

**CHUY'S TEX-MEX BAR W EAST COMMERCIAL**  
**WATER POLLUTION ABATEMENT PLAN**

PREPARED FOR:

**BAR W EAST COMMERCIAL, LTD.**  
**c/o Mr. Robbie Keithley**  
901 S. Mopac Expressway, Suite 550  
Austin, Texas 78746

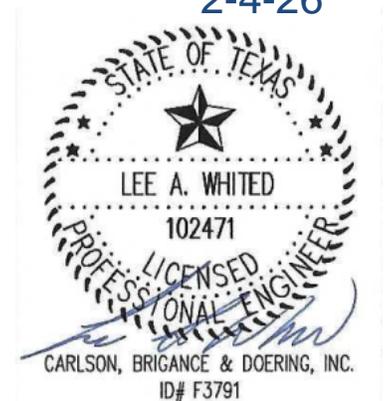
2-4-26

PREPARED BY:

**CARLSON, BRIGANCE & DOERING, INC.**  
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Austin, Texas 78749  
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**Carlson, Brigance & Doering, Inc.**  
Civil Engineering ♦ Surveying



CBD # 5375  
January 2026

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**EDWARDS AQUIFER APPLICATION COVER PAGE**

# Texas Commission on Environmental Quality

## Edwards Aquifer Application Cover Page

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### 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.

<b>1. Regulated Entity Name:</b> Chuy’s Tex-Mex Bar W East Commercial				<b>2. Regulated Entity No.:</b> 112154331					
<b>3. Customer Name:</b> Bar W East Commercial, LTD.				<b>4. Customer No.:</b> 606357127					
<b>5. Project Type:</b> (Please circle/check one)	<input checked="" type="radio"/> New	Modification			Extension	Exception			
<b>6. Plan Type:</b> (Please circle/check one)	<input checked="" type="radio"/> WPAP	<input type="checkbox"/> CZP	<input type="checkbox"/> SCS	<input type="checkbox"/> UST	<input type="checkbox"/> AST	EXP	EXT	Technical Clarification	Optional Enhanced Measures
<b>7. Land Use:</b> (Please circle/check one)	<input type="checkbox"/> Residential	<input checked="" type="checkbox"/> Non-residential			<b>8. Site (acres):</b>		2.904		
<b>9. Application Fee:</b>	\$4,000	<b>10. Permanent BMP(s):</b>			Wet Pond				
<b>11. SCS (Linear Ft.):</b>	0	<b>12. AST/UST (No. Tanks):</b>			N/A				
<b>13. County:</b>	Williamson	<b>14. Watershed:</b>			South Fork San Gabriel River				

# 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](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.

<b>Austin Region</b>			
<b>County:</b>	<b>Hays</b>	<b>Travis</b>	<b>Williamson</b>
Original (1 req.)	—	—	<u>X</u>
Region (1 req.)	—	—	<u>X</u>
County(ies)	—	—	<u>X</u>
Groundwater Conservation District(s)	<input type="checkbox"/> Edwards Aquifer Authority <input type="checkbox"/> Barton Springs/ Edwards Aquifer <input type="checkbox"/> Hays Trinity <input type="checkbox"/> Plum Creek	<input type="checkbox"/> Barton Springs/ Edwards Aquifer	NA
City(ies) Jurisdiction	<input type="checkbox"/> Austin <input type="checkbox"/> Buda <input type="checkbox"/> Dripping Springs <input type="checkbox"/> Kyle <input type="checkbox"/> Mountain City <input type="checkbox"/> San Marcos <input type="checkbox"/> Wimberley <input type="checkbox"/> Woodcreek	<input type="checkbox"/> Austin <input type="checkbox"/> Bee Cave <input type="checkbox"/> Pflugerville <input type="checkbox"/> Rollingwood <input type="checkbox"/> Round Rock <input type="checkbox"/> Sunset Valley <input type="checkbox"/> West Lake Hills	<input type="checkbox"/> Austin <input type="checkbox"/> Cedar Park <input type="checkbox"/> Florence <input type="checkbox"/> Georgetown <input type="checkbox"/> Jerrell <input checked="" type="checkbox"/> Leander <input type="checkbox"/> Liberty Hill <input type="checkbox"/> Pflugerville <input type="checkbox"/> Round Rock

<b>San Antonio Region</b>					
<b>County:</b>	<b>Bexar</b>	<b>Comal</b>	<b>Kinney</b>	<b>Medina</b>	<b>Uvalde</b>
Original (1 req.)	—	—	—	—	—
Region (1 req.)	—	—	—	—	—
County(ies)	—	—	—	—	—
Groundwater Conservation District(s)	<input type="checkbox"/> Edwards Aquifer Authority <input type="checkbox"/> Trinity-Glen Rose	<input type="checkbox"/> Edwards Aquifer Authority	<input type="checkbox"/> Kinney	<input type="checkbox"/> EAA <input type="checkbox"/> Medina	<input type="checkbox"/> EAA <input type="checkbox"/> Uvalde
City(ies) Jurisdiction	<input type="checkbox"/> Castle Hills <input type="checkbox"/> Fair Oaks Ranch <input type="checkbox"/> Helotes <input type="checkbox"/> Hill Country Village <input type="checkbox"/> Hollywood Park <input type="checkbox"/> San Antonio (SAWS) <input type="checkbox"/> Shavano Park	<input type="checkbox"/> Bulverde <input type="checkbox"/> Fair Oaks Ranch <input type="checkbox"/> Garden Ridge <input type="checkbox"/> New Braunfels <input type="checkbox"/> Schertz	NA	<input type="checkbox"/> 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.

Lee A. Whited, P.E.

Print Name of Customer/Authorized Agent



2-4-26

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):

**II**

**GENERAL INFORMATION FORM**

# General Information Form

## Texas Commission on Environmental Quality

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

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

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

## Signature

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

Print Name of Customer/Agent: Lee A. Whited, P.E.

Date: 2-4-26

Signature of Customer/Agent:



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## Project Information

1. Regulated Entity Name: Chuy's Tex-Mex Bar W Ranch East Commercial

2. County: Williamson

3. Stream Basin: South San Gabriel River

4. Groundwater Conservation District (If applicable): N/A

5. Edwards Aquifer Zone:

- Recharge Zone  
 Transition Zone

6. Plan Type:

- WPAP  
 SCS  
 Modification

- AST  
 UST  
 Exception Request

7. Customer (Applicant):

Contact Person: Robbie Keithley  
Entity: Bar W East Commercial, Ltd.  
Mailing Address: 901 S. Mopac Expressway, Suite 550  
City, State: Austin, TX Zip: 78746  
Telephone: (512) 477-1212 FAX: \_\_\_\_\_  
Email Address: dwheat@barshop-oles.com

8. Agent/Representative (If any):

Contact Person: Lee A. Whited, P.E.  
Entity: Carlson, Brigance & Doering, Inc.  
Mailing Address: 5701 W. William Cannon Dr.  
City, State: Austin, TX Zip: 78749  
Telephone: (512) 280-5160 FAX: \_\_\_\_\_  
Email Address: lee@cbdeng.com

9. Project Location:

- The project site is located inside the city limits of Leander.
- The project site is located outside the city limits but inside the ETJ (extra-territorial jurisdiction) of \_\_\_\_\_.
- The project site is not located within any city's limits or ETJ.

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

The project site is located on the southeast corner at the intersection of Ronald Reagan Blvd and Kauffman Loop in the City of Leander.

11.  **Attachment A – Road Map.** A road map showing directions to and the location of the project site is attached. The project location and site boundaries are clearly shown on the map.
12.  **Attachment B - USGS / Edwards Recharge Zone Map.** A copy of the official 7 ½ minute USGS Quadrangle Map (Scale: 1" = 2000') of the Edwards Recharge Zone is attached. The map(s) clearly show:
- Project site boundaries.
  - USGS Quadrangle Name(s).
  - Boundaries of the Recharge Zone (and Transition Zone, if applicable).
  - Drainage path from the project site to the boundary of the Recharge Zone.
13.  **The TCEQ must be able to inspect the project site or the application will be returned.** Sufficient survey staking is provided on the project to allow TCEQ regional staff to locate the boundaries and alignment of the regulated activities and the geologic or manmade features noted in the Geologic Assessment.

Survey staking will be completed by this date: March 10, 2026

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

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

15. Existing project site conditions are noted below:

- Existing commercial site
- Existing industrial site
- Existing residential site
- Existing paved and/or unpaved roads
- Undeveloped (Cleared)
- Undeveloped (Undisturbed/Uncleared)
- Other: Pond & connecting internal roads, utilities and drainage for the overall development that was previously approved.

### ***Prohibited Activities***

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

- (1) Waste disposal wells regulated under 30 TAC Chapter 331 of this title (relating to Underground Injection Control);
- (2) New feedlot/concentrated animal feeding operations, as defined in 30 TAC §213.3;
- (3) Land disposal of Class I wastes, as defined in 30 TAC §335.1;
- (4) The use of sewage holding tanks as parts of organized collection systems; and
- (5) New municipal solid waste landfill facilities required to meet and comply with Type I standards which are defined in §330.41(b), (c), and (d) of this title (relating to Types of Municipal Solid Waste Facilities).
- (6) New municipal and industrial wastewater discharges into or adjacent to water in the state that would create additional pollutant loading.

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

- (1) Waste disposal wells regulated under 30 TAC Chapter 331 (relating to Underground Injection Control);
- (2) Land disposal of Class I wastes, as defined in 30 TAC §335.1; and
- (3) New municipal solid waste landfill facilities required to meet and comply with Type I standards which are defined in §330.41 (b), (c), and (d) of this title.

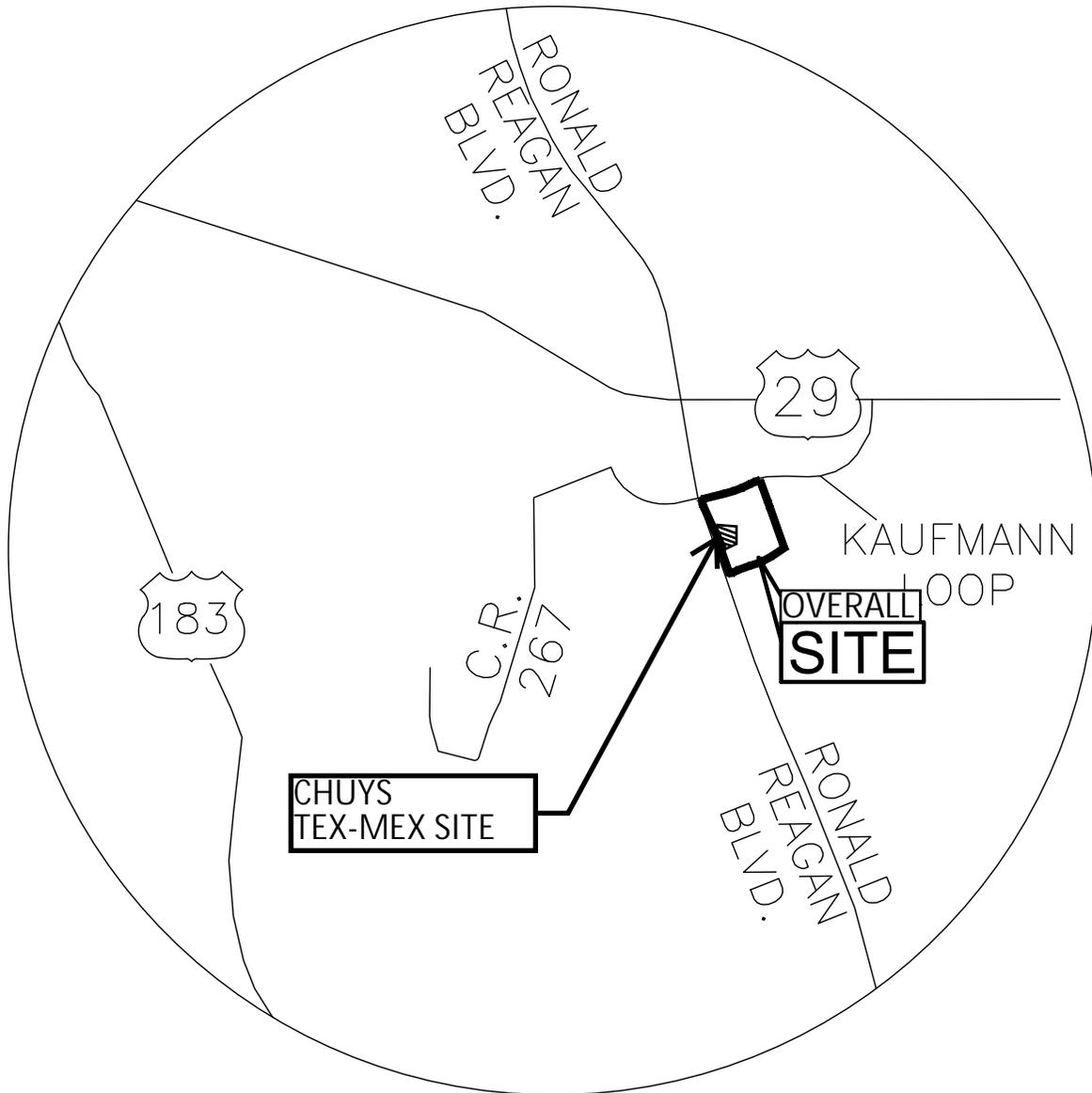
### ***Administrative Information***

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

- For a Water Pollution Abatement Plan or Modification, the total acreage of the site where regulated activities will occur.
  - For an Organized Sewage Collection System Plan or Modification, the total linear footage of all collection system lines.
  - For a UST Facility Plan or Modification or an AST Facility Plan or Modification, the total number of tanks or piping systems.
  - A request for an exception to any substantive portion of the regulations related to the protection of water quality.
  - A request for an extension to a previously approved plan.
19.  Application fees are due and payable at the time the application is filed. If the correct fee is not submitted, the TCEQ is not required to consider the application until the correct fee is submitted. Both the fee and the Edwards Aquifer Fee Form have been sent to the Commission's:
- TCEQ cashier
  - Austin Regional Office (for projects in Hays, Travis, and Williamson Counties)
  - San Antonio Regional Office (for projects in Bexar, Comal, Kinney, Medina, and Uvalde Counties)
20.  Submit one (1) original and one (1) copy of the application, plus additional copies as needed for each affected incorporated city, groundwater conservation district, and county in which the project will be located. The TCEQ will distribute the additional copies to these jurisdictions. The copies must be submitted to the appropriate regional office.
21.  No person shall commence any regulated activity until the Edwards Aquifer Protection Plan(s) for the activity has been filed with and approved by the Executive Director.

