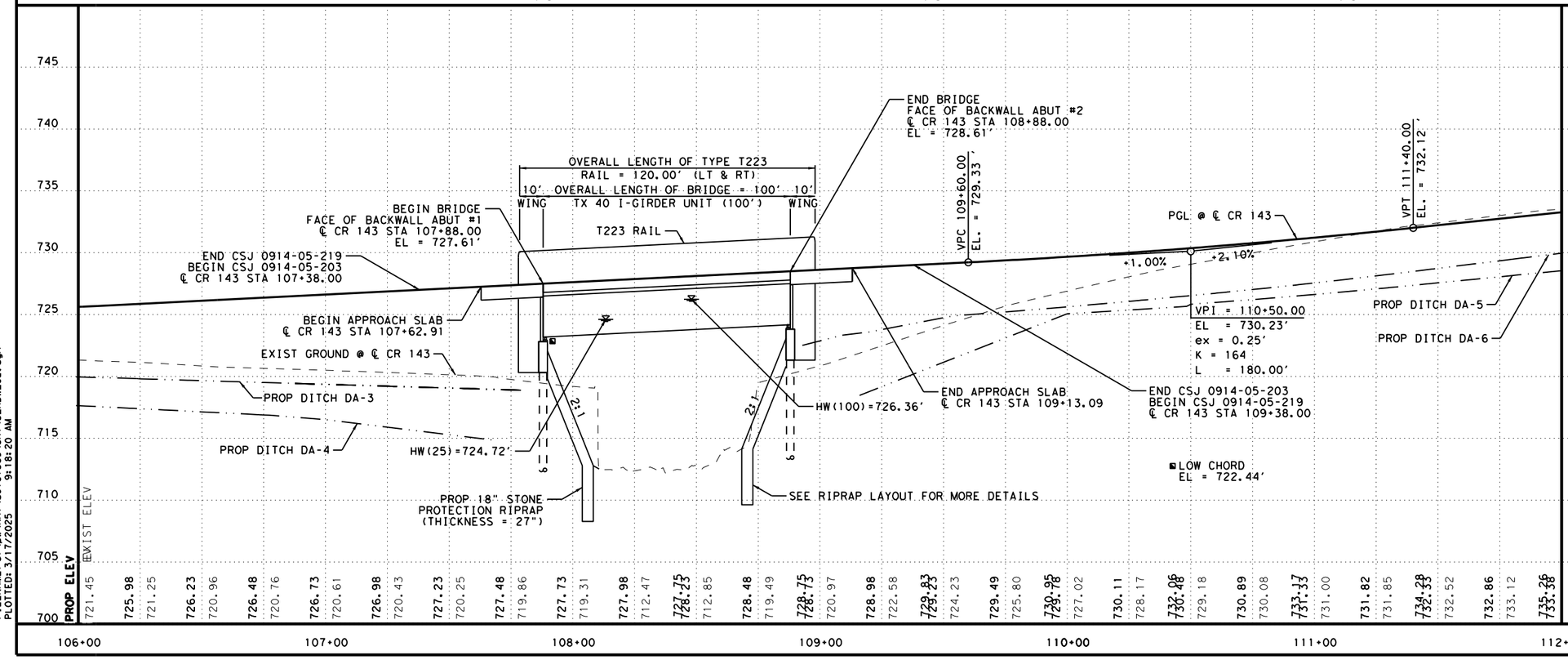
STA 104+76 TO STA 107+62
NTS

NORMAL CROWN SECTION

STA 107+62 TO STA 109+14
NTS

SUPERELEVATION TRANSITION SECTION

STA 109+14 TO STA 112+00
NTS



3/17/2025

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Texas Department of Transportation

CR 143 AT DRY BERRY CREEK

PLAN AND PROFILE

SHEET 2 OF 3

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6		CR 143

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	AUS	WILLIAMSON	44
CONT.	SECT.	JOB	
0914	05	203, ETC.	

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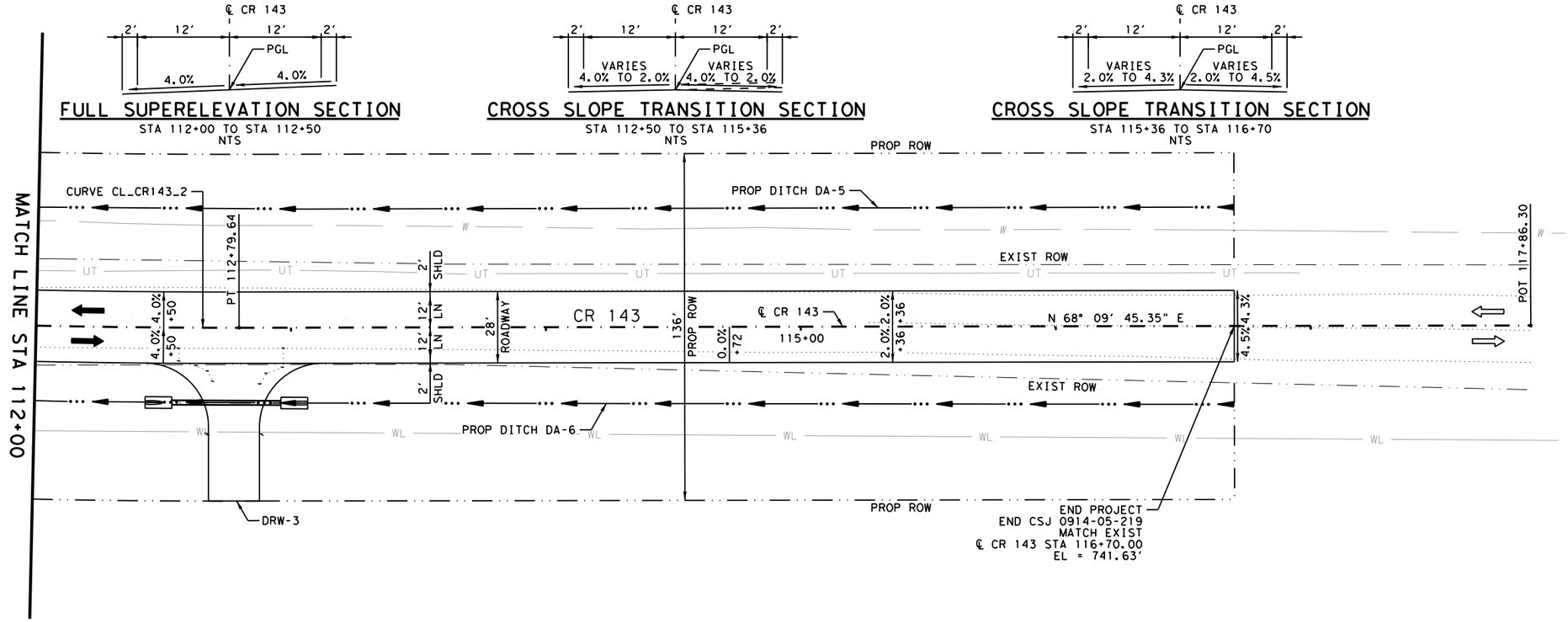

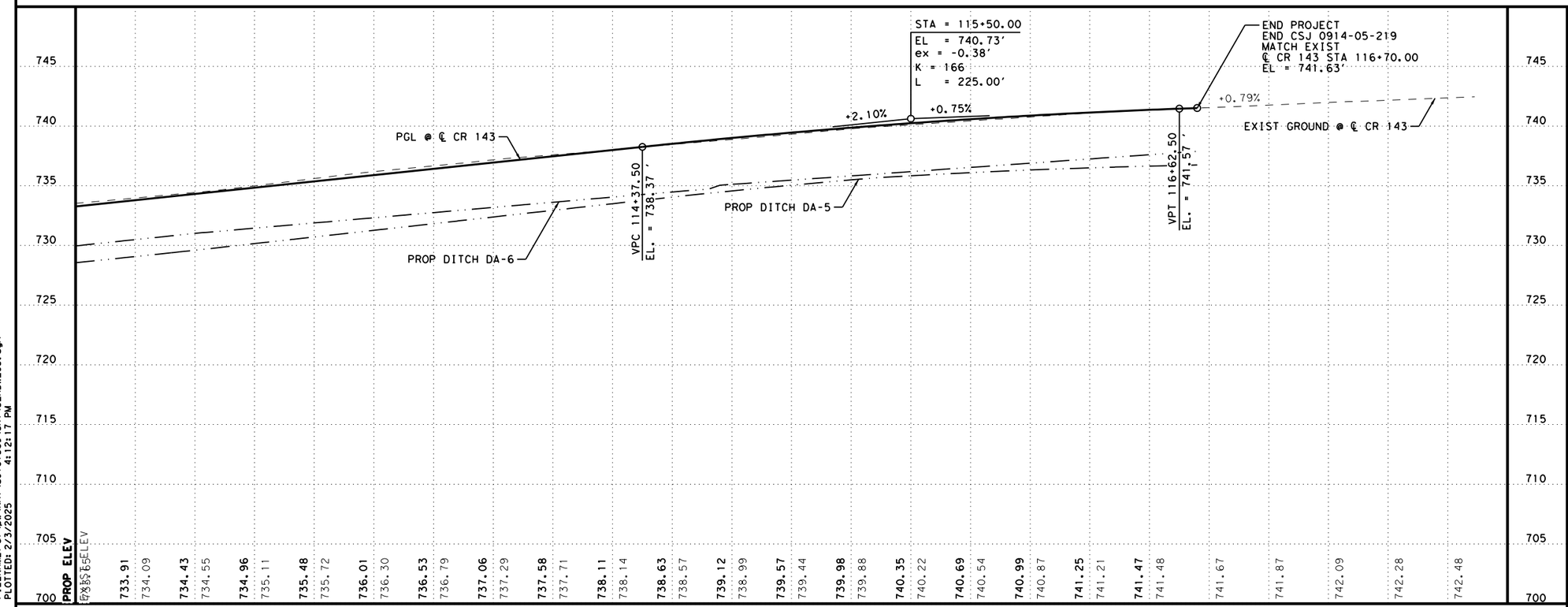

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2/3/2025

ELIZABETH W. WAGNER 149380 LICENSED PROFESSIONAL ENGINEER STATE OF TEXAS

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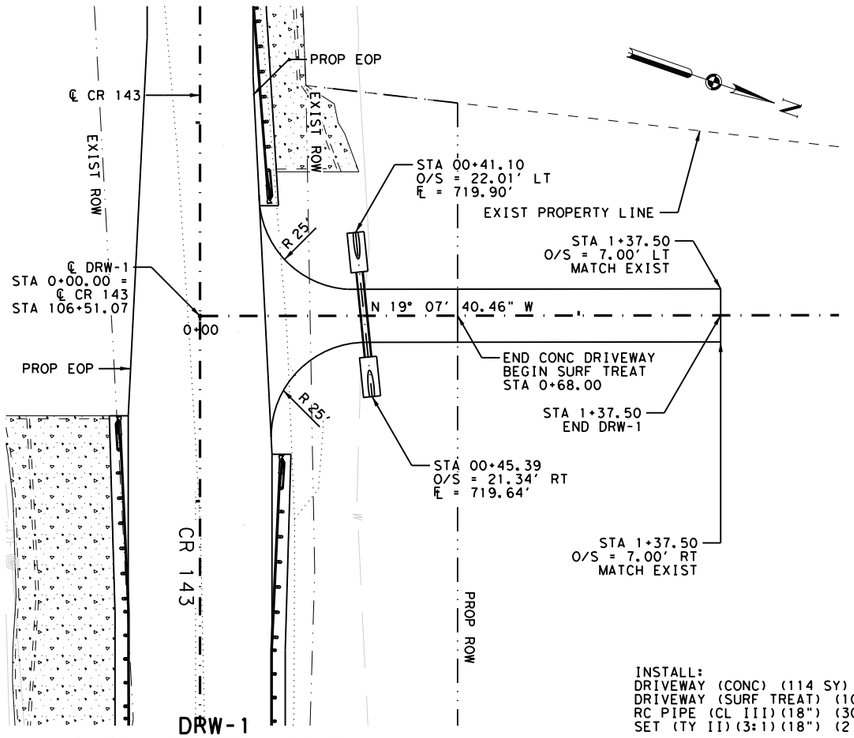
CR 143 AT DRY BERRY CREEK

PLAN AND PROFILE

SHEET 3 OF 3

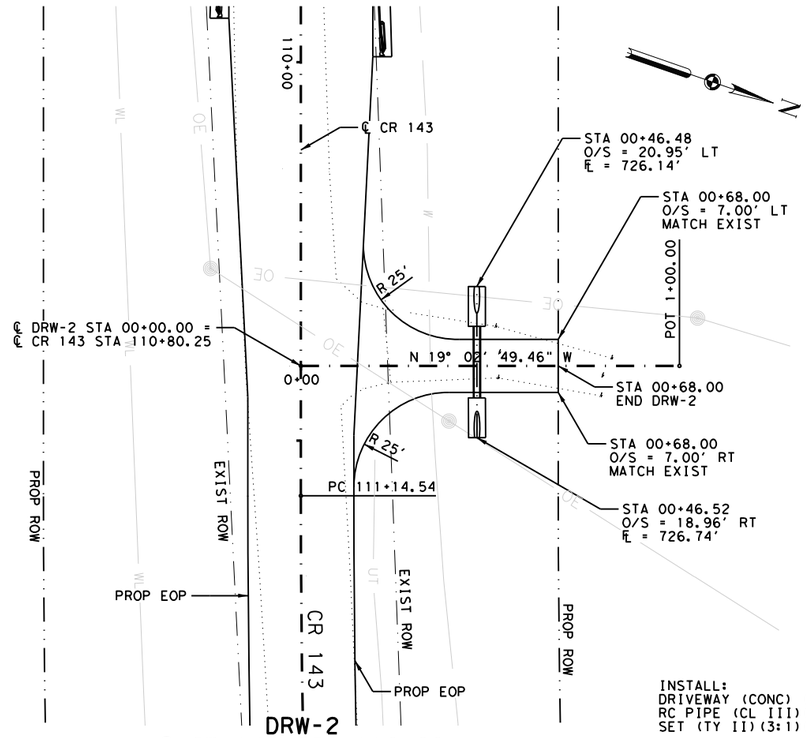
FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	BR2020(732)	CR 143

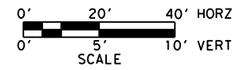
STATE	DIST.	COUNTY	SHEET NO.
TEXAS	AUS	WILLIAMSON	45
CONT.	SECT.	JOB	
0914	05	203, ETC.	



INSTALL:
DRIVEWAY (CONC) (114 SY)
DRIVEWAY (SURF TREAT) (109 SY)
RC PIPE (CL III)(18") (30 LF)
SET (TY II)(3:1)(18") (2 EA)

DRW-1
℄ CR 143 STA 106+51



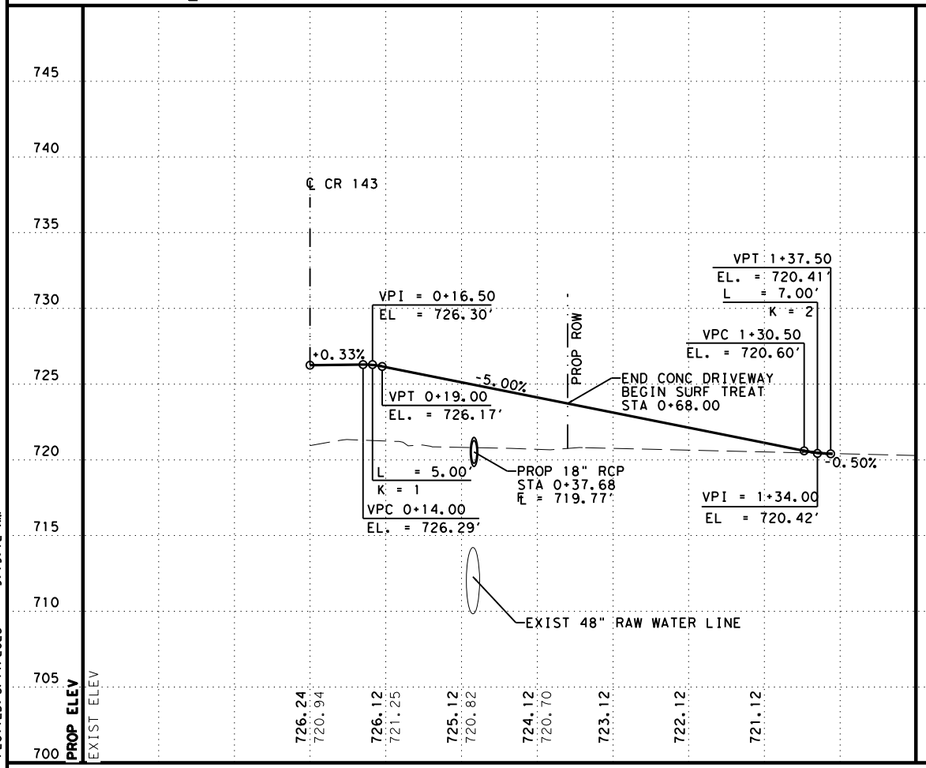


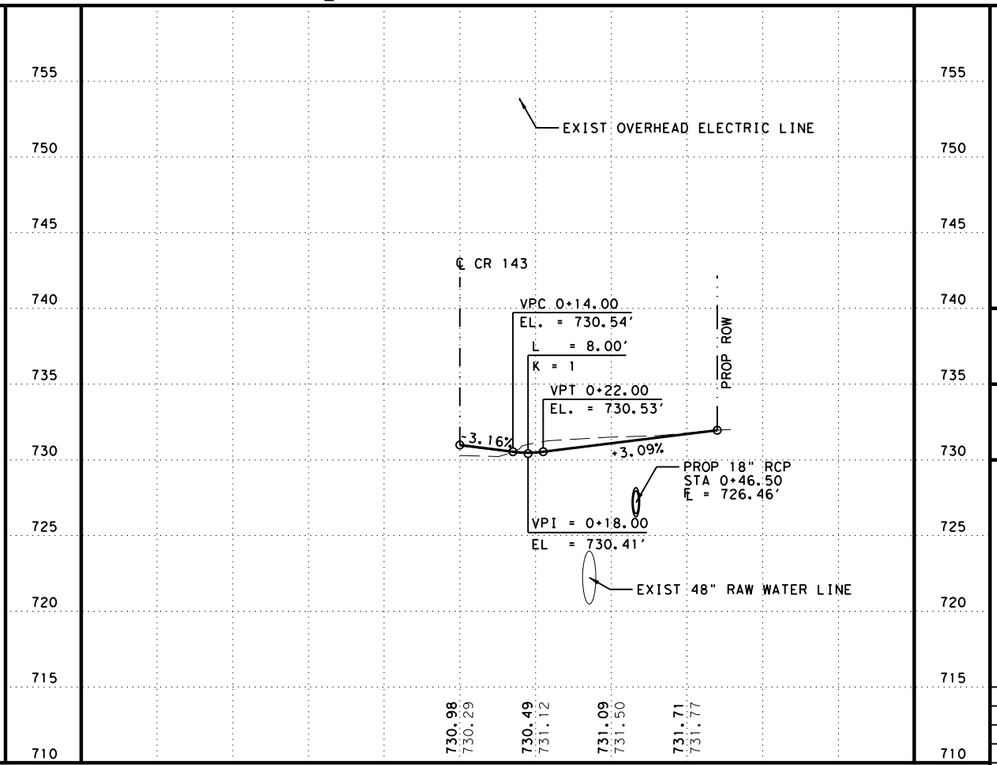
NOTES:

1. DRIVEWAYS WILL REQUIRE TEMPORARY CONSTRUCTION LICENSES.

INSTALL:
DRIVEWAY (CONC) (114 SY)
RC PIPE (CL III)(18") (26 LF)
SET (TY II)(3:1)(18") (2 EA)

DRW-2
℄ CR 143 STA 110+80





Kimley»Horn F-928

Texas Department of Transportation

CR 143 AT DRY BERRY CREEK

DRIVEWAY PLAN AND PROFILE

SHEET 1 OF 2

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6		CR 143

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	AUS	WILLIAMSON	46
CONT.	SECT.	JOB	
0914	05	203, ETC.	

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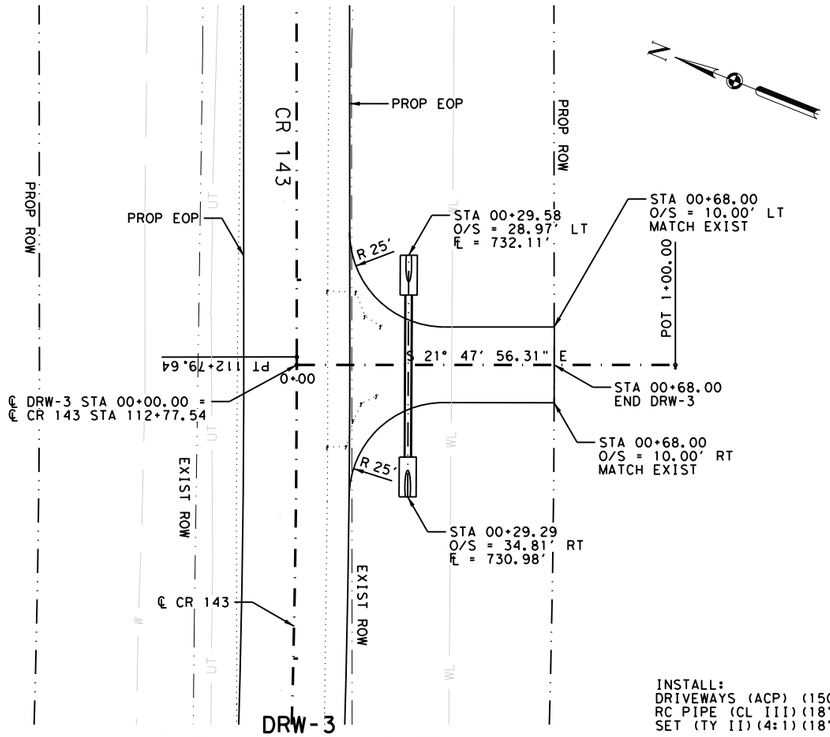


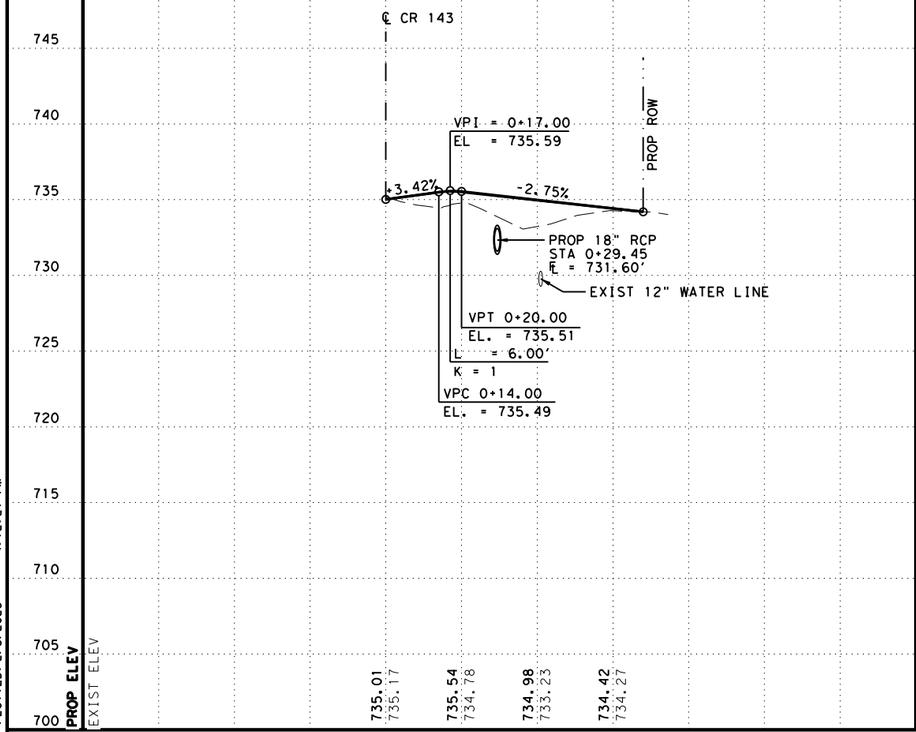
DRW-3
℄ CR 143 STA 112+78

INSTALL:
DRIVEWAYS (ACP) (150 SY)
RC PIPE (CL III)(18") (50 LF)
SET (TY II)(4:1)(18") (2 EA)

0' 20' 40' HORZ
0' 5' 10' VERT
SCALE

NOTES:

1. DRIVEWAYS WILL REQUIRE TEMPORARY CONSTRUCTION LICENSES.



2/3/2025

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CR 143 AT DRY BERRY CREEK

DRIVEWAY
PLAN AND PROFILE

SHEET 2 OF 2

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	BR2020(732)	CR 143

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	AUS	WILLIAMSON	47
CONT.	SECT.	JOB	
0914	05	203, ETC.	

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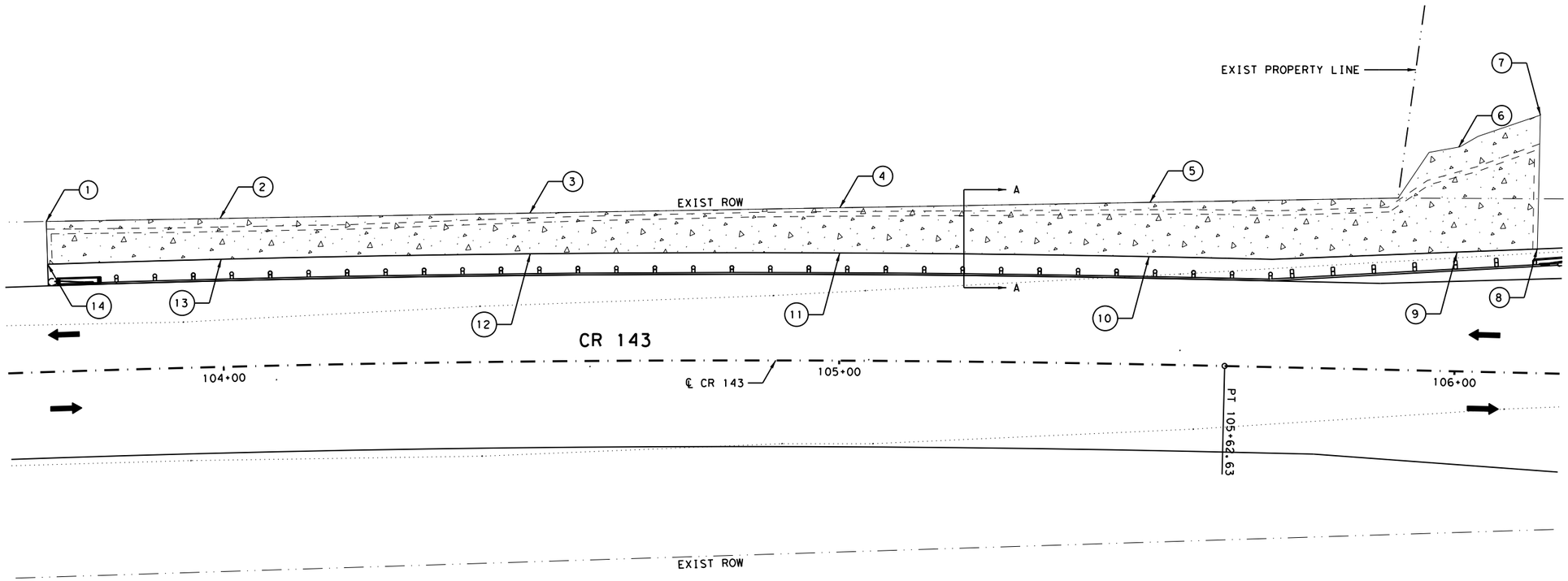
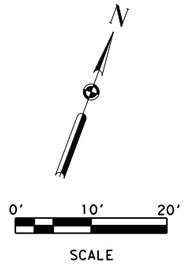
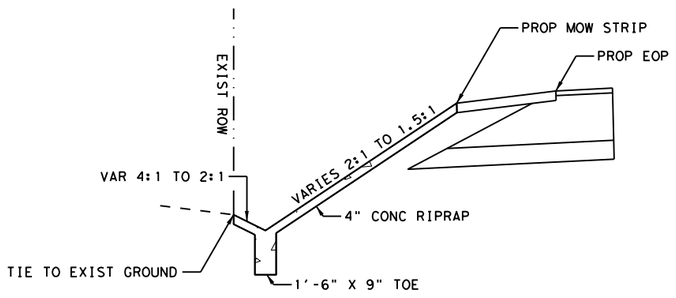




LEGEND

- 4" CONCRETE RIPRAP
- LIMITS OF TOE
- DIRECTION OF TRAVEL



SECTION A-B

RIPRAP POINT TABLE				
POINT	ALIGNMENT	STATION	OFFSET	ELEVATION
1	℄ CR 143	103+71.96	24.47' LT	721.78'
2	℄ CR 143	104+00.00	24.13' LT	721.73'
3	℄ CR 143	104+50.00	24.12' LT	721.44'
4	℄ CR 143	105+00.00	24.85' LT	721.16'
5	℄ CR 143	105+50.00	26.33' LT	721.02'
6	℄ CR 143	106+00.00	36.47' LT	721.19'
7	℄ CR 143	106+13.00	41.93' LT	721.25'
8	℄ CR 143	106+13.00	20.17' LT	725.40'
9	℄ CR 143	106+00.00	19.36' LT	725.39'
10	℄ CR 143	105+50.00	17.50' LT	725.23'
11	℄ CR 143	105+00.00	17.50' LT	724.88'
12	℄ CR 143	104+50.00	17.50' LT	724.52'
13	℄ CR 143	104+00.00	17.50' LT	724.15'
14	℄ CR 143	103+71.96	17.50' LT	723.95'

3/17/2025

STATE OF TEXAS
ELIZABETH W. WAGNER
149380
LICENSED
PROFESSIONAL ENGINEER

Kimley»Horn F-928

Texas Department of Transportation

CR 143 AT DRY BERRY CREEK

RIPRAP LAYOUT

SHEET 1 OF 2

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6		CR 143

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	AUS	WILLIAMSON	48
CONT.	SECT.	JOB	
0914	05	203, ETC.	

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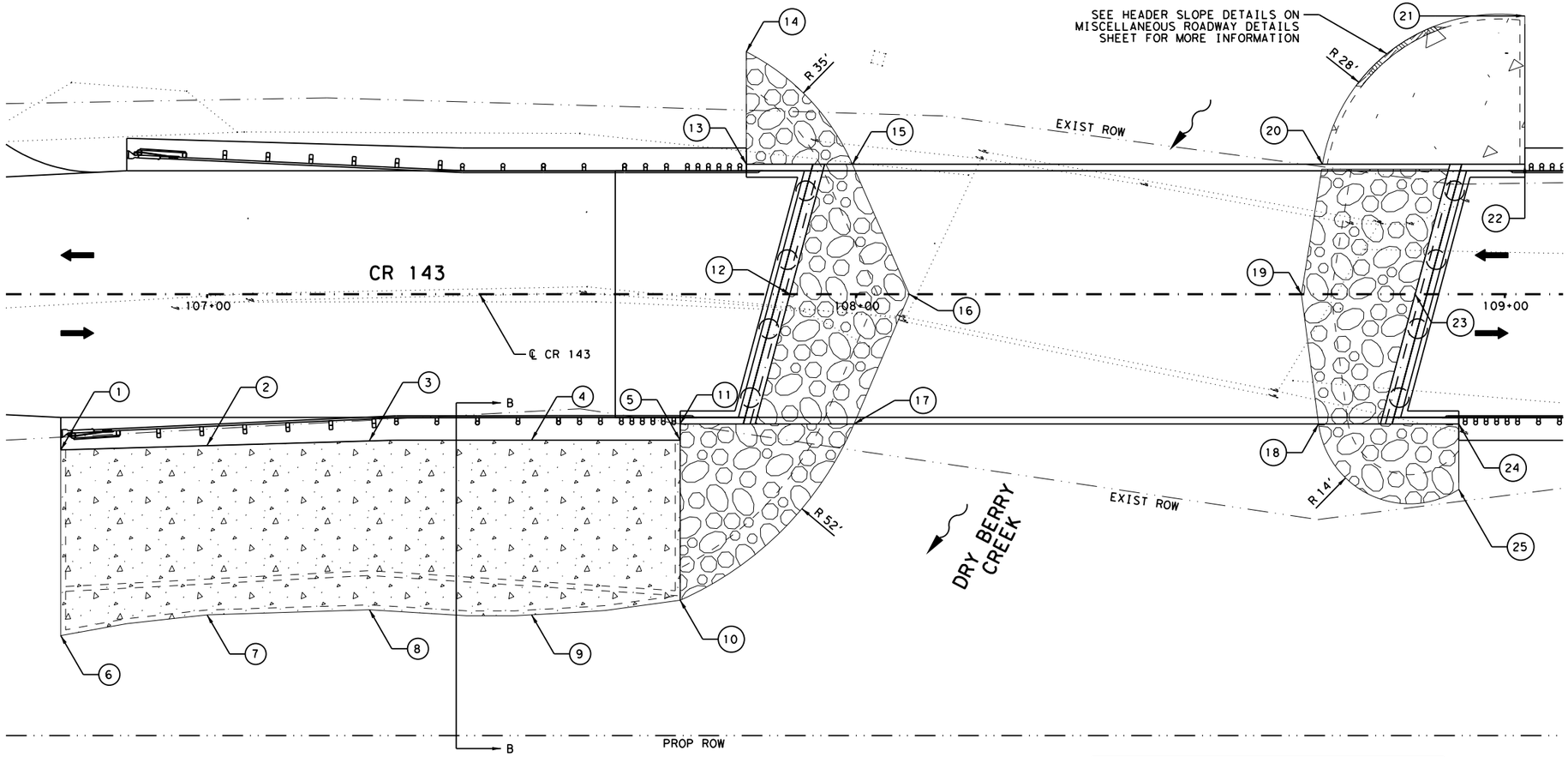

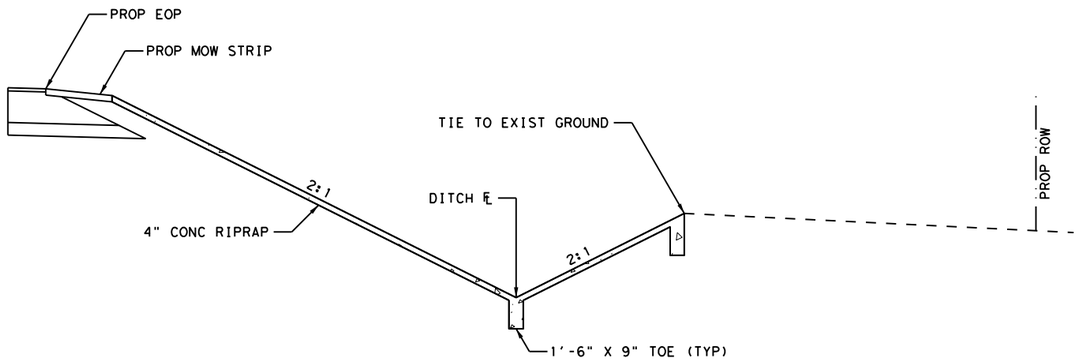

SECTION B-B

N

0' 10' 20'

SCALE

LEGEND

- 18" STONE RIPRAP (27" THICKNESS)
- 4" CONCRETE RIPRAP
- 5" CONCRETE RIPRAP
- FLOWABLE BACKFILL
- LIMITS OF TOE
- DIRECTION OF TRAVEL

RIPRAP POINT TABLE

POINT	ALIGNMENT	STATION	OFFSET	ELEVATION
1	℄ CR 143	106+77.42	24.00' RT	725.52'
2	℄ CR 143	107+00.00	23.34' RT	725.84'
3	℄ CR 143	107+25.00	22.61' RT	726.19'
4	℄ CR 143	107+50.00	22.50' RT	726.49'
5	℄ CR 143	107+72.91	22.50' RT	726.73'
6	℄ CR 143	106+77.42	52.59' RT	718.85'
7	℄ CR 143	107+00.00	49.41' RT	718.85'
8	℄ CR 143	107+25.00	48.61' RT	718.83'
9	℄ CR 143	107+50.00	49.40' RT	717.78'
10	℄ CR 143	107+72.91	47.14' RT	713.93'
11	℄ CR 143	107+72.91	20.00' RT	727.50'
12	℄ CR 143	107+89.81	0.00'	722.18'
13	℄ CR 143	107+83.09	20.00' LT	727.88'
14	℄ CR 143	107+83.09	37.33' LT	719.21'
15	℄ CR 143	107+99.45	20.00' LT	719.69'
16	℄ CR 143	108+08.24	0.00'	713.20'
17	℄ CR 143	107+99.69	20.00' RT	714.14'
18	℄ CR 143	108+71.17	20.00' RT	717.93'
19	℄ CR 143	108+68.66	0.00'	714.27'
20	℄ CR 143	108+71.92	20.00' LT	712.97'
21	℄ CR 143	109+03.09	42.86' LT	717.16'
22	℄ CR 143	109+03.09	20.00' LT	728.59'
23	℄ CR 143	108+86.19	0.00'	723.16'
24	℄ CR 143	108+92.91	20.00' RT	728.75'
25	℄ CR 143	108+92.91	30.09' RT	723.70'

2/3/2025

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Texas Department of Transportation

CR 143 AT DRY BERRY CREEK

RIPRAP LAYOUT

SHEET 2 OF 2

FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
6	BR2020(732)		CR 143
STATE	DIST.	COUNTY	SHEET NO.
TEXAS	AUS	WILLIAMSON	49
CONT.	SECT.	JOB	
0914	05	203, ETC.	

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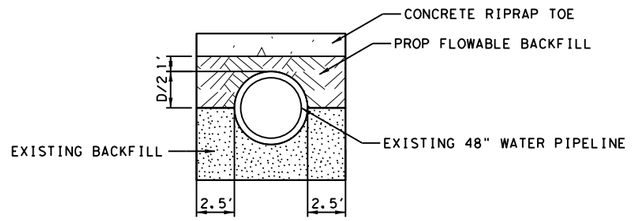
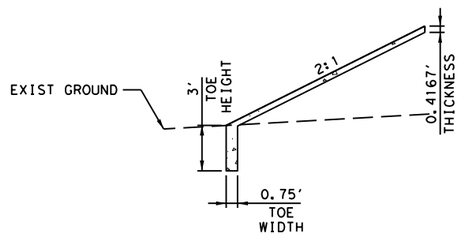


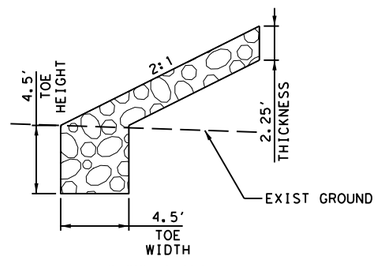
PIPELINE PROTECTION DETAIL

NOTES:

1. CONTRACTOR TO EXTEND BRAZOS RIVER AUTHORITY BLOW OFF VALVE STEM AS NECESSARY, PAID FOR BY ITEM 0479 7007, ADJUSTING MANHOLES (WATER VALVE BOX). CONTACT BRA REPRESENTATIVE COLTON ADKINS AT (254)307-9836 PRIOR TO CONSTRUCTION.
2. NO HEAVY EQUIPMENT ON TOP OF THE BRAZOS RIVER AUTHORITY RAW WATER LINE. CROSS AT 90 DEGREES USING MATTED CROSSINGS.



CONCRETE RIPAP



STONE RIPAP

HEADER SLOPE DETAILS

2/3/2025

STATE OF TEXAS
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Texas Department of Transportation

CR 143 AT DRY BERRY CREEK

MISCELLANEOUS ROADWAY DETAILS

SHEET 1 OF 1

FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	BR2020(732)	CR 143

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	AUS	WILLIAMSON	50
CONT.	SECT.	JOB	
0914	05	203, ETC.	

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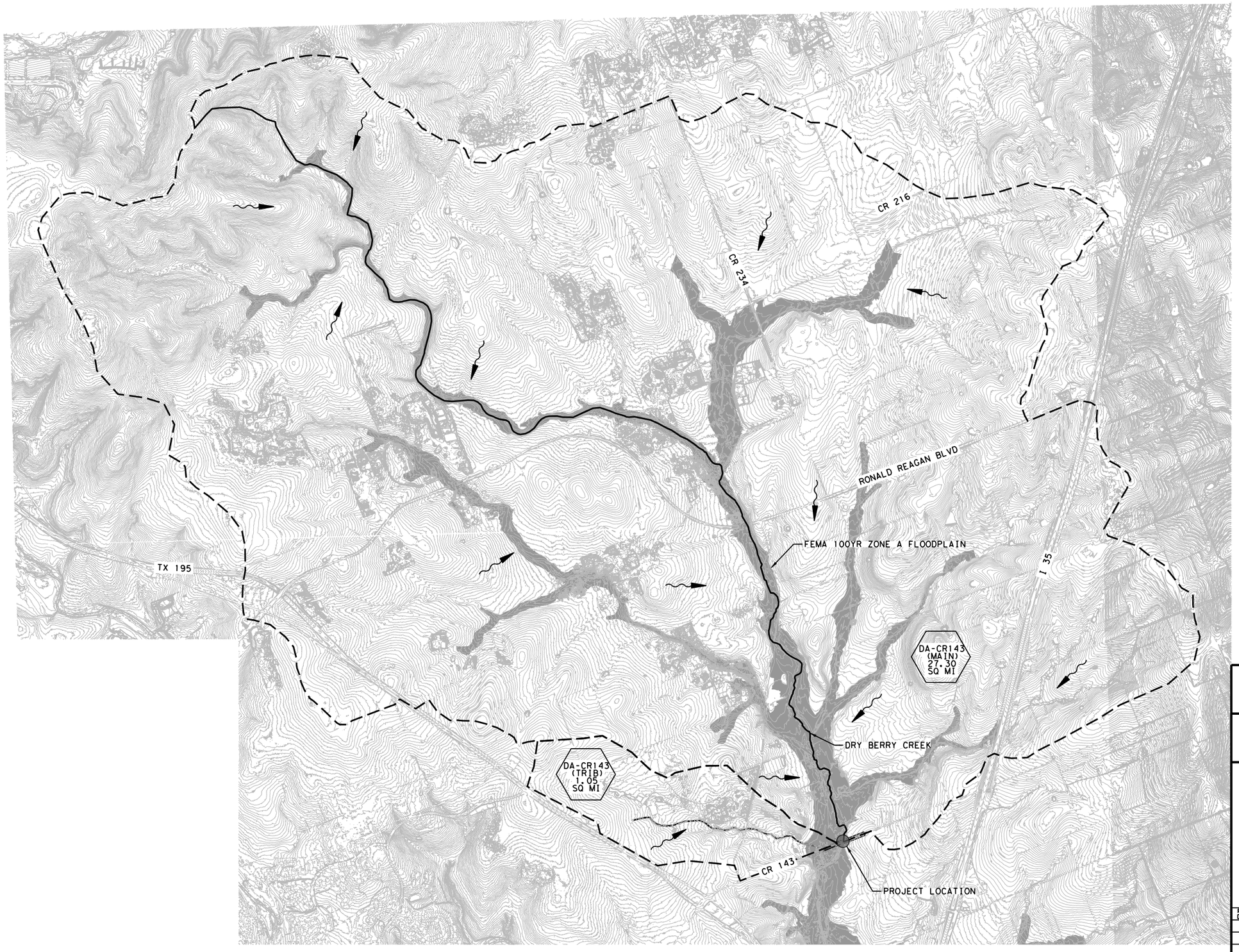

N

LEGEND

- DRAINAGE AREA BOUNDARY
- LONGEST FLOW PATH
- EXISTING CONTOURS
- FEMA ZONE A
- FLOW ARROWS

NOTES:

1. REFER TO THE HYDROLOGIC DATA SHEET FOR DETAILED CALCULATIONS.
2. DRY BERRY CREEK IS LOCATED IN A FEMA ZONE A FLOODPLAIN PER FIRM PANEL 48491C0285F DATED DECEMBER 20, 2019.
3. DRAINAGE AREA DELINEATED BASED ON TNRIS 2016 LIDAR 1 FT CONTOURS.

0' 1750' 3500'

SCALE

Claire Mai

2/3/2025

STATE OF TEXAS
CLAIRE M. MAI
155097
LICENSED
PROFESSIONAL ENGINEER

Kimley»Horn F-928

Texas Department of Transportation

CR 143 AT DRY BERRY CREEK

EXTERNAL DRAINAGE AREA MAP

SHEET 1 OF 1

FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	BR2020(732)	CR 143

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	AUS	WILLIAMSON	63
CONT.	SECT.	JOB	
0914	05	203, ETC.	

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N

0' 100' 200'

SCALE

LEGEND

- DA-X / X.XX — AREA ID / AREA (ACRES)
- DRAINAGE AREA
- DIRECTION OF FLOW

NOTES:

1. PEAK DISCHARGE FOR DITCHES DETERMINED BY RATIONAL METHOD. ALL DITCHES DESIGNED TO THE 5 YEAR STORM USING ATLAS-14.

Rational Method Discharge Calculations

Drainage Area Name	Area (AC)	Runoff Coefficient	Rainfall Intensity (in/hr)	Peak Runoff (CFS)
DA-1	0.20	0.345	5.81	0.40
DA-2	0.51	0.345	5.81	1.02
DA-3	0.23	0.345	5.81	0.46
DA-4	0.38	0.345	5.81	0.76
DA-5	0.75	0.41	5.81	1.79
DA-6	0.87	0.41	5.81	2.07

3/17/2025

STATE OF TEXAS
ELIZABETH W. WAGNER
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Texas Department of Transportation

CR 143 AT DRY BERRY CREEK

INTERNAL DRAINAGE AREA MAP

SHEET 1 OF 1

FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6		CR 143

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	AUS	WILLIAMSON	64
CONT.	SECT.	JOB	
0914	05	203, ETC.	

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HYDROLOGIC MODELING INPUT PARAMETERS												
	BASIN MODEL PARAMETERS											
Name	Subbasin			Transform		Preciptation Depth - NOAA Atlas 14						
	Area	Area	Weighted Curve Number	T_c	T_{lag}	2 yr	5 yr	10 yr	25 yr	50 yr	100 yr	500 yr
	(sq mi)	(ac)		(min)	(min)	(in)	(in)	(in)	(in)	(in)	(in)	(in)
DA-CR 143 (Main)	27.30	17475.00	66	249	149	3.93	5.14	6.28	8.01	9.49	11.20	16.00
DA-CR 143 (Trib)	1.05	671.00	68	76	46	3.93	5.14	6.28	8.01	9.49	11.20	16.00

Name	FLOW COMPUTATION (Q)						
	2 yr	5 yr	10 yr	25 yr	50 yr	100 yr	500 yr
	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)
DA-CR 143 (Main)	3346	6098	9018	13781.6	18057	23073	37721
DA-CR 143 (Trib)	327	571	811	1181	1494	1844	2801
J - CR 143	3419	6220	9194	14045	18432	23587	38565

Loss Method:	SCS Curve Number
Surface Method:	SCS Unit Hydrograph
Precipitation:	SCS Storm - Atlas 14 Depths

CR 143 (Main) Time of Concentration	
Calculation Method	Kerby Kirpich Method
Kerby Variables	
Overland Flow Roughness	0.4
Slope (ft/ft)	0.052
Length (ft)	1200
Kerpich Flow Variables	
Slope (ft/ft)	0.006
Length (ft)	44315
Time of Concentration (min)	249
T Lag (min)	149

CR 143 (Trib) Time of Concentration	
Calculation Method	Kerby Kirpich Method
Kerby Variables	
Overland Flow Roughness	0.4
Slope (ft/ft)	0.015
Length (ft)	1200
Kerpich Flow Variables	
Slope (ft/ft)	0.012
Length (ft)	6140
Time of Concentration (min)	76
T Lag (min)	46

NOTES:

1. HEC-HMS VERSION 4.5 WAS USED FOR HYDROLOGIC ANALYSIS.
2. RAINFALL DEPTHS OBTAINED FROM NOAA ATLAS 14 TO MODEL FREQUENCY STORM.
3. 25-YEAR DEISGN STORM WAS DETERMINED BY WILLIAMSON COUNTY BASED ON THE LONG RANGE TRANSPORTATION PLAN.

Claire Mai

2/3/2025

STATE OF TEXAS
CLAIRE M. MAI
155097
LICENSED
PROFESSIONAL ENGINEER

Kimley»Horn F-928

Texas Department of Transportation

CR 143 AT DRY BERRY CREEK

HYDROLOGIC DATA SHEET

SHEET 1 OF 1

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	BR2020(732)	CR 143

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	AUS	WILLIAMSON	65
CONT.	SECT.	JOB	
0914	05	203, ETC.	

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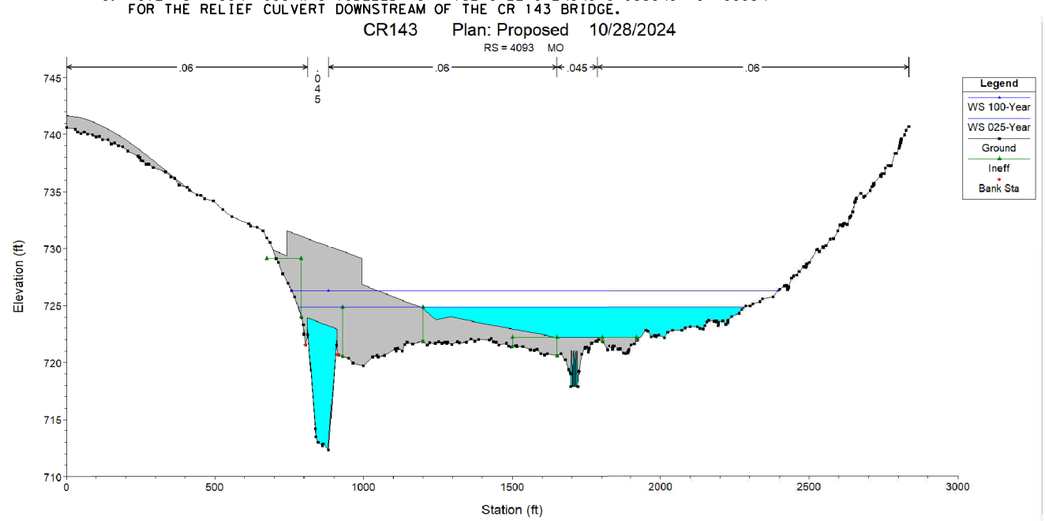
HEC-RAS HYDRAULIC CALCULATIONS

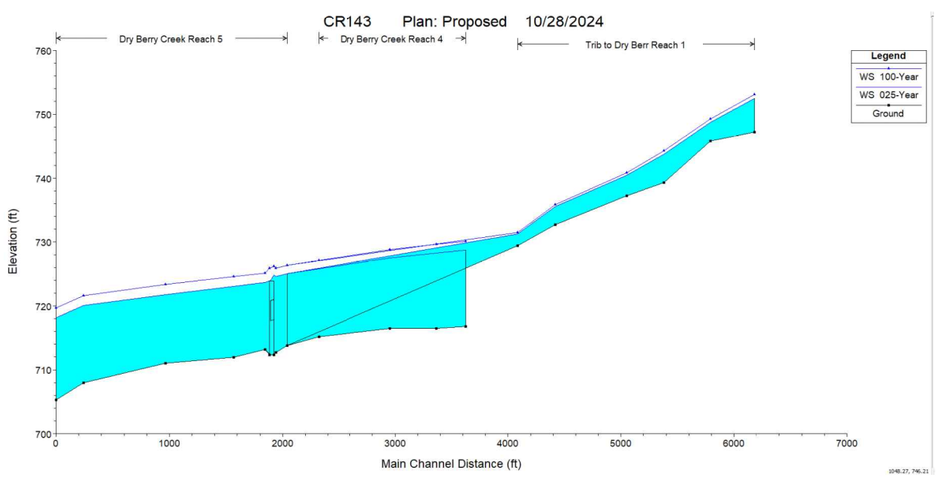
Reach	River	Profile	Plan	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude #
Reach 4	5821	025-Year	Existing	13781.6	716.81	728.76		729.04	0.00236	7.57	4738.36	1590.27	0.41
Reach 4	5821	025-Year	Proposed	13781.6	716.81	728.76		729.04	0.00235	7.56	4744.96	1591.04	0.41
Reach 4	5821	100-Year	Existing	23073.0	716.81	730.11		730.39	0.00233	8.15	7119.17	1845.11	0.41
Reach 4	5821	100-Year	Proposed	23073.0	716.81	730.13		730.41	0.00231	8.12	7143.40	1847.88	0.41
Reach 4	5563	025-Year	Existing	13781.6	716.47	728.25		728.46	0.00194	6.61	5249.46	1672.33	0.36
Reach 4	5563	025-Year	Proposed	13781.6	716.47	728.26		728.47	0.00193	6.59	5260.99	1673.49	0.36
Reach 4	5563	100-Year	Existing	23073.0	716.47	729.60		729.83	0.00195	7.18	7633.60	1859.04	0.37
Reach 4	5563	100-Year	Proposed	23073.0	716.47	729.62		729.84	0.00192	7.15	7669.26	1862.14	0.37
Reach 4	5152	025-Year	Existing	13781.6	716.49	727.49		727.67	0.00189	6.15	5115.53	1488.21	0.36
Reach 4	5152	025-Year	Proposed	13781.6	716.49	727.50		727.68	0.00187	6.12	5137.07	1489.50	0.35
Reach 4	5152	100-Year	Existing	23073.0	716.49	728.77		729.00	0.00211	7.08	7118.64	1634.75	0.38
Reach 4	5152	100-Year	Proposed	23073.0	716.49	728.80		729.03	0.00206	7.00	7179.76	1637.97	0.38
Reach 4	4519	025-Year	Existing	13781.6	715.19	725.76		726.08	0.00526	8.78	3592.79	1262.62	0.55
Reach 4	4519	025-Year	Proposed	13781.6	715.19	725.83		726.14	0.00501	8.62	3677.45	1273.93	0.54
Reach 4	4519	100-Year	Existing	23073.0	715.19	726.89		727.29	0.00546	9.78	5078.27	1371.35	0.58
Reach 4	4519	100-Year	Proposed	23073.0	715.19	727.12		727.47	0.00453	9.06	5404.77	1386.96	0.53
Reach 5	4238	025-Year	Existing	14045.0	713.83	724.92		725.13	0.00214	6.08	4796.65	1538.85	0.37
Reach 5	4238	025-Year	Proposed	14045.0	713.83	725.08		725.27	0.00185	5.74	5047.09	1549.95	0.35
Reach 5	4238	100-Year	Existing	23587.0	713.83	725.85		726.17	0.00283	7.52	6282.16	1633.84	0.44
Reach 5	4238	100-Year	Proposed	23587.0	713.83	726.39		726.62	0.00192	6.44	7165.73	1661.06	0.36
Reach 5	4141	025-Year	Existing	14045.0	712.69	723.85	723.85	724.72	0.00727	10.73	2879.76	1442.45	0.62
Reach 5	4141	025-Year	Proposed	14045.0	712.69	724.61	723.77	725.01	0.00338	7.71	3632.80	1492.28	0.43
Reach 5	4141	100-Year	Existing	23587.0	712.69	725.00	724.63	725.73	0.00639	10.88	4581.39	1530.02	0.60
Reach 5	4141	100-Year	Proposed	23587.0	712.69	725.89	724.38	726.35	0.00373	8.78	5549.71	1619.99	0.46
Reach 5	4093			Mult Open									
Reach 5	4043	025-Year	Existing	14045.0	713.16	723.66	722.60	723.98	0.00237	6.76	4388.90	1446.00	0.40
Reach 5	4043	025-Year	Proposed	14045.0	713.16	723.67	722.87	724.15	0.00325	7.92	3527.58	1446.53	0.47
Reach 5	4043	100-Year	Existing	23587.0	713.16	725.17	723.42	725.48	0.00211	7.10	6656.94	1547.93	0.39
Reach 5	4043	100-Year	Proposed	23587.0	713.16	725.17	723.76	725.49	0.00216	7.18	6486.40	1547.77	0.40
Reach 5	3765	025-Year	Existing	14045.0	711.99	723.10		723.37	0.00206	6.42	4162.16	1245.78	0.38
Reach 5	3765	025-Year	Proposed	14045.0	711.99	723.10		723.37	0.00206	6.42	4162.16	1245.78	0.38
Reach 5	3765	100-Year	Existing	23587.0	711.99	724.63		724.94	0.00200	7.02	6165.69	1389.58	0.38
Reach 5	3765	100-Year	Proposed	23587.0	711.99	724.63		724.94	0.00200	7.02	6165.69	1389.58	0.38

NOTES:

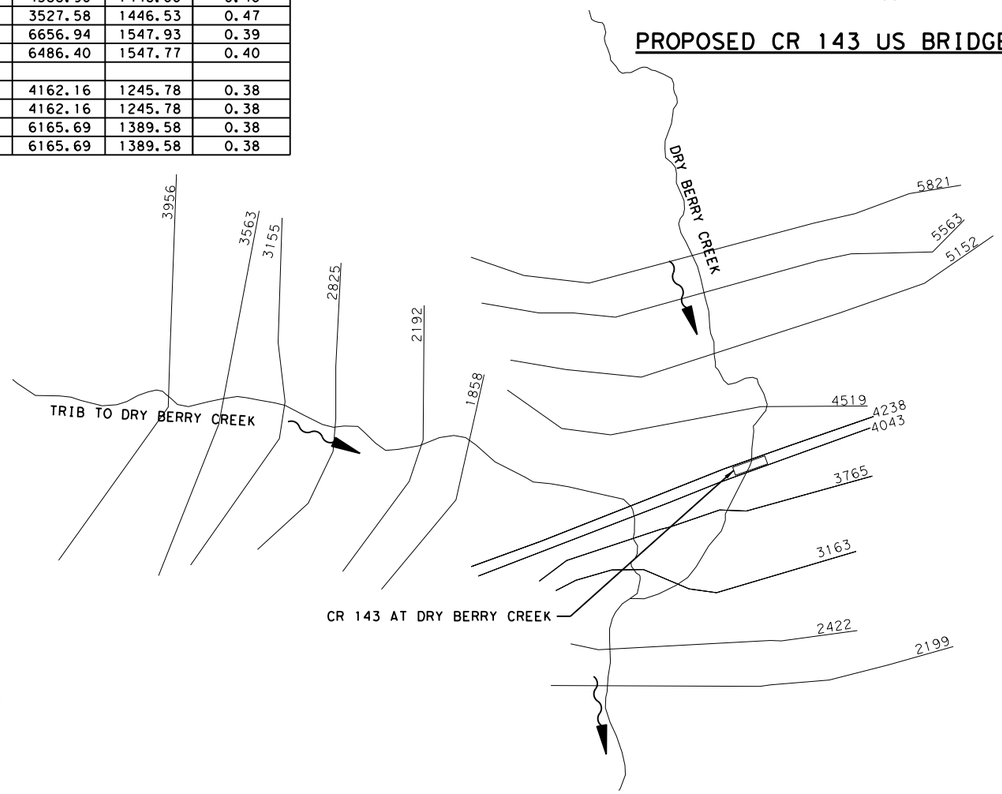
1. HEC-RAS VERSION 5.0.7 WAS USED FOR HYDRAULIC ANALYSIS AND DESIGN.
2. THE TAILWATER BOUNDARY CONDITION USED WAS NORMAL DEPTH WITH A SLOPE OF 0.00611 FT/FT.
3. DESIGN FLOW BASED ON 25-YR FREQUENCY. DESIGN STORM WAS DETERMINED BY WILLIAMSON COUNTY BASED ON THE LONG RANGE TRANSPORTATION PLAN.
4. H&H FILES WERE SENT TO THE LOCAL FLOODPLAIN ADMINISTRATOR, DAVID ZWERNEMANN ON 02/03/2025.
5. THERE ARE NO INSURABLE STRUCTURES THAT WOULD BE ADVERSELY IMPACTED BY THE 25 YR AND 100 YR DESIGN FREQUENCY.
6. RIVER STATION 4093 WAS MODELED AS A MULTIPLE OPENING CROSSING TO ACCOUNT FOR THE RELIEF CULVERT DOWNSTREAM OF THE CR 143 BRIDGE.



PROPOSED CR 143 US BRIDGE FACE



WATER SURFACE PROFILE



HEC-RAS CROSS SECTION LOCATIONS

2/3/2025

STATE OF TEXAS
AUSTIN S. HELTON
124922
LICENSED
PROFESSIONAL ENGINEER

Kimley»Horn F-928

Texas Department of Transportation

CR 143 AT DRY BERRY CREEK

HYDRAULIC DATA SHEET

SHEET 1 OF 2

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	BR2020(732)	CR 143

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	AUS	WILLIAMSON	66
CONT.	SECT.	JOB	
0914	05	203, ETC.	

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PROPOSED DITCH ANALYSIS - DA-1

STATION	FLOW LINE ELEVATION	DITCH GRADE	LINING	DITCH DEPTH (FT)	NORMAL DEPTH (FT)	FRONT SLOPE (X:1)	BACK SLOPE (X:1)	CHANNEL n	DITCH CAPACITY (CFS)	NORMAL CAPACITY (CFS)	DESIGN VELOCITY (FPS)	DESIGN Q(5) (CFS)	DELTA CAPACITY CAP - DES (CFS)	ALLOW SHEAR STRESS	DESIGN SHEAR STRESS	DELTA SHEAR ALLOW - DES
100+56	718.35															
101+00	719.44	2.48%	CLASS B	0.69	0.28	3	3	0.035	4.53	0.40	1.73	0.40	4.13	2.10	0.43	1.67
101+50	719.68	0.48%	CLASS B	1.01	0.38	3	3	0.035	5.51	0.40	0.93	0.40	5.11	2.10	0.11	1.99
102+00	720.40	1.44%	CLASS B	1.01	0.31	3	3	0.035	9.55	0.40	1.41	0.40	9.15	2.10	0.28	1.82
102+50	720.77	0.74%	CLASS B	1.00	0.35	3	3	0.035	6.66	0.40	1.10	0.40	6.26	2.10	0.16	1.94
103+00	720.87	0.20%	CLASS B	1.04	0.45	3	3	0.035	3.85	0.40	0.67	0.40	3.45	2.10	0.06	2.04
103+50	721.17	0.60%	CLASS B	0.64	0.36	3	3	0.035	1.83	0.40	1.02	0.40	1.43	2.10	0.14	1.96

PROPOSED DITCH ANALYSIS - DA-3

STATION	FLOW LINE ELEVATION	DITCH GRADE	LINING	DITCH DITCH (FT)	NORMAL DEPTH (FT)	FRONT SLOPE (X:1)	BACK SLOPE (X:1)	CHANNEL n	DITCH CAPACITY (CFS)	NORMAL CAPACITY (CFS)	DESIGN VELOCITY (FPS)	DESIGN Q(5) (CFS)	DELTA CAPACITY CAP - DES (CFS)	ALLOW SHEAR STRESS	DESIGN SHEAR STRESS	DELTA SHEAR ALLOW - DES
104+00	721.26															
104+50	720.90	0.72%	CLASS B	0.54	0.45	1.5	2.2	0.035	0.74	0.46	1.22	0.46	0.28	2.10	0.20	1.90
105+00	720.65	0.50%	CLASS B	0.51	0.49	1.5	2	0.035	0.50	0.46	1.07	0.46	0.04	2.10	0.15	1.95
105+50	720.39	0.52%	CLASS B	0.63	0.46	1.5	2.5	0.035	1.04	0.46	1.07	0.46	0.58	2.10	0.15	1.95
106+00	720.07	0.64%	CLASS B	1.12	0.37	2.3	4	0.035	8.81	0.46	1.07	0.46	8.35	2.10	0.15	1.95
106+50	719.77	0.60%	CLASS B	1.04	0.34	4	4	0.035	9.02	0.46	0.99	0.46	8.56	2.10	0.13	1.97
107+00	719.47	0.60%	CLASS B	0.75	0.34	4	4	0.035	3.77	0.46	0.99	0.46	3.31	2.10	0.13	1.97
107+50	719.18	0.58%	CLASS B	0.46	0.34	4	4	0.035	1.01	0.46	0.98	0.46	0.55	2.10	0.12	1.98

PROPOSED DITCH ANALYSIS - DA-5

STATION	FLOW LINE ELEVATION	DITCH GRADE	LINING	DITCH DEPTH (FT)	NORMAL DEPTH (FT)	FRONT SLOPE (X:1)	BACK SLOPE (X:1)	CHANNEL n	DITCH CAPACITY (CFS)	NORMAL CAPACITY (CFS)	DESIGN VELOCITY (FPS)	DESIGN Q(5) (CFS)	DELTA CAPACITY CAP - DES (CFS)	ALLOW SHEAR STRESS	DESIGN SHEAR STRESS	DELTA SHEAR ALLOW - DES
109+50	720.97															
110+00	724.69	7.44%	CLASS B	2.54	0.35	4	4	0.035	343.47	1.79	3.58	1.79	341.68	2.10	1.64	0.46
110+50	725.95	2.52%	CLASS B	4.12	0.43	4	4	0.035	726.06	1.79	2.38	1.79	724.27	2.10	0.68	1.42
111+00	726.74	1.58%	CLASS B	4.13	0.47	4	4	0.035	578.64	1.79	2.00	1.79	576.85	2.10	0.47	1.63
111+50	727.68	1.88%	CLASS B	4.14	0.46	4	4	0.035	635.27	1.79	2.13	1.79	633.48	2.10	0.54	1.56
112+00	728.66	1.96%	CLASS B	4.16	0.45	4	4	0.035	657.04	1.79	2.17	1.79	655.25	2.10	0.56	1.54
112+50	729.71	2.10%	CLASS B	4.03	0.45	4	4	0.035	624.89	1.79	2.23	1.79	623.10	2.10	0.59	1.51
113+00	730.83	2.24%	CLASS B	3.65	0.44	4	4	0.035	495.59	1.79	2.28	1.79	493.80	2.10	0.62	1.48
113+50	731.94	2.22%	CLASS B	3.28	0.44	4	4	0.035	371.01	1.79	2.27	1.79	369.22	2.10	0.61	1.49
114+00	733.05	2.22%	CLASS B	3.08	0.44	4	4	0.035	313.71	1.79	2.27	1.79	311.92	2.10	0.61	1.49
114+50	734.16	2.22%	CLASS B	2.59	0.44	4	4	0.035	197.63	1.79	2.27	1.79	195.84	2.10	0.61	1.49
115+00	735.16	2.00%	CLASS B	2.36	0.45	4	4	0.035	146.38	1.79	2.18	1.79	144.59	2.10	0.56	1.54
115+50	735.95	1.58%	CLASS B	1.92	0.47	4	4	0.035	75.05	1.79	2.00	1.79	73.26	2.10	0.47	1.63
116+00	736.43	0.96%	CLASS B	2.14	0.52	4	4	0.035	78.12	1.79	1.66	1.79	76.33	2.10	0.31	1.79
116+50	736.76	0.66%	CLASS B	2.41	0.56	4	4	0.035	88.93	1.79	1.44	1.79	87.14	2.10	0.23	1.87
116+70	736.85	0.45%	CLASS B	2.41	0.60	4	4	0.035	73.43	1.79	1.25	1.79	71.64	2.10	0.17	1.93

3/17/2025

STATE OF TEXAS
ELIZABETH W. WAGNER
149380
LICENSED
PROFESSIONAL ENGINEER

Kimley»Horn F-928

Texas Department of Transportation

CR 143 AT DRY BERRY CREEK

DITCH CALCULATIONS (LEFT)

SHEET 1 OF 1

FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6		CR 143

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	AUS	WILLIAMSON	68
CONT.	SECT.	JOB	
0914	05	203, ETC.	

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PROPOSED DITCH ANALYSIS - DA-2

STATION	FLOW LINE ELEVATION	DITCH GRADE	LINING	DITCH DEPTH (FT)	NORMAL DEPTH (FT)	FRONT SLOPE (X:1)	BACK SLOPE (X:1)	CHANNEL n	DITCH CAPACITY (CFS)	NORMAL CAPACITY (CFS)	DESIGN VELOCITY (FPS)	DESIGN Q(5) (CFS)	DELTA CAPACITY CAP - DES (CFS)	ALLOW SHEAR STRESS	DESIGN SHEAR STRESS	DELTA SHEAR ALLOW - DES
100+56	717.82															
101+00	718.04	0.50%	CLASS B	1.96	0.48	4	4	0.035	44.60	1.03	1.13	1.02	43.58	2.10	0.15	1.95
101+50	718.22	0.36%	CLASS B	2.29	0.51	4	4	0.035	57.31	1.03	1.00	1.02	56.29	2.10	0.11	1.99
102+00	718.41	0.38%	CLASS B	2.22	0.50	4	4	0.035	54.21	1.03	1.02	1.02	53.19	2.10	0.12	1.98
102+50	718.60	0.38%	CLASS B	2.29	0.50	4	4	0.035	58.88	1.03	1.02	1.02	57.86	2.10	0.12	1.98
103+00	718.78	0.36%	CLASS B	2.14	0.51	4	4	0.035	47.84	1.03	1.00	1.02	46.82	2.10	0.11	1.99
103+50	718.97	0.38%	CLASS B	2.06	0.50	4	4	0.035	44.40	1.03	1.02	1.02	43.38	2.10	0.12	1.98
104+00	719.22	0.50%	CLASS B	1.87	0.48	4	4	0.035	39.35	1.03	1.13	1.02	38.33	2.10	0.15	1.95
104+50	719.55	0.66%	CLASS B	1.53	0.45	4	4	0.035	26.47	1.03	1.26	1.02	25.45	2.10	0.19	1.91

PROPOSED DITCH ANALYSIS - DA-4

STATION	FLOW LINE ELEVATION	DITCH GRADE	LINING	DITCH DEPTH (FT)	NORMAL DEPTH (FT)	FRONT SLOPE (X:1)	BACK SLOPE (X:1)	CHANNEL n	DITCH CAPACITY (CFS)	NORMAL CAPACITY (CFS)	DESIGN VELOCITY (FPS)	DESIGN Q(5) (CFS)	DELTA CAPACITY CAP - DES (CFS)	ALLOW SHEAR STRESS	DESIGN SHEAR STRESS	DELTA SHEAR ALLOW - DES
104+50	719.22															
105+00	718.73	0.98%	CLASS B	2.62	0.38	4	4	0.035	135.40	0.76	1.35	0.76	134.64	2.10	0.23	1.87
105+50	718.25	0.96%	CLASS B	3.42	0.40	3.4	3.4	0.035	230.11	0.76	1.39	0.76	229.35	2.10	0.24	1.86
106+00	717.75	1.00%	CLASS B	3.39	0.42	3	3	0.035	200.91	0.76	1.45	0.76	200.15	2.10	0.26	1.84
106+50	717.25	1.00%	CLASS B	2.22	0.42	3	3	0.035	64.97	0.76	1.45	0.76	64.21	2.10	0.26	1.84
107+00	716.62	1.26%	CONCRETE RIPRAP	2.23	0.33	2.3	2	0.015	119.74	0.76	3.16	0.76	118.98	100.00	0.26	99.74
107+50	715.41	2.42%	CONCRETE RIPRAP	2.37	0.31	2	2	0.015	179.97	0.76	4.08	0.76	179.21	100.00	0.46	99.54

PROPOSED DITCH ANALYSIS - DA-6

STATION	FLOW LINE ELEVATION	DITCH GRADE	LINING	DITCH DEPTH (FT)	NORMAL DEPTH (FT)	FRONT SLOPE (X:1)	BACK SLOPE (X:1)	CHANNEL n	DITCH CAPACITY (CFS)	NORMAL CAPACITY (CFS)	DESIGN VELOCITY (FPS)	DESIGN Q(5) (CFS)	DELTA CAPACITY CAP - DES (CFS)	ALLOW SHEAR STRESS	DESIGN SHEAR STRESS	DELTA SHEAR ALLOW - DES
109+00	722.99															
109+50	724.38	6.62%	CLASS B	1.38	0.43	3	3	0.035	47.03	2.07	3.77	2.07	44.96	2.10	1.77	0.33
110+00	725.74	2.75%	CLASS B	1.23	0.50	3	3	0.035	22.31	2.07	2.71	2.07	20.24	2.10	0.87	1.23
110+50	726.65	1.82%	CLASS B	1.48	0.49	4	4	0.035	40.24	2.07	2.19	2.07	38.17	2.10	0.55	1.55
111+00	727.67	2.04%	CLASS B	1.76	0.48	4	4	0.035	67.62	2.07	2.28	2.07	65.55	2.10	0.61	1.49
111+50	728.85	2.36%	CLASS B	1.67	0.46	4	4	0.035	63.23	2.07	2.41	2.07	61.16	2.10	0.68	1.42
112+00	730.08	2.46%	CLASS B	1.54	0.46	4	4	0.035	52.01	2.07	2.45	2.07	49.94	2.10	0.71	1.39
112+50	731.13	2.10%	CLASS B	1.47	0.47	4	4	0.035	42.45	2.07	2.31	2.07	40.38	2.10	0.62	1.48
113+00	732.00	1.74%	CLASS B	1.57	0.49	4	4	0.035	46.05	2.07	2.15	2.07	43.98	2.10	0.53	1.57
113+50	732.87	1.74%	CLASS B	1.82	0.49	4	4	0.035	68.29	2.07	2.15	2.07	66.22	2.10	0.53	1.57
114+00	733.73	1.72%	CLASS B	1.84	0.49	4	4	0.035	69.90	2.07	2.14	2.07	67.83	2.10	0.53	1.57
114+50	734.59	1.72%	CLASS B	2.62	0.49	4	4	0.035	179.38	2.07	2.14	2.07	177.31	2.10	0.53	1.57
115+00	735.59	2.00%	CLASS B	2.65	0.48	4	4	0.035	199.40	2.07	2.27	2.07	197.33	2.10	0.60	1.50
115+50	736.30	1.42%	CLASS B	2.50	0.51	4	4	0.035	143.84	2.07	1.99	2.07	141.77	2.10	0.45	1.65
116+00	737.01	1.42%	CLASS B	2.44	0.51	4	4	0.035	134.81	2.07	1.99	2.07	132.74	2.10	0.45	1.65
116+50	737.72	1.42%	CLASS B	2.23	0.51	4	4	0.035	106.05	2.07	1.99	2.07	103.98	2.10	0.45	1.65
116+70	738.00	1.40%	CLASS B	2.14	0.51	4	4	0.035	94.34	2.07	1.98	2.07	92.27	2.10	0.45	1.65

2/3/2025

STATE OF TEXAS
ELIZABETH W. WAGNER
149380
LICENSED
PROFESSIONAL ENGINEER

Kimley»Horn F-928

Texas Department of Transportation

CR 143 AT DRY BERRY CREEK

DITCH CALCULATIONS (RIGHT)

SHEET 1 OF 1

FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	BR2020(732)	CR 143

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	AUS	WILLIAMSON	69
CONT.	SECT.	JOB	
0914	05	203, ETC.	