GENERAL INFORMATION FORM

# ATTACHMENT "A"



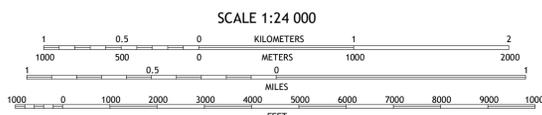
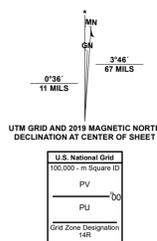
VICINITY MAP  
N.T.S.



**Produced by the United States Geological Survey**

North American Datum of 1983 (NAD83)  
World Geodetic System of 1984 (WGS84). Projection and  
1 000-meter grid: Universal Transverse Mercator, Zone 14R.  
This map is not a legal document. Boundaries may be  
generalized for this map scale. Private lands within government  
reservations may not be shown. Obtain permission before  
entering private lands.

Imagery.....NAIP, August 2016 - November 2016  
Roads.....U.S. Census Bureau, 2015 - 2019  
Names.....GNS, 1979 - 2021  
Hydrography.....National Hydrography Dataset, 2002 - 2021  
Contours.....National Elevation Dataset, 2004  
Boundaries.....Multiple sources; see metadata file 2019 - 2021  
Wetlands.....FWS National Wetlands Inventory Not Available



CONTOUR INTERVAL 10 FEET  
NORTH AMERICAN VERTICAL DATUM OF 1988  
This map was produced to conform with the  
National Geospatial Program US Topo Product Standard.



1	2	3
4	5	6
7	8	

ADJOINING QUADRANGLES

- 1 Mahomet
- 2 Florence
- 3 Cobbs Cavern
- 4 Liberty Hill
- 5 Georgetown
- 6 Nameless
- 7 Leander
- 8 Round Rock

**ROAD CLASSIFICATION**

	Expressway		Local Connector
	Secondary Hwy		Local Road
	Ramp		4WD
	Interstate Route		US Route
			State Route



**III**

**GEOLOGIC ASSESSMENT WITH MAPS & PHOTOS**



Environmental Services, Inc.

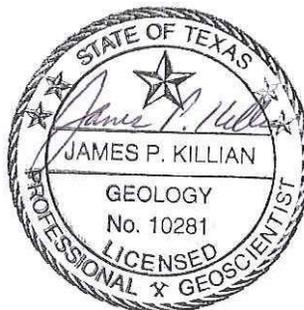
**GEOLOGIC ASSESSMENT  
187.3-ACRE BAR W TRACT  
LEANDER, WILLIAMSON COUNTY, TEXAS  
HJN 21011-001 GA**

**PREPARED FOR:**

**CARLSON, BRIGANCE & DOERING, INC.  
AUSTIN, TEXAS**

**PREPARED BY:**

**HORIZON ENVIRONMENTAL SERVICES, INC.  
TBPG FIRM REGISTRATION NO. 50488**



**FEBRUARY 2021**

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  - C DESCRIPTION OF SITE GEOLOGY
  - D SITE GEOLOGIC MAP
  - E SUPPORTING INFORMATION
  - F ADDITIONAL SITE MAPS
  - G SITE PHOTOGRAPHS

# 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: James Killian

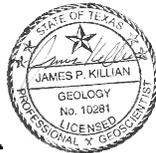
Telephone: 512 328-2430

Date: 5 February 2021

Fax: 512 328-1804

Representing: Horizon Environmental Services, Inc. and TBPG Firm Registration No. 50488  
(Name of Company and TBPG or TBPE registration number)

Signature of Geologist:



Regulated Entity Name: 187.3-acre Bar W Tract; Leander, Williamson County, Texas

## Project Information

1. Date(s) Geologic Assessment was performed: 22-24, 27-29 April 2015; 1 May 2015, and 13-14 January 2021
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)
Brackett gravelly clay loam, 3-16% slopes (BkE)	C	0 to 1
Eckrant cobbly clay, 1-8% slopes (EaD)	D	0 to 1
Fairlie clay, 1-2% slopes (FaB)	D	2 to 4
Georgetown clay loam, 0-2% slopes (GeB)	D	1 to 3

Soil Name	Group*	Thickness(feet)
Georgetown stony clay loam, 1-3% slopes (GsB)	D	1 to 3

*\* 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" = 400'

Site Geologic Map Scale: 1" = 400'

Site Soils Map Scale (if more than 1 soil type): 1" = 1000'

9. Method of collecting positional data:

- Global Positioning System (GPS) technology.
- Other method(s). Please describe method of data collection: \_\_\_\_\_

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

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

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

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

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

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

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

The wells are not in use and have been properly abandoned.

The wells are not in use and will be properly abandoned.

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

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

### ***Administrative Information***

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

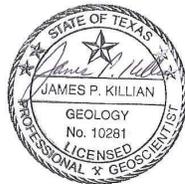
**ATTACHMENT A**  
**GEOLOGIC ASSESSMENT TABLE**



**ATTACHMENT B  
STRATIGRAPHIC COLUMN**

Geologic Unit	Hydrologic Unit	Approx. Thickness at Project Site (ft)	Elevation (ft msl)	Depth (ft)
			1030	0
Edwards Formation (Ked)	Edwards Aquifer	60		
Comanche Peak Formation (Kc)		50	970	60
Walnut Formation Keys Valley Marl Member (Kkv)	Confining Unit	50	920	110
Walnut Formation Cedar Park Member (Kcp)		50	870	160
			820	210

Note: Unit elevation and thickness given with respect to a ground surface elevation of 1030 ft on the northwestern corner of the project site.



**ATTACHMENT B**  
 STRATIGRAPHIC COLUMN  
 APPROXIMATELY 187.3-ACRE  
 BAR W TRACT  
 LEANDER, WILLIAMSON COUNTY, TEXAS

**ATTACHMENT C  
DESCRIPTION OF SITE GEOLOGY**

Geologic information for the subject site obtained via literature review is provided in Attachment E, Supporting Information.

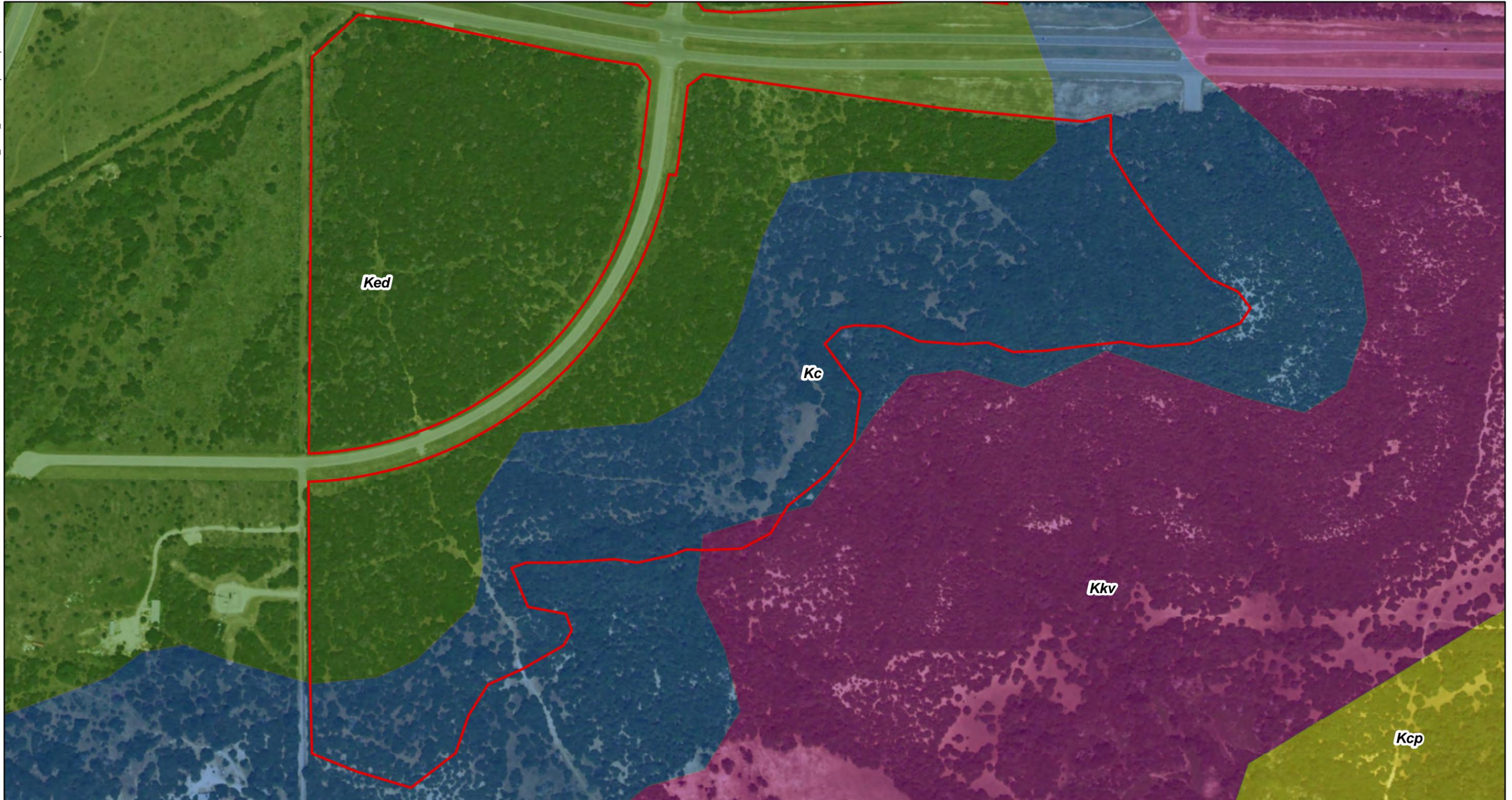
A geologic assessment of the approximately 187.3-acre Bar W Tract was conducted pursuant to Texas rules for regulated activities in the Edwards Aquifer Recharge Zone (EARZ) (30 TAC 213). The subject site consists of undeveloped rangeland and/or woodlands currently used to raise beef cattle, located near the intersection of Ronald Reagan Boulevard and Kauffman Loop in west-central Williamson County, Texas. Assessment findings were used to develop recommendations for site construction measures intended to be protective of water resources at the subject site and adjacent areas.

The entire subject site is located within the Edwards Aquifer Recharge Zone (EARZ), as defined by the Texas Commission on Environmental Quality (TCEQ, 2005). The EARZ occurs where surface water enters the subsurface through exposed limestone bedrock containing faults, fractures, sinkholes, and caves.

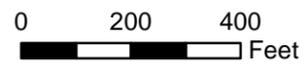
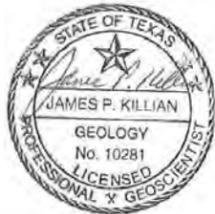
The subject site is predominantly underlain by undifferentiated Edwards Limestone Formation (Ked) (UT-BEG, 1995), which is further underlain by the Comanche Peak Formation (Kc) and the Keys Valley Marl member (Kkv) of the Walnut Formation.

One natural geologic feature (F-1) and one man-made feature (M-1) were identified at the subject site. Further information pertaining to the geologic features is presented in Attachments D, E, and F.

**ATTACHMENT D  
SITE GEOLOGIC MAP**



MAP SOURCE: UT-BEG, 1974; USDA, 2014.



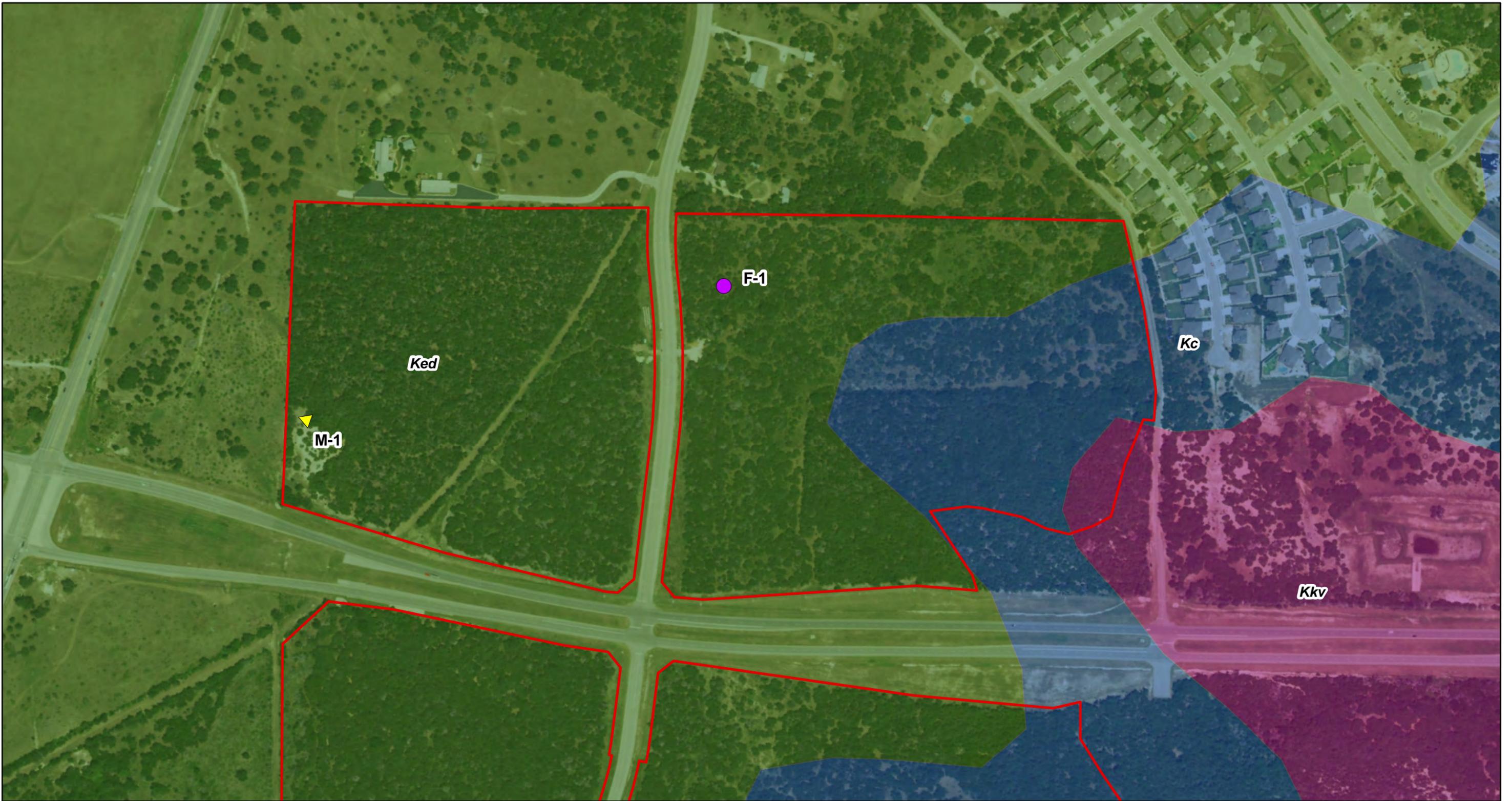
Scale: 1" = 400'