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CONTRACTION SCOUR ANALYSIS (PRESSURE FLOW)

$Q_{ue} = Q_1 (h_{ue}/h_u)^{8/7}$ and $y_2/h_{ue} = (Q_2/Q_{ue})^{6/7}(W_1/W_2)^{k_1}$ and $t/h_b = 0.5(h_b * h_t/h_u^2)^{0.2}(1-h_w/h_t)^{-0.1}$

USING HEC-18 EQ 6.14

$y_s = y_2 + t - h_b$

WHERE:

Q_{ue} = EFFECTIVE CHANNEL DISCHARGE FOR LIVE BED CONDITIONS AND BRIDGE OVERTOPPING FLOWS

Q_1 = UPSTREAM CHANNEL DISCHARGE

h_u = UPSTREAM CHANNEL FLOW DEPTH

h_{ue} = EFFECTIVE CHANNEL FLOW DEPTH FOR LIVE BED CONDITIONS AND BRIDGE OVERTOPPING FROM STAGNATION STREAMLINE TO AVERAGE CHANNEL BOTTOM ELEVATION

y_2 = AVERAGE DEPTH OF FLOW

Q_2 = FLOW THROUGH THE BRIDGE

W_1 = WIDTH OF FLOW CONTRIBUTING TO TRANSPORT OF BED MATERIAL

W_2 = WIDTH OF FLOW CONTRIBUTING TO TRANSPORT OF BED MATERIAL IN UPSTREAM CROSS SECTION

k_1 = DETERMINED VIA RELATIONSHIP BETWEEN SHEER VELOCITY AND FALL VELOCITY

t = SEPARATION ZONE THICKNESS

h_b = VERTICAL SIZE OF BRIDGE OPENING PRIOR TO SCOUR

h_t = DISTANCE FROM WATER SURFACE TO LOW CHORD

h_w = WEIR FLOW HEIGHT

y_s = AVERAGE CONTRACTION SCOUR DEPTH

50 YEAR SCOUR CALCULATIONS
CONTRACTION SCOUR COMPUTATION RESULTS

FREQ (yrs)	Q_{ue}	Q_1	h_u	h_{ue}	y_2	Q_2	W_1	W_2	k_1
50	6582.6	3751.49	9.11	14.9	11.76	5090.8	68	70	0.65
	t	h_b	h_t	h_w	y_s				
	3.8	10.55	2.6	-4.1	5.50				

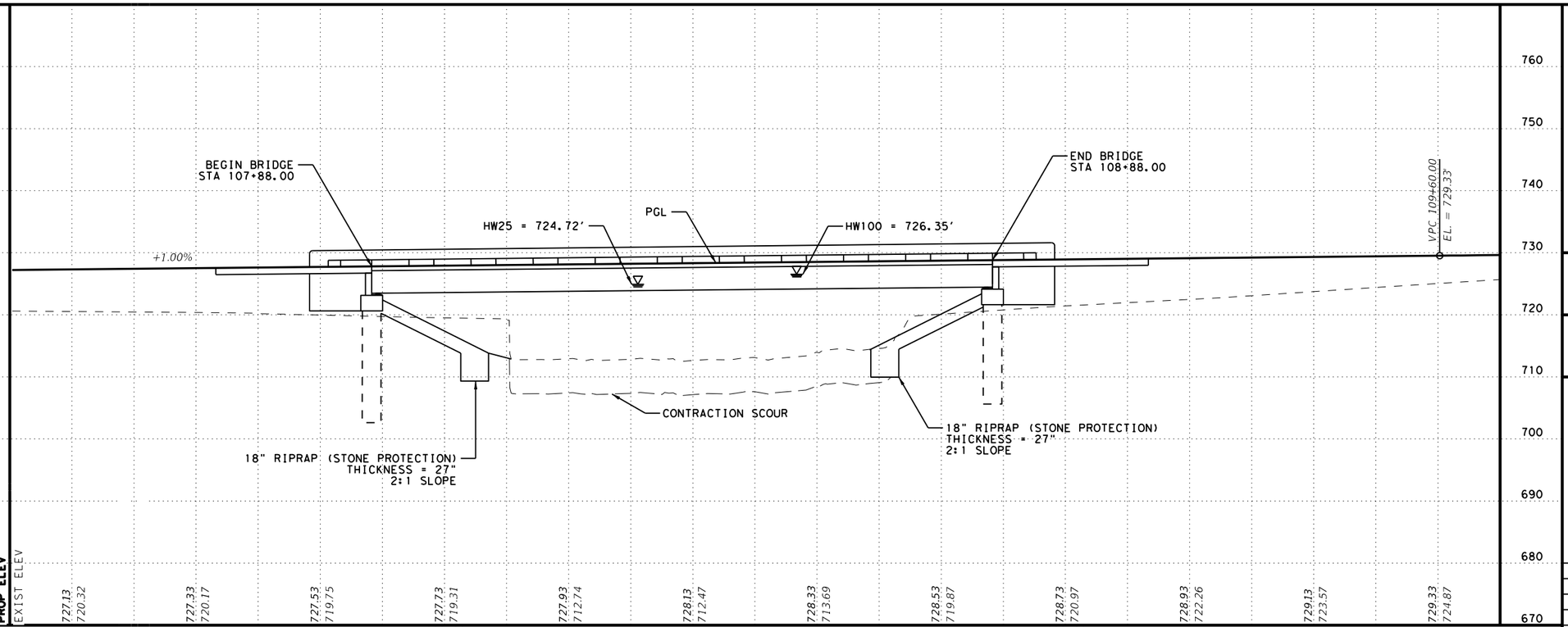
100 YEAR SCOUR CALCULATIONS
CONTRACTION SCOUR COMPUTATION RESULTS

FREQ (yrs)	Q_{ue}	Q_1	h_u	h_{ue}	y_2	Q_2	W_1	W_2	k_1
100	6965	4279.59	9.73	14.9	10.99	4976.4	68	70	0.65
	t	h_b	h_t	h_w	y_s				
	4.0	10.55	3.4	-3.59	4.50				

0′ 20′ 40′ HORZ
0′ 20′ 40′ VERT
SCALE

NOTES:

1. SCOUR ANALYSIS BASED ON TXDOT GEOTECHNICAL MANUAL (GM) AND FHWA H.E.C.-18 "EVALUATING SCOUR AT BRIDGES".
2. THE D50 SOIL PARTICLE SIZE FOR THIS PROJECT WAS PROVIDED BY TERRACON IN THE GEOTECHNICAL REPORT, LISTED AS 4.907 MM OR 0.016 FT.
3. THE MAXIMUM CALCULATED SCOUR WAS DURING THE 50 YEAR STORM AT A DISHCHARGE OF 2104 CFS. THE BRIDGE WAS ANALYZED IN THE 50 AND 100 YR EVENTS.
4. SEE DRAINAGE REPORT FOR MORE INFORMATION ON SCOUR ANALYSIS.



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Claire Mai
3/12/2025

STATE OF TEXAS
CLAIRE M. MAI
155097
LICENSED PROFESSIONAL ENGINEER

Kimley»Horn F-928

Texas Department of Transportation

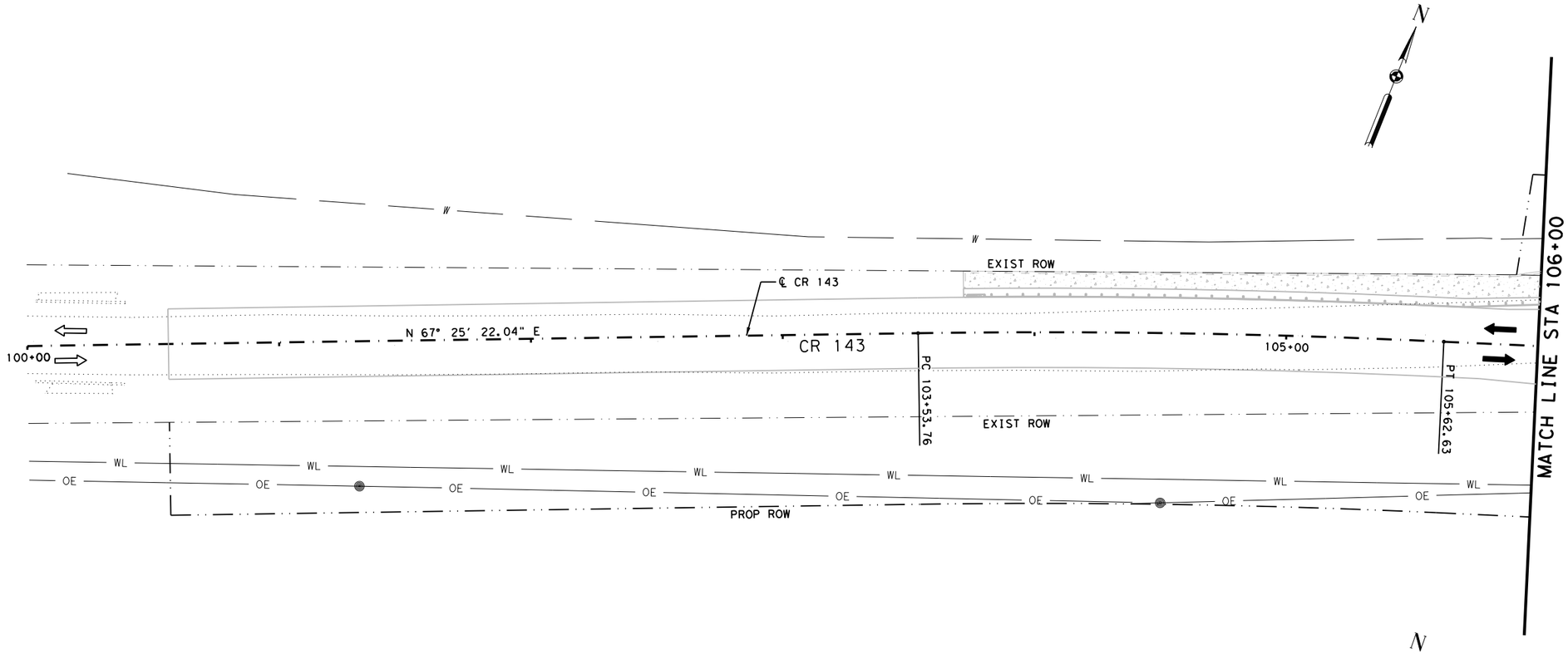
CR 143 AT DRY BERRY CREEK

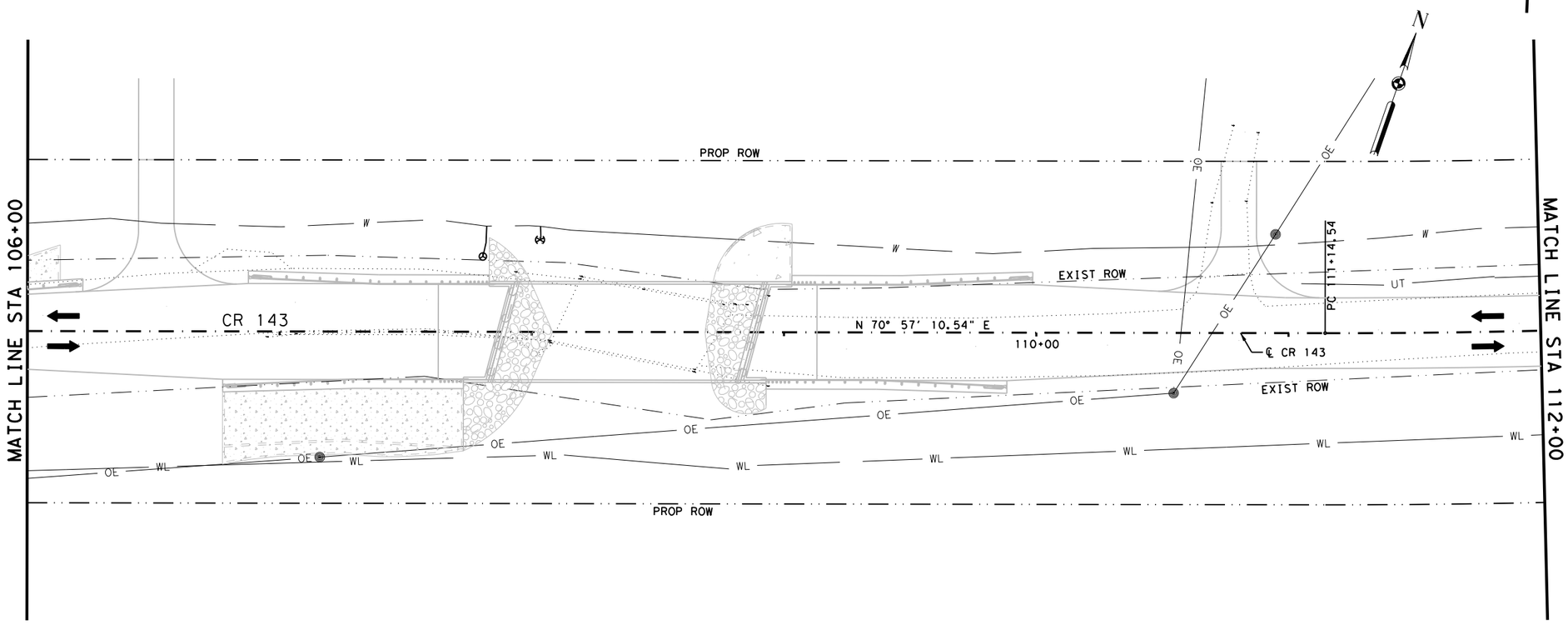
SCOUR ANALYSIS

SHEET 1 OF 1

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6		CR 143

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	AUS	WILLIAMSON	70
CONT.	SECT.	JOB	
0914	05	203, ETC.	





0′ 25′ 50′

SCALE

LEGEND

UT	FRONTIER TELECOM LINE (TO BE ABANDONED)
W	BRAZOS RIVER AUTHORITY 48" RAW WATER PIPELINE
WL	CITY OF GEORGETOWN 12" WATER LINE
OE	PEDERNALES ELECTRIC CO-OP OVERHEAD ELECTRIC LINE
	PEDERNALES ELECTRIC CO-OP ELECTRIC POLE TO BE RELOCATED BY OTHERS

NOTES:

1. LOCATION OF EXISTING UTILITIES SHOWN ARE APPROXIMATE. CONTRACTOR TO FIELD VERIFY PRIOR TO CONSTRUCTION.

2/3/2025

ELIZABETH W. WAGNER
149380
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PROFESSIONAL ENGINEER
STATE OF TEXAS

Kimley»Horn F-928

Texas Department of Transportation

CR 143 AT DRY BERRY CREEK

EXISTING UTILITY LAYOUT

SHEET 1 OF 2

FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	BR2020(732)	CR 143

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	AUS	WILLIAMSON	75
CONT.	SECT.	JOB	
0914	05	203, ETC.	

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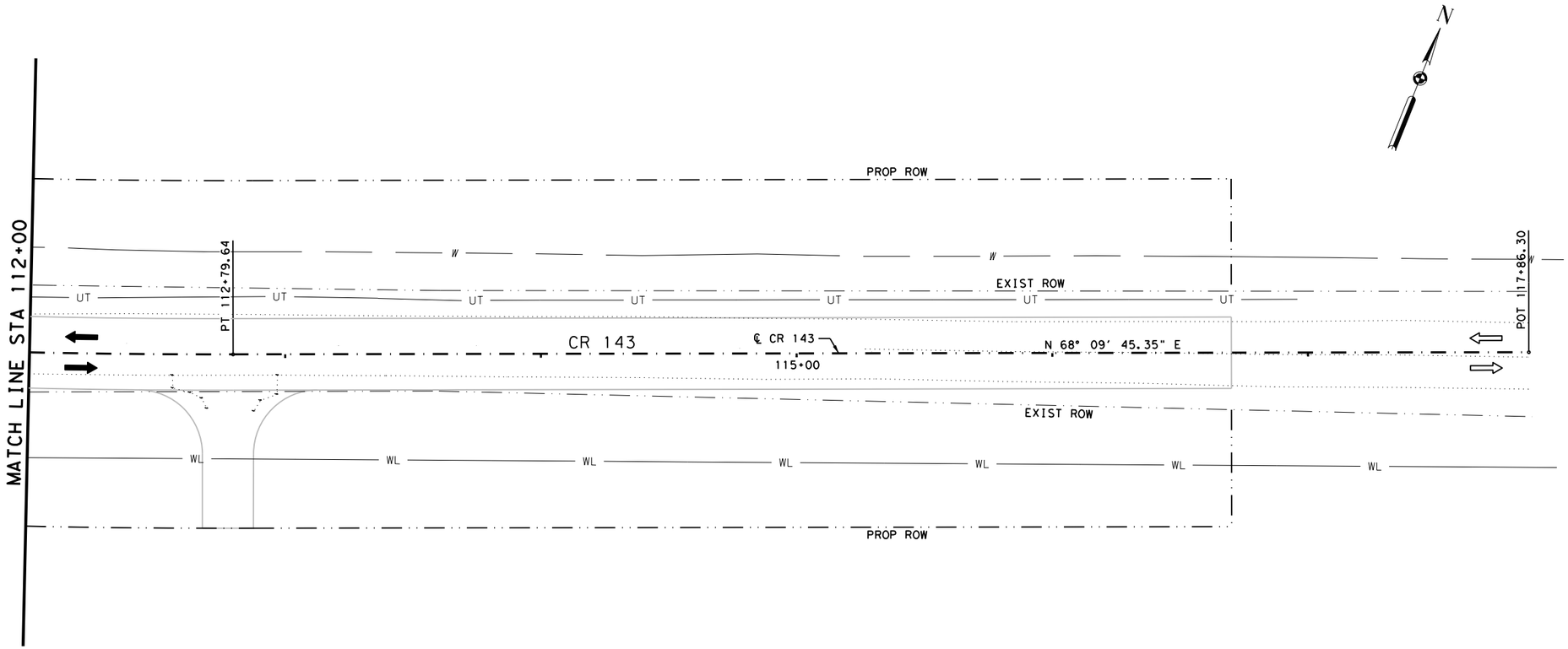

N

0' 25' 50'

SCALE

LEGEND

UT	FRONTIER TELECOM LINE (TO BE ABANDONED)
W	BRAZOS RIVER AUTHORITY 48" RAW WATER PIPELINE
WL	CITY OF GEORGETOWN 12" WATER LINE
OE	PEDERNALES ELECTRIC CO-OP OVERHEAD ELECTRIC LINE
	PEDERNALES ELECTRIC CO-OP ELECTRIC POLE TO BE RELOCATED BY OTHERS

NOTES:

1. LOCATION OF EXISTING UTILITIES SHOWN ARE APPROXIMATE. CONTRACTOR TO FIELD VERIFY PRIOR TO CONSTRUCTION.

2/3/2025

STATE OF TEXAS
ELIZABETH W. WAGNER
149380
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PROFESSIONAL ENGINEER

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Texas Department of Transportation

CR 143 AT DRY BERRY CREEK

EXISTING UTILITY LAYOUT

SHEET 2 OF 2

FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	BR2020(732)	CR 143

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	AUS	WILLIAMSON	76
CONT.	SECT.	JOB	
0914	05	203, ETC.	

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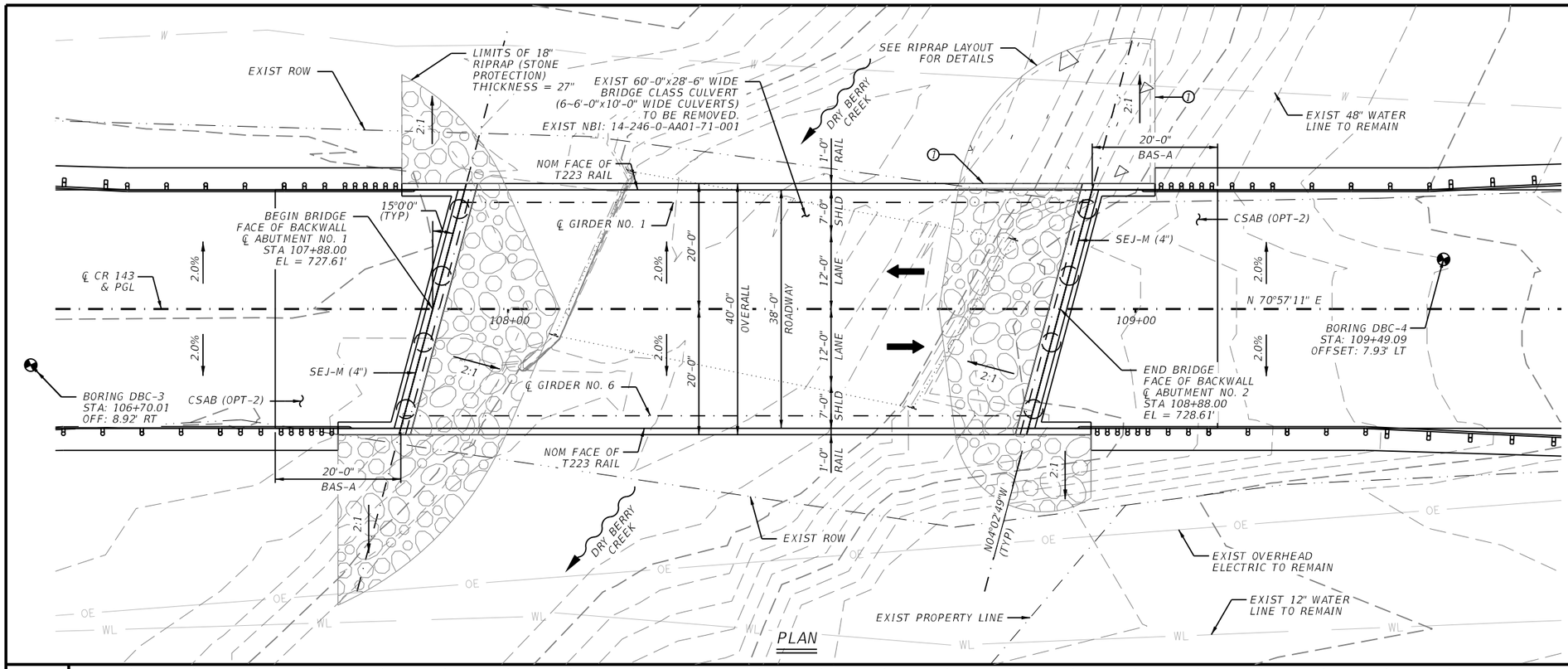


PLAN

N

0' 10' 20'

SCALE

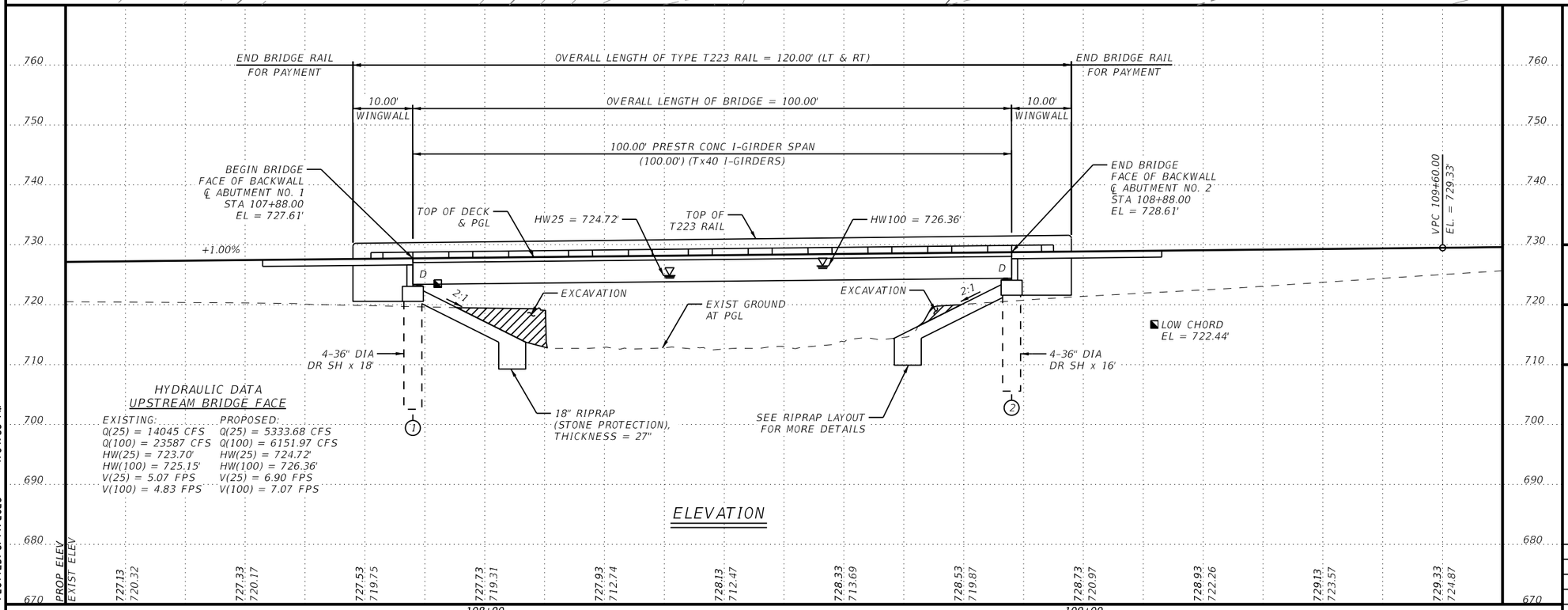
GENERAL NOTES:

1. DESIGNED ACCORDING TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 9TH EDITION (2020) AND TxDOT BRIDGE DESIGN MANUAL (SEP 2024).
2. ALL DIMENSIONS ARE HORIZONTAL AND MUST BE CORRECTED FOR GRADE AND CROSS SLOPE.
3. CONTRACTOR SHALL FIELD VERIFY LOCATIONS OF ALL STRUCTURES AND UTILITIES PRIOR TO ORDERING MATERIALS AND NOTIFY ENGINEER IN WRITING OF ANY CONFLICTS OR DISCREPANCIES.
4. SEE BORING LOG SHEET FOR ADDITIONAL BORING INFORMATION.
5. BEARING CONDITIONS:
   D = DOWEL, BLANK = NO DOWEL

(1) CONCRETE RIPRAP SHALL HAVE A WALL EXTENSION ON BOTH SIDES THAT TURN TOWARDS THE ABUTMENT. WALL EXTENSION SHALL BE 1'-6" DEEP TO HELP MITIGATE EROSION UNDER CONCRETE RIPRAP.

DESIGN SPEED: 60 MPH
EXIST ADT: 696 VPD (2020)
PROP ADT: 164 VPD (2043)
FUNCTIONAL CLASS: RURAL LOCAL
EXIST NBI: 14-246-0-AA01-71-001
PROP NBI: 14-246-0-AA01-71-501

HL-93 LOADING
SUPERSTRUCTURE INV/OPR RATINGS: 1.02/2.11



HYDRAULIC DATA
UPSTREAM BRIDGE FACE

EXISTING:	PROPOSED:
Q(25) = 14045 CFS	Q(25) = 5333.68 CFS
Q(100) = 23587 CFS	Q(100) = 6151.97 CFS
HW(25) = 723.70'	HW(25) = 724.72'
HW(100) = 725.15'	HW(100) = 726.36'
V(25) = 5.07 FPS	V(25) = 6.90 FPS
V(100) = 4.83 FPS	V(100) = 7.07 FPS

ELEVATION

3/11/2025
STATE OF TEXAS
RYAN C. LAURENT
131995
LICENSED PROFESSIONAL ENGINEER

Kimley»Horn F-928

Texas Department of Transportation

CR 143 AT DRY BERRY CREEK

BRIDGE LAYOUT

SHEET 1 OF 1

FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6		CR 143

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	AUS	WILLIAMSON	77
CONT.	SECT.	JOB	
0914	05	203, ETC.	

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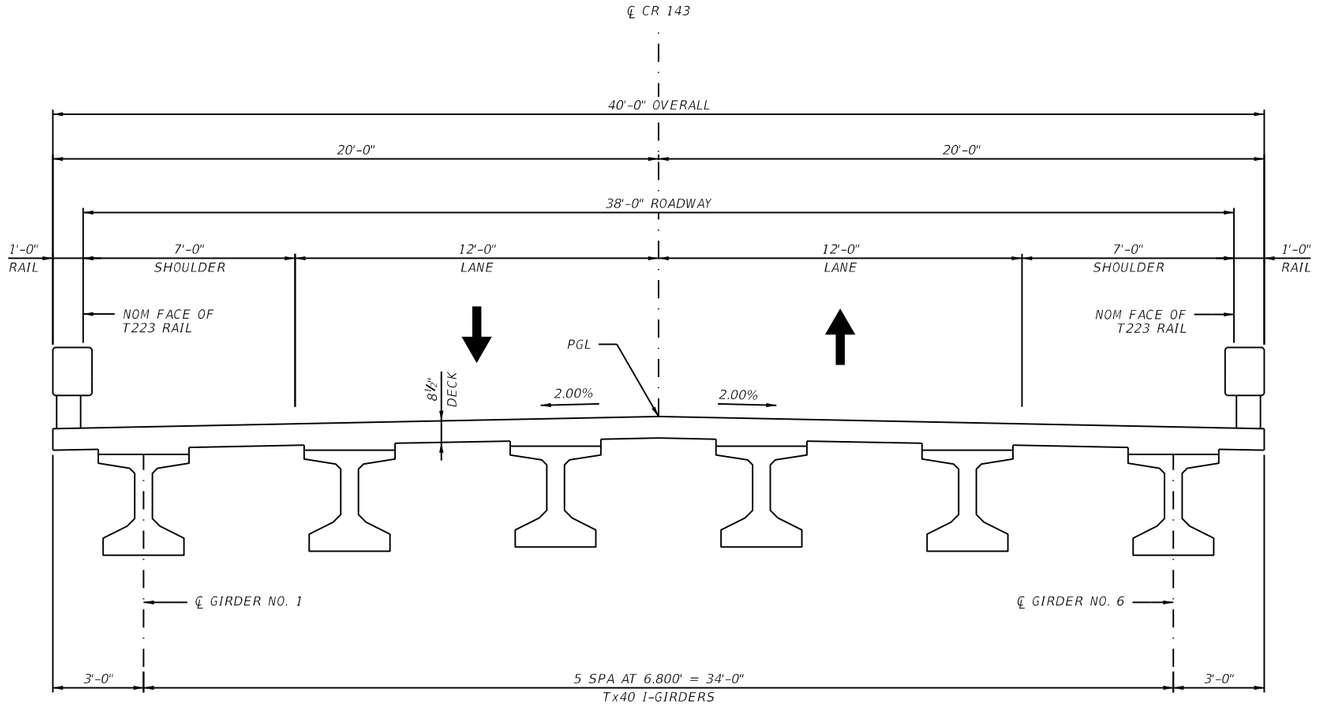
0′ 2.5′ 5′

SCALE



BRIDGE TYPICAL SECTION

2/3/2025

STATE OF TEXAS
RYAN C. LAURENT
131995
LICENSED
PROFESSIONAL ENGINEER

Kimley»Horn F-928

Texas Department of Transportation

CR 143 AT DRY BERRY CREEK

BRIDGE TYPICAL SECTIONS

SHEET 1 OF 1

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
6	BR2020(732)		CR 143
STATE	DIST.	COUNTY	SHEET NO.
TEXAS	AUS	WILLIAMSON	78
CONT.	SECT.	JOB	
0914	05	203, ETC.	

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SUMMARY OF ESTIMATED QUANTITIES – CR 143 AT DRY BERRY CREEK

CSJ: 0914-05-203	ITEM NO.	0400 7010	0416 7006	0420 7012	0422 7001	0422 7013	0425 7003	0432 7002	0432 7043	0450 7008	0454 7004
BRIDGE ELEMENT / BID ITEM DESCRIPTION		CEM STABIL BKFL	DRILL SHAFT (36 IN)	CL C CONC (ABUT)	REINF CONC SLAB	APPROACH SLAB	PRESTR CONC GIRDER (TX40)	RIPRAP (CONC) (5 IN)	RIPRAP (STONE PROTECTION)(18 IN)	RAIL (TY T223)	SEALED EXPANSION JOINT (4 IN) (SEJ – M)
NBI#: 14-246-0-AA01-71-501		CY	LF	CY	SF	CY	LF	CY	CY	LF	LF
2 – ABUTMENTS		191	136	51.2		77		16	306	40.0	82
1 – 100.00' PRESTR CONC Tx40 I-GIRDER UNIT					4,000		596.94			200.0	
TOTAL		191	136	51.2	4,000	77	596.94	16	306	240.0	82

NOTES:

1. ALL QUANTITIES ON THIS SHEET PERTAIN TO CSJ 0914-05-203.
2. CL C CONC (ABUT) QUANTITY INCLUDES SHEAR KEY QUANTITY.

2/3/2025

STATE OF TEXAS
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Texas Department of Transportation

CR 143 AT DRY BERRY CREEK

ESTIMATED QUANTITIES

SHEET 1 OF 1

FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	BR2020(732)	CR 143

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	AUS	WILLIAMSON	79
CONT.	SECT.	JOB	
0914	05	203, ETC.	

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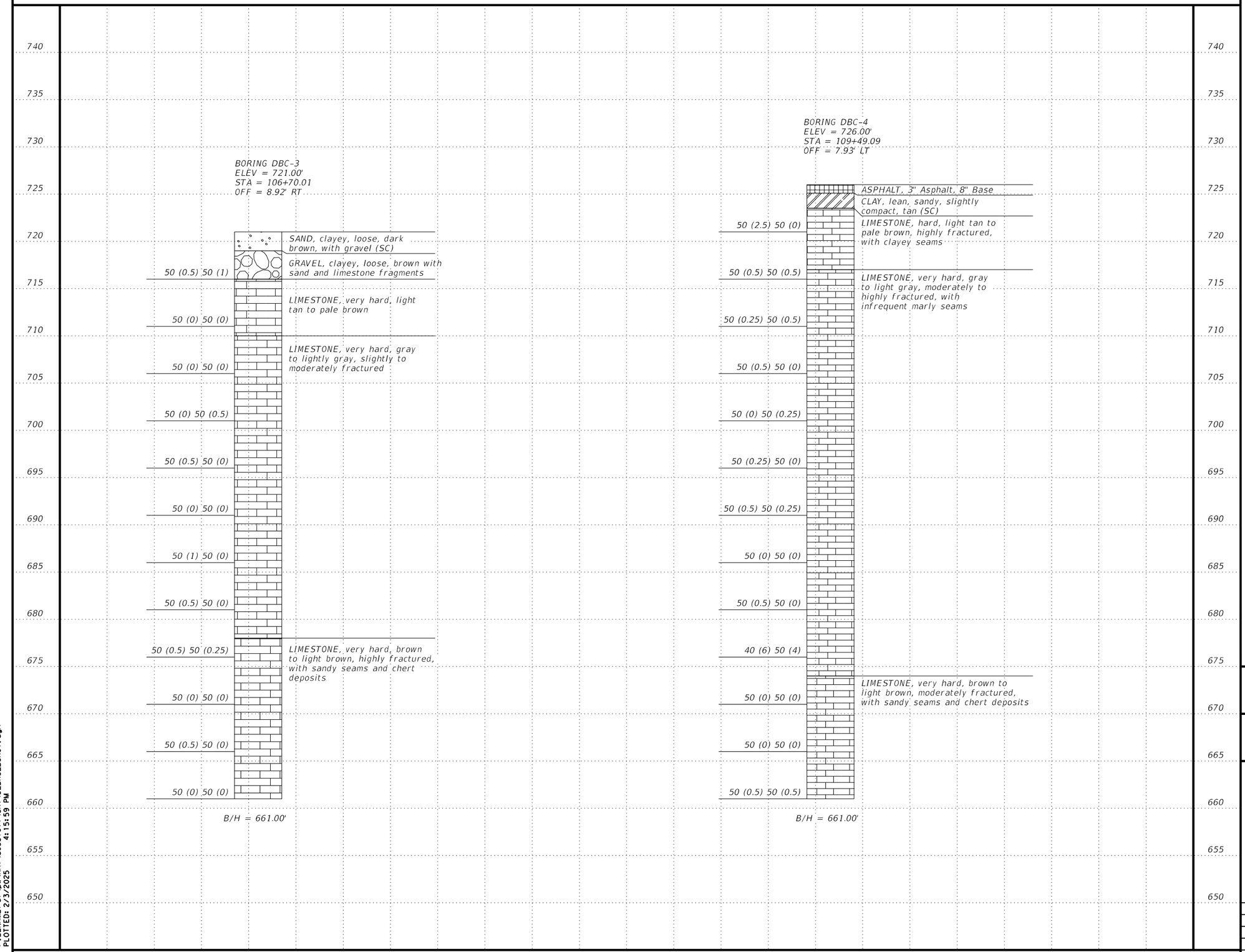

0' 5' 10'

SCALE

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Texas Department of Transportation

CR 143 AT DRY BERRY CREEK

BRIDGE BORING LOGS

SHEET 1 OF 1

FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	BR2020(732)	CR 143

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	AUS	WILLIAMSON	80
CONT.	SECT.	JOB	
0914	05	203, ETC.	

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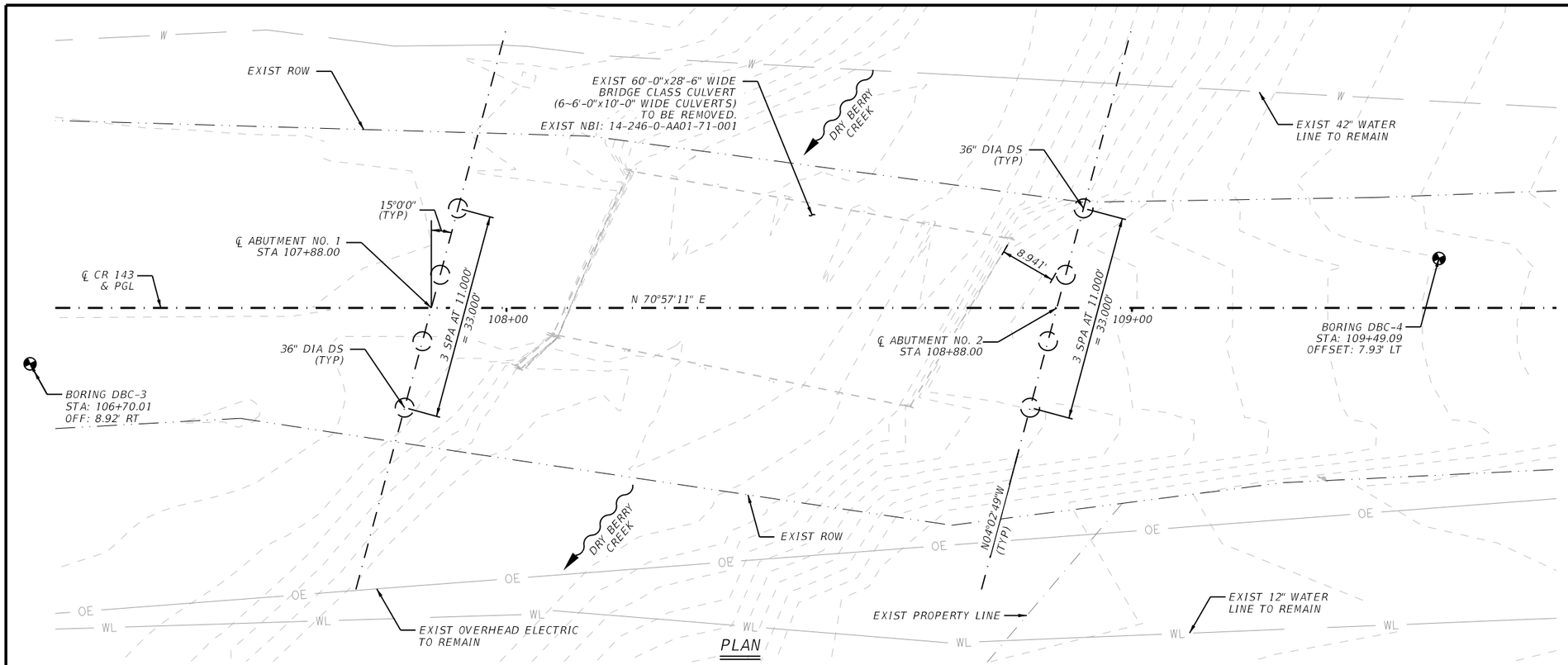

PLAN

N

0' 10' 20'

SCALE

2/3/2025

STATE OF TEXAS
RYAN C. LAURENT
131995
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PROFESSIONAL ENGINEER

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Texas Department of Transportation

CR 143 AT DRY BERRY CREEK

FOUNDATION LAYOUT

SHEET 1 OF 1

FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	BR2020(732)	CR 143

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	AUS	WILLIAMSON	81
CONT.	SECT.	JOB	
0914	05	203, ETC.	

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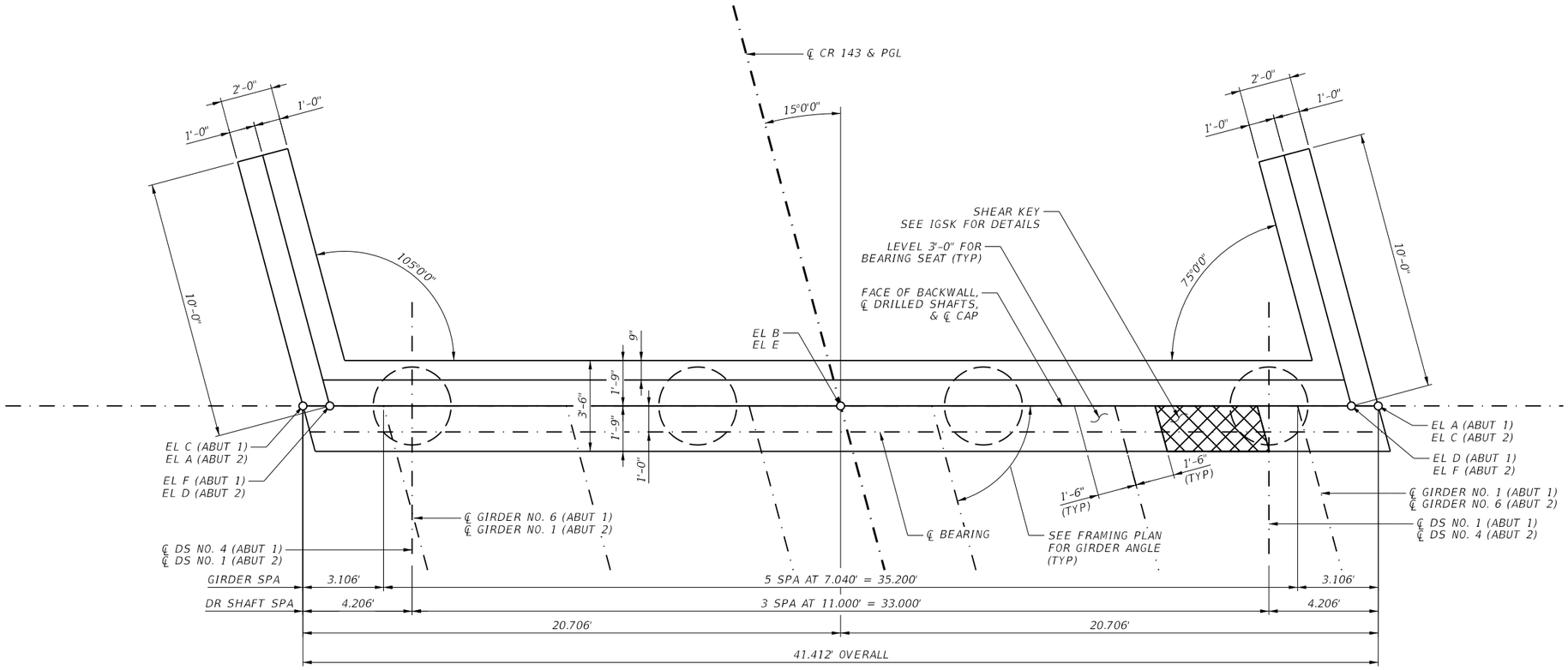
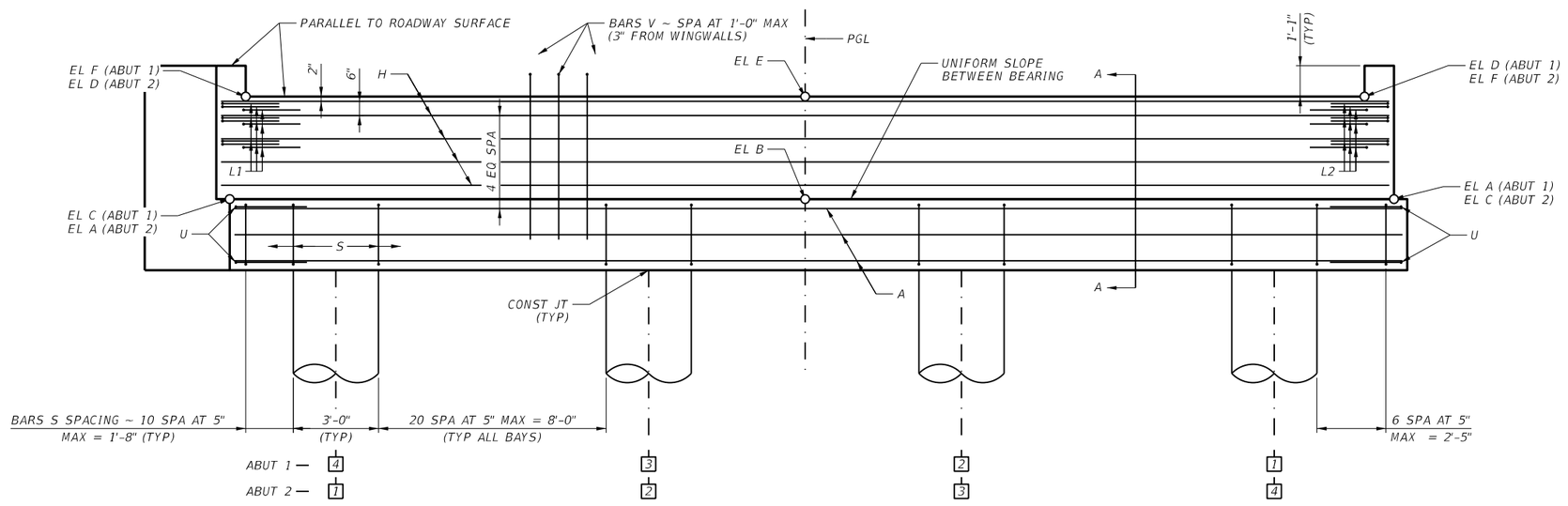
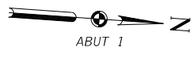


PLAN



ELEVATION

LOOKING BACKSTATION - ABUTMENT 1
LOOKING UPSTATION - ABUTMENT 2



GENERAL NOTES:

1. DESIGNED ACCORDING TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 9TH EDITION (2020) AND TxDOT BRIDGE DESIGN MANUAL (SEP 2024).
2. SEE BRIDGE LAYOUT FOR HEADER SLOPE AND FOUNDATION TYPE, SIZE, AND LENGTH.
3. SEE COMMON FOUNDATION (FD) STANDARD FOR ALL FOUNDATION DETAILS AND NOTES.
4. SEE STONE RIPRAP (SRR) & CONCRETE RIPRAP (CRR) STANDARDS FOR RIPRAP ATTACHMENT DETAILS.
5. SEE ABUTMENT DETAILS SHEET FOR SECTION A-A, BEARING SEAT DETAILS, CONTROL ELEVATION, AND BAR DETAILS.
6. SEE T223 DETAILS FOR RAIL ANCHORAGE IN WINGWALL.

COVER DIMENSIONS ARE CLEAR DIMENSIONS, UNLESS NOTED OTHERWISE.

REINFORCING BAR DIMENSIONS SHOWN ARE OUT-TO-OUT OF BAR.

CALCULATED FOUNDATION LOAD:
ABUTMENTS 1 & 2
= 175 TONS/SHAFT (STRENGTH)

2/3/2025
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CR 143 AT DRY BERRY CREEK

ABUTMENTS NO. 1 & 2

SHEET 1 OF 1

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	BR2020(732)	CR 143

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	AUS	WILLIAMSON	82
CONT.	SECT.	JOB	
0914	05	203, ETC.	

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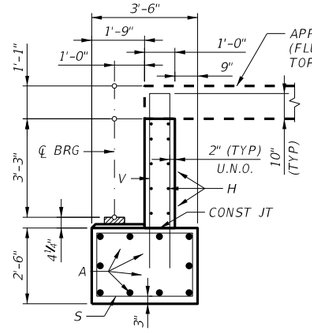
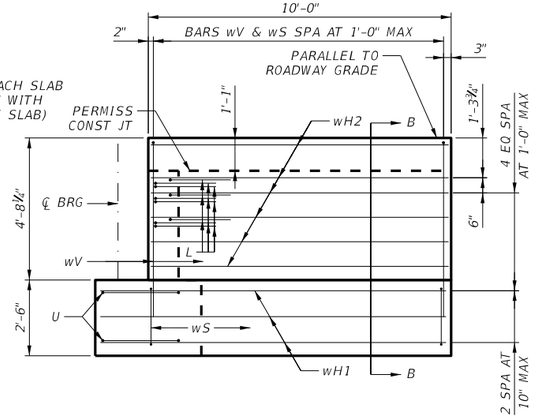
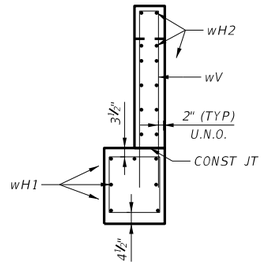


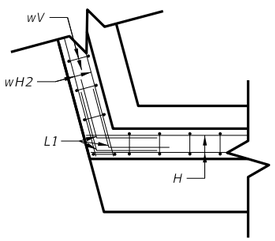
SECTION A-A

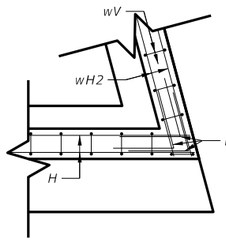


WINGWALL ELEVATION



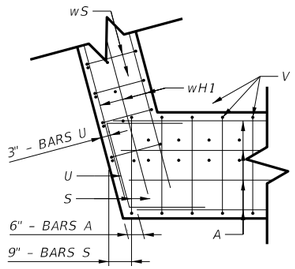
SECTION B-B

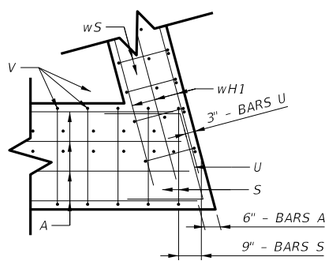




CORNER DETAILS

BACKWALL





CORNER DETAILS

CAP

TABLE OF ESTIMATED QUANTITIES				
ABUTMENT 1 & 2 (QUANTITIES PER ABUTMENT)				
BAR	NO.	SIZE	LENGTH	WEIGHT
A	10	#11	40'-5"	2,147
D	2	#9	1'-8"	11
H	10	#6	41'-1"	617
L1	9	#6	4'-0"	54
L2	9	#6	4'-0"	54
S	81	#5	11'-6"	972
U	4	#6	8'-2"	49
V	40	#5	13'-4"	556
wH1	14	#6	11'-5"	240
wH2	24	#6	9'-8"	348
wS	22	#4	7'-10"	115
wV	22	#5	13'-4"	306
REINFORCING STEEL *			LB	5,469
CLASS "C" CONCRETE (ABUT)			CY	25.6

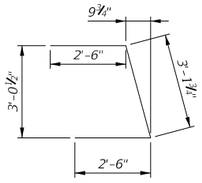
* FOR CONTRACTOR'S INFORMATION ONLY

CONTROL ELEVATIONS						
	TOP OF CAP			TOP OF BACKWALL		
	EL A	EL B	EL C	EL D	EL E	EL F
ABUT 1	722.564'	722.911'	722.457'	726.197'	726.527'	726.097'
ABUT 2	723.566'	723.911'	723.458'	727.197'	727.527'	727.097'

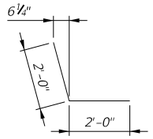
CONTROL ELEVATIONS				
	TOP OF DRILLED SHAFT*			
	DS 1	DS 2	DS 3	DS 4
ABUT 1	720.156'	720.341'	720.312'	720.071'
ABUT 2	721.136'	721.319'	721.291'	721.050'

* ELEVATIONS AT ℄ OF DRILLED SHAFT

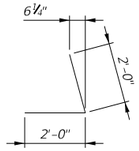
BEARING SEAT ELEVATIONS						
	GIRDER 1	GIRDER 2	GIRDER 3	GIRDER 4	GIRDER 5	GIRDER 6
ABUT 1 (FWD)	722.763'	722.881'	722.999'	722.981'	722.826'	722.672'
ABUT 2 (BK)	723.743'	723.860'	723.978'	723.960'	723.806'	723.652'



BARS U



BARS L1



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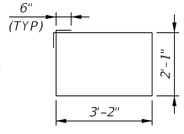

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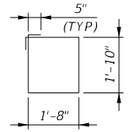
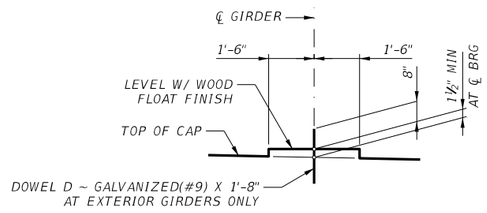


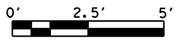
BARS wS

BARS V & wV



BEARING SEAT DETAIL

(BEARING SURFACE MUST BE CLEAN AND FREE OF ALL LOOSE MATERIAL BEFORE PLACING BEARING PAD.)



SCALE

MATERIAL NOTES:

PROVIDE CLASS C CONCRETE, f'c = 3600 PSI
PROVIDE GRADE 60 REINFORCING STEEL.
GALVANIZE DOWEL BARS D.

COVER DIMENSIONS ARE CLEAR DIMENSIONS, UNLESS NOTED OTHERWISE.

REINFORCING BAR DIMENSIONS SHOWN ARE OUT-TO-OUT OF BAR.

2/3/2025
STATE OF TEXAS
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CR 143 AT DRY BERRY CREEK

ABUTMENTS DETAILS

SHEET 1 OF 1

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	BR2020(732)	CR 143

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	AUS	WILLIAMSON	83
CONT.	SECT.	JOB	
0914	05	203, ETC.	

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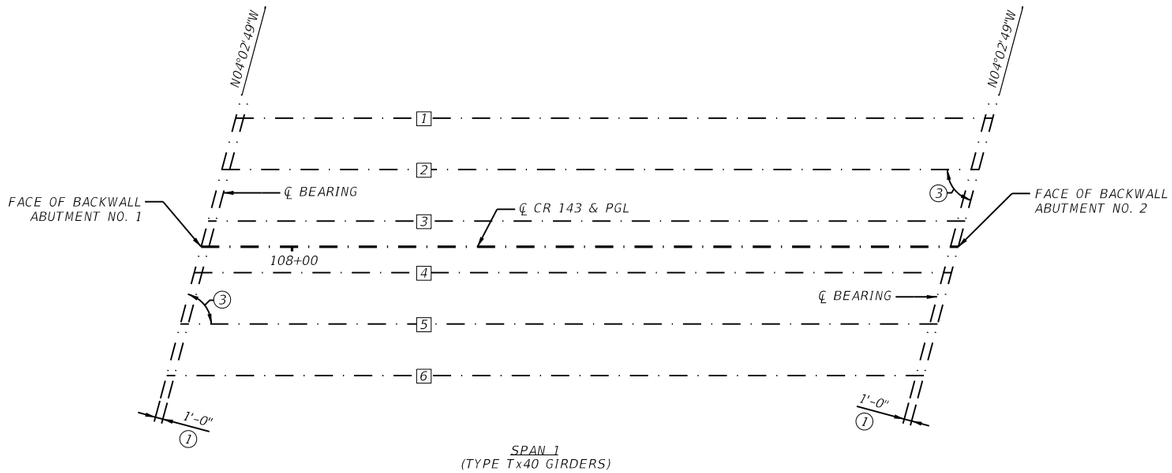
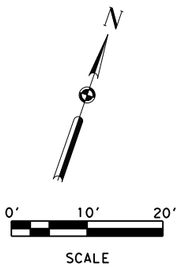


SPAN 1
(TYPE Tx40 GIRDERS)

FRAMING PLAN



SCALE

GENERAL NOTES:

1. SEE IGEB STANDARD FOR ORIENTATION OF DIMENSION.
2. BEAM LENGTHS SHOWN ARE BOTTOM OF BEAM LENGTHS WITH ADJUSTMENTS MADE FOR BEAM SLOPE.
3. GIRDER ANGLE (TYP).

BENT REPORT

BENT NO. 1 (N 4 2 49.46 W)
DISTANCE BETWEEN STATION LINE AND BEAM 1, 17.600 L

		BEAM SPAC. (C.L. BENT)	BEAM ANGLE D	M	S
SPAN 1	BEAM 1	0.000	75	0	0
	BEAM 2	7.040	75	0	0
	BEAM 3	7.040	75	0	0
	BEAM 4	7.040	75	0	0
	BEAM 5	7.040	75	0	0
	BEAM 6	7.040	75	0	0
	TOTAL	35.200			

BENT NO. 2 (N 4 2 49.46 W)
DISTANCE BETWEEN STATION LINE AND BEAM 1, 17.600 L

		BEAM SPAC. (C.L. BENT)	BEAM ANGLE D	M	S
SPAN 1	BEAM 1	0.000	75	0	0
	BEAM 2	7.040	75	0	0
	BEAM 3	7.040	75	0	0
	BEAM 4	7.040	75	0	0
	BEAM 5	7.040	75	0	0
	BEAM 6	7.040	75	0	0
	TOTAL	35.200			

BEAM REPORT

BEAM REPORT, SPAN 1

	HORIZONTAL DISTANCE C-C BENT	C-C BRG.	TRUE DISTANCE BOT. BM. FLG. (2)	BEAM SLOPE
BEAM 1	100.000	97.929	99.49	0.0100
BEAM 2	100.000	97.929	99.49	0.0100
BEAM 3	100.000	97.929	99.49	0.0100
BEAM 4	100.000	97.929	99.49	0.0100
BEAM 5	100.000	97.929	99.49	0.0100
BEAM 6	100.000	97.929	99.49	0.0100

2/3/2025

STATE OF TEXAS
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131995
LICENSED
PROFESSIONAL ENGINEER

Kimley»Horn F-928

Texas Department of Transportation

CR 143 AT DRY BERRY CREEK

FRAMING PLAN
(SPAN 1)

SHEET 1 OF 1

FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	BR2020(732)	CR 143

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	AUS	WILLIAMSON	84
CONT.	SECT.	JOB	
0914	05	203, ETC.	

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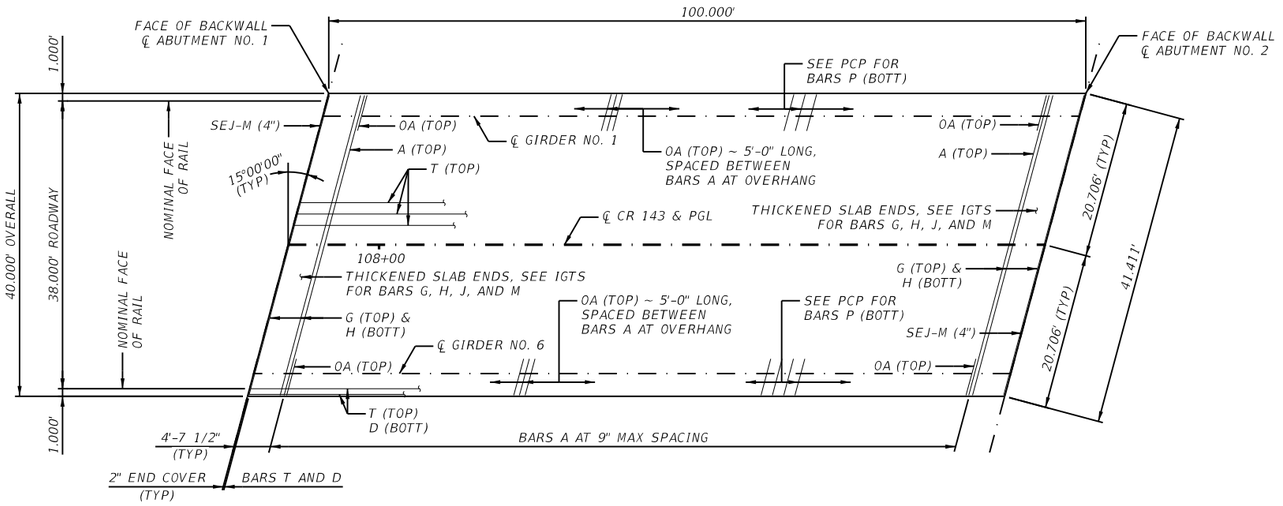
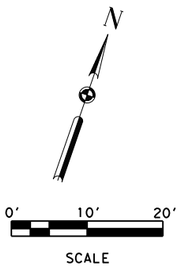


PLAN

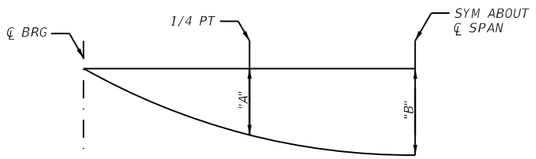


GENERAL NOTES:

1. DESIGNED ACCORDING TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 9TH EDITION (2020) AND TxDOT BRIDGE DESIGN MANUAL (SEP 2024).
2. SEE TxDOT STANDARD, IGTS, FOR THICKENED SLAB END DETAILS AND QUANTITY ADJUSTMENTS.
3. SEE TxDOT STANDARD, IGMS, FOR MISCELLANEOUS SLAB DETAILS.
4. SEE TxDOT STANDARDS, PCP AND PCP-FAB, FOR PANEL DETAILS.
5. SEE TxDOT STANDARD, PMDF. FOR DETAILS AND QUANTITY ADJUSTMENTS IF THIS OPTION IS USED.
6. SEE TxDOT STANDARD, SEJ-M, FOR SEALED EXPANSION JOINT DETAILS NOT SHOWN.
7. SEE TxDOT STANDARD, T223 RAIL DETAILS, FOR RAIL ANCHORAGE IN SLAB.

COVER DIMENSIONS ARE CLEAR DIMENSIONS, UNLESS NOTED OTHERWISE.

REINFORCING BAR DIMENSIONS SHOWN ARE OUT-TO-OUT BAR.



DEAD LOAD DEFLECTION DIAGRAM

CALCULATED DEFLECTIONS SHOWN ARE DUE TO THE CONCRETE SLAB ONLY (Ec = 5000 KSI). ADJUST VALUES AS REQUIRED FOR EXTERIOR GIRDERS AND IF OPTIONAL SLAB FORMING IS USED. THESE VALUES MAY REQUIRE FIELD VERIFICATION.

TABLE OF ESTIMATED QUANTITIES			
	REINF CONCRETE SLAB	PRESTRESSED CONCRETE GIRDERS (Tx40) (1)	TOTAL REINF STEEL * (2)
	SF	LF	LB
SPAN 1	4,000	596.94	9,200

* FOR CONTRACTOR'S INFORMATION ONLY

DEAD LOAD DEFLECTION TABLE		
	"A"	"B"
SPAN NO.	FT	FT
1	0.132	0.185

BAR TABLE	
BAR	SIZE
A	#4
D	#4
G	#4
H	#4
J	#4
M	#4
0A	#5
P	#4
T	#4

MATERIAL NOTES:

ALL CONCRETE SHALL BE CLASS S CONCRETE (f'c = 4,000 PSI)

ALL REINFORCING SHALL BE GRADE 60 REINFORCING STEEL.

PROVIDE BAR LAPS, WHEN REQUIRED. UNCOATED ~ #4 - 1'-7".

LAPS IN BARS A AND T SHALL BE STAGGERED AND ALTERNATED TO MAXIMIZE THE DISTANCE BETWEEN ADJACENT SPLICES.

2/3/2025

STATE OF TEXAS
RYAN C. LAURENT
131995
LICENSED
PROFESSIONAL ENGINEER

Kimley»Horn F-928

Texas Department of Transportation

CR 143 AT DRY BERRY CREEK

SLAB PLAN

SHEET 1 OF 1

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
6	BR2020(732)		CR 143
STATE	DIST.	COUNTY	SHEET NO.
TEXAS	AUS	WILLIAMSON	85
CONT.	SECT.	JOB	
0914	05	203, ETC.	

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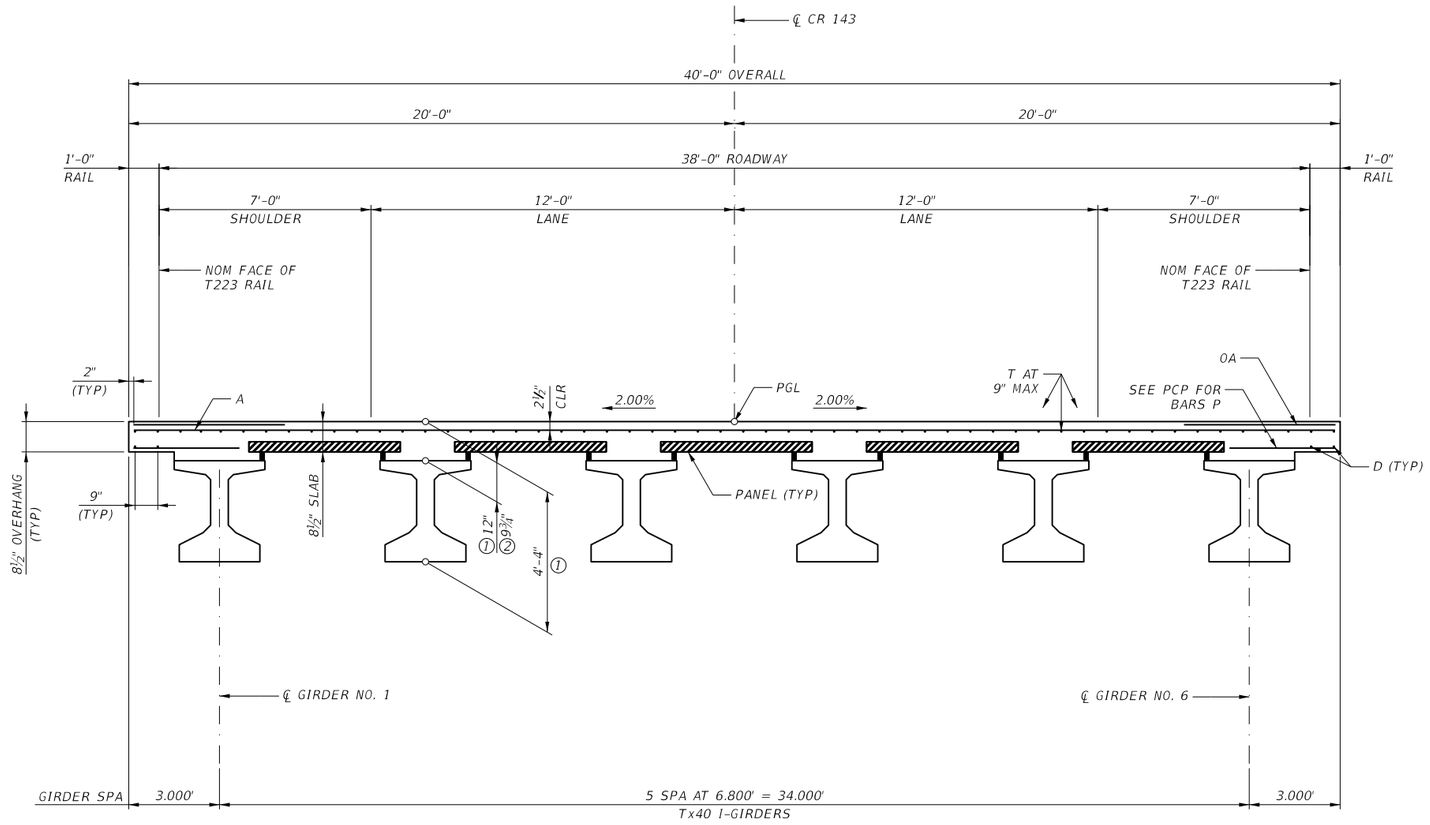

TYPICAL TRANSVERSE SECTION

0' 2.5' 5'

SCALE

NOTES:

① VALUE IS MEASURED AT ℄ OF BEARING

② VALUE IS MEASURED AT ℄ OF SPAN

2/3/2025

STATE OF TEXAS
RYAN C. LAURENT
131995
LICENSED
PROFESSIONAL ENGINEER

Kimley»Horn F-928

Texas Department of Transportation

CR 143 AT DRY BERRY CREEK

TYPICAL TRANSVERSE SECTION

SHEET 1 OF 1

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	BR2020(732)	CR 143

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	AUS	WILLIAMSON	86
CONT.	SECT.	JOB	
0914	05	203, ETC.	

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STRUCTURE	DESIGNED GIRDERS									DEPRESSED STRAND PATTERN		CONCRETE		OPTIONAL DESIGN					LOAD RATING FACTORS		
	SPAN NO.	GIRDER NO.	GIRDER TYPE	PRESTRESSING STRANDS						NO.	TO END (in)	RELEASE STRGTH (1) f'ci (ksi)	MINIMUM 28 DAY COMP STRGTH f'c (ksi)	DESIGN LOAD COMP STRESS (TOP ℄) (SERVICE I) fct(ksi)	DESIGN LOAD TENSILE STRESS (BOTT ℄) (SERVICE III) fcb(ksi)	REQUIRED MINIMUM ULTIMATE MOMENT CAPACITY (STRENGTH I) (kip-ft)	LIVE LOAD DISTRIBUTION FACTOR (2)		STRENGTH I		SERVICE III
				NON-STD STRAND PATTERN	TOTAL NO.	SIZE (in)	STRGTH fpu (ksi)	"e" ℄ (in)	"e" END (in)								Moment	Shear	Inv	Opr	Inv
CR 143 AT DRY BERRY CREEK	1	1-6	TX40		36	0.6	270	13.93	8.93	6	36.5	5.800	6.600	4.002	-4.439	5326	0.546	0.770	1.59	2.11	1.02

NON-STANDARD STRAND PATTERNS

PATTERN	STRAND ARRANGEMENT AT ℄ OF GIRDER

(1) Based on the following allowable stresses (ksi):

Compression = 0.65 f'ci

Tension = $0.24\sqrt{f'ci}$

Optional designs must likewise conform.

(2) Portion of full HL93.

DESIGN NOTES:

Designed according to AASHTO LRFD Bridge Design Specifications. Load rated using Load and Resistance Factor Rating according to AASHTO Manual for Bridge Evaluation.

Optional designs for girders 120 feet or longer must have a calculated residual camber equal to or greater than that of the designed girder.

Prestress losses for the designed girders have been calculated for a relative humidity of 60 percent. Optional designs must likewise conform.

FABRICATION NOTES:

Provide Class H concrete.

Provide Grade 60 reinforcing steel bars.

Use low relaxation strands, each pretensioned to 75 percent of fpu.

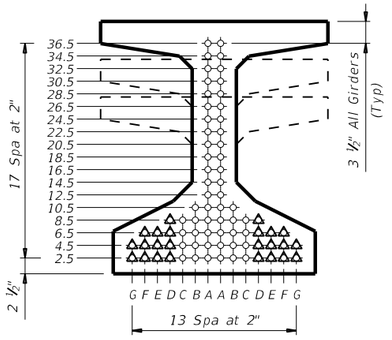
Strand debonding must comply with Item 424.4.2.2.2.4. Full-length debonded strands are only permitted in positions marked △. Double wrap full-length debonded strands in outer most position of each row.

When shown on this sheet, the Fabricator has the option of furnishing either the designed girder or an approved optional design. All optional design submittals must be signed, sealed and dated by a Professional Engineer registered in the State of Texas.

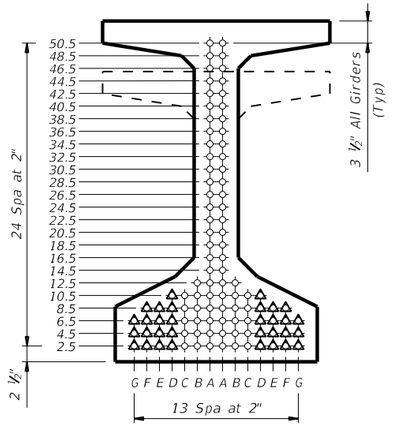
Seal cracks in girder ends exceeding 0.005" in width as directed by the Engineer. The fabricator is permitted to decrease the spacing of Bars R and S by providing additional bars to help limit crack width provided the decreased spacing results in no less than 1" clear between bars. The fabricator must take an approved corrective action if cracks greater than 0.005" form on a repetitive basis.

DEPRESSED STRAND DESIGNS:

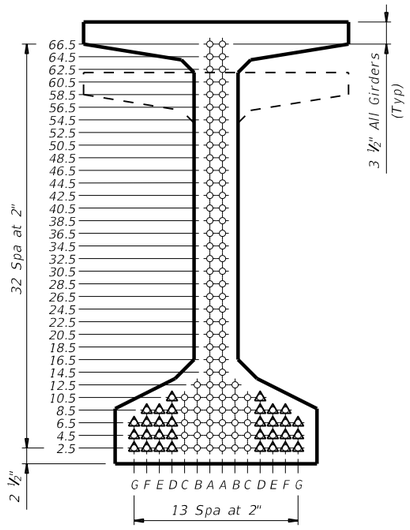
Locate strands for the designed girder as low as possible on the 2" grid system unless a non-standard strand pattern is indicated. Fill row "2.5", then row "4.5", then row "6.5", etc., beginning each row in the "A" position and working outward until the required number of strands is reached. All strands in the "A" position must be depressed, maintaining the 2" spacing so that, at the girder ends, the upper two strands are in the position shown in the table.



TYPE Tx28, Tx34 & Tx40



TYPE Tx46 & Tx54



TYPE Tx62 & Tx70

HL93 LOADING

Texas Department of Transportation | Bridge Division Standard

PRESTRESSED CONCRETE I-GIRDER DESIGNS (NON-STANDARD SPANS)

IGND(MOD)

2/3/2025
STATE OF TEXAS
RYAN C. LAURENT
131995
LICENSED PROFESSIONAL ENGINEER

FILE:	DN: TxDOT	CK: TxDOT	DW: EFC	CK: TAR
©TxDOT August 2017	CONT	SECT	JOB	HIGHWAY
REVISIONS 10-19: Modified for depressed strands only. 3-22: Added Load Rating.	0914	05	203, ETC.	CR 143
	DIST	COUNTY		SHEET NO.
	AUS	WILLIAMSON		87

STORMWATER POLLUTION PREVENTION PLAN (SWP3):

This SWP3 has been developed in accordance with the TPDES Construction General Permit TXR150000 (CGP). The Texas Department of Transportation (TxDOT) ensures that project specifications include adequate best management practices (BMPs) for this project.

For all projects with soil disturbing activity and for projects that have Environmental, Permits, Issues, and Commitments (EPICs) dependent on stormwater controls and water quality measures TxDOT will maintain a SWP3 with all pertinent records, correspondence, environmental documents, etc. at the project field office, Area Office, or electronically.

This SWP3 is consistent with requirements specified in applicable stormwater plans and the projects environmental permits, issues, and commitments (EPICs). A copy of the CGP is included in Attachment 2.12 of the SWP3 binder.

1.0 SITE/PROJECT DESCRIPTION

1.1 PROJECT CONTROL SECTION JOB (CSJ):
0914-05-203, ETC.

1.2 PROJECT LIMITS:
From: ON CR 143 AT DRY BERRY CREEK

To: ., ETC.

1.3 PROJECT COORDINATES:
BEGIN: (Lat) 30.7302 ,(Long) -97.658703

END: (Lat) 30.7316 ,(Long) -97.653825

1.4 TOTAL PROJECT AREA (Acres): 4.53

1.5 TOTAL AREA TO BE DISTURBED (Acres): 3.31

1.6 NATURE OF CONSTRUCTION ACTIVITY:
CONSISTING OF REPLACING BRIDGE AND APPROACHES

1.7 MAJOR SOIL TYPES:

Soil Type	Description
DENTON SILTY CLAY 0 TO 1% SLOPES	7.9%
KRUM SILTY CLAY 1 TO 3% SLOPES	20.2%
OAKALLA SILTY CLAY 0 TO 2% SLOPES	71.9% FREQUENTLY FLOODED

1.8 PROJECT SPECIFIC LOCATIONS (PSLs):
PSLs must be depicted on the Environmental Layout Sheets in Attachment 1.2 of this SWP3. PSLs may be identified during preconstruction meetings or during the construction process. Please choose from the options below:

☐ PSLs determined during preconstruction meeting
☒ PSLs determined during construction
☐ No PSLs planned for construction

Type	Sheet #s

All off-ROW PSLs required by the Contractor are the Contractor's responsibility. The Contractor shall secure all permits required by local, state, federal laws for off-ROW PSLs. The contractor shall provide diagrams, areas of disturbance, acreage, and BMPs for all off-ROW PSLs within one mile of the project.

1.9 CONSTRUCTION ACTIVITIES:
(Use the following list as a starting point when developing the Construction Activity Schedule and Ceasing Record in Attachment 2.5.)

☒ Mobilization
☒ Install sediment and erosion controls
☒ Blade existing topsoil into windrows, prep ROW, clear and grub
☒ Remove existing pavement
☒ Grading operations, excavation, and embankment
☐ Excavate and prepare subgrade for proposed pavement widening
☐ Remove existing culverts, safety end treatments (SETs)
☒ Remove existing metal beam guard fence (MBGF), bridge rail
☒ Install proposed pavement per plans
☒ Install culverts, culvert extensions, SETs
☒ Install mow strip, MBGF, bridge rail
☒ Place flex base
☒ Rework slopes, grade ditches
☐ Blade windrowed material back across slopes
☐ Revegetation of unpaved areas
☒ Achieve site stabilization and remove sediment and erosion control measures
☐ Other: _____
☐ Other: _____
☐ Other: _____

1.10 POTENTIAL POLLUTANTS AND SOURCES:

☒ Sediment laden stormwater from stormwater conveyance over disturbed area
☒ Fuels, oils, and lubricants from construction vehicles, equipment, and storage
☒ Solvents, paints, adhesives, etc. from various construction activities
☒ Transported soils from offsite vehicle tracking
☒ Construction debris and waste from various construction activities
☒ Contaminated water from excavation or dewatering pump-out water
☒ Sanitary waste from onsite restroom facilities
☒ Trash from various construction activities/receptacles
☐ Long-term stockpiles of material and waste
☒ Discharges from concrete washout activities, runoff from concrete cutting activities, and other concrete related activities.
☐ Other: _____
☐ Other: _____
☐ Other: _____

1.11 RECEIVING WATERS:
Receiving waters must be depicted on the Environmental Layout Sheets in Attachment 1.2 of this SWP3. Include Segment # for receiving waters.

Tributaries	Classified Waterbody
DRY BERRY CREEK	SAN GABRIEL RIVER (1214)

* Add (*) for impaired waterbodies with pollutant in ().