**Legend**

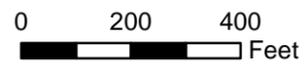
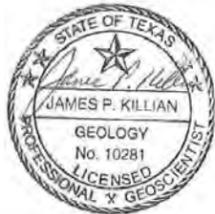
	Geologic Feature		Edwards Formation (Ked)
	Man-made Feature		Comanche Peak Formation (Kc)
	Subject Site		Walnut Formation Keys Valley Marl Member (Kkv)
			Walnut Formation Cedar Park Member (Kcp)



**ATTACHMENT D**  
 SITE GEOLOGIC MAP  
 APPROXIMATELY 187.3-ACRE  
 BAR W TRACT  
 (WESTERN PORTION)  
 LEANDER, WILLIAMSON COUNTY, TEXAS



MAP SOURCE: UT-BEG, 1974; USDA, 2014.



Scale: 1" = 400'

Legend			
	Geologic Feature		Edwards Formation (Ked)
	Man-made Feature		Comanche Peak Formation (Kc)
	Subject Site		Walnut Formation Keys Valley Marl Member (Kkv)
			Walnut Formation Cedar Park Member (Kcp)



**ATTACHMENT D**  
 SITE GEOLOGIC MAP  
 APPROXIMATELY 187.3-ACRE  
 BAR W TRACT  
 (EASTERN PORTION)  
 LEANDER, WILLIAMSON COUNTY, TEXAS



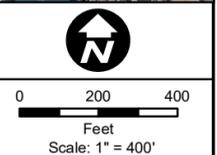
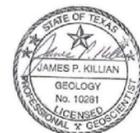
**Horizon**  
Environmental Services, Inc.

Date: 01/22/2021  
 Drawn: KRS  
 HJN NO: 21011.001 KS  
 Source: Nearmap, 2021

**Legend**

- Sensitive Geologic Feature
- ▲ Man-made Feature
- Subject Site
- TCEQ Buffer Area

Geologic Feature Buffer Map  
 187.3-Acre Bar W Tract  
 Leander, Williamson County, Texas



**ATTACHMENT E  
SUPPORTING INFORMATION**

## **1.0 INTRODUCTION AND METHODOLOGY**

This report and any proposed abatement measures are intended to fulfill Texas Commission on Environmental Quality (TCEQ) reporting requirements (TCEQ, 2005). This geologic assessment includes a review of the subject site for potential aquifer recharge and documentation of general geologic characteristics for the subject site. Horizon Environmental Services, Inc. (Horizon) conducted the necessary field and literature studies according to TCEQ *Instructions to Geologists for Geologic Assessments on the Edwards Aquifer Recharge/Transition Zones* (TCEQ, 2004).

Horizon walked transects spaced 50 feet apart, mapped the locations of features using a sub-foot accurate Trimble Geo HX handheld GPS, and posted processed data utilizing GPS Pathfinder Office software, topographic maps, and aerial photographs. Horizon also searched the area around any potential recharge features encountered to look for additional features. When necessary, Horizon removed loose rocks and soil (by hand) to preliminarily assess each feature's subsurface extent while walking transects. However, labor-intensive excavation was not conducted during this assessment. Features that did not meet the TCEQ definition of a potential recharge feature (per TCEQ, 2004), such as surface weathering, karren, or animal burrows, were evaluated in the field and omitted from this report.

The results of this survey do not preclude the possibility of encountering subsurface voids or abandoned test or water wells during the clearing or construction phases of the proposed project. If a subsurface void is encountered during any phase of the project, work should be halted until the TCEQ (or appropriate agency) is contacted and a geologist can investigate the feature.

## **2.0 ENVIRONMENTAL SETTING**

### **2.1 LOCATION AND GENERAL DESCRIPTION**

The subject site consists of approximately 187.3 acres located near the intersection of Ronald Reagan Boulevard and Kauffman Loop in west-central Williamson County, Texas (Attachment F, Figure 1).

### **2.2 LAND USE**

The subject site is undeveloped rangeland and/or woodlands currently used to raise beef cattle, with local electrical and water utilities. Surrounding land is predominantly undeveloped rangeland and/or used for rural residences.

### **2.3 TOPOGRAPHY AND SURFACE WATER**

The subject site is situated on gently to moderately sloping terrain within the South and Middle Forks of the San Gabriel River watershed (Attachment F, Figures 2 and 3). Surface elevations on the subject site vary from a minimum of approximately 970 feet above mean sea level (amsl) near the southeastern boundary to a maximum of approximately 1030 feet amsl near

the northwestern corner. Drainage on most of the site occurs primarily by overland sheet flow in multiple directions based on locations near several unnamed tributaries of the South and Middle Forks of the San Gabriel River.

## 2.4 EDWARDS AQUIFER ZONE

As shown in Attachment F, Figure 2, the entire subject site is found within the Edwards Aquifer Recharge Zone, as mapped by TCEQ Recharge Zone Boundary Maps (TCEQ, 2015).

## 2.5 SURFACE SOILS

Mapping by the Natural Resources Conservation Service (NRCS, 2015) shows approximately 5 soil mapping units within the subject site (Attachment F, Figure 4) associated with the soil series described below.

Brackett gravelly clay loam, 3 to 16% slopes (BkE) has a moderately alkaline, pale brown, clay loam surface layer about 5 inches thick with about 15% cover of limestone fragments that range from 4 to 12 inches in diameter. The subsoil, to 16 inches, is moderately alkaline, pale yellow clay loam with about 5% weakly cemented fine limestone fragments. The underlying layer is very pale brown, interbedded, calcareous loam and limestone. This soil is well-drained, permeability is moderately slow, and available water capacity is very low. Runoff is rapid.

Eckrant cobbly clay, 1 to 8% slopes (EaD) has a surface layer about 13 inches thick. The upper part is dark grayish-brown, cobbly clay and the lower part is dark brown, cobbly clay. The underlying material is coarsely fractured, indurated limestone. This soil is calcareous and moderately alkaline. The surface has about 50% cover of limestone fragments that are mostly 4 to 8 inches across. This soil is well-drained, permeability is moderately slow, and runoff is rapid. The available water capacity is very low.

Fairlie clay, 1 to 2% slopes (FaB) is a gently sloping soil along broad flats and on the edges of drainageways on uplands. Typically, this soil has a dark gray clay upper layer about 21 inches thick. The layer below that, to 46 inches, is clay that is gray in the upper part and dark grayish-brown in the lower part. The underlying material is weakly cemented limestone interbedded with limy material. This soil is calcareous and moderately alkaline throughout. This soil is moderately well-drained. When dry, this soil cracks extensively, and water enters it rapidly. When this soil is wet and the cracks are closed, water enters the soil very slowly. Runoff is medium. The available water capacity is high. Erosion is a slight hazard.

Georgetown clay loam, 0 to 2% slopes (GeB) is a nearly level to gently sloping soil on uplands. Most areas are irregular in shape and range from 10 to 50 acres. Typically, the surface layer is slightly acidic, brown clay loam about 7 inches thick. The subsoil extends to about 35 inches; it is neutral to slightly acidic, reddish-brown clay in the upper part and cobbly clay in the lower part. The underlying material is indurated limestone that has limy earth imbedded in the crevices. This soil is well-drained. Permeability is slow. Surface runoff is medium. The available water capacity is low.

Georgetown stony clay loam, 1 to 3% slopes (GsB) is a gently sloping soil found mostly on the higher parts of uplands. Typically, this soil has a slightly acidic, brown stony clay loam surface layer about 7 inches thick and few to common stones on or near the surface. The subsoil, which extends down to a depth of about 35 inches, is neutral, reddish-brown clay in the upper part and slightly acidic, reddish-brown cobbly clay in the lower part. The underlying material is indurated, fractured limestone that has clay loam in crevices and fractures. This soil is well-drained. Permeability is slow, and surface runoff is medium. The available water capacity is low. Reaction is neutral to slightly acidic. The erosion hazard ranges to slight.

## 2.6 WATER WELLS

A search was made for water wells on and within 0.5 miles of the subject site. A review of the records of the TCEQ and the Texas Water Development Board (TWDB) revealed no water wells at the subject site or within 0.5 miles from the subject site (TWDB, 2015). The results of this survey do not preclude the existence of an abandoned well. The results of this assessment do not preclude the existence of undocumented/abandoned wells on the site. If a water well or casing is encountered during construction, work should be halted near the feature until the TCEQ is contacted.

Abandoned wells must be capped or properly abandoned according to the Administrative Rules of the Texas Department of Licensing and Regulation, 16 Texas Administrative Code (TAC), Chapter 76, effective 3 January 1999. A plugging report must be submitted (by a licensed water well driller) to the Texas Department of Licensing and Regulation, Water Well Driller's Program, Austin, Texas. If a well is intended for use, it must comply with 16 TAC §76.

## 2.7 GEOLOGY

### Literature Review

A review of existing literature shows the subject site is predominantly underlain by the undifferentiated Edwards Limestone Formation (Ked) (UT-BEG, 1995) with an estimated maximum thickness of about 60 feet at higher elevations located near the northwestern corner. Underlying the Edwards Limestone is the Comanche Peak Formation (Kc), which crops out at lower elevations located along the western, southern, and southeastern portions of the subject site, with an estimated thickness of about 50 feet. Below the Comanche Peak Formation is the Keys Valley Marl member (Kkv) of the Walnut Formation, which crops out at the lowest elevations near the western and southern portions of the subject site. In general, the rock strata beneath the site dip to the southeast at about 10 to 30 feet per mile.

The subject site is located several miles west of the Balcones Fault Zone, and available geologic reports indicate the immediate area has not been affected by geologically inactive, normal faulting. A normal fault is an inclined fault in which the hanging wall appears to have slipped downward relative to the footwall. The nearest mapped fault is located about 2 miles west of the site, and strikes N30°E (UT-BEG, 1995).

## Field Assessment

Please see Attachment C for a narrative description of geology observed on the subject site. The Site Geologic Map is provided as Attachment D. Field surveys of the subject site were conducted by a licensed Horizon geologist on 22 to 24 and 27 to 29 April 2015, 1 May 2015, and 13 to 14 January 2021. Based on the results of the survey, 1 natural geologic feature (F-1) and 1 man-made feature (M-1) were observed at the subject site. Man-made feature M-1 is an abandoned gravel pit currently used as a (dry) stock pond located on the northeastern portion of the subject site that measures about 80 feet long by 60 feet wide by 2 to 4 feet deep.

Geologic Feature F-1 is an upland sinkhole measuring about 25 feet long by 20 feet wide by 2.5 feet deep with 3 open drainage portals located near its center spaced from about 3 to 6 feet apart. The largest drainage portal measures approximately 3 feet long by 2 feet wide by 18 feet deep. The smallest portal is a solution-enlarged fracture (azimuth: N26°E) measuring 3 feet long by 0.5 to 1 foot wide by 3 feet deep about 6 feet east of the larger portal. The third portal is located about 3 feet southeast of the larger portal and measures 1.5 feet in diameter by 8 feet deep. Air flow conductivity was noted at the largest and deepest drainage portal opening; however, entry was not attempted due to its extended vertical nature and lack of hand/footholds. On 13 and 14 January 2021, Horizon staff excavated the largest drainage portal within the sinkhole (to about ~8 feet long by 7 feet wide by 14 feet deep) using a backhoe with hoe ram attachment and found a narrow, fractured drainage portal within the floor of the excavation. The portal extended down another 2 feet with slight to moderate air flow conductivity; however, it became too small to continue. Due to its apparent limited horizontal extent, this feature has a final (negotiated) TCEQ setback buffer of at least 25 feet in all directions from the feature's areal extent (sinkhole perimeter), plus its watershed catchment up to 200 feet from the sinkhole perimeter of the feature. This feature has a high infiltration rate and an apparent surface runoff catchment of less than 0.3 acres.

### **3.0 CONCLUSIONS AND RECOMMENDATIONS**

One natural geologic and 1 man-made feature were identified at the subject site. Each of the features was evaluated for its potential to be a significant pathway for fluid movement into the Edwards Aquifer. The Geologic Assessment Table (Attachment A) summarizes this evaluation and assigns each feature's sensitivity a total point value. Those with a point value of 40 or higher are deemed to be sensitive groundwater recharge features and should be protected during site development pursuant to TCEQ rules for protection of the Edwards Aquifer (30 TAC 213).

Geologic feature F-1 has been evaluated as sensitive for groundwater recharge capability and would therefore require a TCEQ protective setback buffer. This feature has a final (negotiated) TCEQ setback buffer of at least 25 feet in all directions from the feature's areal extent (sinkhole perimeter), plus its watershed catchment up to 200 feet from the sinkhole perimeter of the feature.