1.12 ROLES AND RESPONSIBILITIES: TxDOT

☒ Development of plans and specifications
☐ Submit Notice of Intent (NOI) to TCEQ (≥5 acres)
☐ Post Construction Site Notice
☐ Submit NOI/CSN to local MS4
☒ Perform SWP3 inspections
☒ Maintain SWP3 records and update to reflect daily operations
☐ Complete and submit Notice of Termination to TCEQ
☐ Maintain SWP3 records for 3 years
☐ Other: _____
☐ Other: _____
☐ Other: _____

1.13 ROLES AND RESPONSIBILITIES: CONTRACTOR

☒ Day To Day Operational Control
☐ Submit Notice of Intent (NOI) to TCEQ (≥5 acres)
☐ Post Construction Site Notice
☐ Submit NOI/CSN to local MS4
☒ Maintain schedule of major construction activities
☒ Install, maintain and modify BMPs
☐ Complete and submit Notice of Termination to TCEQ
☐ Maintain SWP3 records for 3 years
☐ Other: _____
☐ Other: _____
☐ Other: _____

1.14 LOCAL MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) OPERATOR COORDINATION:

MS4 Entity

STORMWATER POLLUTION PREVENTION PLAN (SWP3)

July 2023 Sheet 1 of 2
Texas Department of Transportation

FED. RD. DIV. NO.	PROJECT NO.		SHEET NO.
6	SEE TITLE SHEET		138
STATE	STATE DIST.	COUNTY	
TEXAS	AUS	WILLIAMSON	
CONT.	SECT.	JOB	HIGHWAY NO.
0914	05	203, ETC.	CR 143

STORMWATER POLLUTION PREVENTION PLAN (SWP3):

2.0 BEST MANAGEMENT PRACTICES (BMPs) AND CONTROLS, INSPECTION, AND MAINTENANCE

The Contractor shall be the responsible party for implementing the BMPs described herein and for complying with the SWP3 for control of erosion and sedimentation during day-to-day operations. The Contractor shall implement changes to this SWP3 approved by TxDOT within the times specified in this SWP3 or the CGP.

2.1 EROSION CONTROL AND SOIL STABILIZATION BMPs:

T / P

- ☐ ☐ Protection of Existing Vegetation
- ☐ ☐ Vegetated Buffer Zones
- ☐ ☐ Soil Retention Blankets
- ☐ ☐ Geotextiles
- ☐ ☐ Mulching/ Hydromulching
- ☐ ☐ Soil Surface Treatments
- ☒ ☐ Temporary Seeding
- ☐ ☒ Permanent Planting, Sodding or Seeding
- ☐ ☐ Biodegradable Erosion Control Logs
- ☒ ☐ Rock Filter Dams/ Rock Check Dams
- ☐ ☐ Vertical Tracking
- ☐ ☐ Interceptor Swale
- ☐ ☒ Riprap
- ☐ ☐ Diversion Dike
- ☐ ☐ Temporary Pipe Slope Drain
- ☐ ☐ Embankment for Erosion Control
- ☐ ☐ Paved Flumes
- ☐ ☐ Other: _____
- ☐ ☐ Other: _____
- ☐ ☐ Other: _____
- ☐ ☐ Other: _____

2.2 SEDIMENT CONTROL BMPs:

T / P

- ☒ ☐ Biodegradable Erosion Control Logs
- ☐ ☐ Dewatering Controls
- ☐ ☐ Inlet Protection
- ☒ ☐ Rock Filter Dams/ Rock Check Dams
- ☐ ☐ Sandbag Berms
- ☒ ☐ Sediment Control Fence
- ☐ ☐ Stabilized Construction Exit
- ☒ ☐ Floating Turbidity Barrier
- ☐ ☐ Vegetated Buffer Zones
- ☐ ☒ Vegetated Filter Strips
- ☐ ☐ Other: _____
- ☐ ☐ Other: _____
- ☐ ☐ Other: _____
- ☐ ☐ Other: _____

Refer to the Environmental Layout Sheets/ SWP3 Layout Sheets located in Attachment 1.2 of this SWP3

Sediment control BMPs requiring design capacity calculations (See SWP3 Attachment 1.3.):

T / P

- ☐ ☐ Sediment Trap
  - ☐ Calculated volume runoff from 2-year, 24-hour storm for each acre of disturbed area
  - ☐ 3,600 cubic feet of storage per acre drained
- ☐ ☐ Sedimentation Basin
  - ☒ Not required (<10 acres disturbed)
  - ☐ Required (>10 acres) and implemented.
    - ☐ Calculated volume runoff from 2-year, 24-hour storm for each acre of disturbed area
    - ☐ 3,600 cubic feet of storage per acre drained
  - ☐ Required (>10 acres), but not feasible due to:
    - ☐ Available area/Site geometry
    - ☐ Site slope/Drainage patterns
    - ☐ Site soils/Geotechnical factors
    - ☐ Public safety
    - ☐ Other: _____

2.3 PERMANENT CONTROLS:

(Coordinate post-construction BMPs with appropriate TxDOT maintenance sections.)

BMPs To Be Left In Place Post Construction:

Type	Stationing	
	From	To
SEE ITEM 2.6 VEGETATED BUFFER ZONES FOR VFS DETAILS FOR TCEQ EDWARDS AQUIFER REQUIREMENTS		

Refer to the Environmental Layout Sheets/ SWP3 Layout Sheets located in Attachment 1.2 of this SWP3

2.4 OFFSITE VEHICLE TRACKING CONTROLS:

- ☒ Excess dirt/mud on road removed daily
- ☐ Haul roads dampened for dust control
- ☒ Loaded haul trucks to be covered with tarpaulin
- ☒ Stabilized construction exit
- ☐ Daily street sweeping
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

2.5 POLLUTION PREVENTION MEASURES:

- ☒ Chemical Management
- ☒ Concrete and Materials Waste Management
- ☒ Debris and Trash Management
- ☒ Dust Control
- ☒ Sanitary Facilities
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

2.6 VEGETATED BUFFER ZONES:

Natural vegetated buffers shall be maintained as feasible to protect adjacent surface waters. If vegetated natural buffer zones are not feasible due to site geometry, the appropriate additional sediment control measures have been incorporated into this SWP3.

Type	Stationing	
	From	To
VEGETATIVE FILTER STRIPS	109+54.10	116+70.00

Refer to the Environmental Layout Sheets/ SWP3 Layout Sheets located in Attachment 1.2 of this SWP3

2.7 ALLOWABLE NON-STORMWATER DISCHARGES:

- ☒ Fire hydrant flushings
- ☒ Irrigation drainage
- ☒ Pavement washwater (where spills or leaks have not occurred, and detergents are not used)
- ☒ Potable water sources
- ☒ Springs
- ☒ Uncontaminated groundwater
- ☒ Water used to wash vehicles or control dust
- ☒ Other allowable non-stormwater discharges as allowed by TPDES GP TXR150000.

2.8 DEWATERING:

Dewatering discharges of accumulated stormwater, groundwater, and surface water including discharges from dewatering of trenches, excavations, foundations, vaults, and other points of accumulation are prohibited unless managed by appropriate controls to prevent and minimize the offsite discharge of sediment and other pollutants.

2.9 INSPECTIONS:

All disturbed areas and erosion and sediment control devices shall be inspected at least once every seven (7) days. Inspections shall be performed by TxDOT as indicated on the Field Inspection and Maintenance Report Form 2118 and retained in Attachment 2.5 of this SWP3.

When dewatering activities are present, a daily inspection will be conducted once per day during those activities and documented in accordance with CGP and TxDOT requirements.

2.10 MAINTENANCE:

Control measures shall be properly installed according to specifications. If it is determined that a BMP or control measure is not operating effectively, maintenance must be accomplished as soon as possible and before the next anticipated rain event, but in no case later than 7 calendar days after being able to access the site. Maintenance shall be performed by the Contractor as indicated on the Field Inspection and Maintenance Report Form 2118 and retained in Attachment 2.5 of this SWP3.

STORMWATER POLLUTION PREVENTION PLAN (SWP3)

July 2023 Sheet 2 of 2

Texas Department of Transportation

FED. RD. DIV. NO.	PROJECT NO.		SHEET NO.
6	SEE TITLE SHEET		139
STATE	STATE DIST.	COUNTY	
TEXAS	AUS	WILLIAMSON	
CONT.	SECT.	JOB	HIGHWAY NO.
0914	05	203, ETC.	CR 143

DATE: 2/3/2025
FILE: c:\pw\kh1\d0378928\CR143_ENV_EPIC.dgn

I. STORMWATER POLLUTION PREVENTION-CLEAN WATER ACT SECTION 402

TPDES TXR 150000: Stormwater Discharge Permit or Construction General Permit required for projects with 1 or more acres disturbed soil. Projects with any disturbed soil must protect for erosion and sedimentation in accordance with Item 506.

List MS4 Operator(s) that may receive discharges from this project. They may need to be notified prior to construction activities.

1.

2.

☐ No Action Required ☒ Required Action

Action No.

1. Prevent stormwater pollution by controlling erosion and sedimentation in accordance with TPDES Permit TXR 150000

2. Comply with the SW3P and revise when necessary to control pollution or required by the Engineer.

3. Post Construction Site Notice (CSN) with SW3P information on or near the site, accessible to the public and TCEQ, EPA or other inspectors.

4. When Contractor project specific locations (PSL's) increase disturbed soil area to 5 acres or more, submit NOI to TCEQ and the Engineer.

II. WORK IN OR NEAR STREAMS, WATERBODIES AND WETLANDS CLEAN WATER ACT SECTIONS 401 AND 404

USACE Permit required for filling, dredging, excavating or other work in any water bodies, rivers, creeks, streams, wetlands or wet areas.

The Contractor must adhere to all of the terms and conditions associated with the following permit(s):

☐ No Permit Required

☒ Nationwide Permit 14 - PCN not Required (less than 1/10th acre waters or wetlands affected)

☐ Nationwide Permit 14 - PCN Required (1/10 to <1/2 acre, 1/3 in tidal waters)

☐ Individual 404 Permit Required

☐ Other Nationwide Permit Required: NWP# _____

Required Actions: List waters of the US permit applies to, location in project and check Best Management Practices planned to control erosion, sedimentation and post-project TSS.

1. DRY BERRY CREEK - NWP #14

2.

3.

4.

The elevation of the ordinary high water marks of any areas requiring work to be performed in the waters of the US requiring the use of a nationwide permit can be found on the Bridge Layouts.

Best Management Practices:

Erosion	Sedimentation	Post-Construction TSS
☒ Temporary Vegetation	☒ Silt Fence	☒ Vegetative Filter Strips
☐ Blankets/Matting	☒ Rock Berm	☐ Retention/Irrigation Systems
☐ Mulch	☐ Triangular Filter Dike	☐ Extended Detention Basin
☐ Sodding	☐ Sand Bag Berm	☐ Constructed Wetlands
☐ Interceptor Swale	☐ Straw Bale Dike	☐ Wet Basin
☐ Diversion Dike	☐ Brush Berms	☐ Erosion Control Compost
☐ Erosion Control Compost	☐ Erosion Control Compost	☐ Mulch Filter Berm and Socks
☐ Mulch Filter Berm and Socks	☐ Mulch Filter Berm and Socks	☐ Compost Filter Berm and Socks
☐ Compost Filter Berm and Socks	☐ Compost Filter Berm and Socks	☒ Vegetation Lined Ditches
	☐ Stone Outlet Sediment Traps	☐ Sand Filter Systems
	☐ Sediment Basins	☐ Grassy Swales

III. CULTURAL RESOURCES

Refer to TxDOT Standard Specifications in the event historical issues or archeological artifacts are found during construction. Upon discovery of archeological artifacts (bones, burnt rock, flint, pottery, etc.) cease work in the immediate area and contact the Engineer immediately.

☒ No Action Required ☐ Required Action

Action No.

1.

2.

3.

4.

IV. VEGETATION RESOURCES

Preserve native vegetation to the extent practical.
Contractor must adhere to Construction Specification Requirements Specs 162, 164, 192, 193, 506, 730, 751, 752 in order to comply with requirements for invasive species, beneficial landscaping, and tree/brush removal commitments.

☐ No Action Required ☒ Required Action

Action No.

1. COMPLY WITH EXECUTIVE ORDER 13112 ON INVASIVE SPECIES IF AND WHEN APPLICABLE

2.

3.

4.

V. FEDERAL LISTED, PROPOSED THREATENED, ENDANGERED SPECIES, CRITICAL HABITAT, STATE LISTED SPECIES, CANDIDATE SPECIES AND MIGRATORY BIRDS.

☒ No Action Required ☐ Required Action

Action No.

1.

2.

3.

4.

If any of the listed species are observed, cease work in the immediate area, do not disturb species or habitat and contact the Engineer immediately. The work may not remove active nests from bridges and other structures during nesting season of the birds associated with the nests. If caves or sinkholes are discovered, cease work in the immediate area, and contact the Engineer immediately.

LIST OF ABBREVIATIONS

BMP:	Best Management Practice	SPCC:	Spill Prevention Control and Countermeasure
CGP:	Construction General Permit	SW3P:	Storm Water Pollution Prevention Plan
DSHS:	Texas Department of State Health Services	PCN:	Pre-Construction Notification
FHWA:	Federal Highway Administration	PSL:	Project Specific Location
MOA:	Memorandum of Agreement	TCEQ:	Texas Commission on Environmental Quality
MOU:	Memorandum of Understanding	TPDES:	Texas Pollutant Discharge Elimination System
MS4:	Municipal Separate Stormwater Sewer System	TPWD:	Texas Parks and Wildlife Department
MBTA:	Migratory Bird Treaty Act	TxDOT:	Texas Department of Transportation
NOT:	Notice of Termination	T&E:	Threatened and Endangered Species
NWP:	Nationwide Permit	USACE:	U.S. Army Corps of Engineers
NOI:	Notice of Intent	USFWS:	U.S. Fish and Wildlife Service

VI. HAZARDOUS MATERIALS OR CONTAMINATION ISSUES

General (applies to all projects):
Comply with the Hazard Communication Act (the Act) for personnel who will be working with hazardous materials by conducting safety meetings prior to beginning construction and making workers aware of potential hazards in the workplace. Ensure that all workers are provided with personal protective equipment appropriate for any hazardous materials used.

Obtain and keep on-site Material Safety Data Sheets (MSDS) for all hazardous products used on the project, which may include, but are not limited to the following categories: Paints, acids, solvents, asphalt products, chemical additives, fuels and concrete curing compounds or additives. Provide protected storage, off bare ground and covered, for products which may be hazardous. Maintain product labelling as required by the Act.

Maintain an adequate supply of on-site spill response materials, as indicated in the MSDS. In the event of a spill, take actions to mitigate the spill as indicated in the MSDS, in accordance with safe work practices, and contact the District Spill Coordinator immediately. The Contractor shall be responsible for the proper containment and cleanup of all product spills.

Contact the Engineer if any of the following are detected:
* Dead or distressed vegetation (not identified as normal)
* Trash piles, drums, canister, barrels, etc.
* Undesirable smells or odors
* Evidence of leaching or seepage of substances

Does the project involve any bridge class structure rehabilitation or replacements (bridge class structures not including box culverts)?

☒ Yes ☐ No

If "No", then no further action is required.
If "Yes", then TxDOT is responsible for completing asbestos assessment/inspection.

Are the results of the asbestos inspection positive (is asbestos present)?

☐ Yes ☒ No

If "Yes", then TxDOT must retain a DSHS licensed asbestos consultant to assist with the notification, develop abatement/mitigation procedures, and perform management activities as necessary. The notification form to DSHS must be postmarked at least 15 working days prior to scheduled demolition.

If "No", then TxDOT is still required to notify DSHS 15 working days prior to any scheduled demolition.

In either case, the Contractor is responsible for providing the date(s) for abatement activities and/or demolition with careful coordination between the Engineer and asbestos consultant in order to minimize construction delays and subsequent claims.

Any other evidence indicating possible hazardous materials or contamination discovered on site. Hazardous Materials or Contamination Issues Specific to this Project:

☒ No Action Required ☐ Required Action

Action No.

1.

2.

3.

VII. OTHER ENVIRONMENTAL ISSUES

(includes regional issues such as Edwards Aquifer District, etc.)

☐ No Action Required ☒ Required Action

Action No.

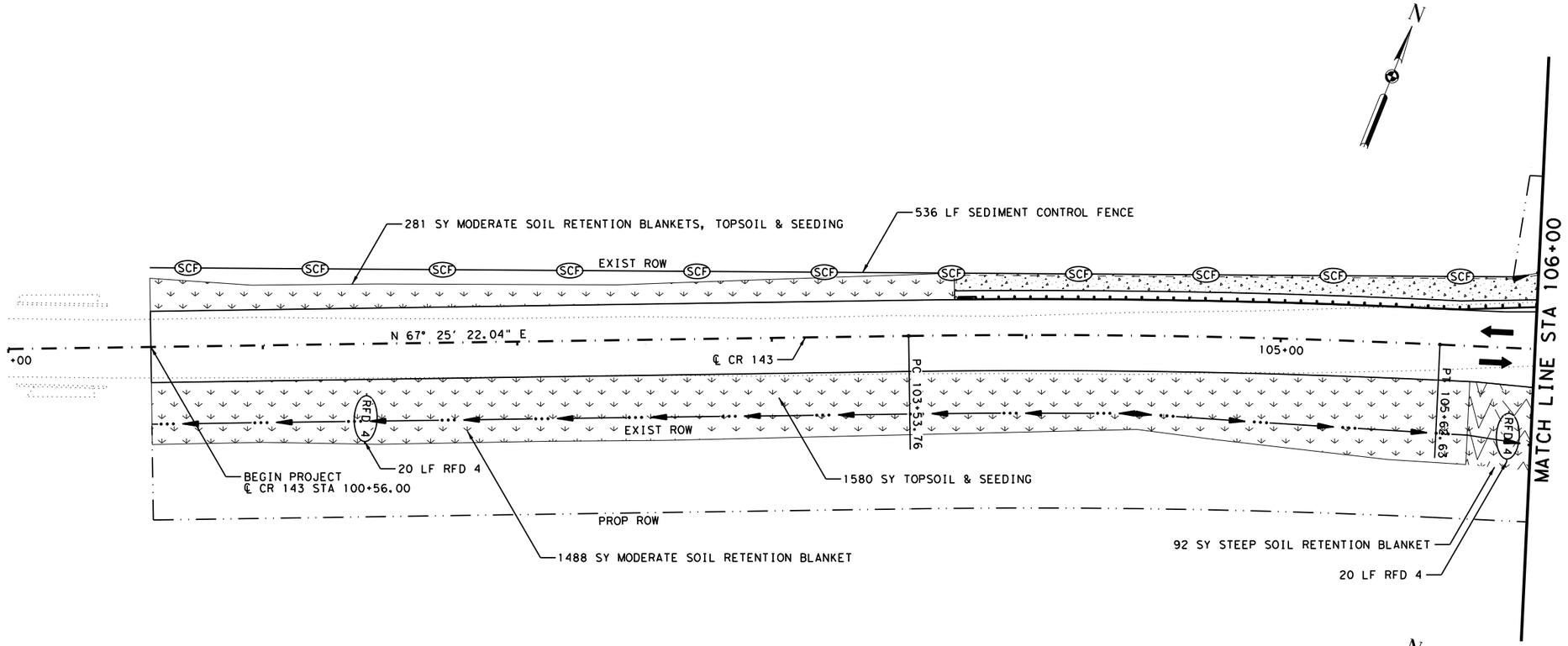
1. THE PROJECT IS LOCATED IN A FEDERAL EMERGENCY MANAGEMENT AGENCY MAPPED FLOODPLAIN. NOTIFY THE LOCAL FLOODPLAIN ADMINISTRATOR AS NECESSARY AND COMPLY WITH ALL APPLICABLE RULES AND REGULATIONS REGARDING HYDRAULIC DESIGN OF THE PROJECT.
2. THE PROJECT IS LOCATED ON THE EDWARDS AQUIFER RECHARGE ZONE. A WATER POLLUTION ABATEMENT PLAN (WPAP) APPROVED BY THE TEXAS COMMISON ON ENVIRONMENTAL QUALITY (TCEQ) IS REQUIRED BEFORE START OF CONSTRUCTION.
3. COMPLY WITH THE WPAP AND WPAP APPROVAL LETTER.
4. MAINTAIN COPIES OF THE WPAP AND WPAP APPROVAL LETTER ONSITE OR IMMEDIATELY AVAILABLE DURING CONSTRUCTION.
5. VOIDS ENCOUNTERED DURING CONSTRUCTION ARE SUBJECTED TO REVIEW BY THE TCEQ PER THE REQUIREMENTS OF THE EDWARDS AQUIFER RULES. DETAILS REGARDING INSPECTION OF VOIDS AND COORDINATION OF CLOSURE PLANS WITH TCEQ ARE INCLUDED IN THE VOID MITIGATION DIAGRAMS (VMD-18).

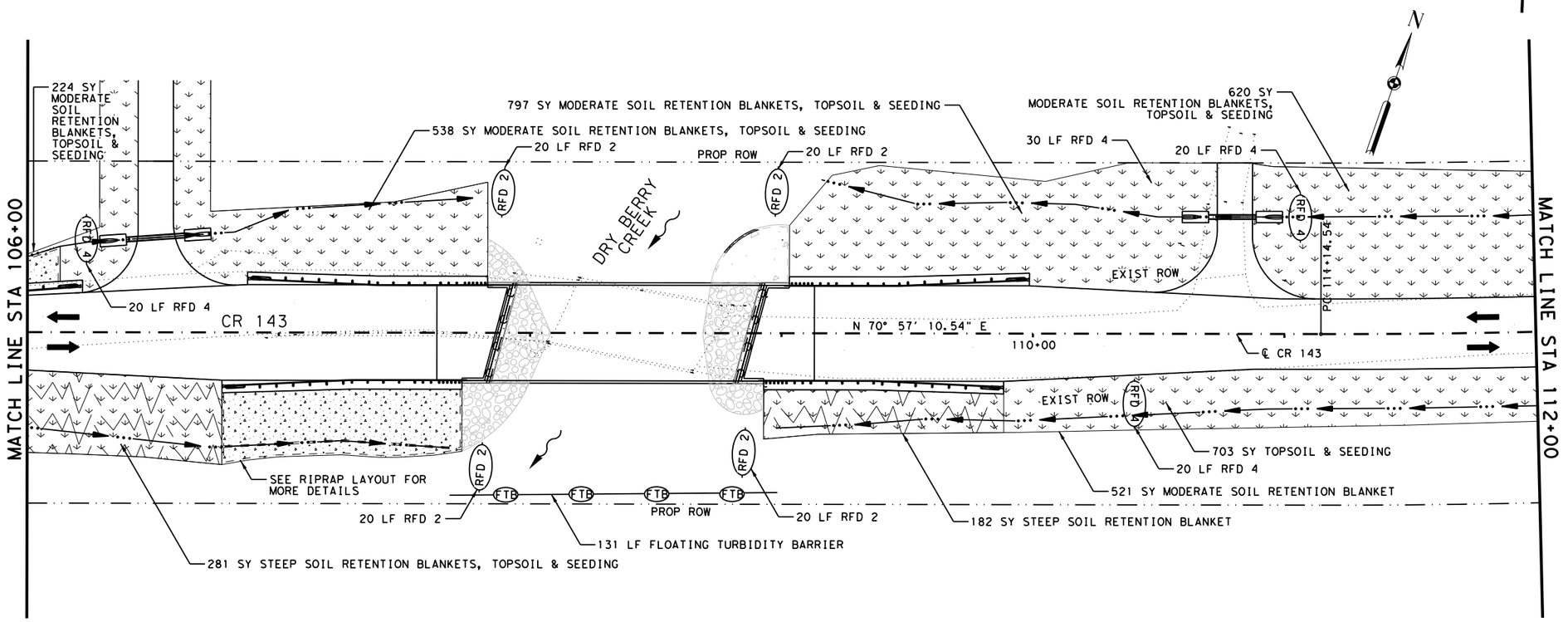
Texas Department of Transportation — Design Division Standard

ENVIRONMENTAL PERMITS, ISSUES AND COMMITMENTS

EPIC

FILE: epic.dgn	DN: TxDOT	CK: RG	DW: VP	CK: AR
© TxDOT: February 2015	CONT	SECT	JOB	HIGHWAY
REVISIONS	0914	05	203, ETC.	CR 143
12-12-2011 (DS)	DIST	COUNTY		SHEET NO.
05-07-14 ADDED NOTE SECTION IV.	AUS	WILLIAMSON		140
01-23-2015 SECTION I (CHANGED ITEM 1122 TO ITEM 506, ADDED GRASSY SWALES.				





2/3/2025

ELIZABETH W. WAGNER
149380
LICENSED
PROFESSIONAL ENGINEER
STATE OF TEXAS

Kimley»Horn F-928

Texas Department of Transportation

CR 143 AT DRY BERRY CREEK

EROSION CONTROL LAYOUT

SHEET 1 OF 2

FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
6	BR2020(732)		CR 143
STATE	DIST.	COUNTY	SHEET NO.
TEXAS	AUS	WILLIAMSON	141
CONT.	SECT.	JOB	
0914	05	203, ETC.	

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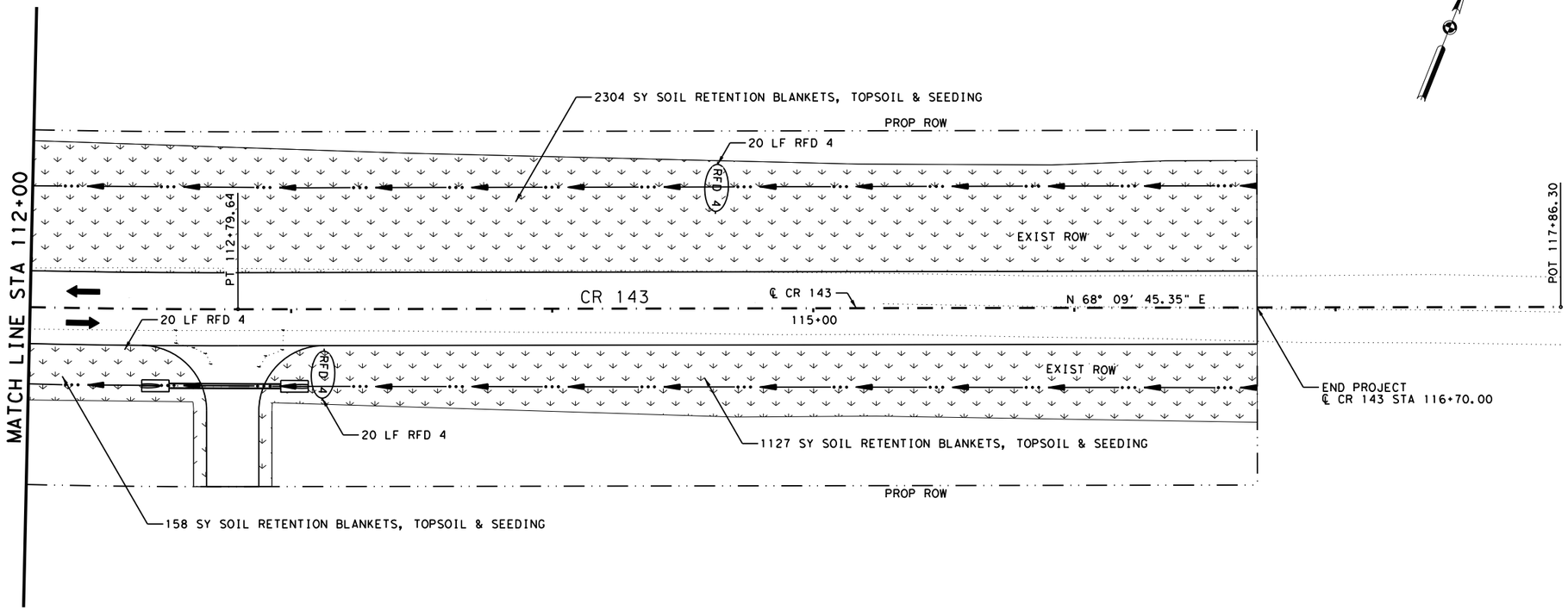

0′ 25′ 50′

SCALE

LEGEND

- PROPOSED TOPSOIL & SEEDING
- PROPOSED 18" STONE RIPRAP
- PROPOSED STEEP SRB
- RFD 4 — TEMPORARY ROCK FILTER DAM TY 4
- RFD 2 — TEMPORARY ROCK FILTER DAM TY 2
- FTB — FLOATING TURBIDITY BARRIER
- DITCH FLOW DIRECTION
- TRAFFIC DIRECTION

NOTES:

1. ALL SW3P MEASURES ARE TO BE PLACED WITHIN TXDOT RIGHT OF WAY AND AS SHOWN IN STANDARDS EC(1)-EC(2).
2. ONCE INSTALLED, ROCK FILTER DAMS SHALL REMAIN IN PLACE THROUGHOUT ALL PHASES OF CONSTRUCTION, OR AS DIRECTED.

2/3/2025

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CR 143 AT DRY BERRY CREEK

EROSION CONTROL LAYOUT

SHEET 2 OF 2

FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	BR2020(732)	CR 143

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	AUS	WILLIAMSON	142
CONT.	SECT.	JOB	
0914	05	203, ETC.	

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TEXAS COMMISSION ON ENVIRONMENTAL QUALITY WATER POLLUTION ABATEMENT PLAN
GENERAL CONSTRUCTION NOTES:

1. A written notice of construction must be submitted to the TCEQ regional office at least 48 hours prior to the start of any regulated activities. This notice must include:
   - the name of the approved project;
   - the activity start date; and
   - the contact information of the prime contractor.
2. All contractors conducting regulated activities associated with this project must be provided with complete copies of the approved Water Pollution Abatement Plan (WPAP) and the TCEQ letter indicating the specific conditions of its approval. During the course of these regulated activities, the contractors are required to keep on-site copies of the approved plan and approval letter.
3. If any sensitive feature(s) (caves, solution cavity, sink hole, etc.) is discovered during construction, all regulated activities near the sensitive feature must be suspended immediately. The appropriate TCEQ regional office must be immediately notified of any sensitive features encountered during construction. Construction activities may not be resumed until the TCEQ has reviewed and approved the appropriate protective measures in order to protect any sensitive feature and the Edwards Aquifer from potentially adverse impacts to water quality.
4. No temporary or permanent hazardous substance storage tank shall be installed within 150 feet of a water supply source, distribution system, well, or sensitive feature.
5. Prior to beginning any construction activity, all temporary erosion and sedimentation (E&S) control measures must be properly installed and maintained in accordance with the approved plans and manufacturers specifications. If inspections indicate a control has been used inappropriately, or incorrectly, the applicant must replace or modify the control for site situations. These controls must remain in place until the disturbed areas have been permanently stabilized.
6. Any sediment that escapes the construction site must be collected and properly disposed of before the next rain event to ensure it is not washed into surface streams, sensitive features, etc.
7. Sediment must be removed from the sediment traps or sedimentation basins not later than TCEQ-0592 (Rev. July 15, 2015) Page 2 of 2 when it occupies 50% of the basin's design capacity.
8. Litter, construction debris, and construction chemicals exposed to stormwater shall be prevented from being discharged offsite.
9. All spoils (excavated material) generated from the project site must be stored on-site with proper E&S controls. For storage or disposal of spoils at another site on the Edwards Aquifer Recharge Zone, the owner of the site must receive approval of a water pollution abatement plan for the placement of fill material or mass grading prior to the placement of spoils at the other site.
10. If portions of the site will have a temporary or permanent cease in construction activity lasting longer than 14 days, soil stabilization in those areas shall be initiated as soon as possible prior to the 14th day of inactivity. If activity will resume prior to the 21st day, stabilization measures are not required. If drought conditions or inclement weather prevent action by the 14th day, stabilization measures shall be initiated as soon as possible.
11. The following records shall be maintained and made available to the TCEQ 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.
12. The holder of any approved Edward Aquifer protection plan must notify the appropriate regional office in writing and obtain approval from the executive director prior to initiating any of the following:
    A. any 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;
    B. any 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;
    C. any development of land previously identified as undeveloped in the original water pollution abatement plan.

Austin Regional Office
12100 Park 35 Circle, Building A
Austin, Texas 78753-1808
Phone (512) 339-2929
Fax (512) 339-3795

San Antonio Regional Office
14250 Judson Road
San Antonio, Texas 78233-4480
Phone (210) 490-3096
Fax (210) 545-4329

TCEQ WATER QUALITY CALCULATION:

Texas Commission on Environmental Quality
TSS Removal Calculations

STEP ONE: Required TSS Removal

EQUATION 3.3
Lm = 28.93(An x P)
Lm = Required TSS Removal (pounds)
An = Net Increase in Impervius Area (acres)
P = Average Annual Precipitation (inches)

Total Project Area	4.53	Acres
Pre-Dev. Imp. Area	0.93	Acres
Post-Dev. Imp. Area	1.33	Acres
Imp. Cover Fraction	0.29	
P =	32	Inches
Lm =	348	Lbs

STEP TWO: Select an Appropriate BMP

Proposed BMP	VFS
Removal Efficiency	85%

STEP THREE: Calculate TSS Load Removed by BMPs

EQUATION 3.8
Lr = (BMP Efficiency) x P x (Ai x 34.6 + Ap x 0.54)
Lr = Load Removed by BMP
BMP Efficiency = TSS Removal Efficiency
Ai = Impervious Tributary Area to the BMP (ac)
Ap = Pervious Tributary Area to the BMP (ac)

Ai =	0.38
Ap =	0.00
Lr =	358 lbs

TCEQ WATER QUALITY CALCULATION SUMMARY:

TOTAL PROJECT SUMMARY				
SITE AREA	EXISTING IMPERVIOUS AREA	PROPOSED IMPERVIOUS AREA	REQUIRED ANNUAL TSS LOAD REMOVAL	PROVIDED ANNUAL TSS LOAD REMOVAL
AC	AC	AC	LBS	LBS
4.53	0.93	1.33	348	358

PROVIDED LOAD REMOVAL / VEGETATIVE FILTER STRIP SUMMARY						
VFS ID	DRAINAGE AREA	BEGIN STA	END STA	OFFSET	REMOVAL EFFICIENCY	PROVIDED TSS REMOVAL
	AC			RT/LT		LBS
WB-1	0.07	109+54.10	110+80.25	LT	85	66
WB-2	0.31	111+12.25	116+70.00	LT	85	292
					TOTAL PROVIDED LOAD REMOVAL =	358

NOTES:

1. SEE CR 143 WATER QUALITY REPORT (KIMLEY-HORN) FOR DETAILED DISCUSSION ON WATER QUALITY CALCULATION METHODOLOGY.
2. TOTAL REQUIRED LOAD REMOVALS ONLY COMPUTED WITHIN THE LIMITS OF THE ROADWAY WIDENING AS FOLLOWS:
   BEGIN STA 100+56.00 END STA 116+70.00

2/4/2025

STATE OF TEXAS
ELIZABETH W. WAGNER
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Texas Department of Transportation

CR 143 AT DRY BERRY CREEK

WATER QUALITY CALCULATIONS AND TCEQ GENERAL NOTES

SHEET 1 OF 1

FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	BR2020(732)	CR 143

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	AUS	WILLIAMSON	143
CONT.	SECT.	JOB	
0914	05	203, ETC.	

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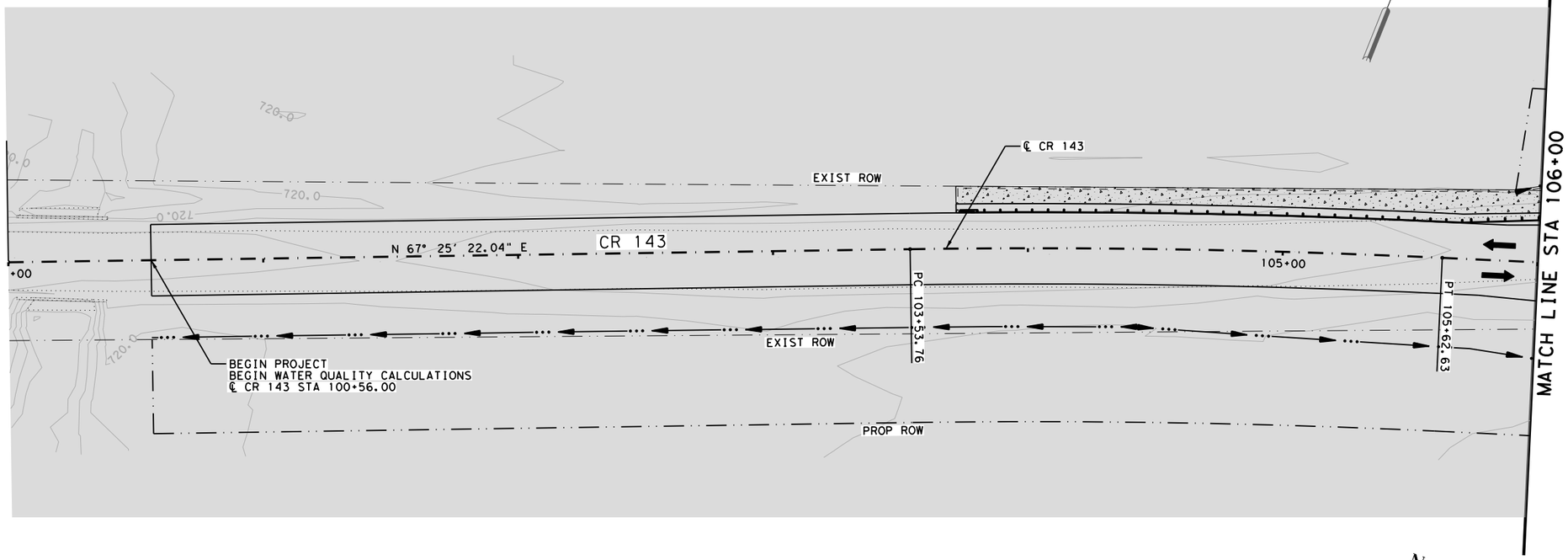

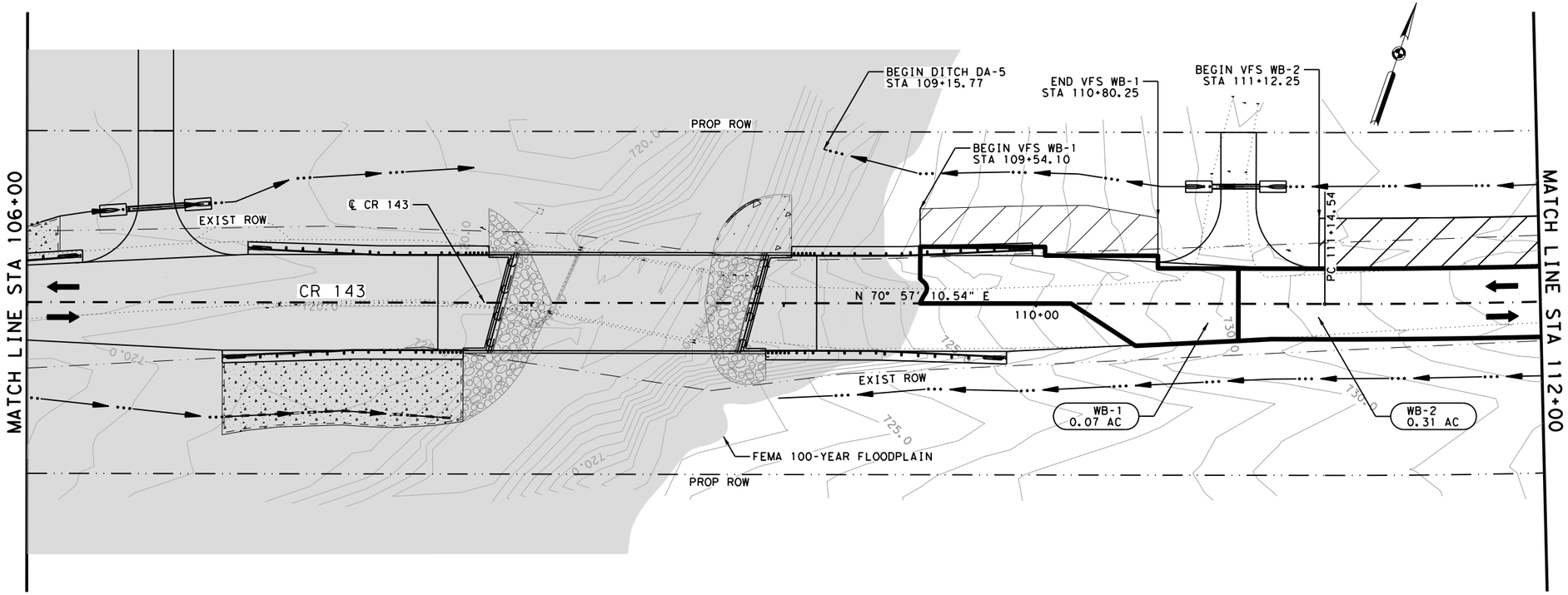

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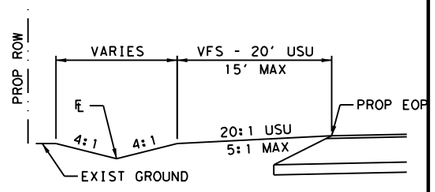
SCALE

LEGEND

- PROPOSED VEGETATIVE FILTER STRIP
- PROPOSED VFS DRAINAGE AREA
- FEMA 100-YEAR FLOODPLAIN
- DIRECTION OF DITCH FLOW
- DIRECTION OF TRAVEL
- XX-X X.XX AC — PROPOSED DRAINAGE AREA ID
- XXX.XX — EXISTING CONTOURS

NOTES:

1. SEE WATER QUALITY CALCULATIONS AND TCEQ GENERAL NOTES SHEET FOR REMOVAL CALCULATIONS.
2. THE PROJECT IS LOCATED WITHIN THE EDWARDS ACQUIFER RECHARGE ZONE AS DEFINED BY TCEQ.



PROP VFS DITCH SECTION - N.T.S

2/3/2025

STATE OF TEXAS
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CR 143 AT DRY BERRY CREEK

WATER POLLUTION ABATEMENT PLAN

SHEET 1 OF 2

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
6	BR2020(732)		CR 143
STATE	DIST.	COUNTY	SHEET NO.
TEXAS	AUS	WILLIAMSON	144
CONT.	SECT.	JOB	
0914	05	203, ETC.	

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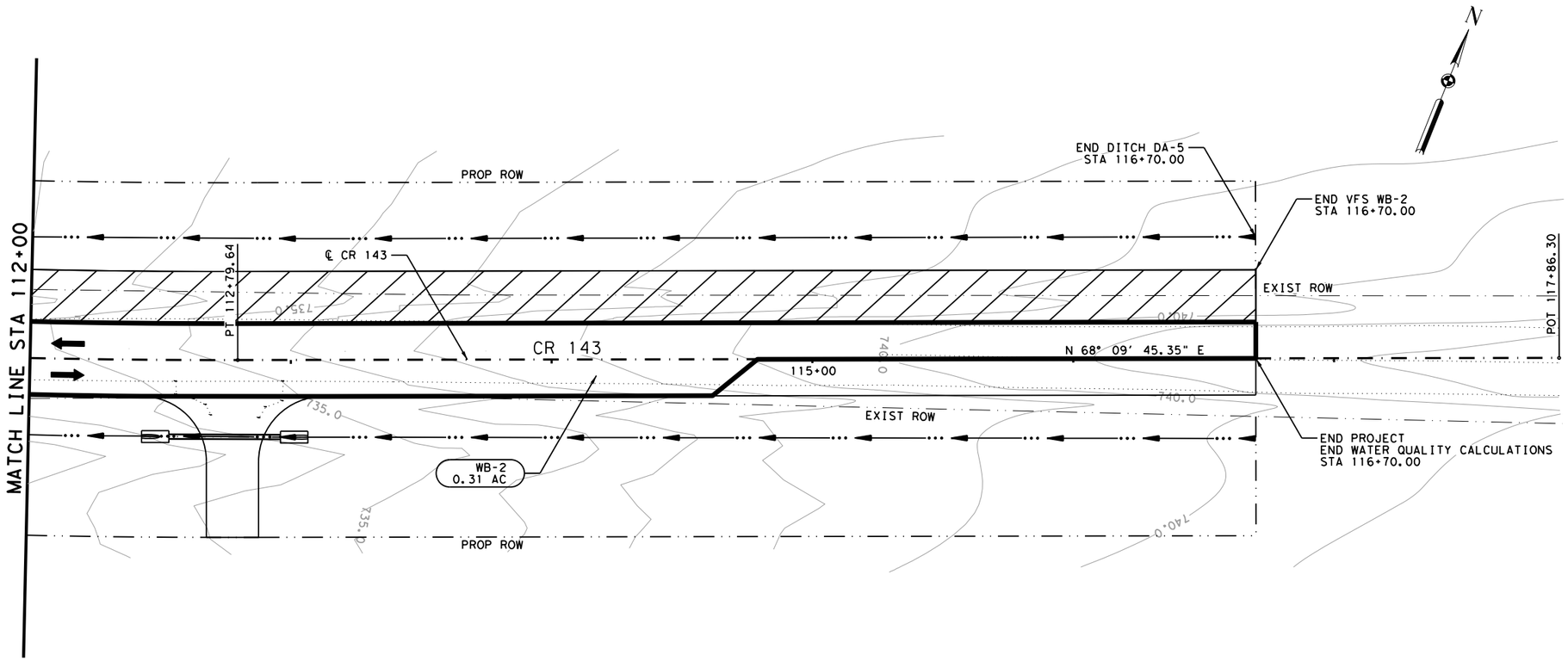

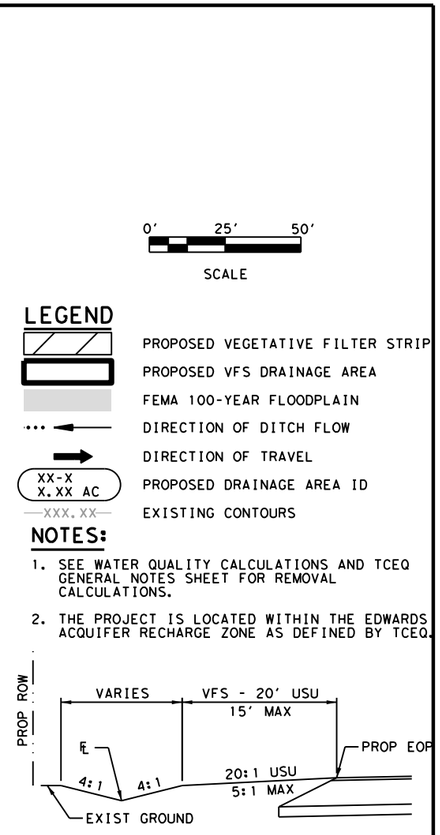

LEGEND

- PROPOSED VEGETATIVE FILTER STRIP
- PROPOSED VFS DRAINAGE AREA
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PROP VFS DITCH SECTION - N.T.S

2/3/2025

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CR 143 AT DRY BERRY CREEK

WATER POLLUTION ABATEMENT PLAN

SHEET 2 OF 2

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	BR2020(732)	CR 143

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	AUS	WILLIAMSON	145
CONT.	SECT.	JOB	
0914	05	203, ETC.	

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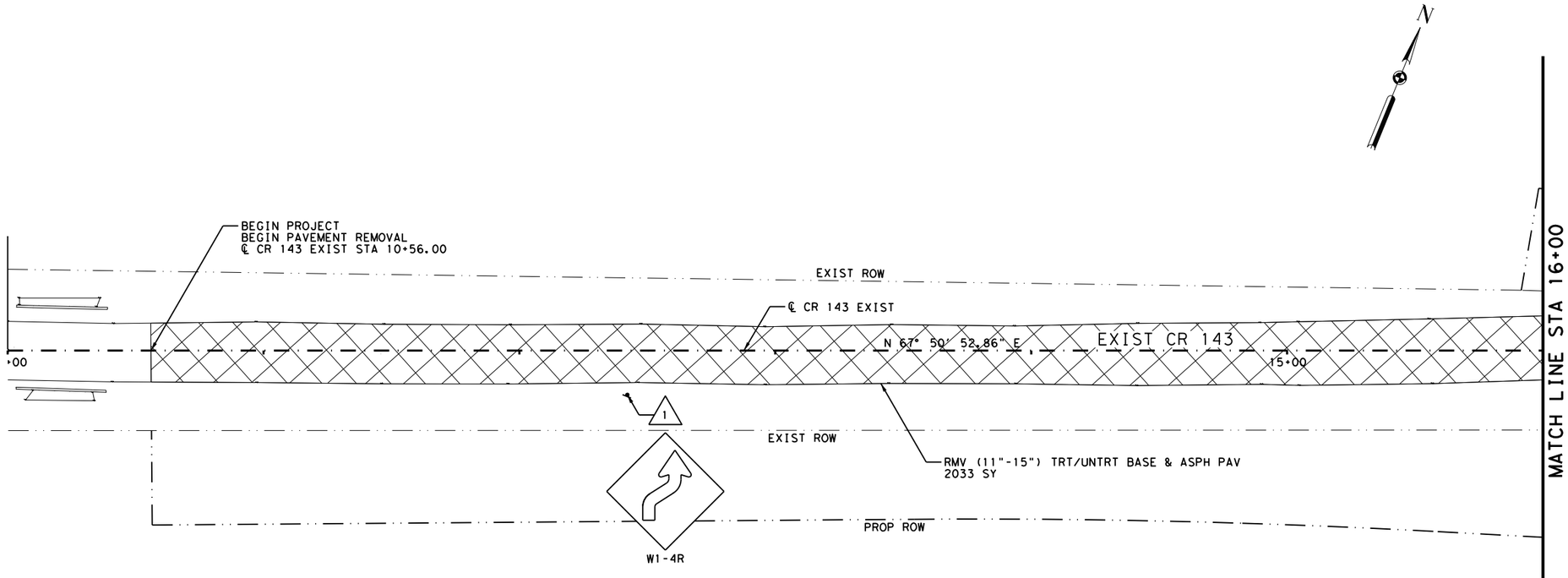

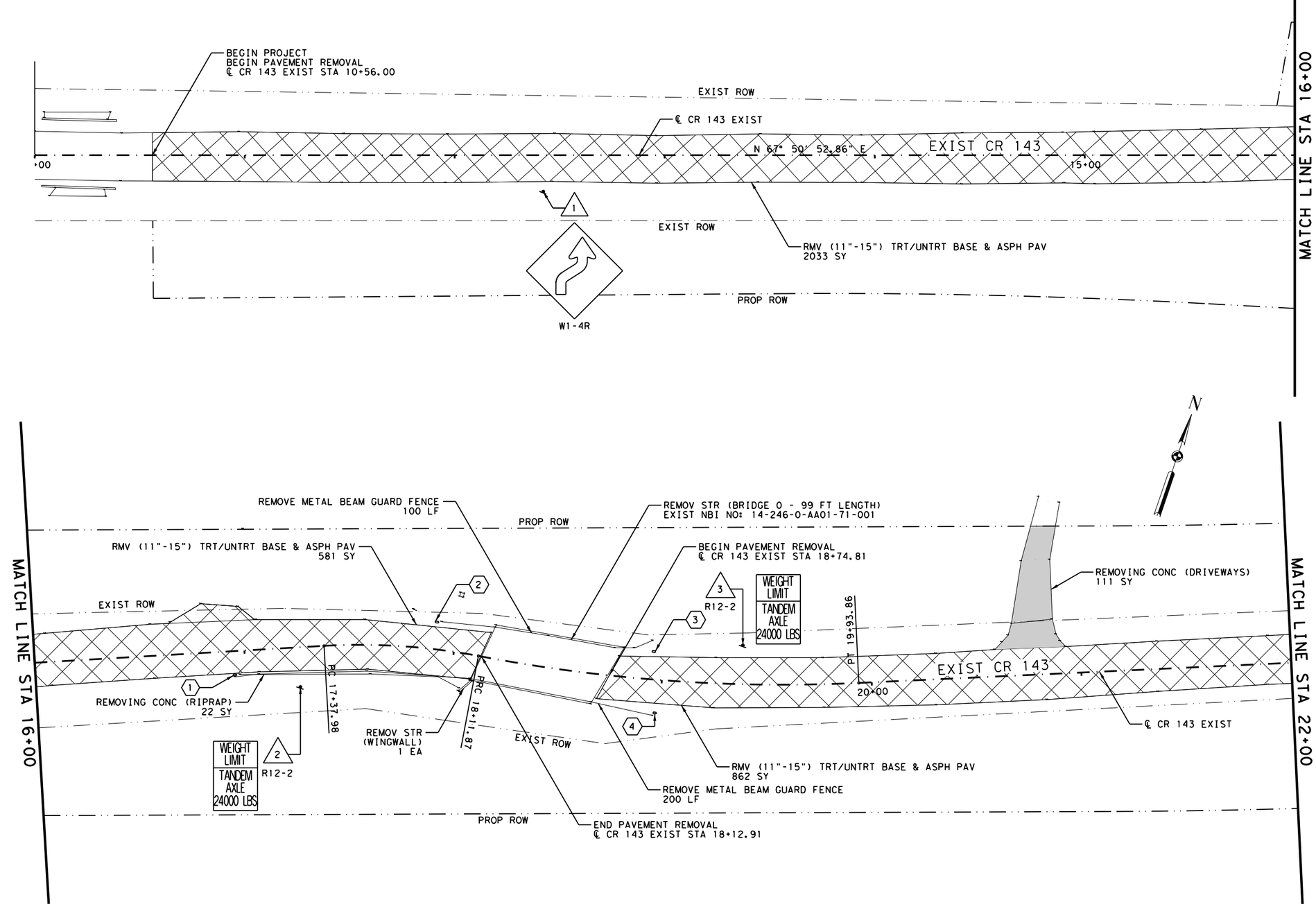

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SCALE

LEGEND

- RMV TRT & UNTRT BASE & ASPH PV(10"-15")
- REMOVING CONC (DRIVEWAYS)
- EXISTING SIGN TO BE REMOVED
- EXISTING OBJECT MARKER TO BE REMOVED

NOTES:

1. REMOVAL OF EXISTING GRAVEL DRIVEWAYS IS SUBSIDIARY TO ITEM 0110 6001 EXCAVATION.
2. REMOVAL OF EXISTING FENCE AND GATES ARE SUBSIDIARY TO ITEM 0100 6001 PREP ROW.

2/3/2025

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CR 143 AT DRY BERRY CREEK

REMOVAL LAYOUT

SHEET 1 OF 2

FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	BR2020(732)	CR 143

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	AUS	WILLIAMSON	159
CONT.	SECT.	JOB	
0914	05	203, ETC.	

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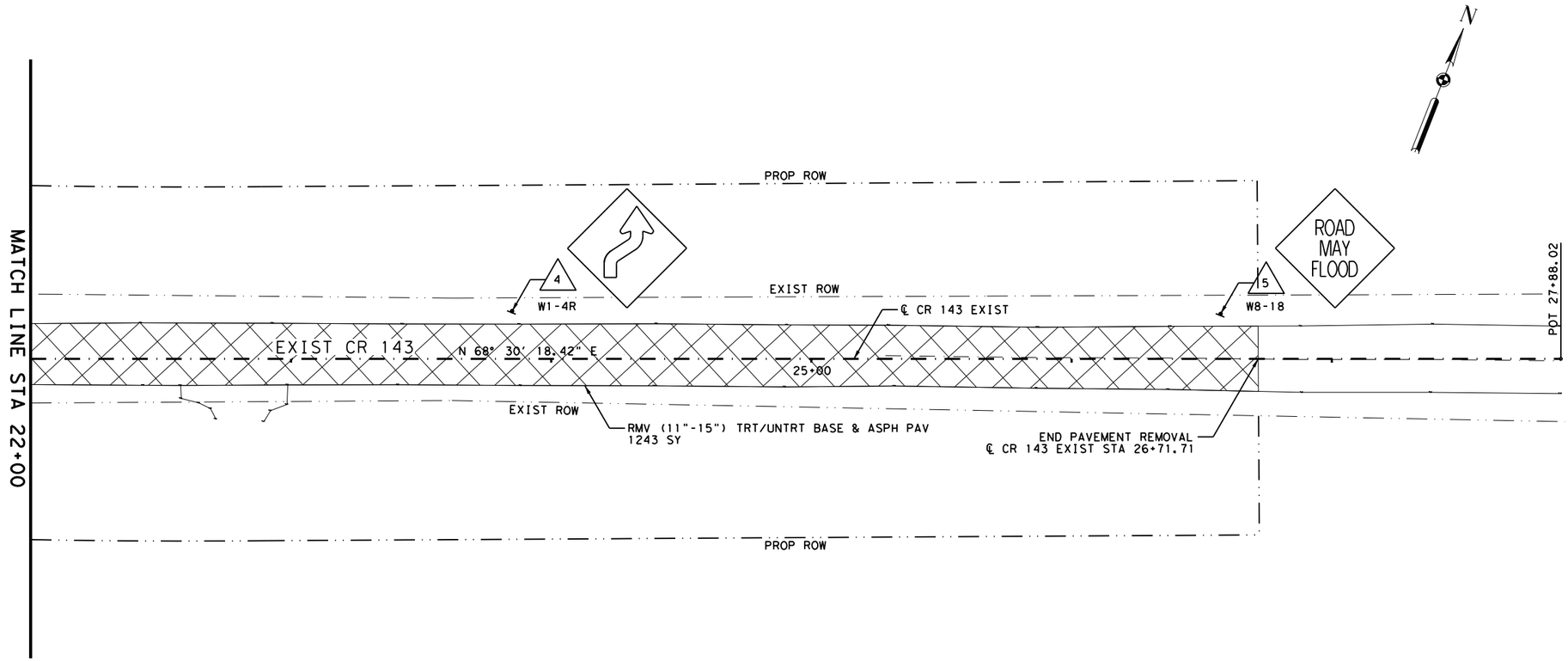

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2/3/2025

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CR 143 AT DRY BERRY CREEK

REMOVAL LAYOUT

SHEET 2 OF 2

FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	BR2020(732)	CR 143

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	AUS	WILLIAMSON	160
CONT.	SECT.	JOB	
0914	05	203, ETC.	

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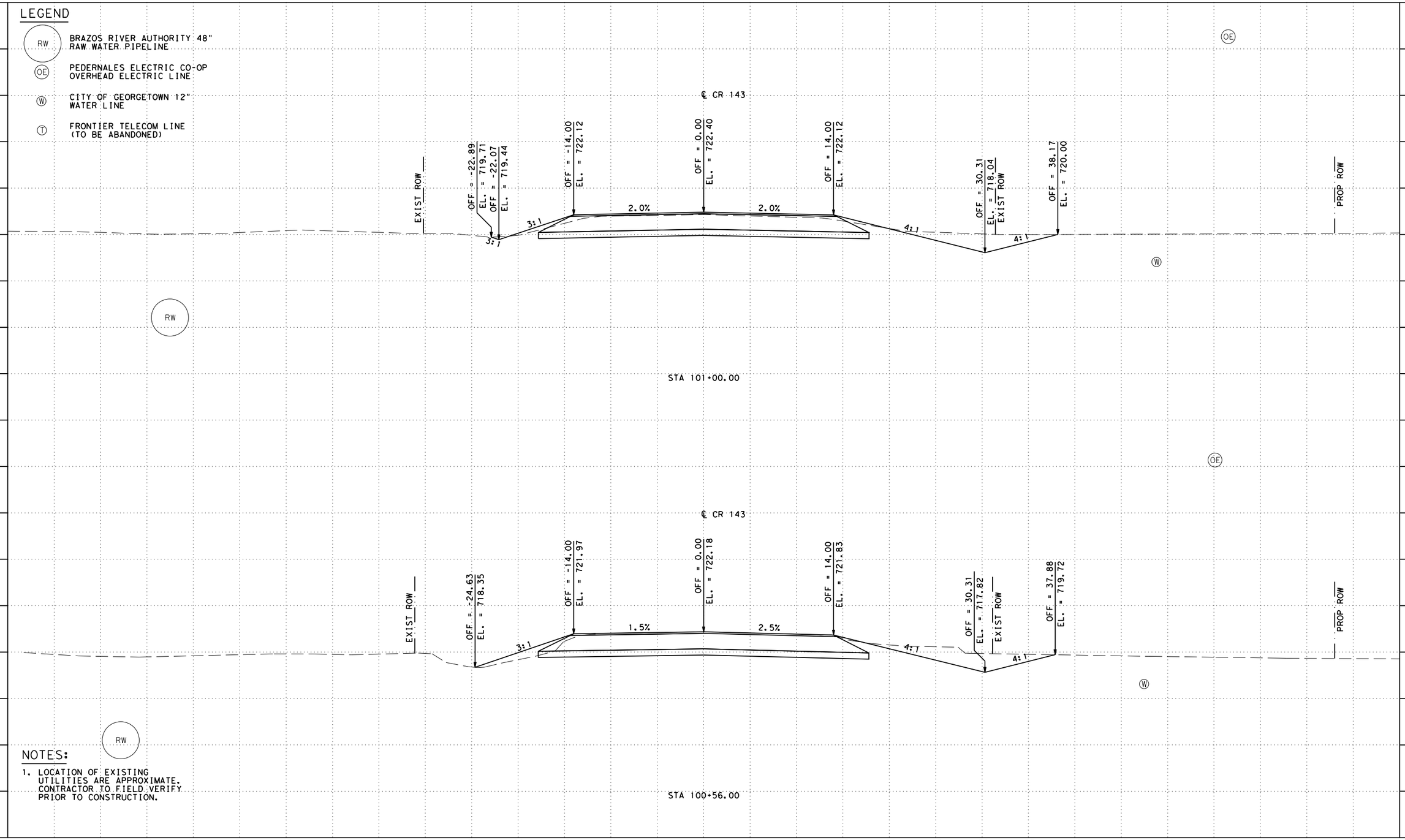
LEGEND

- RW — BRAZOS RIVER AUTHORITY 48" RAW WATER PIPELINE
- OE — PEDERNALES ELECTRIC CO-OP OVERHEAD ELECTRIC LINE
- W — CITY OF GEORGETOWN 12" WATER LINE
- T — FRONTIER TELECOM LINE (TO BE ABANDONED)



NOTES:

1. LOCATION OF EXISTING UTILITIES ARE APPROXIMATE. CONTRACTOR TO FIELD VERIFY PRIOR TO CONSTRUCTION.

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SCALE HORZ 0′ 5′ 10′
VERT 0′ 5′ 10′

Kimley»Horn F-928

Texas Department of Transportation

CR 143
CROSS SECTIONS

SHEET 1 OF 9

FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	BR2020(732)	CR 143

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	AUS	WILLIAMSON	1
CONT.	SECT.	JOB	
0914	05	203, ETC.	

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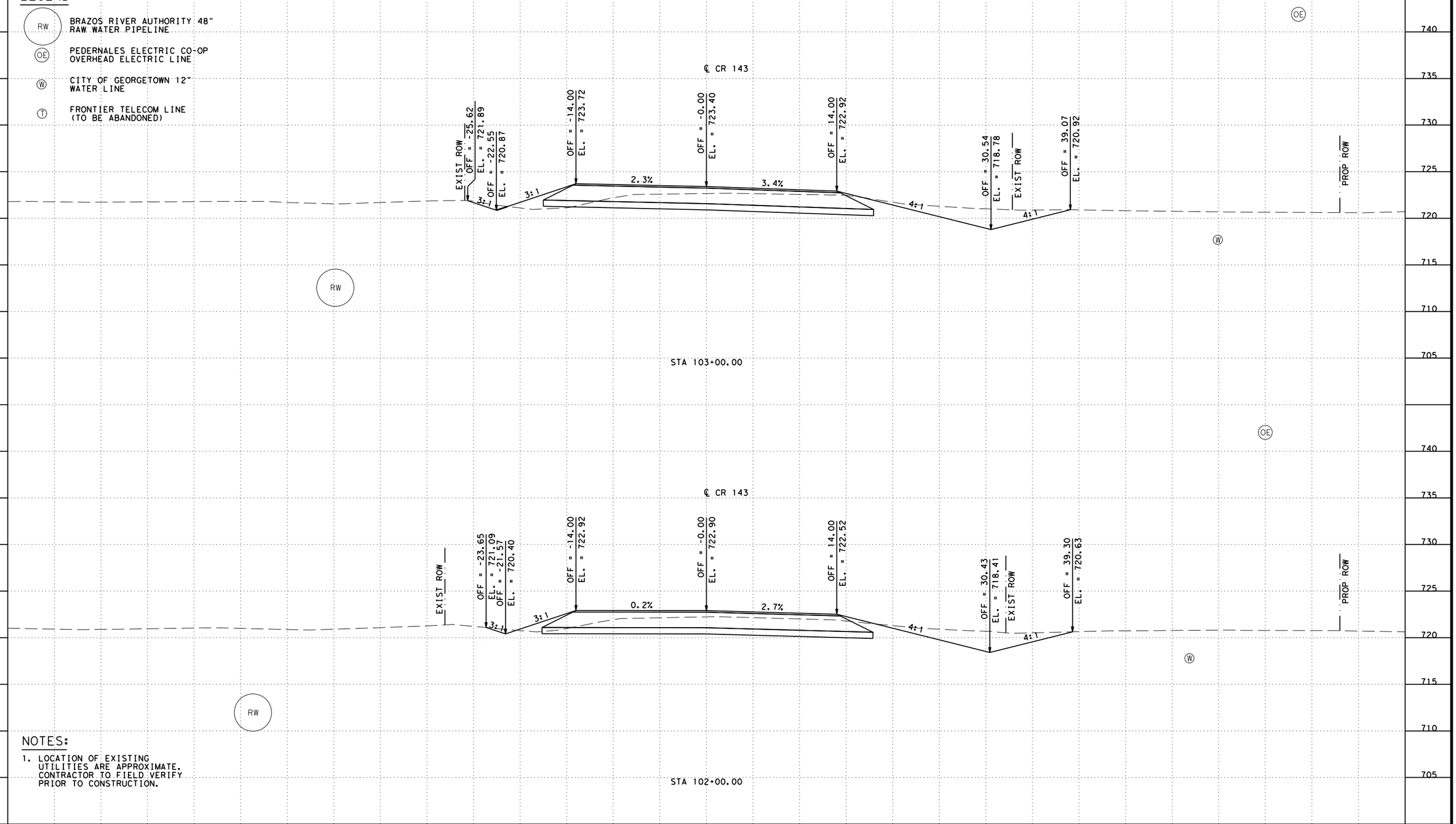

NOTES:

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Kimley»Horn F-928

Texas Department of Transportation

CR 143
CROSS SECTIONS

SHEET 2 OF 9

FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	BR2020(732)	CR 143
STATE	DIST.	COUNTY
TEXAS	AUS	WILLIAMSON
CONT.	SECT.	JOB
0914	05	203, ETC.

SHEET NO. 2

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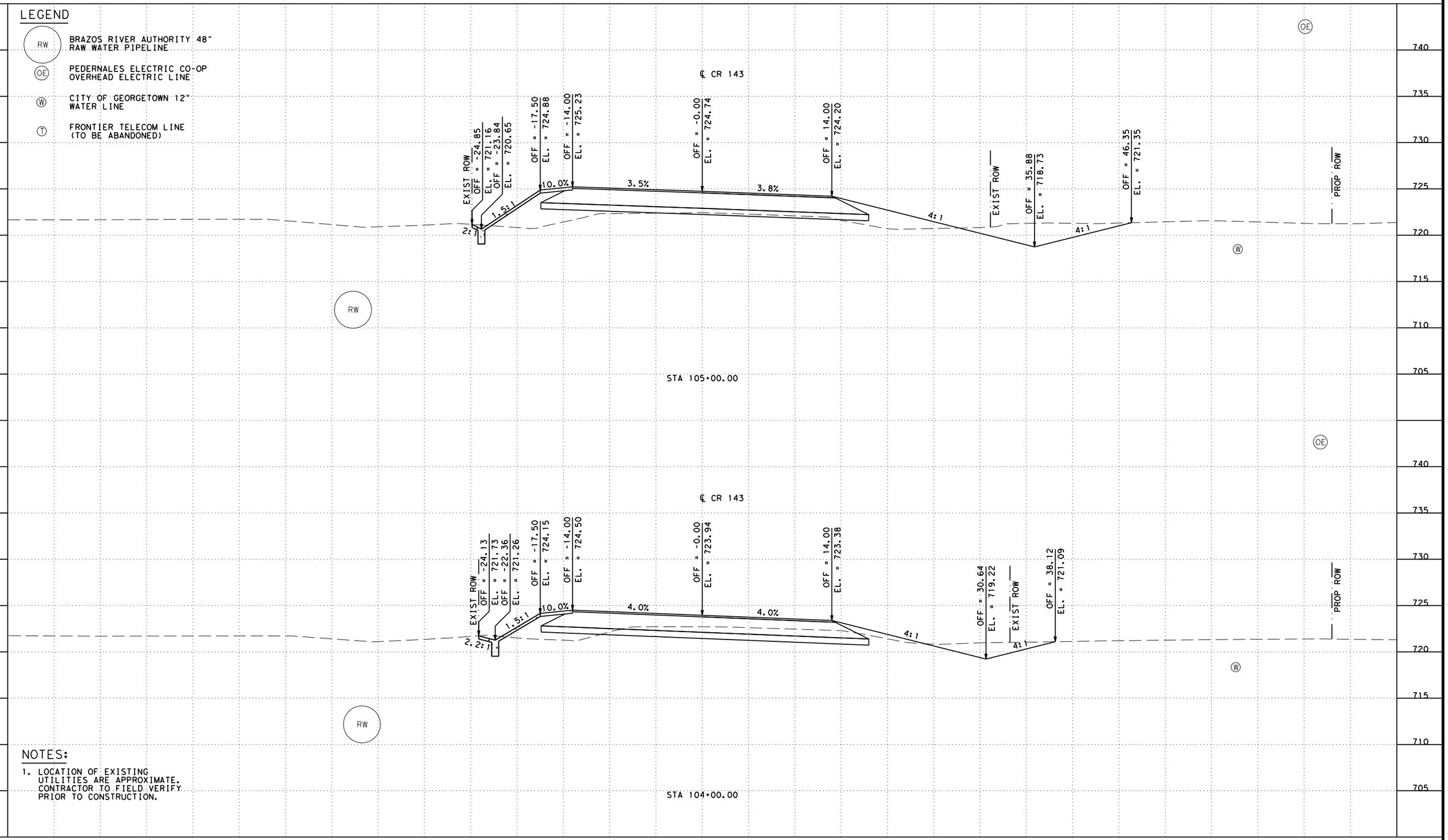

NOTES:

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SCALE HORZ 0' 5' 10'
VERT 0' 5' 10'

Kimley»Horn F-928

Texas Department of Transportation

CR 143
CROSS SECTIONS

SHEET 3 OF 9

FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	BR2020(732)	CR 143

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	AUS	WILLIAMSON	3
CONT.	SECT.	JOB	
0914	05	203, ETC.	

LEGEND

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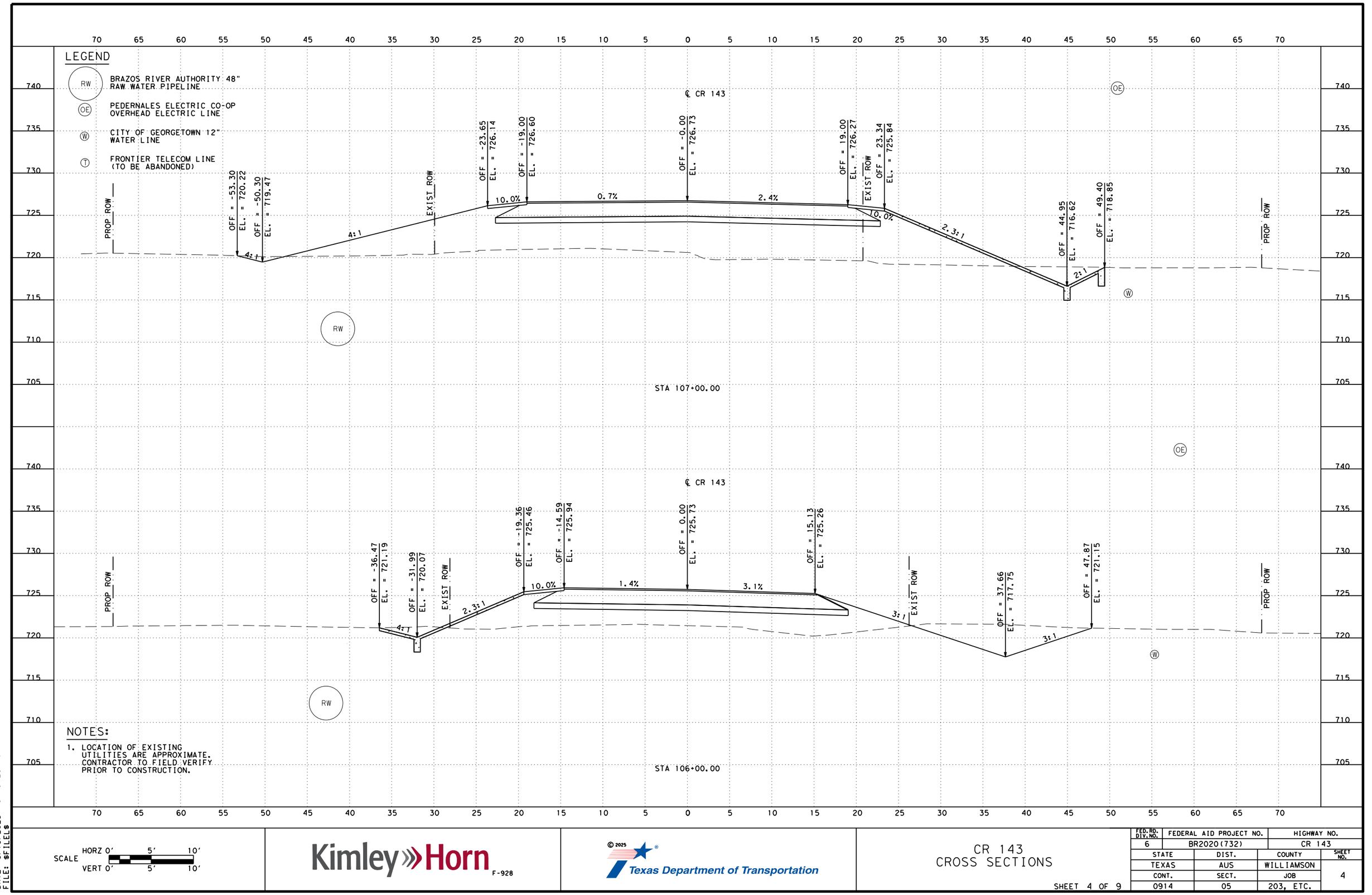

NOTES:

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SCALE HORZ 0' 5' 10'
VERT 0' 5' 10'

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Texas Department of Transportation

CR 143
CROSS SECTIONS

SHEET 4 OF 9

FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	BR2020(732)	CR 143

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	AUS	WILLIAMSON	4
CONT.	SECT.	JOB	
0914	05	203, ETC.	