Man-made feature M-1 has been evaluated as non-sensitive for groundwater recharge capability and would therefore not require a TCEQ protective setback buffer. No further action is recommended for this non-sensitive man-made feature.

The site appears generally well-suited to development prospectus. It should be noted that soil and drainage erosion would increase with ground disturbance. Native grasses and the cobbly content of the soil aid to prevent erosion. Soil and sedimentation fencing should be placed in all appropriate areas prior to any site construction activities.

Because the subject site is located over the Edwards Aquifer Recharge Zone, it is possible that subsurface voids underlie the site. The nature of the subgrade is fault-influenced, which can result with variable-sized voids in materials that may otherwise not be noted as void or cave forming. If any subsurface voids are encountered during the proposed development, construction should halt immediately so that a geologist may assess potential for the void(s) to provide meaningful recharge to the Edwards Aquifer.

#### 4.0 REFERENCES

- (CAPCOG) Capital Area Council of Governments. *Data, Maps, and Reports*. Contours 10 Foot Merge. <<http://www.capcog.org/data-maps-and-reports/geospatial-data/>>. Accessed 1 May 2015.
- (ESRI) Environmental Systems Research Institute, Inc. Street Map North America Data Layer. ESRI, Redlands, California. 2012.
- (NRCS) Natural Resources Conservation Service (formerly the Soil Conservation Service) US Department of Agriculture, Engineering Division Soil Series and Hydrologic Soil Groups of Urban Hydrology for Small Watersheds, Technical Release No. 55, Engineering Division, January 1975.
- \_\_\_\_\_. Web Soil Survey, <<http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>>. Accessed 30 April 2015.
- (TCEQ) Texas Commission on Environmental Quality. RG-348, Complying with the Edwards Aquifer Rules: Technical Guidance on Best Management Practices. Revised July 2005.
- \_\_\_\_\_. Instructions to Geologists for completing Geologic Assessments within the Edwards Aquifer Recharge Zone. Revised October 2004.
- \_\_\_\_\_. Texas Commission on Environmental Quality. Edwards Aquifer Protection Program. Edwards Aquifer Viewer, <<http://gisweb.tceq.texas.gov/edwardsAquifer/>>. Accessed 28 April 2015.
- (TWDB) Texas Water Development Board. Water Information Integration and Dissemination System. TWDB Groundwater Database, <<https://www3.twdb.texas.gov/apps/waterdatainteractive/groundwaterdataviewer>>. Accessed 30 April 2015.
- (USDA) US Department of Agriculture. National Agriculture Imagery Program, Farm Service Agency, Aerial Photography Field Office. Williamson County, Texas. 2014.
- (USGS) US Geological Survey. 7.5-minute series topographic maps, Leander NE, Texas, quadrangle. 1962.
- (UT-BEG) The University of Texas at Austin Bureau of Economic Geology; C.V. Proctor, Jr., T.E. Brown, J.H. McGowen, N.B. Waechter, and V.E. Barnes. *Geologic Atlas of Texas*, Austin Sheet. Francis Luther Whitney Memorial Edition. 1974; revised 1995.
- (Werchan et al.) Werchan, L. E., and J. L. Coker. Soil survey of Williamson County, Texas. Soil Conservation Service, US Department of Agriculture, Washington, D.C. 1983.

**ATTACHMENT F**  
**ADDITIONAL SITE MAPS**

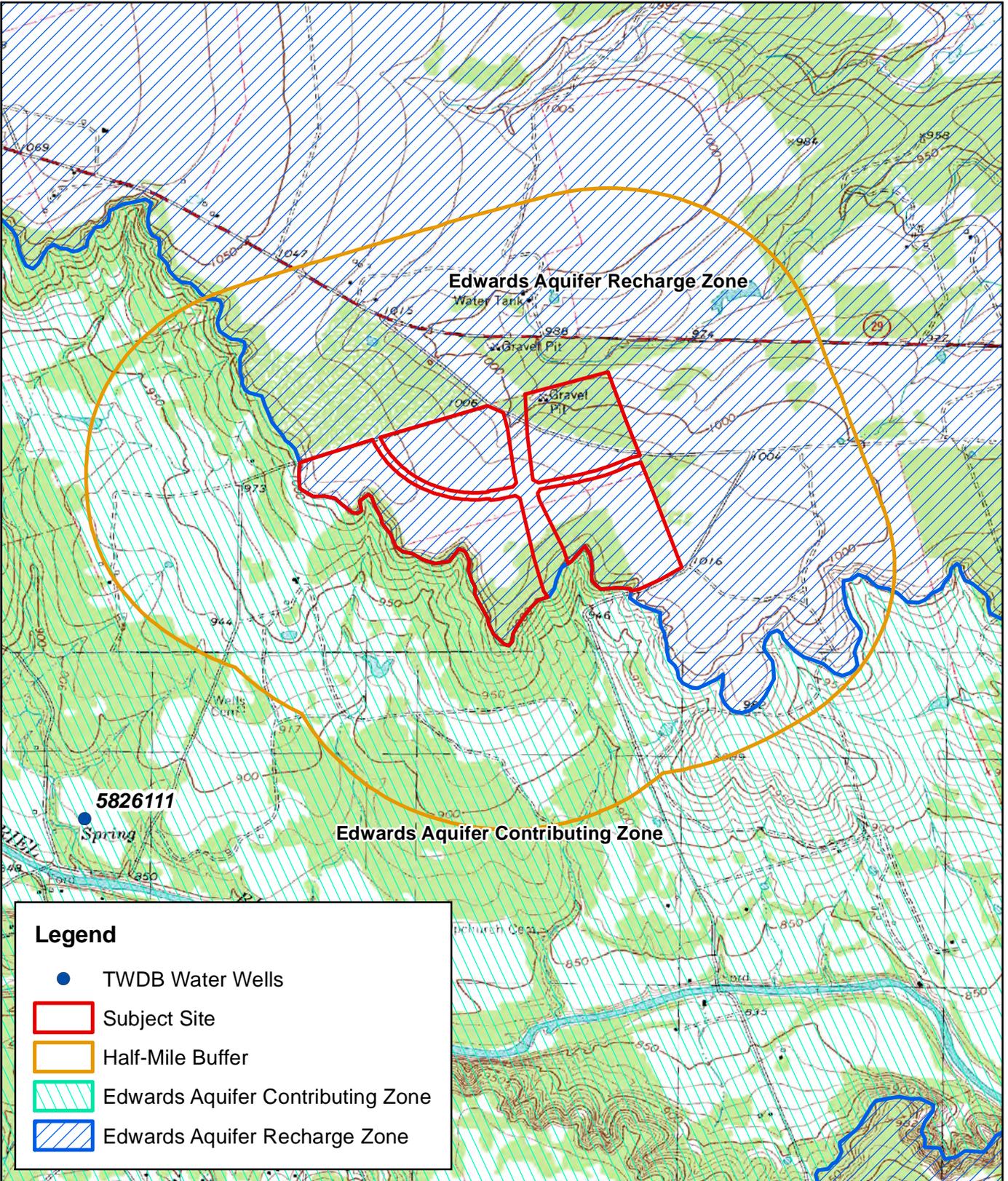


MAP SOURCE: ESRI, 2012.



**ATTACHMENT F, FIGURE 1**

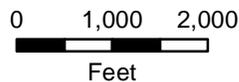
VICINITY MAP  
APPROXIMATELY 187.3-ACRE  
BAR W TRACT  
LEANDER, WILLIAMSON COUNTY, TEXAS



**Legend**

- TWDB Water Wells
- Subject Site
- Half-Mile Buffer
- Edwards Aquifer Contributing Zone
- Edwards Aquifer Recharge Zone

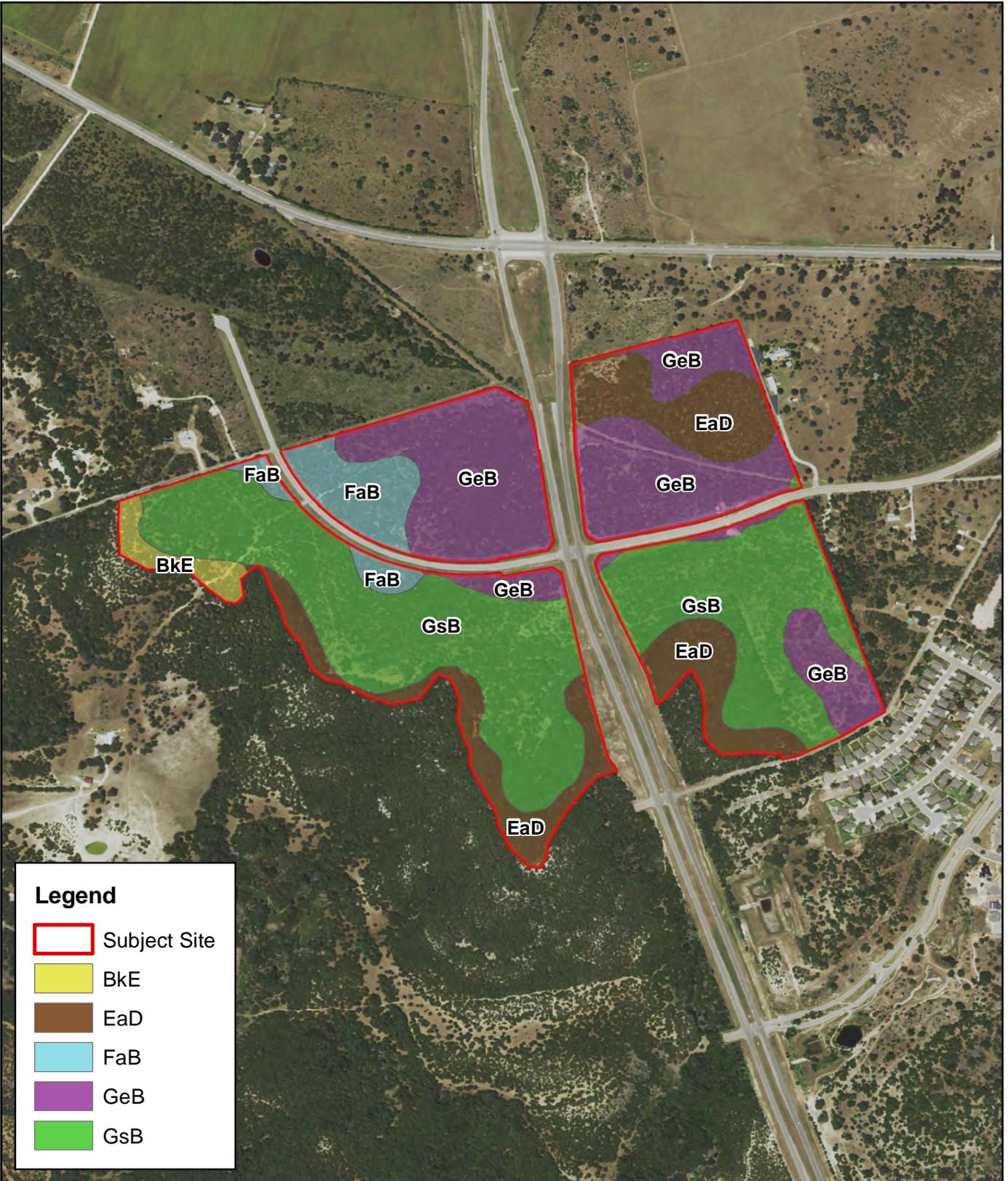
MAP SOURCE: USGS, 1962; TCEQ, 2015; TWDB, 2015.



### ATTACHMENT F, FIGURE 2

TOPOGRAPHY AND  
HYDROGEOLOGY MAP  
APPROXIMATELY 187.3-ACRE  
BAR W TRACT  
LEANDER, WILLIAMSON COUNTY, TEXAS





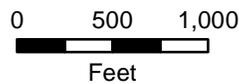
**Legend**

-  Subject Site
-  BkE
-  EaD
-  FaB
-  GeB
-  GsB

MAP SOURCE: USDA, 2014; NRCS, 2015.



**Horizon**  
Environmental Services, Inc.



**ATTACHMENT F, FIGURE 4**

SURFACE SOIL MAP  
APPROXIMATELY 187.3-ACRE  
BAR W TRACT  
LEANDER, WILLIAMSON COUNTY, TEXAS

**ATTACHMENT G**  
**SITE PHOTOGRAPHS**



**PHOTO 1**

**View of geologic feature F-1 (sinkhole/cave), facing south**



**PHOTO 2**

**View of larger drainage portal opening at F-1,  
facing southeast**



**PHOTO 3**

**View of two smaller open drainage portals at F-1,  
facing southwest**



**PHOTO 4**

**View inside drainage portal opening at F-1,  
facing down**



**PHOTO 5**  
**View of smaller open drainage portal at F-1,**  
**facing down**



**PHOTO 6**  
**View of man-made feature (dry stock pond) M-1,**  
**facing east**



**PHOTO 7**  
**Geologic Feature F-1 after mechanical excavation, facing down**



**PHOTO 8**  
**Interior view of small, narrow drainage portal located along excavated floor of F-1, facing down**

**IV**

**WATER POLLUTION ABATEMENT PLAN APPLICATION**

# Water Pollution Abatement Plan Application

Texas Commission on Environmental Quality

for Regulated Activities on the Edwards Aquifer Recharge Zone and Relating 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. This **Water Pollution Abatement Plan Application Form** is hereby submitted for TCEQ review and Executive Director approval. The form was prepared by:

Print Name of Customer/Agent: Lee A. Whited, P.E.

Date: 2-4-26

Signature of Customer/Agent:



Regulated Entity Name: Chuy's Tex-Mex Bar W East Commercial

## Regulated Entity Information

1. The type of project is:

- Residential: Number of Lots: \_\_\_\_\_
- Residential: Number of Living Unit Equivalents: 105
- Commercial
- Industrial
- Other: \_\_\_\_\_

2. Total site acreage (size of property): 2.904

3. Estimated projected population: 0

4. The amount and type of impervious cover expected after construction are shown below:

**Table 1 - Impervious Cover Table**

Impervious Cover of Proposed Project	Sq. Ft.	Sq. Ft./Acre	Acres
Structures/Rooftops	6416	÷ 43,560 =	0.15
Parking	78,251	÷ 43,560 =	1.80
Other paved surfaces	7,693	÷ 43,560 =	0.17
Total Impervious Cover	92,360	÷ 43,560 =	2.12

**Total Impervious Cover 2.12 ÷ Total Acreage 2.904 X 100 = 73% Impervious Cover**

5.  **Attachment A - Factors Affecting Surface Water Quality.** A detailed description of all factors that could affect surface water and groundwater quality that addresses ultimate land use is attached.
6.  Only inert materials as defined by 30 TAC §330.2 will be used as fill material.

***For Road Projects Only***

**Complete questions 7 - 12 if this application is exclusively for a road project.**

7. Type of project:

- TXDOT road project.
- County road or roads built to county specifications.
- City thoroughfare or roads to be dedicated to a municipality.
- Street or road providing access to private driveways.

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

- Concrete
- Asphaltic concrete pavement
- Other: \_\_\_\_\_

9. Length of Right of Way (R.O.W.): \_\_\_\_\_ feet.

Width of R.O.W.: \_\_\_\_\_ feet.

L x W = \_\_\_\_\_ Ft<sup>2</sup> ÷ 43,560 Ft<sup>2</sup>/Acre = \_\_\_\_\_ acres.

10. Length of pavement area: \_\_\_\_\_ feet.

Width of pavement area: \_\_\_\_\_ feet.

L x W = \_\_\_\_\_ Ft<sup>2</sup> ÷ 43,560 Ft<sup>2</sup>/Acre = \_\_\_\_\_ acres.

Pavement area \_\_\_\_\_ acres ÷ R.O.W. area \_\_\_\_\_ acres x 100 = \_\_\_\_\_% impervious cover.

11.  A rest stop will be included in this project.
- A rest stop will not be included in this project.

12.  Maintenance and repair of existing roadways that do not require approval from the TCEQ Executive Director. Modifications to existing roadways such as widening roads/adding shoulders totaling more than one-half (1/2) the width of one (1) existing lane require prior approval from the TCEQ.

### ***Stormwater to be generated by the Proposed Project***

13.  **Attachment B - Volume and Character of Stormwater.** A detailed description of the volume (quantity) and character (quality) of the stormwater runoff which is expected to occur from the proposed project is attached. The estimates of stormwater runoff quality and quantity are based on the area and type of impervious cover. Include the runoff coefficient of the site for both pre-construction and post-construction conditions.

### ***Wastewater to be generated by the Proposed Project***

14. The character and volume of wastewater is shown below:

<u>100%</u> Domestic	<u>291</u> Gallons/day
<u>      </u> % Industrial	<u>      </u> Gallons/day
<u>      </u> % Commingled	<u>      </u> Gallons/day
TOTAL gallons/day <u>291</u>	

15. Wastewater will be disposed of by:

On-Site Sewage Facility (OSSF/Septic Tank):

**Attachment C - Suitability Letter from Authorized Agent.** An on-site sewage facility will be used to treat and dispose of the wastewater from this site. The appropriate licensing authority's (authorized agent) written approval is attached. It states that the land is suitable for the use of private sewage facilities and will meet or exceed the requirements for on-site sewage facilities as specified under 30 TAC Chapter 285 relating to On-site Sewage Facilities.

Each lot in this project/development is at least one (1) acre (43,560 square feet) in size. The system will be designed by a licensed professional engineer or registered sanitarian and installed by a licensed installer in compliance with 30 TAC Chapter 285.

Sewage Collection System (Sewer Lines):

Private service laterals from the wastewater generating facilities will be connected to an existing SCS.

Private service laterals from the wastewater generating facilities will be connected to a proposed SCS.

The SCS was previously submitted on \_\_\_\_\_.

The SCS was submitted with this application.

The SCS will be submitted at a later date. The owner is aware that the SCS may not be installed prior to Executive Director approval.

The sewage collection system will convey the wastewater to the City of Liberty Hill WWTP (name) Treatment Plant. The treatment facility is:

Existing.

Proposed.

16.  All private service laterals will be inspected as required in 30 TAC §213.5.

## **Site Plan Requirements**

**Items 17 – 28 must be included on the Site Plan.**

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

Site Plan Scale: 1" = \_\_\_\_\_'.

18. 100-year floodplain boundaries:

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

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

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

19.  The layout of the development is shown with existing and finished contours at appropriate, but not greater than ten-foot contour intervals. Lots, recreation centers, buildings, roads, open space, etc. are shown on the plan.

The layout of the development is shown with existing contours at appropriate, but not greater than ten-foot intervals. Finished topographic contours will not differ from the existing topographic configuration and are not shown. Lots, recreation centers, buildings, roads, open space, etc. are shown on the site plan.

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

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

The wells are not in use and have been properly abandoned.

The wells are not in use and will be properly abandoned.

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

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

21. Geologic or manmade features which are on the site:

All sensitive geologic or manmade features identified in the Geologic Assessment are shown and labeled.

No sensitive geologic or manmade features were identified in the Geologic Assessment.

**Attachment D - Exception to the Required Geologic Assessment.** A request and justification for an exception to a portion of the Geologic Assessment is attached.

- 22.  The drainage patterns and approximate slopes anticipated after major grading activities.
- 23.  Areas of soil disturbance and areas which will not be disturbed.
- 24.  Locations of major structural and nonstructural controls. These are the temporary and permanent best management practices.
- 25.  Locations where soil stabilization practices are expected to occur.
- 26.  Surface waters (including wetlands).
  - N/A
- 27.  Locations where stormwater discharges to surface water or sensitive features are to occur.
  - There will be no discharges to surface water or sensitive features.
- 28.  Legal boundaries of the site are shown.

### ***Administrative Information***

- 29.  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.
- 30.  Any modification of this WPAP will require Executive Director approval, prior to construction, and may require submission of a revised application, with appropriate fees.

## **WPAP APPLICATION**

### **ATTACHMENT "A"**

Factors contributing to the contamination of surface and groundwater are generated from man-made pollutants such as pesticides, fertilizers, illegal trash dumping, and automotive fluids.

## **WPAP APPLICATION**

### **ATTACHMENT "B"**

#### Volume and Character of Stormwater Runoff:

The Bar W Ranch East Mixed Use development will mitigate the 100-yr storm with the proposed wet pond and natural run-off to existing drainage ditches. The runoff coefficient of the existing conditions is 0.81 and will be increased to 0.59 when the proposed development is completed. The amount of runoff leaving the site will be in compliance with the TCEQ Regulations. The pond is designed to hold the 28.55 CFS that the 100-yr storm generates and will have an 89% removal rate by TCEQ Standards. The quality of runoff leaving the site will also be in compliance with TCEQ Regulations.

**V**

**TEMPORARY STORMWATER SECTION**

# 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: Lee A. Whited, P.E.

Date: 2-4-26

Signature of Customer/Agent:



Regulated Entity Name: Chuy's Tex-Mex Bar W East Commercial

## 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: South Fork San Gabriel River

### ***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.

## TEMPORARY STORMWATER SECTION

### ATTACHMENT "A" Spill Response Actions

Below is the general procedure to follow in the event of a spill or loss of product resulting in an impact or potential impact to soil, surface water, groundwater or sanitary sewer system.

Onsite personnel will be trained to follow the spill response actions for the site.

#### Notifications:

- 911 (if immediate danger to life or health)
- General Contractor Site Superintendent.
- Environmental Emergency Response Contractor (if necessary).
- For spills that exceed the reportable quantity established per federal and state regulations, also contact the Texas Commission on Environmental Quality (TCEQ) at 800-832-8224 and the National Response Center at 800-424-8802. **Reportable quantities are provided behind this Attachment.**

#### Cleanup:

- Impacted soil or used absorbent material shall be picked up and stored in a waterproof, leak proof manner such as on plastic sheeting and covered with plastic sheeting, a drum or roll-off container with a lid or cover that can be secured, or a 5-gallon bucket with a secure lid.
- The Site Superintendent or Emergency Response Coordinator will work with TCEQ to determine the appropriate sampling and disposal protocols for handling impacted soils, absorbent materials, or water.
- Provide proof of sampling and disposal such as laboratory analytical reports and waste manifests to TCEQ.

Follow-up:

- Within 48 hours send a written report to TCEQ describing the cause of the release, the total quantity of material discharged, description of corrective action taken or still in progress to be completed, notifications made, and plans for preventing recurrence.
- Complete any follow-up reports required by the TCEQ or National Response Center within the allowable time frames.
- Submit a copy of documentation of disposal to TCEQ and US EPA at the time of disposal. Also submit a copy of the final uniform hazardous waste manifest “designated facility to generator copy” by the time of environmental closeout.

**REPORTABLE QUANTITY TABLE**

Kind of spill	Where discharged	Reportable quantity	Rule, statute, or responsible agency
Hazardous substance	onto land	<a href="#">"Final RQ" in Table 302.4 in 40 CFR 302.4</a> (see attached)	<a href="#">30 TAC 327</a>
	into water	"Final RQ" or 100 lbs, whichever is <b>less</b>	<a href="#">30 TAC 327</a>
Any Oil	coastal waters	as required by the Texas General Land Office	<a href="#">Texas General Land Office</a>
Crude Oil, Oil that is neither a petroleum product nor used oil	onto land	210 gallons (five barrels)	<a href="#">30 TAC 327</a>
	Directly into water	enough to create a sheen	<a href="#">30 TAC 327</a>
Petroleum Product, used oil	onto land from an exempt PST facility	210 gallons (five barrels)	<a href="#">30 TAC 327</a>
	onto land, or onto land from a non-exempt PST facility	25 gallons	<a href="#">30 TAC 327</a>
	directly into water	enough to create a sheen	<a href="#">30 TAC 327</a>
Industrial solid waste or other substances	into water	100 lbs	<a href="#">30 TAC 327</a>
From petroleum storage tanks, underground or aboveground	into water	enough to create a sheen on water	<a href="#">30 TAC 334.75-81</a>
From petroleum storage tanks, underground or aboveground	onto land	<a href="#">25 gallons or equal to the RQ under 40 CFR 302</a>	<a href="#">30 TAC 327</a>
Other substances that may be useful or valuable and are not ordinarily considered to be waste, but will cause pollution if discharged into water in the state	into water	100 lbs	<a href="#">30 TAC 327</a>

## **TEMPORARY STORMWATER SECTION**

### **ATTACHMENT "B"**

Potential sources of contamination include the leaking of fluids from construction equipment, trash generated by workers and material, sediment transport onto public roadways from construction equipment, and the use of asphaltic products on the roadways.

## TEMPORARY STORMWATER SECTION

### ATTACHMENT "C"

All temporary BMP's will be in place prior to start of any construction. All work within the Limits of Construction will be encompassed with silt fence to prevent water migrating into the site and trap any sediment leaving the site.

All permanent BMP's will begin to be installed once the temporary BMP's are complete. Upon completion of the permanent BMP's and site re-vegetation restoration, all temporary BMP's will be removed.

The major activities of this project that will result in large areas of soil disturbance are:

#### Sequence of Construction

Grubbing and Rough Grading:	2.904 acres
Utilities (SS, W, WW):	0.289 acres
Paving	1.527 acres

## **TEMPORARY STORMWATER SECTION**

### **ATTACHMENT "D"**

All temporary BMP's will be installed prior to the beginning of construction and remain in place until revegetation has been completed. These temporary measures will include silt fences, rock berms, inlet dykes, concrete wash-out areas, and stabilized construction entrances. These erosion control devices will prevent the transport of sediment generated from this site. The erosion control devices proposed with this project allow for the passing of water while retaining any sediment or trash. This will allow for the flow to maintain its natural course to naturally occurring sensitive features.

All Chuys Tex-Mex Bar W Commercial natural and permanent re-vegetation will be completed prior to removal of any temporary BMP's.

## **TEMPORARY STORMWATER SECTION**

### **ATTACHMENT "F"**

Practices of diverting runoff around exposed soils will consist of silt fence and inlet protection, which will be utilized to catch any pollutants from leaving the site. The only runoff aimed at exposed soils will be from the site itself. Filter dykes will prevent the sediment from entering constructed inlets.

## **TEMPORARY STORMWATER SECTION**

### **ATTACHMENT "1"**

The Temporary BMP's will be inspected on a weekly basis for their compliance with TCEQ and City of Leander criteria.

Check all concrete washout facilities daily to determine if they have been filled to 75% capacity. The facility needs to be cleaned or changed when 75% full. Inspect self-installed washouts daily to ensure that plastic linings are intact and sidewalls have not been damaged by construction activities. If contractors have washed out chutes or hoppers in other unapproved locations, you may need to provide more education, install additional signage, or place additional washouts in more convenient locations. If the washout is nearing capacity, vacuum and dispose of the waste material in an approved manner. Do not discharge liquids to waterways, storm drains or directly onto ground. Do not use sanitary sewer without local approval. Remove liquids or cover the structures before predicted storms to prevent overflows.

Inspection of silt fence will occur weekly, and after any rainfall. Sediment shall be removed from silt fence when buildup reaches 6-inches and torn fabric must be replaced or a second line of fencing parallel to the torn section shall be provided. Inspections and maintenance of the inlet protection and stabilized construction entrance/exit will occur weekly, and after any rainfall. The contractor will be responsible for maintenance of these items. Inspections reports will document maintenance activities, sediment removal and modifications to the sediment and erosion controls. If cited by TCEQ or City of Leander the contractor will have 24 hours to bring the delinquent items up to standard. The contractor will keep a record of these items on site in the construction trailer. A Storm Water Pollution Prevention Plan will be filed prior to commencement of construction.

## **TEMPORARY STORMWATER SECTION**

### **ATTACHMENT "J"**

The project's limits of construction are primarily confined to the existing right-of-ways, easements, and project site. The project will begin with rough grading and cutting. The utilities will be installed. The final installation of curbs and paving will be completed within 120 working days. The backfill behind the curbs and embankments will be revegetated with hydromulch mix to be determined by the City of Leander.

Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than 14 days after the construction activity on that portion has temporarily or permanently ceased. Where the initiation of stabilization measures by the 14<sup>th</sup> day after construction activity temporary or permanently cease is precluded by weather conditions, stabilization measures shall be initiated as soon as practicable.