LEGEND

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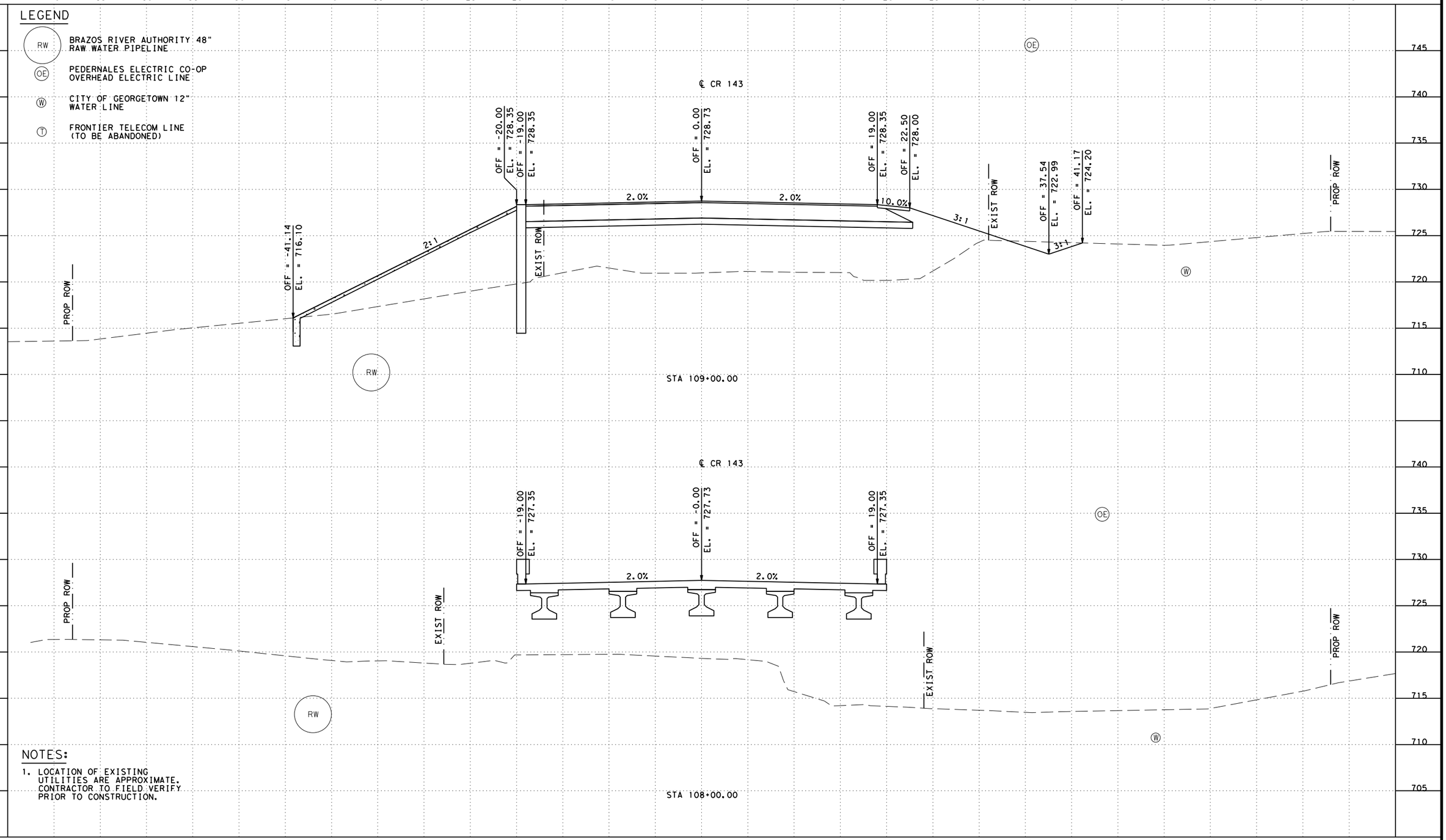

NOTES:

1. LOCATION OF EXISTING UTILITIES ARE APPROXIMATE. CONTRACTOR TO FIELD VERIFY PRIOR TO CONSTRUCTION.

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SCALE
HORZ 0' 5' 10'
VERT 0' 5' 10'

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Texas Department of Transportation

CR 143
CROSS SECTIONS

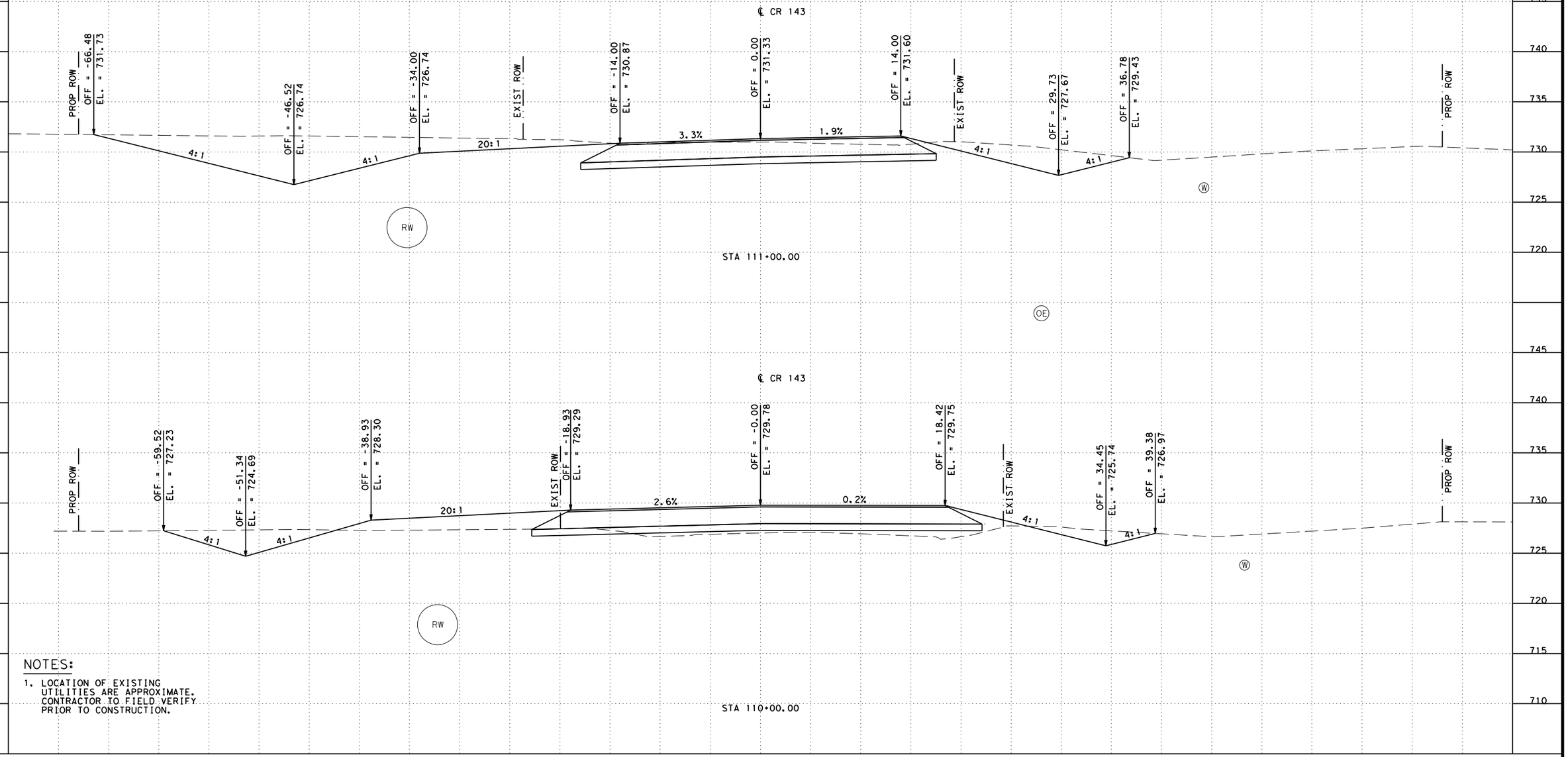
SHEET 5 OF 9

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	BR2020(732)	CR 143

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	AUS	WILLIAMSON	5
CONT.	SECT.	JOB	
0914	05	203, ETC.	

LEGEND

- RW — BRAZOS RIVER AUTHORITY 48" RAW WATER PIPELINE
- OE — PEDERNALES ELECTRIC CO-OP OVERHEAD ELECTRIC LINE
- W — CITY OF GEORGETOWN 12" WATER LINE
- T — FRONTIER TELECOM LINE (TO BE ABANDONED)



NOTES:

1. LOCATION OF EXISTING UTILITIES ARE APPROXIMATE. CONTRACTOR TO FIELD VERIFY PRIOR TO CONSTRUCTION.

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SCALE HORZ 0′ 5′ 10′
VERT 0′ 5′ 10′

Kimley»Horn F-928

Texas Department of Transportation

CR 143
CROSS SECTIONS

SHEET 6 OF 9

FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	BR2020(732)	CR 143

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	AUS	WILLIAMSON	6
CONT.	SECT.	JOB	
0914	05	203, ETC.	

LEGEND

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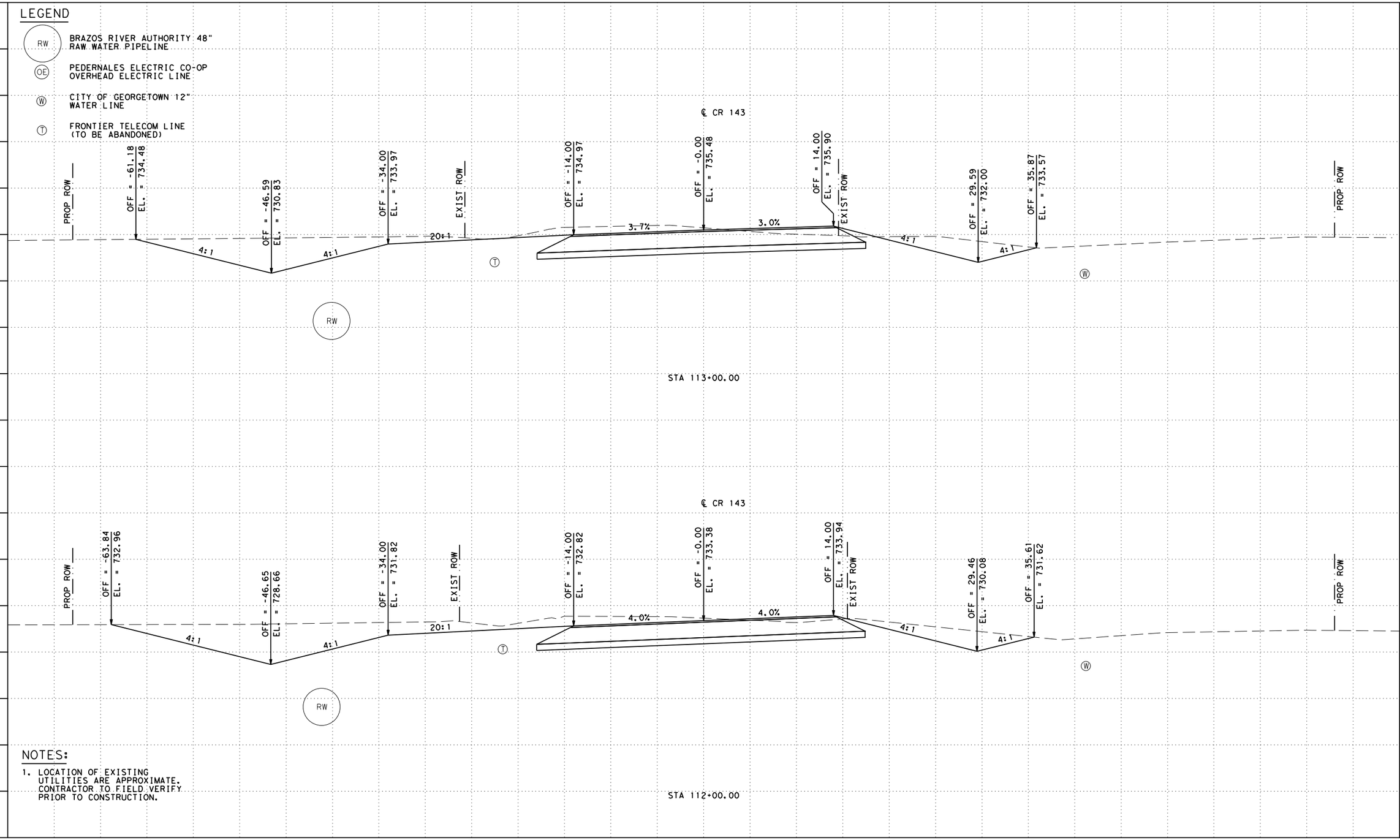

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Kimley»Horn F-928

Texas Department of Transportation

CR 143
CROSS SECTIONS

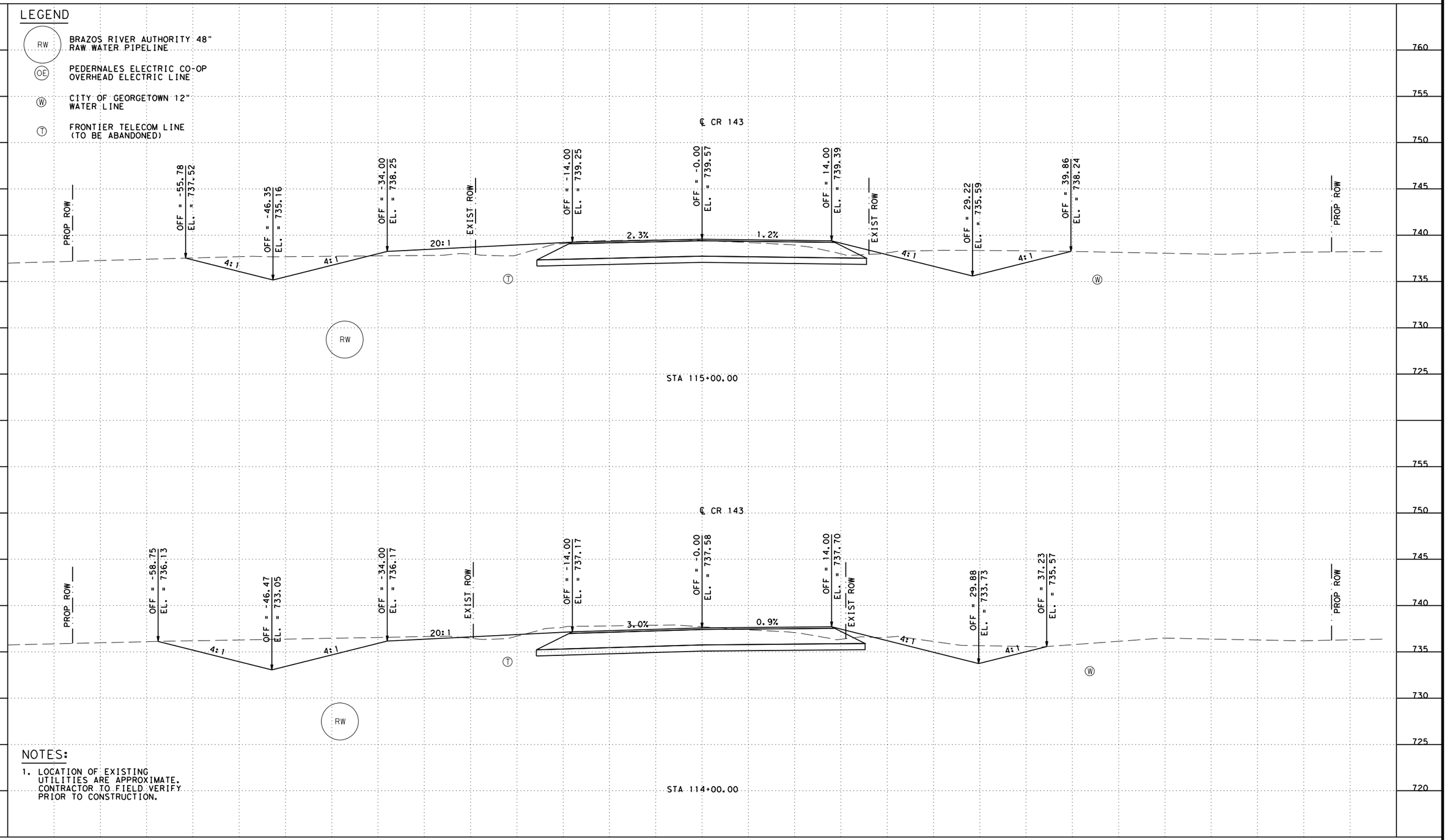
SHEET 7 OF 9

FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	BR2020(732)	CR 143

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	AUS	WILLIAMSON	7
CONT.	SECT.	JOB	
0914	05	203, ETC.	

LEGEND

- RW — BRAZOS RIVER AUTHORITY 48" RAW WATER PIPELINE
- OE — PEDERNALES ELECTRIC CO-OP OVERHEAD ELECTRIC LINE
- W — CITY OF GEORGETOWN 12" WATER LINE
- T — FRONTIER TELECOM LINE (TO BE ABANDONED)



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VERT 0′ 5′ 10′

Kimley»Horn F-928

Texas Department of Transportation

CR 143
CROSS SECTIONS

SHEET 8 OF 9

FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	BR2020(732)	CR 143

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	AUS	WILLIAMSON	8
CONT.	SECT.	JOB	
0914	05	203, ETC.	

LEGEND

- RW — BRAZOS RIVER AUTHORITY 48" RAW WATER PIPELINE
- OE — PEDERNALES ELECTRIC CO-OP OVERHEAD ELECTRIC LINE
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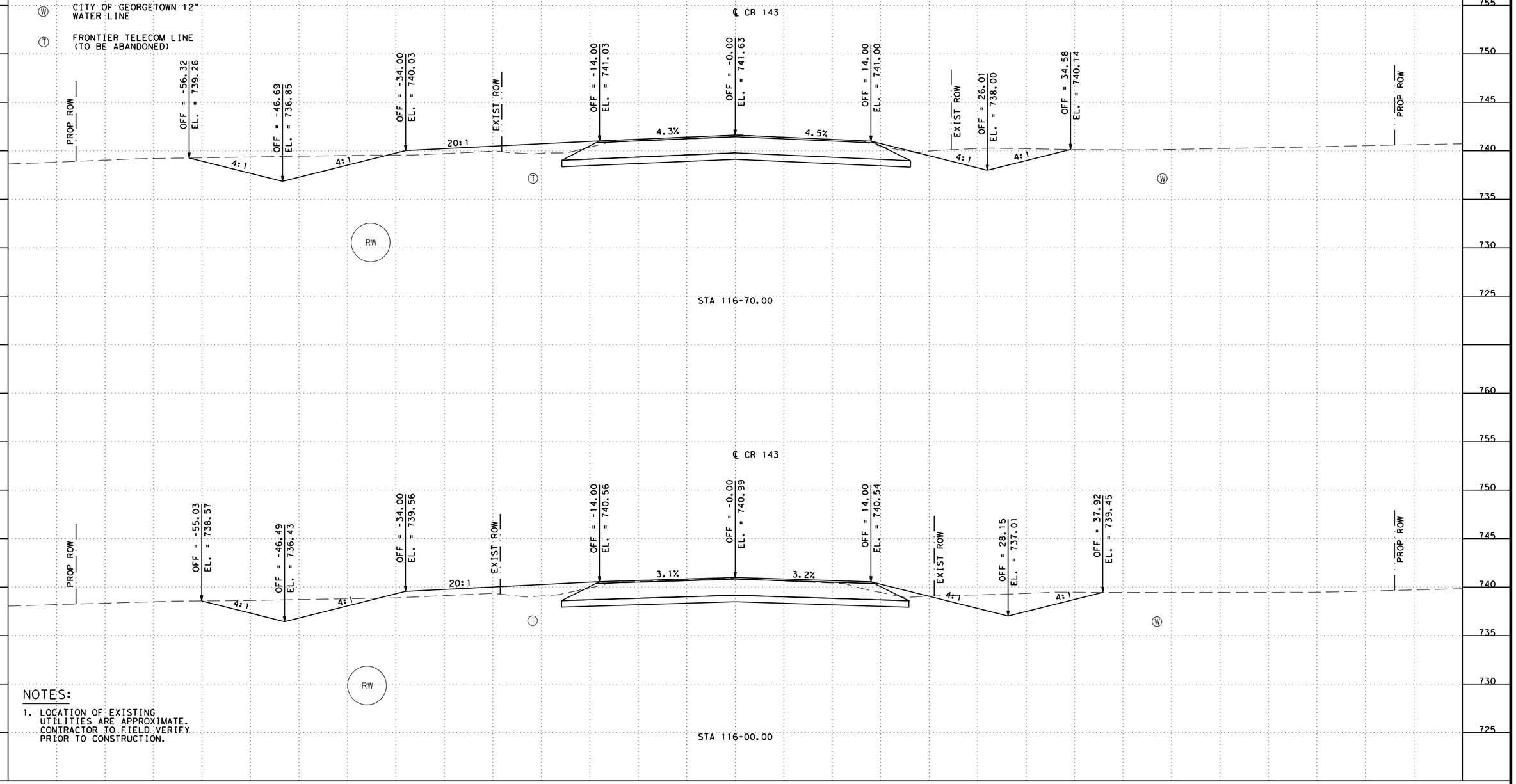

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Kimley»Horn F-928

Texas Department of Transportation

CR 143
CROSS SECTIONS

SHEET 9 OF 9

FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	BR2020(732)	CR 143

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	AUS	WILLIAMSON	9
CONT.	SECT.	JOB	
0914	05	203, ETC.	

ATTACHMENT H

INSPECTION, MAINTENANCE, REPAIR, AND RETROFIT PLAN

The following sections address inspection and maintenance taken from the TNRCC Manual "Complying with Edward Aquifer Rules: Technical Guidance on Best Management Practices."

PEST MANAGEMENT

An Integrated Pest Management (IPM) Plan should be developed for vegetated areas. This plan should specify how problem insects and weeds will be controlled with minimal or no use of insecticides and herbicides.

SEASONAL MOWING AND LAWN CARE

If the filter strip is made up of turf grass, it should be mowed as needed to limit vegetation height to 18 inches, using a mulching mower (or removal of clippings). If native grasses are used, the filter may require less frequent mowing, but a minimum of twice annually. Grass clippings and brush debris should not be deposited on vegetated filter strip areas. Regular mowing should also include weed control practices, however herbicide use should be kept to a minimum (Urbonas et al., 1992). Healthy grass can be maintained without using fertilizers because runoff usually contains sufficient nutrients. Irrigation of the site can help assure a dense and healthy vegetative cover.

INSPECTION

Inspect filter strips at least twice annually for erosion or damage to vegetation; however, additional inspection after periods of heavy runoff is most desirable. The strip should be checked for uniformity of grass cover, debris and litter, and areas of sediment accumulation. More frequent inspections of the grass cover during the first few years after establishment will help to determine if any problems are developing, and to plan for long-term restorative maintenance needs. Bare spots and areas of erosion identified during semi-annual inspections must be replanted and 3-91 restored to meet specifications. Construction of a level spreader device may be necessary to reestablish shallow overland flow.

DEBRIS AND LITTER REMOVAL

Trash tends to accumulate in vegetated areas, particularly along highways. Any filter strip structures (i.e. level spreaders) should be kept free of obstructions to reduce floatables being flushed downstream, and for aesthetic reasons. The need for this practice is determined through periodic inspection, but should be performed no less than 4 times per year.

SEDIMENT REMOVAL

Sediment removal is not normally required in filter strips, since the vegetation normally grows through it and binds it to the soil. However, sediment may accumulate along the upstream boundary of the strip preventing uniform overland flow. Excess sediment should be removed by hand or with flat-bottomed shovels.

GRASS RESEEDING AND MULCHING

A healthy dense grass should be maintained on the filter strip. If areas are eroded, they should be filled, compacted, and reseeded so that the final grade is level. Grass damaged during the sediment removal process should be promptly replaced using the same seed mix used during filter strip establishment. If possible, flow should be diverted from the damaged areas until the grass is firmly established. Bare spots and areas of erosion identified during semi-annual inspections must be replanted and restored to meet specifications. Corrective maintenance, such as weeding or replanting should be done more frequently in the first two to three years after installation to ensure stabilization. Dense vegetation may require irrigation immediately after planting, and during particularly dry periods, particularly as the vegetation is initially established.

The TxDOT Area Engineer may be contacted for questions that pertain to the maintenance of this roadway. He has approved these guidelines and signed below.

Responsible Party for Maintenance: Douglas C. Harris

Address: 2727 South Austin Avenue

City, State, Zip: Georgetown TX. 78626

Signature of Responsible Party:

ATTACHMENT J

MEASURES FOR MINIMIZING SURFACE STREAM CONTAMINATION

Temporary BMPs, such as rock filter dams and a floating turbidity barrier, will be installed to prevent onsite sediment and debris from entering surface streams during construction. Temporary BMPs will be placed before commencing any construction activities and will remain in place during construction.

A floating turbidity barrier will be installed at the downstream end of the project as a perimeter control and Type 2 and Type 4 rock filter dams will be placed at ditch outfall locations to filter onsite stormwater runoff before release to receiving waters. After construction, the project limits will be revegetated to prevent pollution of surface streams. Temporary BMPs will only be removed once sufficient vegetation is established.

In the event of a hazardous or hydrocarbon spill, spill response contingencies are in place for the project as included in *Attachment A – Spill Response Actions* of the Temporary Stormwater Section. This includes standard procedures for spill prevention, control, clean up, and reporting.

ATTACHMENT K

VOLUME AND CHARACTER OF STORMWATER

The proposed BMPs were designed and sized to treat the proposed onsite and offsite flows. The proposed improvements create a total of 1.33 acres of impervious cover, making up 29% of the overall site that drains into the proposed BMPs.

The character of the stormwater is not expected to change significantly from pre-project to post-project conditions. Vegetative filter strips will treat 80% of TSS generated by the project. All disturbed areas will be re-vegetated at the completion of the project; therefore, no significant degradation of stormwater quality is anticipated due to construction activities. For project drainage patterns see Drainage Area Map in *Attachment G – Construction Plans*.

SECTION 3

GEOLOGICAL ASSESSMENT FORM (TCEQ-0585)

Geologic Assessment

County Road (CR) 143 at Dry Berry Creek Bridge Replacement

CSJ Number: 0914-05-203

March 2024

Prepared for Texas Department of Transportation

The environmental review, consultation, and other actions required by applicable Federal environmental laws for this project are being, or have been, carried-out by TxDOT pursuant to 23 U.S.C. 327 and a Memorandum of Understanding dated 12-9-2019, and executed by FHWA and TxDOT.

Geologist Certification

County Road (CR) 143 at Dry Berry Creek Bridge Replacement

Prepared for: Texas Department of Transportation
Prepared by: Stantec Consulting, Inc.
Date: 29 March 2024

In accordance with the Texas Board of Professional Geologists rules at 22 Texas Administrative Code, Part 39, Chapter 851, Subchapter C, §851.156, this report is signed and sealed on the title page to assure the user that the work has been performed by or directly supervised by the following professional geoscientists who take full responsibility for this work.

The computer-generated seals appearing on this document were authorized by Brian Cowan, P.G. 11180.

Brian Cowan

Brian D. Cowan, Texas Professional Geoscientist No. 11180
Stantec Consulting Services, Inc., Geoscience Firm No. 50120

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: Brain Davis Cowan, P.G.

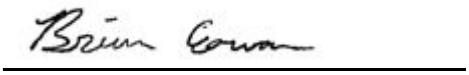
Telephone: 512-632-8409

Fax: _____

Date: 03/29/2024

Representing: Stantec Consulting Services, Inc. (#50120) (Name of Company and TBPG or TBPE registration number)

Signature of Geologist:



Regulated Entity Name: County Road (CR) 143 at Dry Berry Creek Bridge Replacement; CSJ 0914-05-203

Project Information

1. Date(s) Geologic Assessment was performed: 12/12/2023
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)
DnA	C	6.66
KrB	C	>6.66
OkA	B	>6.66

** 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" = 50'
   Site Geologic Map Scale: 1" = 50'
   Site Soils Map Scale (if more than 1 soil type): 1" = 400'

9. Method of collecting positional data:

   ☒ Global Positioning System (GPS) technology.
   ☒ Other method(s). Please describe method of data collection: Via ESRI ArcGIS software for mapped features

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 1 (#) 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.

Attachment A: Geologic Assessment Table

GEOLOGIC ASSESSMENT TABLE				PROJECT NAME:	County Road (CR) 143 at Dry Berry Creek Bridge Replacement														
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	
CR143-01	30.730683	-97.656998	MB	30	Qal	2	2	UNK	NA	NA	NA	NA	NA	5	35	x			x	Hillside

* DATUM: WGS 1984

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:

Brian Cowan

Sheet 1 of 1

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

Attachment B: Stratigraphic Column

Series	Group	Stratigraphic Unit		Outcrops in project area
Comanche	Eagle Ford			
	Washita	Buda Limestone		
		Del Rio Clay		
		Georgetown Formation		
	Fredericksburg	Edwards Limestone		
		Comanche Peak Limestone		
		Walnut Formation		
	Trinity	Paluxy Formation		
		Glen Rose	Upper Member	
			Lower Member	
		Travis Peak	Hensel Sand Member	
			Cow Creek Limestone Member	
			Hammett Shale Member	
			Sligo Member	
			Hosston Member	

Adapted from Jones 2023

Table of Contents

Attachment C

Introduction

The proposed project would replace the CR 143 culverts with a bridge and reconstruct the approaches over Dry Berry Creek. The project would require approximately 3.53 acres of additional right-of-way (ROW). The project limits extend from 3,200 feet east of CR 234 to 4,814 feet west of the IH 35 service road. The project is located with the TCEQ Edwards Aquifer Recharge Zone (EARZ). TxDOT conducted a Geologic Assessment (GA) on the project.

Methodology

Before fieldwork, pertinent data was reviewed, including local and regional geology (Blome et al., 2005), soils (National Resource Conservation Service [NRCS] 2023), flood insurance rate maps (Federal Emergency Management Agency [FEMA] 2012), and well records (Texas Water Development Board [TWDB] 2023).

Pedestrian surveys were conducted on 12 December 2023 by walking in transects spaced no more than 25 feet apart while visually surveying for indications of karst features or other features reported in a GA. A reconnaissance investigation was performed on all potential features by Brian D. Cowan, a licensed Professional Geoscientist (TX: 11180) to evaluate the subsurface extent and infiltration potential. The sensitivity of each feature was ranked using the point system as defined in TCEQ 2004. All work was conducted and supervised by Brian D. Cowan, a licensed Professional Geoscientist in the State of Texas (#11180).

Results

Regional Hydrostratigraphy

The project area is in the Northern Segment of the Edwards Aquifer (NEA), which consists of the Comanche Peak Limestone, Edwards Limestone, and Georgetown Formation, collectively referred to as the Edwards and associated limestones. The NEA overlies the Walnut and Glen Rose formations and is overlain by the confining Del Rio Clay. The Walnut Formation is the oldest unit of the Fredericksburg Group and is underlain by the Glen Rose Formation. In most areas, the Walnut formation acts as a confining unit for the bottom of the NEA, but in some locations, it is composed of permeable shell beds (Kirkland et al. 1996). These beds are part of the NEA in the areas where they occur. The Walnut Formation is comprised of the Bull Creek, Bee Cave, and Cedar Park members. These units are nodular grainstones, except for the Bee Cave Member, which has a significant clay content (Kirkland et al. 1996). The Comanche Peak Formation is the next youngest unit in the Fredericksburg Group and is made up of chalky fossiliferous limestone interbedded with thin shale beds (USGS 2015). The Edwards Formation is the youngest unit in the Fredericksburg group and is comprised of massive, vuggy limestone. The Georgetown Formation represents the stratigraphic top of the units included in the NEA. The Georgetown Formation is a fossiliferous micritic limestone (Wilbert 1966). These units are overlain by the Del Rio Clay, which acts as an aquitard

(Kirkland et al. 1996). The following units are mapped within the project area: Georgetown Formation, Quaternary alluvium, and Quaternary undivided alluvium. A stratigraphic column showing the regional geology is included as Attachment B.

Narrative Description of Project Area Geology

The project area is underlain by alluvial units and the Georgetown Limestone (Collins 2005; Attachment D, Figure 2). The project area is mostly covered by paved roadway and the unpaved portions consisted of thick sediments that are Quaternary in age. Massive nodular limestone bedrock outcrops occurred within the bed of Dry Berry Creek and in a drainage ditch to the east of Dry Berry Creek. The rest of the project area appears to be underlain by thick alluvium and limestone residuum.

The following descriptions are summarized from Collins 2005 and Blome et al. 2005:

- Georgetown Formation: massive, nodular limestone, reddish-brown and gray to light-tan, marly with a biomicritic texture. It is characterized by considerable jointing, which contributes to its hydrological properties, particularly in terms of groundwater flow and aquifer recharge. The Georgetown Formation is often hydrologically connected to the underlying Edwards Limestone.

- Quaternary alluvium: alluvium, gravel, sand, silt, and clay along streams and rivers (Collins, 2005).

- Quaternary undivided alluvium: sand, silt, clay, and some gravel. Includes terrace alluvium, local drainageway alluvium, and slope-wash alluvium (Collins, 2005).

Soils

A review of the NRCS United States Department of Agriculture (USDA) Web Soil Survey (NRCS 2024) indicated that three soil types occur within the project area (Attachment D, Figure 3).

Attachment C

Map Unit Symbol	Map Unit Name	Acres in Project Area	Percent of Project Area	Thickness (ft)	Hydrologic Group	Description
DnA	Denton silty clay, 0 to 1 percent slopes	1.2	20.8	6.66	C	Deep, well drained, moderately low to moderately high saturated conductivity, formed in clayey slope alluvium and/or residuum over calcareous residuum weathered from limestone
KrB	Krum silty clay, 1 to 3 percent slopes	2.2	39.1	>6.66	C	Very deep, well drained, high saturated conductivity, clayey alluvium of Pleistocene age derived from mixed sources
OkA	Oakalla silty clay loam, 0 to 2 percent slopes, frequently flooded	2.2	40.1	>6.66	B	Very deep, well drained, moderately high to high saturated conductivity, loamy alluvium derived from limestone

FEMA Flood Zones

The project area is shown on the FEMA flood map 48491C0285F effective 19 December 2019. Significant portions of the project area are within Zone A, the 100-Yr floodplain, which is the area where there is a one percent or greater annual chance of flooding. Parts of the project area are outside the FEMA flood zones (Attachment D, Figure 2).

Water Well Records

According to the Texas Water Development Board (TWDB) Groundwater Database, Brackish

Resources Aquifer Characterization System Database, and Submitted Drillers Reports Database, no wells occur within the project area. A groundwater monitoring well was observed on the east side of Dry Berry Creek within the south CR-143 ROW, but it was not listed in any of the searched databases. Well depth, screened interval, completion date, and owner information are unknown.

Feature Descriptions

One feature was identified within the project area. The feature is described in the Geologic Assessment Table (Attachment A) and below. The location of the feature is mapped on the Site Geologic Map (Attachment D, Figure 2). Feature photographs can be found in Appendix A.

Feature CR143-01 Manmade Feature in Bedrock -97.656998°, 30.730683°
This feature is a monitoring well located on the east side of Dry Berry Creek within the south CR-143 ROW, but it was not listed in any of the searched databases. Well depth, screened interval, completion date, and owner information are unknown. The well has a cap and concrete pad and there is no indication of rapid infiltration of water into the subsurface near this feature, it is not considered sensitive according to the Edwards Aquifer Rules (30 TAC §213.5(b)(3)).

Discussion and Recommendations

The potential for rapid recharge to the Edwards Aquifer within much of the project area is low due to the lack of features with downward trending voids that may act as a conduit for flow into the Edwards Aquifer. The feature identified was a monitoring well that appeared to be properly constructed with a cap and concrete pad and no indications of rapid infiltration of water into the subsurface near the feature. The feature was not listed in any TWDB database that was reviewed for this report. It is recommended that the owner of the well be identified so that more information on its construction and reason for groundwater monitoring can be ascertained. This well should be properly abandoned per applicable standards prior to roadway construction. It is important to note that visual observations alone cannot identify all karst features as they are often obscured by sediment, pavement, or dense vegetation.

Care should be taken during subsurface excavation within the EARZ as there is a potential to intersect a karst feature with no previous surface expression. A qualified Professional Geoscientist should inspect excavations for karst features. If a void is encountered during excavation within the EARZ, all work around it should cease immediately, and a qualified Professional Geoscientist should inspect the void and prepare a TCEQ Void Discovery Notification Form, if applicable.

Attachment C

References

Blome, C.D., Faith, J.R., Pedraza, D.E., Ozuna, G.B., Cole, J.C., Clark, A.K., Small, T.A., and Morris, R.R., 2005, Geologic map of the Edwards aquifer recharge zone, south-central Texas, U.S. Geological Survey, Scientific Investigations Map SIM-2873, 1:200,000.

Collins, E.W., 2005, Geologic map of the west half of the Taylor, Texas, 30 X 60 minute quadrangle: central Texas urban corridor, encompassing Round Rock, Georgetown, Salado, Briggs, Liberty Hill, and Leander, University of Texas at Austin, Bureau of Economic Geology, Miscellaneous Map 43, 1:100,000. Online at https://ngmdb.usgs.gov/Prodesc/proddesc_70045.htm

Federal Emergency Management Agency (FEMA). 2012. National Flood Insurance Program, Flood Insurance Rate Map (FIRM) panel: 48209C0370F - Effective 09/02/2005. Available Online at https://msc.fema.gov/portal/home. Accessed on November 29, 2023.

C. V. Proctor, Jr., T. E. Brown, J. H. McGowen, and N. B. Waechter, 1974, Geologic Atlas of Texas, Austin Sheet, Bureau of Economic Geology.

Jones, I.C., 2023, Conceptual Model: Northern Segment of the Edwards (Balcones Fault Zone) and Associated Trinity Aquifers of Texas, Texas Water Development Board Publication. February 6, 2023.

Texas Commission on Environmental Quality (TCEQ). 2004. Instructions to Geologists for Geologic Assessments on the Edwards Aquifer Recharge/Transition Zone. TCEQ RG-0508, 34 p., revised October 1, 2004.

Texas Water Development Board (TWDB). 2023. Groundwater Data Viewer. Available online at https://www3.twdb.texas.gov/apps/waterdatainteractive/groundwaterdataviewer. Accessed on November 29, 2023.

United States Department of Agriculture (USDA), Natural Resources Conservation Service, Soil Survey. 2019. Web Soil Survey. Available online at http://websoilsurvey.nrcs.usda.gov/. Accessed November 29, 2023.