**VI**

**PERMANENT STORMWATER SECTION**

# Permanent 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)(C), (D)(li), (E), and (5), 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 **Permanent Stormwater Section** is hereby submitted for TCEQ review and executive director approval. The application was prepared by:

Print Name of Customer/Agent: Lee A. Whited, P.E.

Date: 2-4-26

Signature of Customer/Agent



Regulated Entity Name: Chuy's Tex-Mex Bar W East Commercial

## Permanent Best Management Practices (BMPs)

**Permanent best management practices and measures that will be used during and after construction is completed.**

- Permanent BMPs and measures must be implemented to control the discharge of pollution from regulated activities after the completion of construction.  
 N/A
- These practices and measures have been designed, and will be constructed, operated, and maintained to insure 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 prepared or 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 is: \_\_\_\_\_

N/A

3.  Owners must insure that permanent BMPs and measures are constructed and function as designed. A Texas Licensed Professional Engineer must certify in writing that the permanent BMPs or measures were constructed as designed. The certification letter must be submitted to the appropriate regional office within 30 days of site completion.

N/A

4. Where a site is used for low density single-family residential development and has 20 % or less impervious cover, other permanent BMPs are not required. This exemption from permanent BMPs must be recorded in the county deed records, with a notice that if the percent impervious cover increases above 20% or land use changes, the exemption for the whole site as described in the property boundaries required by 30 TAC §213.4(g) (relating to Application Processing and Approval), may no longer apply and the property owner must notify the appropriate regional office of these changes.

The site will be used for low density single-family residential development and has 20% or less impervious cover.

The site will be used for low density single-family residential development but has more than 20% impervious cover.

The site will not be used for low density single-family residential development.

5. The executive director may waive the requirement for other permanent BMPs for multi-family residential developments, schools, or small business sites where 20% or less impervious cover is used at the site. This exemption from permanent BMPs must be recorded in the county deed records, with a notice that if the percent impervious cover increases above 20% or land use changes, the exemption for the whole site as described in the property boundaries required by 30 TAC §213.4(g) (relating to Application Processing and Approval), may no longer apply and the property owner must notify the appropriate regional office of these changes.

**Attachment A - 20% or Less Impervious Cover Waiver.** The site will be used for multi-family residential developments, schools, or small business sites and has 20% or less impervious cover. A request to waive the requirements for other permanent BMPs and measures is attached.

The site will be used for multi-family residential developments, schools, or small business sites but has more than 20% impervious cover.

The site will not be used for multi-family residential developments, schools, or small business sites.

6.  **Attachment B - BMPs for Upgradient 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.
7.  **Attachment C - 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.
8.  **Attachment D - BMPs for Surface Streams.** A description of the BMPs and measures that prevent pollutants from entering surface streams, sensitive features, or the aquifer is attached. Each feature identified in the Geologic Assessment as sensitive has been addressed.
- N/A
9.  The applicant understands that to the extent practicable, BMPs and measures must maintain flow to naturally occurring sensitive features identified in either the geologic assessment, executive director review, or during excavation, blasting, or construction.
- The permanent sealing of or diversion of flow from a naturally-occurring sensitive feature that accepts recharge to the Edwards Aquifer as a permanent pollution abatement measure has not been proposed.
  - Attachment E - Request to Seal Features.** A request to seal a naturally-occurring sensitive feature, that includes, for each feature, a justification as to why no reasonable and practicable alternative exists, is attached.
10.  **Attachment F - Construction Plans.** All construction plans and design calculations for the proposed permanent BMP(s) and measures have been prepared by or under the direct supervision of a Texas Licensed Professional Engineer, and are signed, sealed, and dated. The plans are attached and, if applicable include:
- Design calculations (TSS removal calculations)
  - TCEQ construction notes
  - All geologic features
  - All proposed structural BMP(s) plans and specifications
- N/A

11.  **Attachment G - Inspection, Maintenance, Repair and Retrofit Plan.** A plan for the inspection, maintenance, repairs, and, if necessary, retrofit of the permanent BMPs and measures is attached. The plan includes all of the following:
- Prepared and certified by the engineer designing the permanent BMPs and measures
  - Signed by the owner or responsible party
  - Procedures for documenting inspections, maintenance, repairs, and, if necessary retrofit
  - A discussion of record keeping procedures
- N/A
12.  **Attachment H - 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
13.  **Attachment I -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 velocities, and other in-stream effects caused by the regulated activity, which increase erosion that results in water quality degradation.
- N/A

### ***Responsibility for Maintenance of Permanent BMP(s)***

***Responsibility for maintenance of best management practices and measures after construction is complete.***

14.  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 having ownership or control of the property (such as without limitation, an owner's association, a new property owner or lessee, a district, or municipality) or the ownership of the property is transferred to the entity. Such entity shall then be responsible for maintenance until another entity assumes such obligations in writing or ownership is transferred.
- N/A
15.  A copy of the transfer of responsibility must be filed with the executive director at the appropriate regional office within 30 days of the transfer if the site is for use as a multiple single-family residential development, a multi-family residential development, or a non-residential development such as commercial, industrial, institutional, schools, and other sites where regulated activities occur.
- N/A

## **PERMANENT STORMWATER SECTION**

### **ATTACHMENT "B"**

There is no water upgradient of this project site. The wet pond (built with Bar W Ranch East Mixed Use) will capture the required water quality volume then release the remainder downstream. The proposed pond was designed using the TCEQ Technical Guidance Manual for BMP's.

## **PERMANENT STORMWATER SECTION**

### **ATTACHMENT "C"**

All onsite storm water will flow over land and/or pavement where it will be captured by curb inlets and area inlets and transported via storm sewer pipe stubbed to the property that drains to the wet pond (built with Bar W Ranch East Mixed use). This pond (pond located in Bar W Ranch East Mixed Use) captures the required water quality volume then releases the remainder downstream. The proposed pond was designed using the City of Austin Environmental Criteria Manual and the TCEQ Technical Guidance Manual for BMP's.

## **PERMANENT STORMWATER SECTION**

### **ATTACHMENT "D"**

This section has been designed to capture all runoff and transport via a built stubbed out storm sewer to a wet basin (built with the overall Bar W East Mixed Use project). This will prevent the pollutants from entering the adjacent stream until they are reduced to an acceptable level. A concrete wash-out will be used to remove any toxic materials from entering the adjacent stream and should be maintained properly. None of the features located on site are affected by the Chuys Tex-Mex Bar W East Commercial project construction. The identified sensitive feature F-1 has a 50-ft radial buffer with a 150-foot tear drop extension in the direction upgradient from the feature.

**PERMANENT STORMWATER SECTION**

**ATTACHMENT "F"**

**CONSTRUCTION PLANS**

(SEE ATTACHED TCEQ SPREADSHEETS)

Additional information is provided for cells with a red triangle in the upper right corner. Place the cursor over the cell. Text shown in blue indicate location of instructions in the Technical Guidance Manual - RG-348.

Characters shown in red are data entry fields.

Characters shown in black (Bold) are calculated fields. Changes to these fields will remove the equations used in the sp

**1. The Required Load Reduction for the total project:**

Calculations from RG-348

Pages 3-27 to 3-30

Page 3-29 Equation 3.3:  $L_M = 27.2(A_N \times P)$

where:

$L_{M \text{ TOTAL PROJECT}}$  = Required TSS removal resulting from the proposed development = 80% of i

$A_N$  = Net increase in impervious area for the project

P = Average annual precipitation, inches

Site Data: Determine Required Load Removal Based on the Entire Project

County = **Williamson**  
 Total project area included in plan \* = **51.48** acres  
 Predevelopment impervious area within the limits of the plan \* = **0.00** acres  
 Total post-development impervious area within the limits of the plan \* = **38.86** acres  
 Total post-development impervious cover fraction \* = **0.75**  
 P = **32** inches

$L_{M \text{ TOTAL PROJECT}}$  = **33824** lbs.

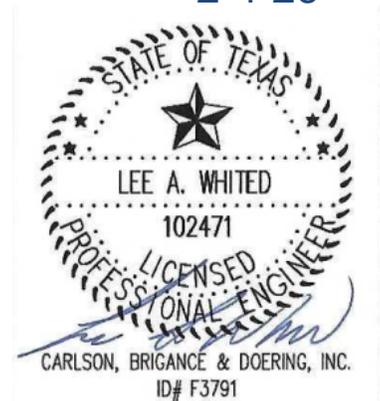
\* The values entered in these fields should be for the total project area.

Number of drainage basins / outfalls areas leaving the plan area = **1**

**2. Drainage Basin Parameters (This information should be provided for each basin):**

Drainage Basin/Outfall Area No. = **A**  
 Total drainage basin/outfall area = **51.48** acres  
 Predevelopment impervious area within drainage basin/outfall area = **0.00** acres  
 Post-development impervious area within drainage basin/outfall area = **38.86** acres  
 Post-development impervious fraction within drainage basin/outfall area = **0.75**  
 $L_{M \text{ THIS BASIN}}$  = **33824** lbs.

2-4-26



**3. Indicate the proposed BMP Code for this basin.**

Proposed BMP = **Wet Basin**  
Removal efficiency = **93** percent

- Aqualogic Cartridge Filter
- Bioretention
- Contech StormFilter
- Constructed Wetland
- Extended Detention
- Grassy Swale
- Retention / Irrigation
- Sand Filter
- Stormceptor
- Vegetated Filter Strips
- Vortechs
- Wet Basin
- Wet Vault

**4. Calculate Maximum TSS Load Removed ( $L_R$ ) for this Drainage Basin by the selected BMP Type.**

RG-348 Page 3-33 Equation 3.7:  $L_R = (\text{BMP efficiency}) \times P \times (A_I \times 34.6 + A_P \times 0.54)$

where:

$A_C$  = Total On-Site drainage area in the BMP catchment area  
 $A_I$  = Impervious area proposed in the BMP catchment area  
 $A_P$  = Pervious area remaining in the BMP catchment area  
 $L_R$  = TSS Load removed from this catchment area by the proposed BMP

$A_C$  = **49.27** acres  
 $A_I$  = **37.94** acres  
 $A_P$  = **11.33** acres  
 $L_R$  = **39250** lbs

**5. Calculate Fraction of Annual Runoff to Treat the drainage basin / outfall area**

Desired  $L_{M \text{ THIS BASIN}}$  = **33824** lbs.

F = **0.86**

**6. Calculate Capture Volume required by the BMP Type for this drainage basin / outfall area.**

Calculations from RG-348

Pages 3-3

Rainfall Depth = **1.38** inches  
Post Development Runoff Coefficient = **0.58**  
On-site Water Quality Volume = **144238** cubic feet

Calculations from RG-348 Pages 3-36 to 3-37

Off-site area draining to BMP = **3.18** acres  
Off-site Impervious cover draining to BMP = **0.00** acres  
Impervious fraction of off-site area = **0.00**  
Off-site Runoff Coefficient = **0.02**  
Off-site Water Quality Volume = **319** cubic feet

Storage for Sediment = **28911**

Total Capture Volume (required water quality volume(s) x 1.20) = **173468** cubic feet

The following sections are used to calculate the required water quality volume(s) for the selected BMP.  
The values for BMP Types not selected in cell C45 will show NA.

**7. Retention/Irrigation System**

Designed as Required in RG-348

Pages 3-42 to 3-46

Required Water Quality Volume for retention basin = **NA** cubic feet

Irrigation Area Calculations:

Soil infiltration/permeability rate = **0.1** in/hr Enter determined permeability rate or assume  
Irrigation area = **NA** square feet  
**NA** acres