Attachment D: Project Location, Site Geology & Site Soils Maps

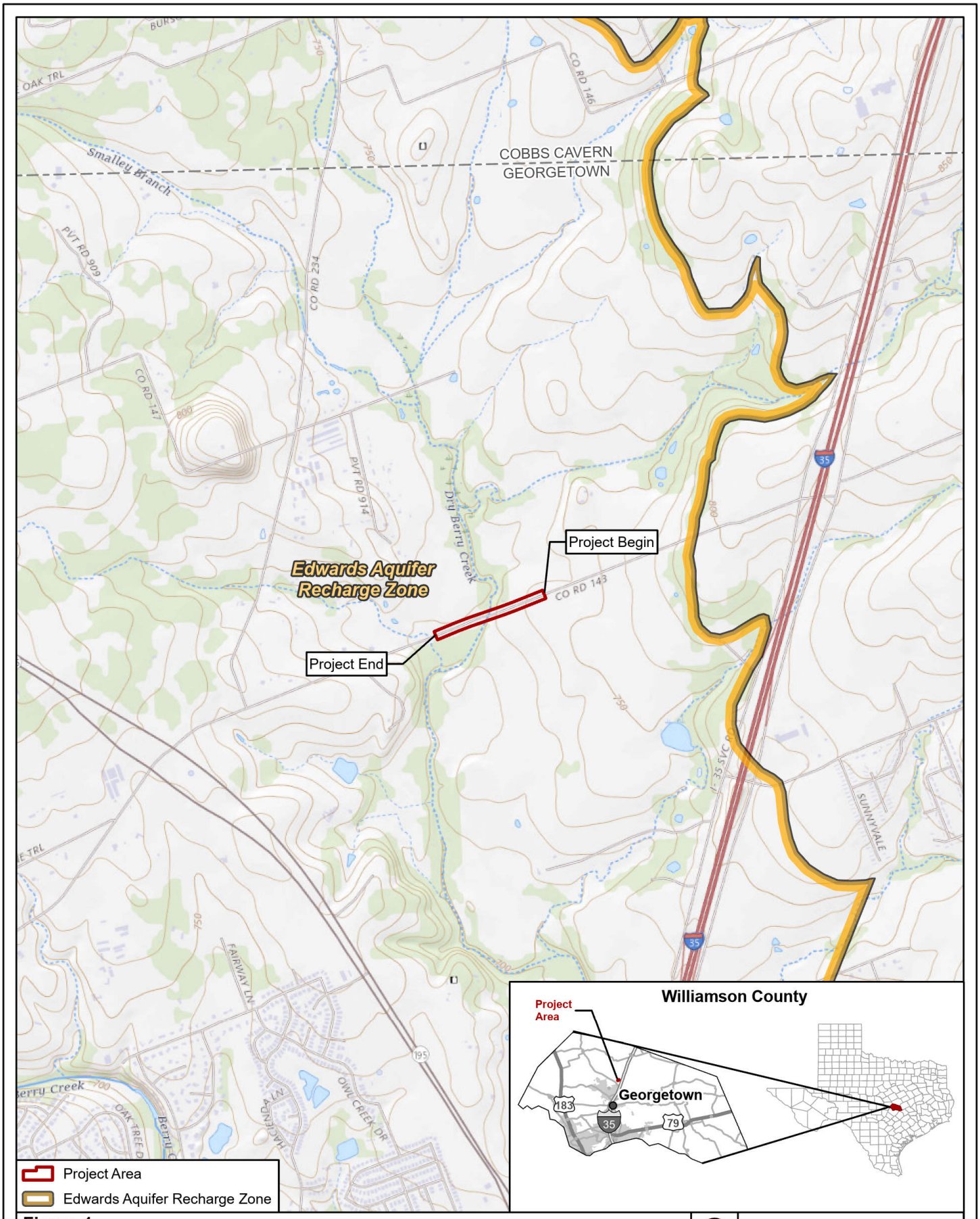


Figure 1.
Site Vicinity Map

CR 143 at Dry Berry Creek

Data Source: TCEQ (2005)
Topographic Source: USGS (2024)
USGS 7.5' Quadrangles: Cobbs Cavern, Georgetown

CSJ: 0914-05-203

0 2,000 Feet
0 600 Meters

1 in = 2,000 feet
Scale: 1:24,000
Date: 3/29/2024

Path: U:\2353\235300512\03_data\gis_cad\gis\100004\cr143_geologic_assessment.aprx - cr143_geologic_assessment_figure_1_site_vicinity_20240328_hf

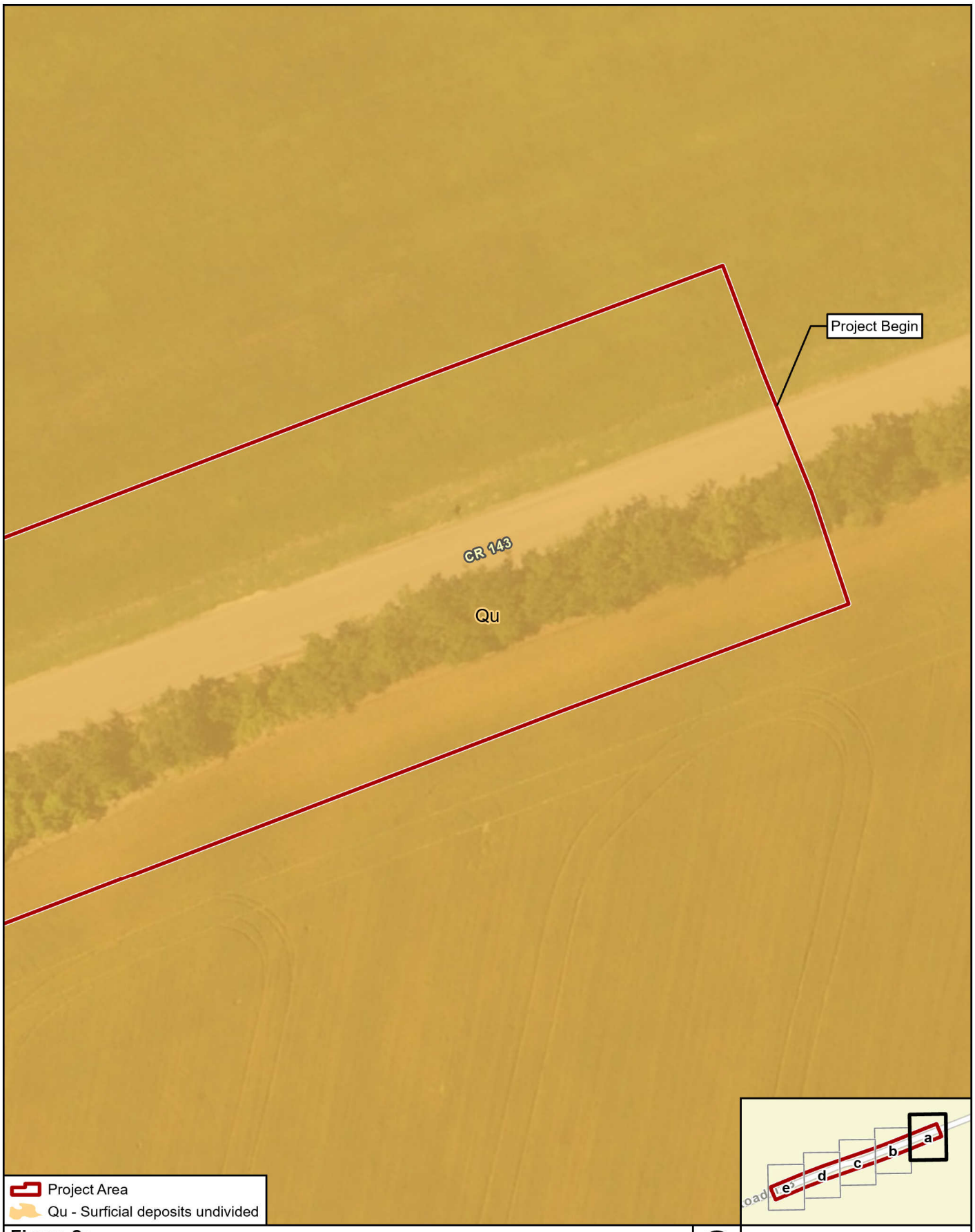


Figure 2a.
Site Geologic Map

CR 143 at Dry Berry Creek

Data Sources: Stantec (2023),
Geologic Database of Texas (2007)/
Geologic Atlas of Texas Austin Sheet (1981)
Aerial Source: Hexagon (2023)

CSJ: 0914-05-203

0 50 Feet
0 15 Meters

1 in = 50 feet
Scale: 1:600
Date: 3/29/2024

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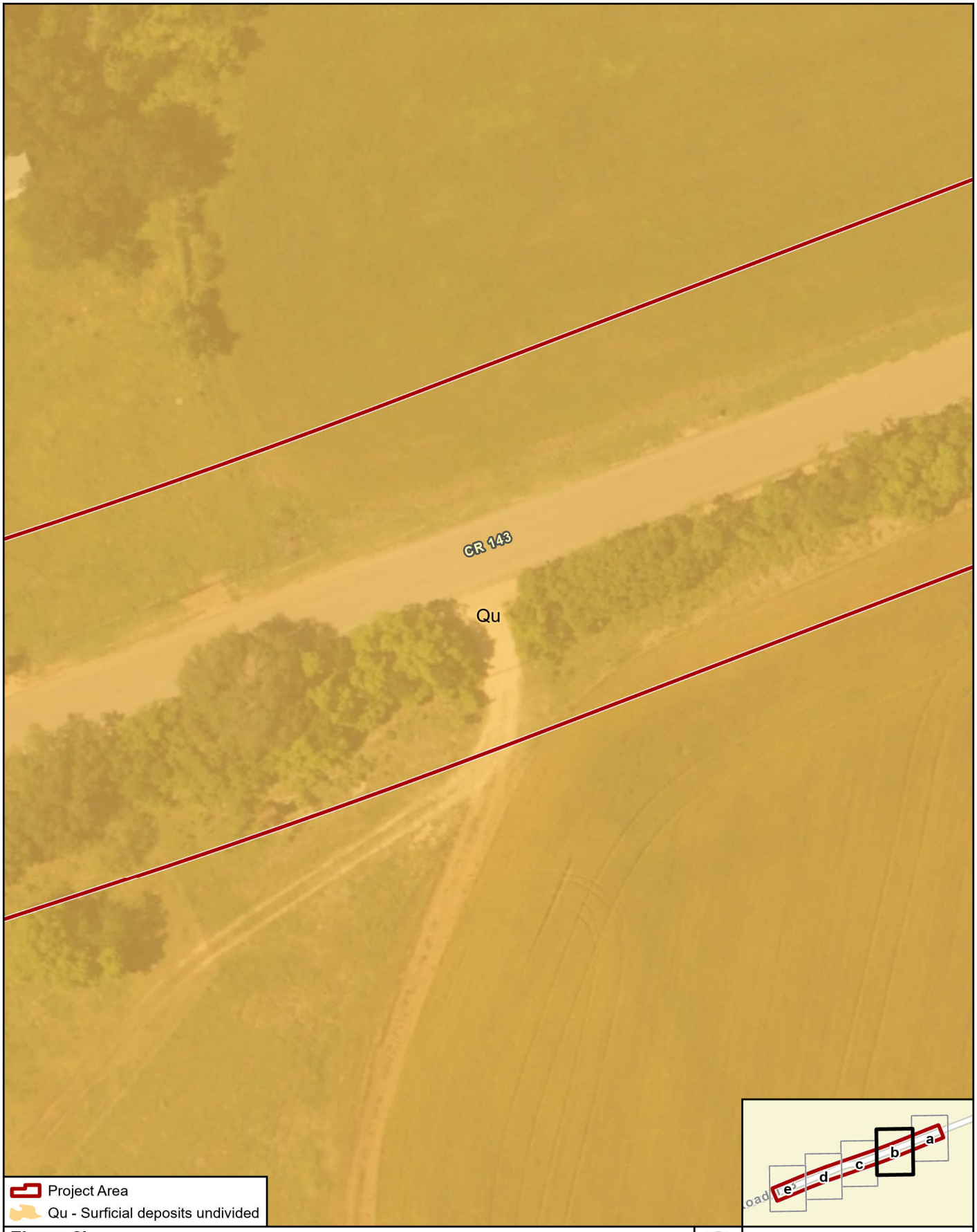


Figure 2b.
Site Geologic Map

CR 143 at Dry Berry Creek

Data Sources: Stantec (2023),
Geologic Database of Texas (2007)/
Geologic Atlas of Texas Austin Sheet (1981)
Aerial Source: Hexagon (2023)

CSJ: 0914-05-203

0 50 Feet
0 15 Meters

1 in = 50 feet
Scale: 1:600
Date: 3/29/2024

U:\2353\235300512\03_data\gis_cad\gis\100004\cr143_geologic_assessment.aprx

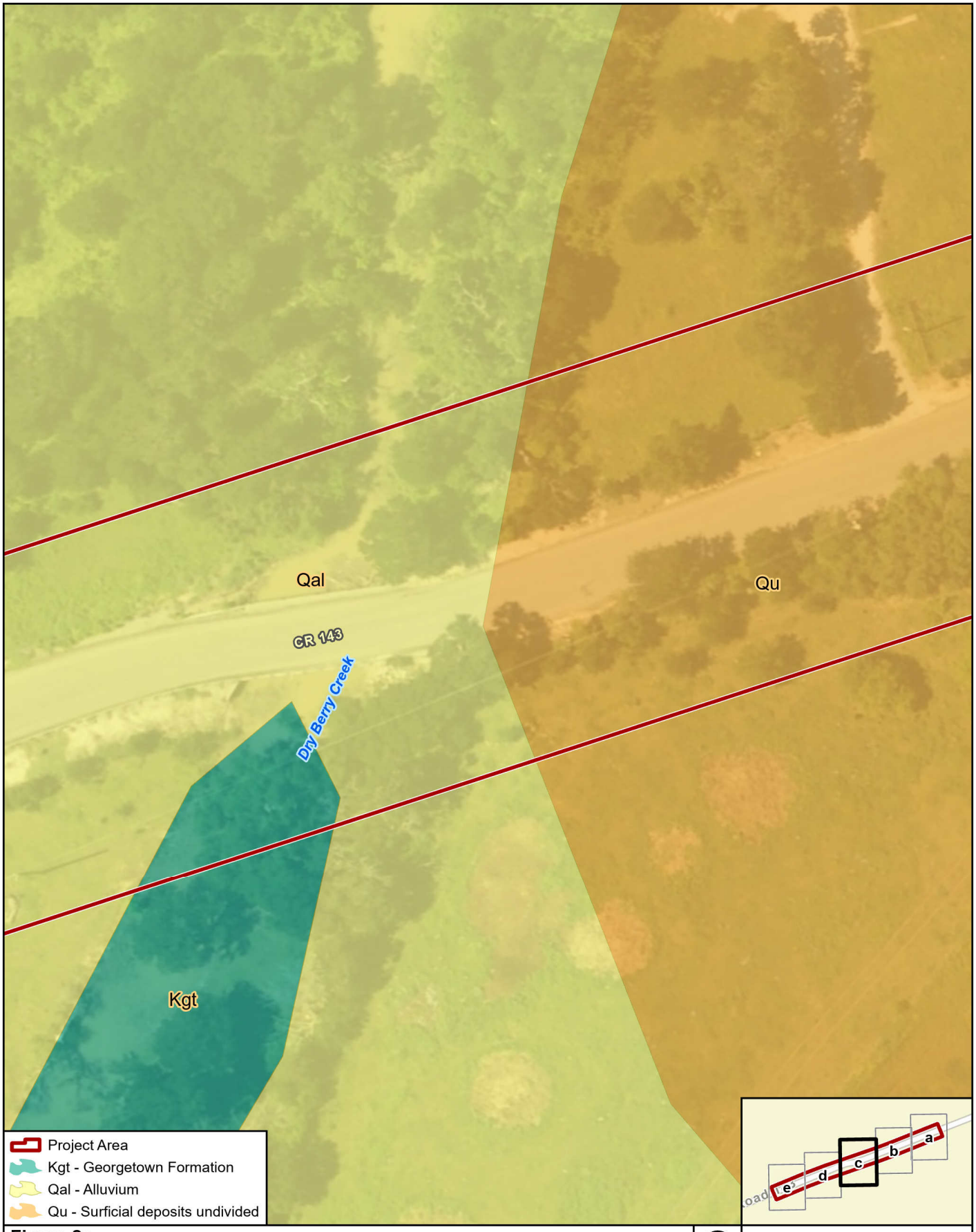


Figure 2c.
Site Geologic Map

CR 143 at Dry Berry Creek

Data Sources: Stantec (2023),
Geologic Database of Texas (2007)/
Geologic Atlas of Texas Austin Sheet (1981)
Aerial Source: Hexagon (2023)

CSJ: 0914-05-203

0 50 Feet
0 15 Meters

1 in = 50 feet
Scale: 1:600
Date: 3/29/2024

U:\2353\235300512\03_data\gis_cad\gis\100004\cr143_geologic_assessment.aprx

Figure 2d.
Site Geologic Map

CR 143 at Dry Berry Creek

Data Sources: Stantec (2023),
Geologic Database of Texas (2007)/
Geologic Atlas of Texas Austin Sheet (1981)
Aerial Source: Hexagon (2023)

CSJ: 0914-05-203

0 50 Feet
0 15 Meters

1 in = 50 feet
Scale: 1:600
Date: 3/29/2024

U:\2353\235300512\03_data\gis_cad\gis\100004\cr143_geologic_assessment.aprx

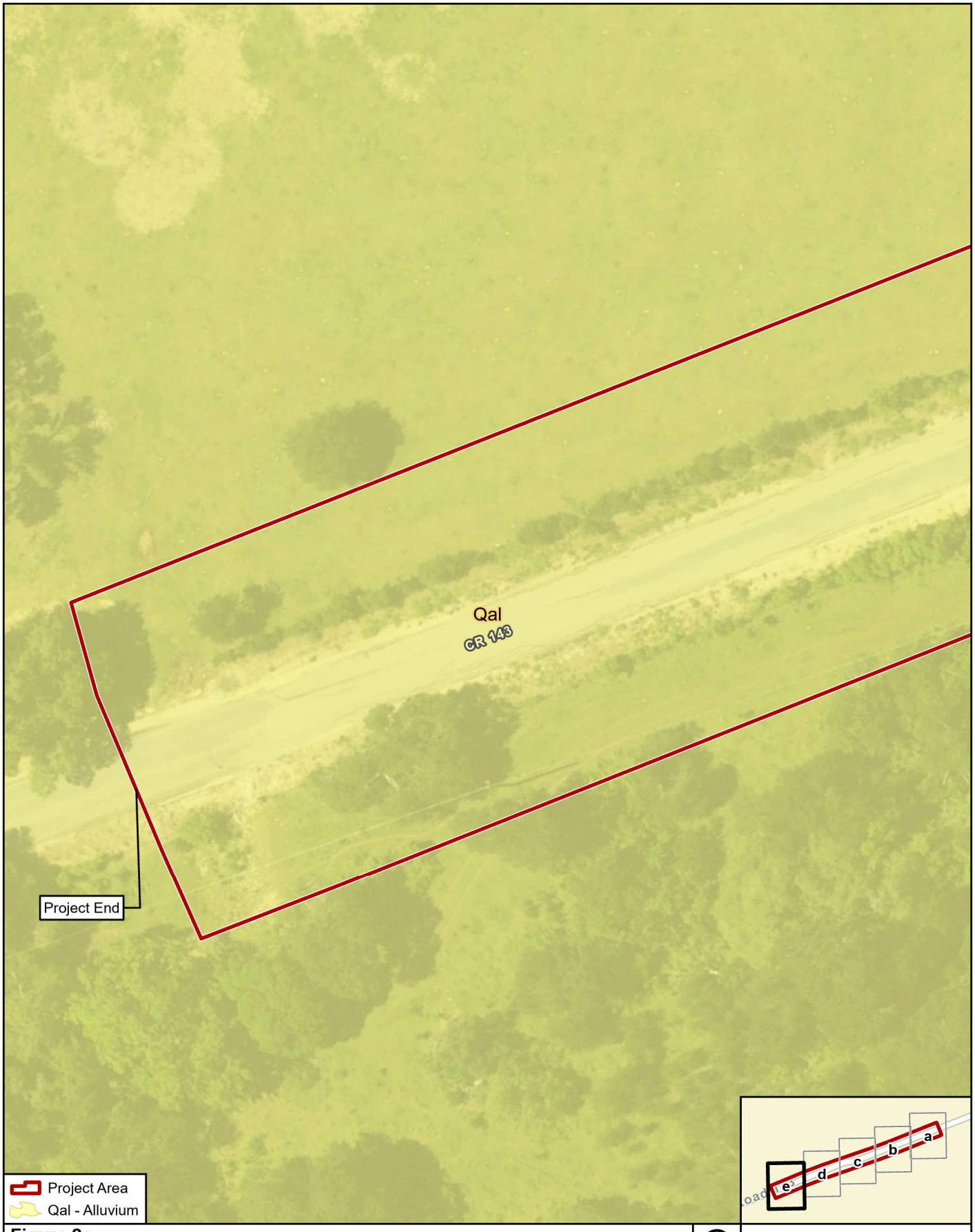


Figure 2e.
Site Geologic Map

CR 143 at Dry Berry Creek

Data Sources: Stantec (2023),
Geologic Database of Texas (2007)/
Geologic Atlas of Texas Austin Sheet (1981)
Aerial Source: Hexagon (2023)

CSJ: 0914-05-203

0 50 Feet
0 15 Meters

1 in = 50 feet
Scale: 1:600
Date: 3/29/2024

U:\2353\235300512\03_data\gis_cad\gis\100004\cr143_geologic_assessment.aprx

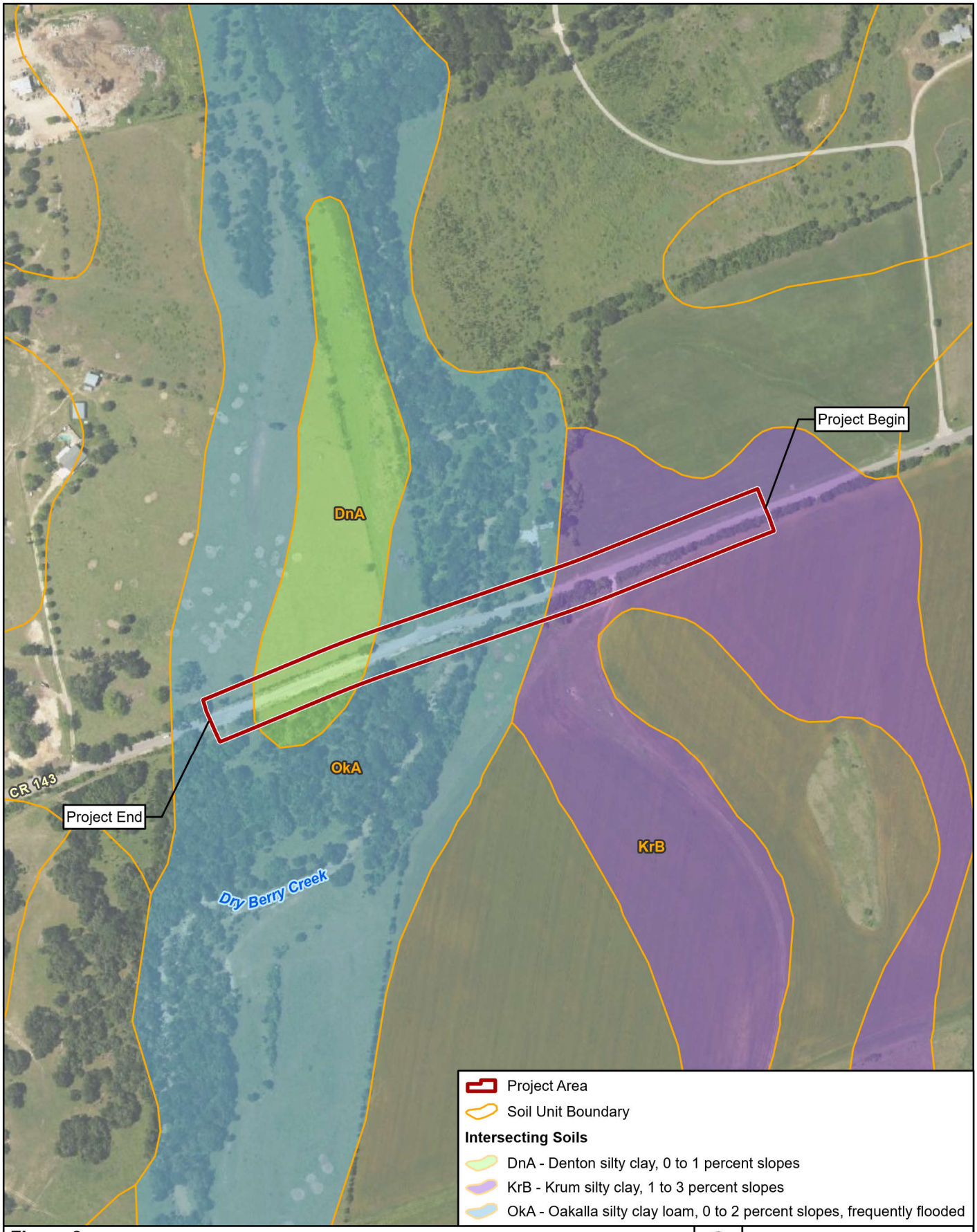


Figure 3.
Site Soils Map

CR 143 at Dry Berry Creek

Data Source: NRCS (2023)
Aerial Source: Hexagon (2023)

CSJ: 0914-05-203

0 400 Feet
0 100 Meters

1 in = 400 feet
Scale: 1:4,800
Date: 3/28/2024

Path: U:\2353\235300512\03_data\gis_cad\gis\100004\cr143_geologic_assessment.aprx - cr143_geologic_assessment_figure_3_site_soils_20240328_hf

Appendix A: Field Photographs

Photo 01: View of project area from eastern project terminus. Facing west.

Photo 02: View of project eastern terminus. Facing east.

Photo 03: Adjacent properties are used as rural residences and agricultural with some abandoned buildings. Facing north.

Photo 04: Downstream view of Dry Berry Creek. Facing south.

Photo 05: Upstream view of Dry Berry Creek. Facing north.

Photo 06: A groundwater monitoring well is located within the project right of way southwest of the culvert. Facing west.

Photo 07: View of western project terminus from project area. Facing west.

Photo 08: View of project area from western project terminus. Facing east.

Photo 09: Utilities are present within proposed ROW. Facing north.

Photo 10: Limestone bedrock, consistent with the Georgetown Formation in creek on north side of the culvert. Facing west.

Photo 11: View underneath culvert facing upstream. Facing north.

Photo 12: View of bedrock outcrop in drainage ditch southeast of bridge. The only bedrock out crops are within the creek bed and in this ditch. Consistent with the Georgetown Formation. Facing east.

SECTION 4

TEMPORARY STORMWATER SECTION (TCEQ-0602)

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.

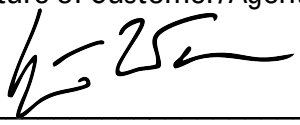
Signature

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: Elizabeth W. Wagner, P.E.

Date: 2/4/2025

Signature of Customer/Agent:



Regulated Entity Name: Kimley-Horn and Associates, Inc.

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: Dry Berry Creek

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.

ATTACHMENT A

SPILL RESPONSE ACTION

If there is an accidental spill on site, the contractor shall respond with appropriate action. The contractor will be required to contact the owner and in turn the owner will contact the TCEQ in the event of a spill on site. In addition to the following guidance, reference the latest version of TCEQ's Technical Guidance Manual (TGM) RG-348 Section 1.4.16. For guidance on reportable quantities of spills reference https://www.tceq.texas.gov/response/spills/spill_rq.html

CLEANUP

- Clean up leaks and spills immediately.
- 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.
- Never hose down or bury dry material spills. Clean up as much of the material as possible and dispose of properly.

MINOR SPILLS

- 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.
- Use absorbent materials on small spills rather than hosing down or burying the spill.
- Absorbent materials should be promptly removed and disposed of properly.
- Follow the practice below for a minor spill:
    - Contain the spread of the spill.
    - Recover spilled materials.
    - 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. This response may require the cessation of all other activities.

Spills should be cleaned up immediately:

- Contain spread of the spill.
- Notify the project foreman immediately.
- 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.
- If the spill occurs in dirt areas, immediately contain the spill by constructing an earthen dike. Dig up and properly dispose of contaminated soil.
- 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:

- 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.
- 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.
- Notification should first be made by telephone and followed up with a written report.
- 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.
- Other agencies which may need to be consulted include, but are not limited to, the City Police Department, County Sheriff Office, Fire Departments, etc.

ATTACHMENT B

POTENTIAL SOURCES OF CONTAMINATION

The potential sources of storm water pollution due to the roadway improvements include displaced soil, wastewater, dust, and miscellaneous construction waste. The potential pollution sources are listed below.

There is potential for soil to be displaced from the construction site from activities such as grading, clearing/grubbing, excavating, and filling. Other potential sources of stormwater pollution include wastewater from portable bathroom, litter generated during the construction process, additional dust and soils tracked onto roads by construction vehicles, miscellaneous construction products and waste, and imported soils.

There are also hazardous construction materials including fuel chemicals such as automotive fluids and lubricants, use of asphaltic products, and petroleum products from the operation of equipment on the site, all of which are potential sources of contamination. The clean up and containment of any fuels, hydraulic fluids, hydrocarbons, or other hazardous substances released on site will be the responsibility of the contractor. In the case that a spill occurs on the site the contractor must respond immediately following *Attachment A – Spill Response Actions*.

The primary storm water containment expected to be generated during the construction project is the entrained soils (soil particles) which will affect the turbidity of the runoff. From this project, disturbed soils will result from:

- Clearing, grubbing, and grading within the right-of-way
- Roadway embankment grading
- Driveway embankment grading
- Ditch excavation and embankment grading
- Roadway construction
- Placement and removal of temporary erosion and sediment controls
- Placement of topsoil and seeding

Increased sediment loading in stormwater can be attributed to a) direct impingement of rain onto disturbed soil areas, sand, gravel and rock areas where rains dislodge or entrain particles; b) erosion of disturbed soil areas, and c) the transfer of soils and particulate matter via equipment

or vehicle tires onto non-disturbed areas. All stormwater will be treated by BMPs such as floating turbidity barrier and rock filter dams before leaving the project site and discharging to receiving waters. BMPs are placed at the project perimeter and key outfall locations as shown in the Stormwater Pollution Prevention Plan (SW3P).

ATTACHMENT C

SEQUENCE OF MAJOR ACTIVITIES

The general order of soil disturbing activities is detailed below. The detailed construction sequence is included in Edwards Aquifer Protection Roadway Application, *Attachment G – Construction Plans.*

Temporary erosion and sediment control measures include floating turbidity barrier and rock filter dams which will be placed before commencing any construction activities and will remain in place during all phases of construction. Temporary controls will be removed once sufficient vegetation is established.

PHASE 1

Close road, remove existing pavement and bridge and construct proposed pavement and bridge, and reopen road upon completion.

1. Place work zone approach signage.
2. Place detour signage and barricades.
3. Install temporary erosion control measures and BMPs. BMPs to be inspected and maintained per TCEQ and WPAP requirements.
4. Clearing, grubbing, and grading at locations of proposed pavement.
5. Remove existing County Road 143 bridge and roadway as shown in the plans.
6. Construct proposed County Road 143 bridge and roadway as shown in the plans.
7. Placement of topsoil for final planting and seeding.
8. Reopen road upon completion of construction.

ATTACHMENT D

TEMPORARY BEST MANAGEMENT PRACTICES AND MEASURES

Temporary BMPs such as floating turbidity barrier and rock filter dams will be installed to prevent onsite sediment and debris from entering surface streams during construction. Temporary BMPs will be placed before commencing any construction activities and will remain in place during all phases of construction.

Floating turbidity barrier will be installed at the downstream end of the project as a perimeter control to filter onsite stormwater runoff before leaving the project site. Type 4 rock filter dams will be placed at ditch outfalls to intercept sediment from overland and/or concentrated flow upstream of culvert locations. Type 2 rock filter dams will be placed at ultimate outfall locations to intercept sediment from concentrated flow leaving the project site to protect receiving streams.

All disturbed areas shall be covered with temporary seeding as a means of dust control and to reduce wind erosion. After construction, the project limits will be revegetated to prevent pollution of surface streams. Temporary BMPs will be removed once sufficient vegetation is established. Temporary BMP placement and quantities, and additional measures are provided in the SW3P.

ATTACHMENT F

STRUCTUAL PRACTICES

Temporary structural practices used to limit transport of pollutants include floating turbidity barrier and Type 2 and Type 4 rock filter dams. These temporary BMPs are proposed to be placed along the perimeter of the channel and at key outfall locations.

The TCEQ guidelines included in Section 1.2 through Section 1.4 of RG-348 must be followed for installation and maintenance of temporary structural erosion and sediment control BMPs. Additional details on temporary structural practices can be found in the SW3P.

ATTACHMENT G

DRAINAGE AREA MAPS

Please reference attached drainage area maps.

N

0' 100' 200'

SCALE

LEGEND

- DA-X / X.XX — AREA ID / AREA (ACRES)
- DRAINAGE AREA
- DIRECTION OF FLOW

NOTES:

1. PEAK DISCHARGE FOR DITCHES DETERMINED BY RATIONAL METHOD. ALL DITCHES DESIGNED TO THE 5 YEAR STORM USING ATLAS-14.

Rational Method Discharge Calculations

Drainage Area Name	Area (AC)	Runoff Coefficient	Rainfall Intensity (in/hr)	Peak Runoff (CFS)
DA-1	0.20	0.345	5.81	0.40
DA-2	0.51	0.345	5.81	1.02
DA-3	0.23	0.345	5.81	0.46
DA-4	0.38	0.345	5.81	0.76
DA-5	0.75	0.41	5.81	1.79
DA-6	0.87	0.41	5.81	2.07

3/17/2025

STATE OF TEXAS
ELIZABETH W. WAGNER
149380
LICENSED
PROFESSIONAL ENGINEER

Kimley»Horn F-928

Texas Department of Transportation

CR 143 AT DRY BERRY CREEK

INTERNAL DRAINAGE AREA MAP

SHEET 1 OF 1

FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6		CR 143

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	AUS	WILLIAMSON	64
CONT.	SECT.	JOB	
0914	05	203, ETC.	

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N

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SCALE

LEGEND

- DA-X / X.XX — AREA ID / AREA (ACRES)
- DRAINAGE AREA
- DIRECTION OF FLOW

NOTES:

1. PEAK DISCHARGE FOR DITCHES DETERMINED BY RATIONAL METHOD. ALL DITCHES DESIGNED TO THE 5 YEAR STORM USING ATLAS-14.

Rational Method Discharge Calculations

Drainage Area Name	Area (AC)	Runoff Coefficient	Rainfall Intensity (in/hr)	Peak Runoff (CFS)
DA-2	0.51	0.345	5.81	1.02
DA-3	0.25	0.345	5.81	0.50
DA-4	0.38	0.345	5.81	0.76
DA-5	0.75	0.41	5.81	1.79
DA-6	0.87	0.41	5.81	2.07

2/3/2025

STATE OF TEXAS
ELIZABETH W. WAGNER
149380
LICENSED
PROFESSIONAL ENGINEER

Kimley»Horn F-928

Texas Department of Transportation

CR 143 AT DRY BERRY CREEK

INTERNAL DRAINAGE AREA MAP

SHEET 1 OF 1

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	BR2020(732)	CR 143

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	AUS	WILLIAMSON	64
CONT.	SECT.	JOB	
0914	05	203, ETC.	

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ATTACHMENT I

INSPECTION AND MAINTENANCE FOR BMPS

All erosion and sediment control measures will be maintained in effective operating condition by following the project management procedures. The general maintenance and inspection requirements are provided in the SW3P. The maintenance plan for temporary BMPs meets the maintenance guidance provided in RG-348.

The contractor shall install and maintain the integrity of temporary erosion and sediment control devices to accumulate silt and debris until soil disturbing activities are complete, permanent erosion control features are in place, and sufficient vegetation has been established in accordance with contract documents including standard TxDOT Specification 506.

Maintenance, repairs, or retrofits will adhere to the project standards and details for the BMP. Damaged portions of BMPs shall be removed and replaced as needed to adhere to the contract documents. BMPs that cannot be adequately repaired or retrofitted to meet project requirements shall be removed and replaced entirely in accordance with the contract documents.

The maintenance documentation procedures and recordkeeping practices to be followed are summarized in the TCEQ Edwards Aquifer General Construction Notes, which are provided in the Roadway Application included as Attachment G.

ATTACHMENT J

SCHEDULE OF INTERIM AND PERMANENT SOIL STABILIZATION PRACTICES

The general order of soil disturbing construction activities is detailed below. The detailed construction sequence is included in the Traffic Control Plans in *Attachment G – Construction Plans.* Soil stabilization practices are **bold.**

PHASE 1

Close road, remove existing pavement and bridge and construct proposed pavement and bridge, and reopen road upon completion.

1. **Install temporary erosion control measures and BMPs including floating turbidity barrier and rock filter dams.**
2. Clearing, grubbing, and grading at locations of proposed pavement.
3. Construct proposed County Road 143 bridge and roadway as shown in the plans.
4. **Placement of topsoil for final planting and seeding.**

Where construction activity temporarily ceases for more than 21 days, these areas will be stabilized by the contractor with temporary seeding within 14 days of the last disturbance.

Records will be kept at the site to document dated when:

- **Major grading activities occur**
- **Construction activities temporarily cease**
- **Construction activities permanently cease; and**
- **Stabilization measures are initiated**

SECTION 5

ADDITIONAL FORMS

Agent Authorization Form
For Required Signature
Edwards Aquifer Protection Program
Relating to 30 TAC Chapter 213
Effective June 1, 1999

I Lorena Roque Martinez, P.G.,
Print Name

Environmental Project Planner,
Title - Owner/President/Other

of Texas Department of Transportation- Austin District,
Corporation/Partnership/Entity Name

have authorized Elizabeth W. Wagner, P.E.
Print Name of Agent/Engineer

of Kimley-Horn and Associates, 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.

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:

Applicant's Signature

2/3/2025
Date

THE STATE OF _____ §

County of _____ §

BEFORE ME, the undersigned authority, on this day personally appeared _____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 ____ day of _____,_____.

_____
NOTARY PUBLIC

_____
Typed or Printed Name of Notary

MY COMMISSION EXPIRES: _____

2/3/2025

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)*

CN 600803456

Follow this link to search for CN or RN numbers in Central Registry**

3. Regulated Entity Reference Number *(if issued)*

RN

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)*

Texas Department of Transportation

If new Customer, enter previous Customer below:

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 ☐ Other:
☐ Occupational Licensee ☐ Responsible Party ☐ VCP/BSA Applicant

15. Mailing Address:

John C. Peters, P.E. Texas Department of Transportation - Georgetown Area Office
2727 S. Austin Ave

City	Georgetown	State	TX	ZIP	78626	ZIP + 4	

16. Country Mailing Information *(if outside USA)*

17. E-Mail Address *(if applicable)*

john.peters@txdot.gov

18. Telephone Number	19. Extension or Code	20. Fax Number *(if applicable)*
( ) -		( ) -

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.)*

County Road (CR) 143 at Dry Berry Creek Bridge Replacement; CSJ 0914-05-203

23. Street Address of the Regulated Entity: *(No PO Boxes)*	N/A							
	City		State		ZIP		ZIP + 4	
24. County	Williamson							

If no Street Address is provided, fields 25-28 are required.

25. Description to Physical Location:	CR 143 at Dry Berry Creek		
26. Nearest City		State	Nearest ZIP Code
Georgetown		TX	78626

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:			28. Longitude (W) In Decimal:		
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds
30	43	51.12	97	39	22.94

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)
1611	N/A	237310	N/A

33. What is the Primary Business of this entity? *(Do not repeat the SIC or NAICS description.)*

Roadway

34. Mailing Address:	John C. Peters, P.E. Texas Department of Transportation - Georgetown Area Office							
	2727 S. Austin Ave							
	City	Georgetown	State	TX	ZIP	78626	ZIP + 4	
35. E-Mail Address:	john.peters@txdot.gov							

36. Telephone Number	37. Extension or Code	38. Fax Number *(if applicable)*
(512) 930-6002		( ) -

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:

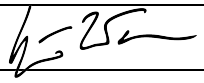
SECTION IV: Preparer Information

40. Name:	Elizabeth Wagner, P.E.	41. Title:	Project Manager

42. Telephone Number	43. Ext./Code	44. Fax Number	45. E-Mail Address
(737) 400-9846		( ) -	elizabeth.wagner@kimley-horn.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:	Kimley-Horn and Associates, Inc.	Job Title:	Civil Engineer	
Name *(In Print):*	Elizabeth W. Wagner, P.E.		Phone:	(737) 400- 9846
Signature:			Date:	2/3/2025