**8. Extended Detention Basin System**

Designed as Required in RG-348

Pages 3-46 to 3-51

Required Water Quality Volume for extended detention basin = **NA** cubic feet

**9. Filter area for Sand Filters**

Designed as Required in RG-348

Pages 3-58 to 3-63

**9A. Full Sedimentation and Filtration System**

Water Quality Volume for sedimentation basin = **NA** cubic feet

Minimum filter basin area = **NA** square feet

Maximum sedimentation basin area = **NA** square feet

Minimum sedimentation basin area = **NA** square feet

For minimum water depth of 2 feet

For maximum water depth of 8 feet

**9B. Partial Sedimentation and Filtration System**

Water Quality Volume for combined basins = **NA** cubic feet

Minimum filter basin area = **NA** square feet

Maximum sedimentation basin area = **NA** square feet

Minimum sedimentation basin area = **NA** square feet

For minimum water depth of 2 feet

For maximum water depth of 8 feet

**10. Bioretention System**

Designed as Required in RG-348

Pages 3-63 to 3-65

Required Water Quality Volume for Bioretention Basin = **NA** cubic feet

**11. Wet Basins**

Designed as Required in RG-348

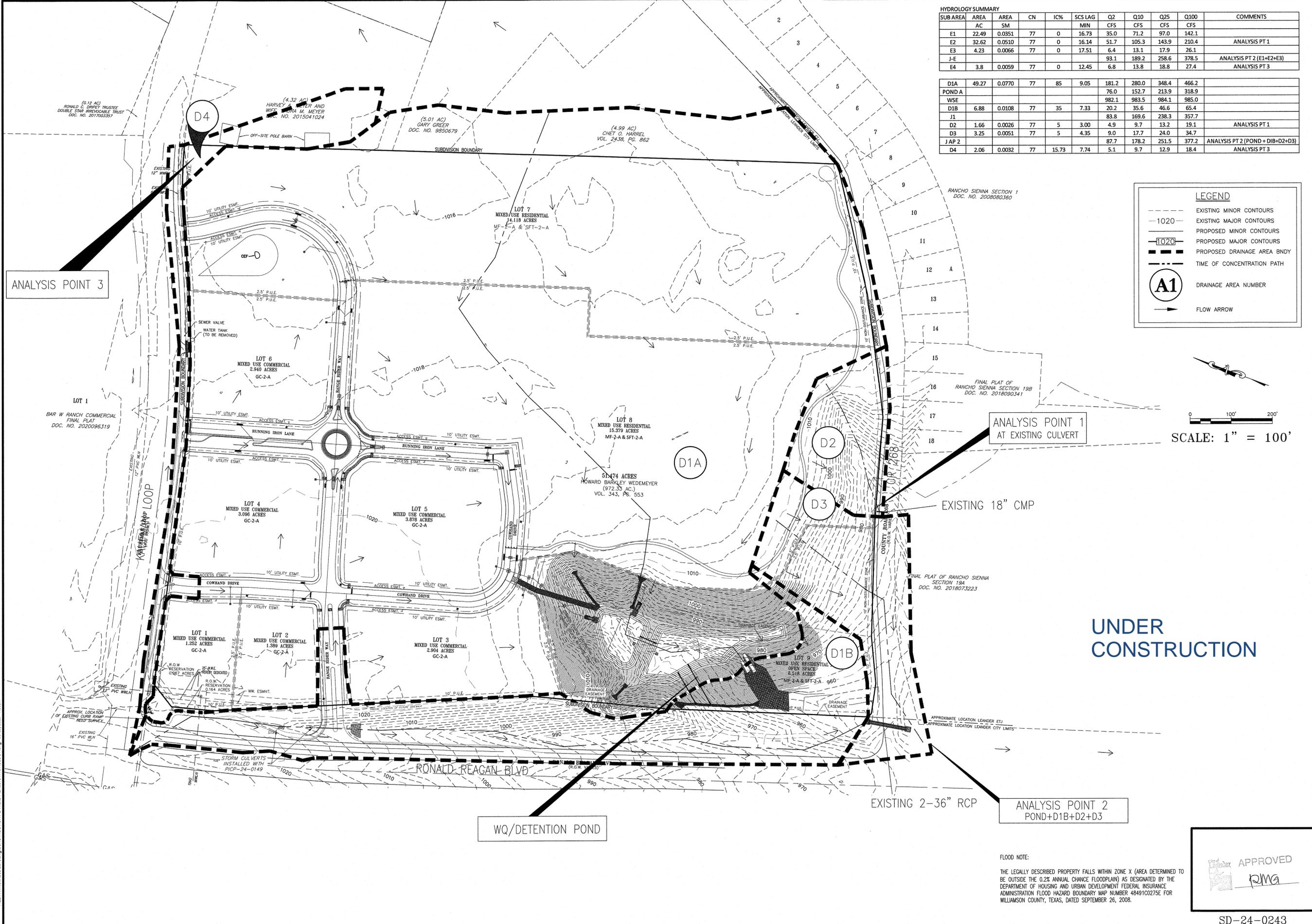
Pages 3-66 to 3-71

Required capacity of Permanent Pool = **173468** cubic feet

Required capacity at WQV Elevation = **317707** cubic feet

Permanent Pool Capacity is 1.20 times the

Total Capacity should be the Permanent Pool plus a second WQV.



**HYDROLOGY SUMMARY**

SUB AREA	AREA AC	AREA SM	CN	IC%	SCS LAG MIN	Q2	Q10	Q25	Q100	COMMENTS
						CFS	CFS	CFS	CFS	
E1	22.49	0.0351	77	0	16.73	35.0	71.2	97.0	142.1	ANALYSIS PT 1
E2	32.62	0.0510	77	0	16.14	51.7	105.3	143.9	210.4	ANALYSIS PT 2 (E1+E2+E3)
E3	4.23	0.0066	77	0	17.51	6.4	13.1	17.9	26.1	ANALYSIS PT 3
J-E						93.1	189.2	258.6	378.5	
E4	3.8	0.0059	77	0	12.45	6.8	13.8	18.8	27.4	
D1A	49.27	0.0770	77	85	9.05	181.2	280.0	348.4	466.2	
POND A						76.0	152.7	213.9	318.9	
WSE						982.1	983.5	984.1	985.0	
D1B	6.88	0.0108	77	35	7.33	20.2	35.6	46.6	65.4	
J1						83.8	169.6	238.3	357.7	
D2	1.66	0.0026	77	5	3.00	4.9	9.7	13.2	19.1	ANALYSIS PT 1
D3	3.25	0.0051	77	5	4.35	9.0	17.7	24.0	34.7	
JAP 2						87.7	178.2	251.5	377.2	ANALYSIS PT 2 (POND + D1B+D2+D3)
D4	2.06	0.0032	77	15.73	7.74	5.1	9.7	12.9	18.4	ANALYSIS PT 3

**LEGEND**

- - - - - EXISTING MINOR CONTOURS
- - - - - EXISTING MAJOR CONTOURS
- - - - - PROPOSED MINOR CONTOURS
- - - - - PROPOSED MAJOR CONTOURS
- - - - - PROPOSED DRAINAGE AREA BNDY
- - - - - TIME OF CONCENTRATION PATH
- (A1) DRAINAGE AREA NUMBER
- FLOW ARROW

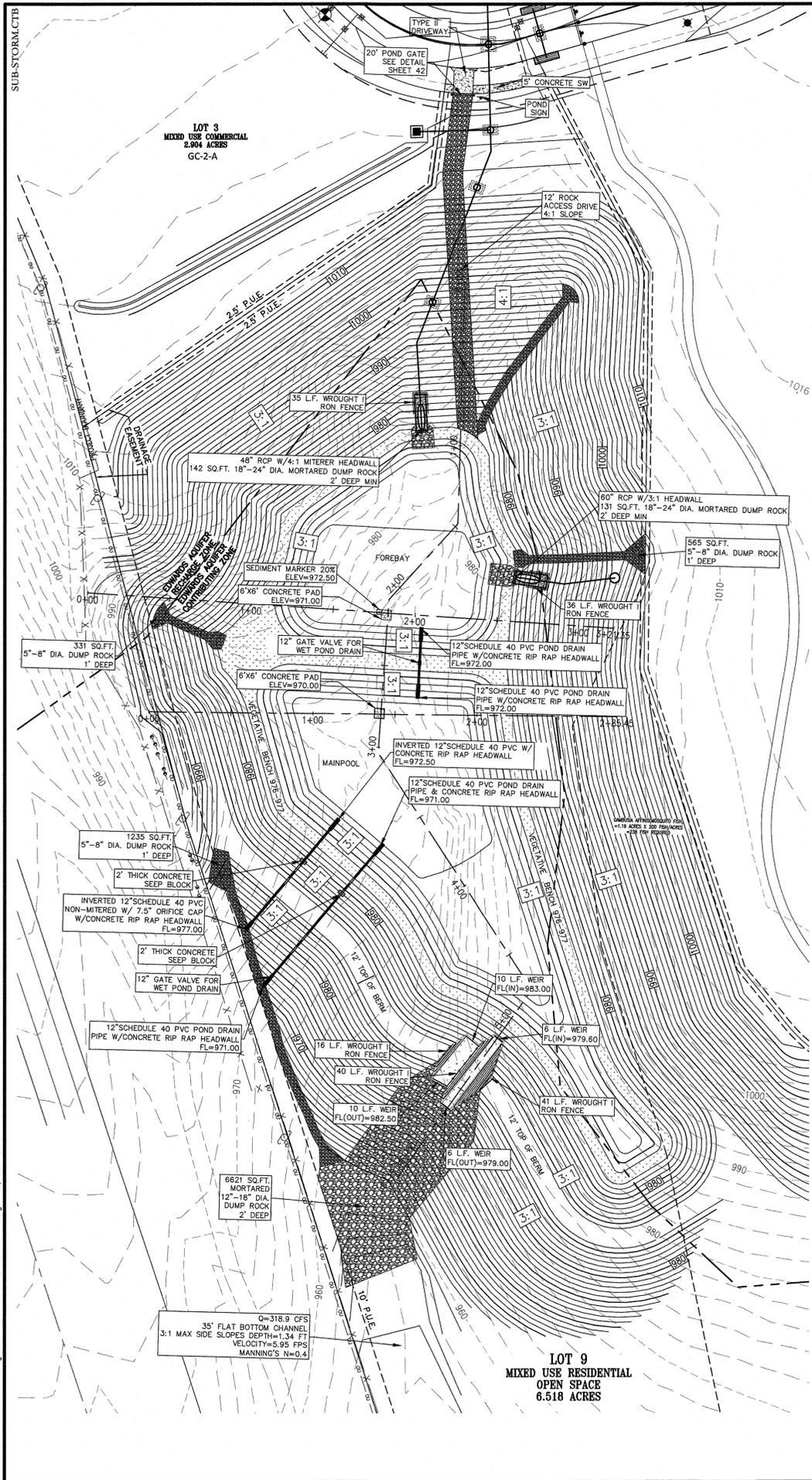
SCALE: 1" = 100'

**UNDER CONSTRUCTION**

FLOOD NOTE:  
THE LEGALLY DESCRIBED PROPERTY FALLS WITHIN ZONE X (AREA DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN) AS DESIGNATED BY THE DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT FEDERAL INSURANCE ADMINISTRATION FLOOD HAZARD BOUNDARY MAP NUMBER 48491C0275E FOR WILLIAMSON COUNTY, TEXAS, DATED SEPTEMBER 26, 2008.

APPROVED  
RWA

DESIGNED BY: CRB/PS	DRAFTED BY:
DATE:	
REVISION:	
SHEET NAME: PROPOSED HYDROLOGY MAP JOB NAME: BAR W RANCH EAST MIXED USE PROJECT: SITE DEVELOPMENT PLANS	
DATE: JULY 2025	
JOB NUMBER: 5375	
SHEET: 15	OF 63



**WATER QUALITY WET POND A VOLUME TABLE**

START ELEV. (FT*2)	AREA (FT*2)	AVG AREA (FT*2)	VOLUME (FT*3)	TOTAL VOLUME (FT*3)
971	38.00	2981.00	0.00	0
972	9626.00	7625.00	2981.00	2981
973	9324.00	7625.00	7625.00	10606
974	10856.00	10090.00	10090.00	20696
975	12490.00	11673.00	11673.00	32369
976	14225.00	13357.50	13357.50	45654

**MAIN POOL**

START ELEV. (FT*2)	AREA (FT*2)	AVG AREA (FT*2)	VOLUME (FT*3)	TOTAL VOLUME (FT*3)
970	38.00	4528.50	0.00	0
971	9021.00	11688.50	4528.50	4529
972	14356.00	11688.50	11688.50	16217
973	16827.00	15591.50	15591.50	31809
974	20280.00	21944.00	16553.50	50362
975	23608.00	21944.00	21944.00	72306
976	27040.00	25324.00	25324.00	97630

**PERMANENT POOL**

START ELEV. (FT*2)	AREA (FT*2)	AVG AREA (FT*2)	VOLUME (FT*3)	TOTAL VOLUME (FT*3)
977	41265.00	46632.50	0.00	0
978	52000.00	46632.50	46632.50	46633

Required Capacity=173468 total volume permanent pool = 173416

**WATER QUALITY STORAGE**

START ELEV. (FT*2)	AREA (FT*2)	AVG AREA (FT*2)	VOLUME (FT*3)	TOTAL VOLUME (FT*3)
977	52000.00	53783.00	0.00	0
978	55566.00	53783.00	53783.00	53783
979	59203.00	57384.50	57384.50	111168
980	62908.00	61055.50	61055.50	172223
981	66679.00	64793.50	64793.50	237017

Required Capacity=217787 total WQ Volume = 326117

**HYDROLOGY SUMMARY**

SUB AREA	AREA AC	AREA SQ MI	CN	ICN	SSCS	Q2 CFS	Q10 CFS	Q25 CFS	Q100 CFS	COMMENTS
E1	22.49	0.0851	77	0	16.73	35.0	71.2	97.0	142.1	ANALYSIS PT 1
E2	32.62	0.0510	77	0	16.34	51.7	105.3	143.9	210.4	ANALYSIS PT 1
E3	4.23	0.0096	77	0	27.51	6.4	13.1	17.9	26.1	ANALYSIS PT 2 (E1+E2+E3)
J-E	3.8	0.0099	77	0	12.45	6.8	13.8	18.8	27.4	ANALYSIS PT 3

**CONCRETE NOTE:**  
ALL EXPOSED CONCRETE THAT IS VISIBLE ALONG THE CONCRETE WEIR OR MORTARED ROCK IS REQUIRED TO BE MADE OF STONE OR CLAD IN STONE INCLUDING BUT NOT LIMITED TO LEDGESTONE, FIELDSTONE, CAST STONE, OR OTHER DECORATIVE MATERIALS SUCH AS STAMPED AND TINTED CONCRETE THAT RESEMBLES STONE OR BRICK AS APPROVED BY THE DIRECTOR OF PLANNING. ALL OTHER EXPOSED CONCRETE IS REQUIRED TO BE MADE OF STONE OR CLAD IN STONE AS LISTED ABOVE OR TEXTURED AND TINTED IN EARTHEN COLORS. THIS INCLUDES THE ACCESS ROAD.

**SUBMERGED EARTH BERM NOTES:**  
1. THE MATERIALS USED FOR CONSTRUCTION MUST BE STABLE WHEN SATURATED AND WHEN THE MAXIMUM HYDROSTATIC FORCE IS APPLIED.  
2. THE SIDE SLOPE MUST BE STABLE WHEN SATURATED.  
3. THE BERM MUST PROTECT AGAINST EROSION FORCES ON THE TOP OF THE BERM IN HIGH FLOW CONDITIONS. WHEN THE EARTH BERM IS USED, IT SHOULD ALSO BE INCLUDED AS PART OF THE VEGETATED BENCH.

Texas Commission on Environmental Quality

**TSS Removal Calculations 04-20-2009** Project Name: BAR W EAST MIXED USE Date Prepared: 4/8/2025

Additional information is provided for cells with a red triangle in the upper right corner. Place the cursor over the cell. Text shown in blue indicates location of instructions in the Technical Guidance Manual - RG-348. Characters shown in red are data entry fields. Characters shown in black (Bold) are calculated fields. Changes to these fields will remove the equations used in the spreadsheet.

1. The Required Load Reduction for the total project: Calculations from RG-348 Pages 3-27 to 3-30

where:  $L_d$  TOTAL PROJECT = Required TSS removal resulting from the proposed development = 80% of increased load  
 $A_d$  = Net increase in impervious area for the project  
 $P$  = Average annual precipitation, inches

Site Data: Determine Required Load Removal Based on the Entire Project  
 County = Williamson  
 Total project area included in plan = 51.48 acres  
 Predevelopment impervious area within the limits of the plan = 0.00 acres  
 Total post-development impervious area within the limits of the plan = 38.68 acres  
 Total post-development impervious cover fraction = 0.75  
 $P$  = 32 inches

$L_d$  TOTAL PROJECT = 33824 lbs.

\* The values entered in these fields should be for the total project area.  
 Number of drainage basins / outfalls areas leaving the plan area = 1

2. Drainage Basin Parameters (This information should be provided for each basin):

Drainage Basin/Outfall Area No. = A

Total drainage basin/outfall area = 51.48 acres  
 Predevelopment impervious area within drainage basin/outfall area = 0.00 acres  
 Post-development impervious area within drainage basin/outfall area = 38.68 acres  
 Post-development impervious fraction within drainage basin/outfall area = 0.75  
 $L_d$  THIS BASIN = 33824 lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = Wet Basin  
 Removal efficiency = 93 percent

Aqualogic Cartridge Filter  
 Bioretention  
 Contech StormFilter  
 Constructed Wetland  
 Extended Detention  
 Grassy Swale  
 Retention / Irrigation  
 Sand Filter  
 Stormceptor  
 Vegetated Filter Strips  
 Vortechs  
 Wet Basin  
 Wet Vault

4. Calculate Maximum TSS Load Removed ( $L_d$ ) for this Drainage Basin by the selected BMP Type.

RG-348 Page 3-33 Equation 3.7:  $L_d = (BMP \text{ efficiency}) \times P \times (A_d \times 34.6 + A_p \times 0.54)$

where:  $A_d$  = Total On-Site drainage area in the BMP catchment area  
 $A_p$  = Impervious area proposed in the BMP catchment area  
 $A_r$  = Pervious area remaining in the BMP catchment area  
 $L_d$  = TSS Load removed from this catchment area by the proposed BMP

$L_d$  = 48.27 acres  
 $A_p$  = 37.94 acres  
 $A_r$  = 11.33 acres  
 $L_d$  = 39250 lbs

5. Calculate Fraction of Annual Runoff to Treat the drainage basin / outfall area

Desired  $L_d$  THIS BASIN = 33824 lbs.  
 $F$  = 0.86

6. Calculate Capture Volume required by the BMP Type for this drainage basin / outfall area. Calculations from RG-348 Pages 3-34 to 3-36

Rainfall Depth = 1.38 inches  
 Post Development Runoff Coefficient = 0.58  
 On-site Water Quality Volume = 144238 cubic feet

Calculations from RG-348 Pages 3-36 to 3-37

Off-site area draining to BMP = 3.16 acres  
 Off-site impervious cover draining to BMP = 0.00 acres  
 Impervious fraction of off-site area = 0.00  
 Off-site Runoff Coefficient = 0.02  
 Off-site Water Quality Volume = 319 cubic feet

Storage for Sediment = 28911 cubic feet  
 Total Capture Volume (required water quality volume)  $\times$  1.20 = 173468 cubic feet  
 The following sections are used to calculate the required water quality volume(s) for the selected BMP.  
 The values for BMP Types not selected in cell C45 will show NA.

7. Retention/Infiltration System

Required Water Quality Volume for retention basin = NA cubic feet

Irrigation Area Calculations:

Soil infiltration/permeability rate = 0.1 in/hr Enter determined permeability rate or assumed value of 0.1  
 Irrigation area = NA square feet  
 NA acres

8. Extended Detention Basin System

Designed as Required in RG-348 Pages 3-46 to 3-51

Required Water Quality Volume for extended detention basin = NA cubic feet

9. Filter area for Sand Filters

Designed as Required in RG-348 Pages 3-58 to 3-63

9A. Full Sedimentation and Filtration System

Water Quality Volume for sedimentation basin = NA cubic feet  
 Minimum filter basin area = NA square feet  
 Maximum sedimentation basin area = NA square feet For minimum water depth of 2 feet  
 Minimum sedimentation basin area = NA square feet For maximum water depth of 8 feet

9B. Partial Sedimentation and Filtration System

Water Quality Volume for combined basins = NA cubic feet  
 Minimum filter basin area = NA square feet  
 Maximum sedimentation basin area = NA square feet For minimum water depth of 2 feet  
 Minimum sedimentation basin area = NA square feet For maximum water depth of 8 feet

10. Bioretention System

Designed as Required in RG-348 Pages 3-63 to 3-65

Required Water Quality Volume for Bioretention basin = NA cubic feet

11. Wet Basins

Designed as Required in RG-348 Pages 3-66 to 3-71

Required capacity of Permanent Pool = 173468 cubic feet  
 Required capacity at WQV Elevation = 317787 cubic feet  
 Permanent Pool Capacity is 1.20 times the WQV  
 Total Capacity should be the Permanent Pool Capacity plus a second WQV.

**LEGEND**

VEGETATIVE BENCH (PLANTING NOT REQUIRED) SEE WET POND DETAIL SHEETS

EXISTING GROUND CONTOURS

FINISHED GROUND CONTOURS

0 30 60  
SCALE: 1" = 30'

**WATER QUALITY DRAWDOWN CALCULATIONS**

VOLUME TO DRAWDOWN = 147,801 CU.FT.  
 DRAWDOWN TIME = 24 HRS  
 $Q = 147,801 \text{ CU.FT.} / (24 \text{ HRS} \times 3600) = 1.71 \text{ CFS}$   
 PROPOSED WATER QUALITY SURFACE ELEV. = 979.60 FT.  
 PERMANENT POOL ELEVATION = 977.00 FT  
 $H = 1/2 * (979.60 - 977.00) = 1.30 \text{ FT}$   
 $Q = 0.6A(2GH)^{1/2} = 0.6A(64.4 \times 1.30)^{1/2}$   
 $A = 0.311 \text{ SQ.FT.}$   
 $A = \frac{Q}{V} ; D = 0.630 \text{ FT} = 7.56" \text{ MAX.}$   
 USE 12" PVC W/ 7.5" ORIFICE FOR INVERTED PIPE

24 HR MAX PERMANENT POOL DRAIN NOTE  
 USE 12" PVC DRAIN PIPE WITH VALVE TO DRAIN PERMANENT POOL FASTER THAN 24 HRS.

**UNDER CONSTRUCTION**

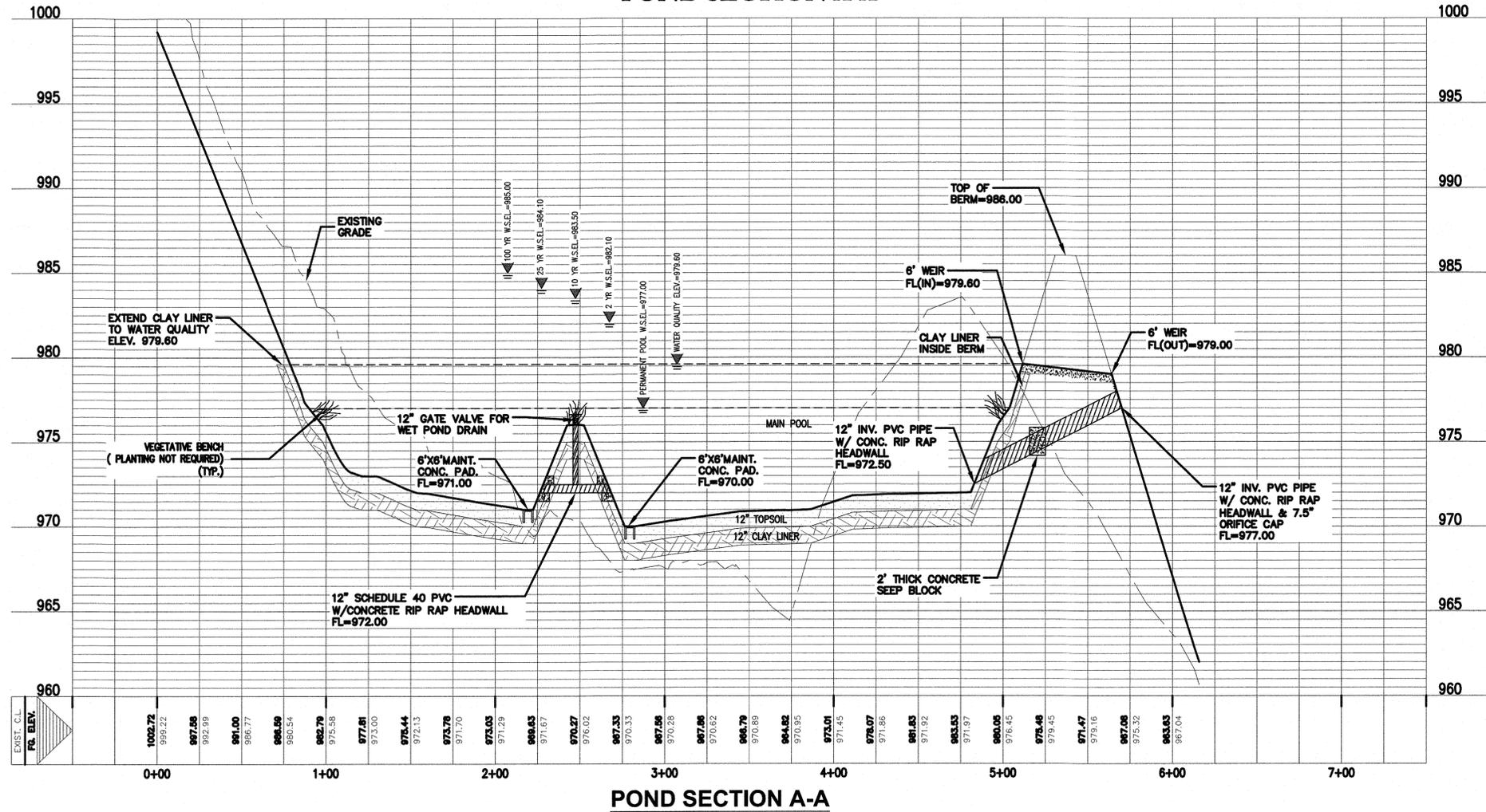
APPROVED  
RMG

DESIGNED BY: CRB/PS  
 DRAFTED BY:  
 DATE:  
 REVISION:  
 SHEET NAME: WET & DETENTION POND 'A'  
 JOB NAME: BAR W RANCH EAST MIXED USE  
 PROJECT: SITE DEVELOPMENT PLANS  
 SHEET: 40 OF 63  
 DATE: JULY 2025  
 JOB NUMBER: 5375  
 SHEET: SD-24-0243

Carlson, Brigrance & Doering, Inc.  
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CHARLES R. BRIGRANCE JR.  
 64346  
 LICENSED PROFESSIONAL ENGINEER  
 CARLSON, BRIGRANCE & DOERING, INC.  
 D# F3791

POND SECTION A-A



**LEGEND**

- VEGETATIVE BENCH (PLANTING NOT REQUIRED) SEE WET POND DETAIL SHEETS
- CLAY LINER
- PROTECTIVE SOIL LAYER
- EXISTING GROUND CONTOURS
- FINISHED GROUND CONTOURS

0 40' 80'  
SCALE: 1" = 40'

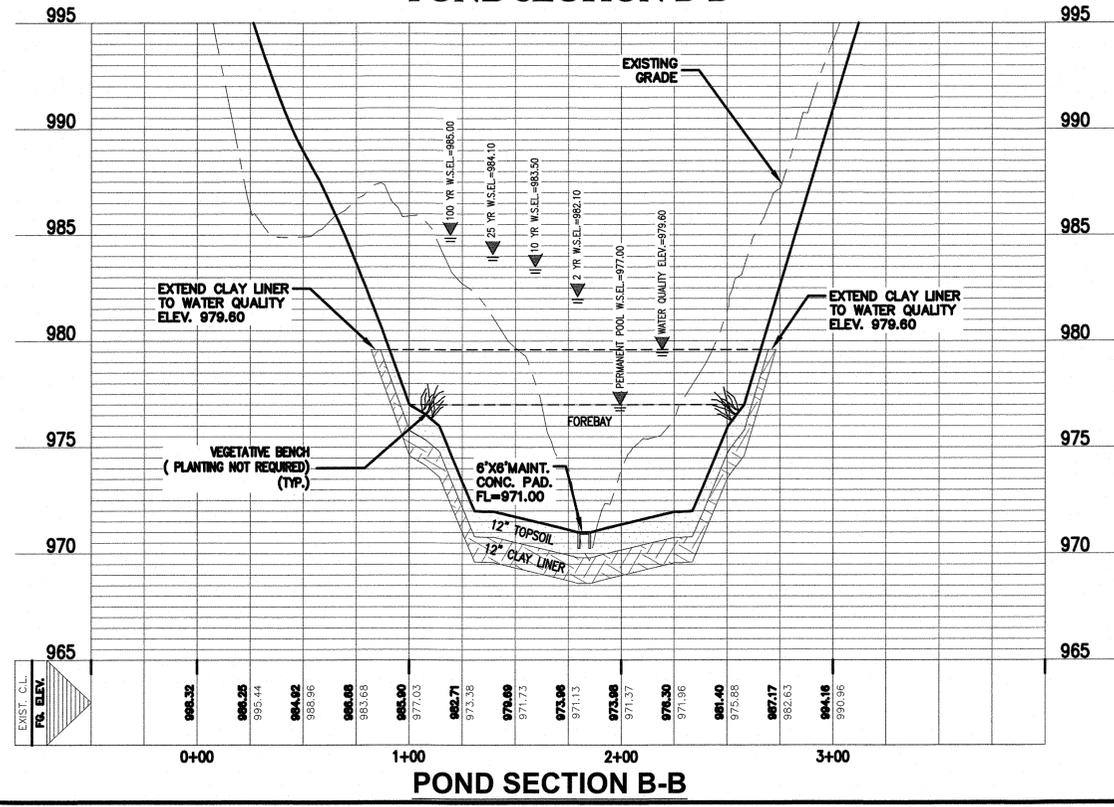
DESIGNED BY	DRAFTED BY
CRB/PS	
DATE	
REVISION	

**Carlson, Brigrance & Doering, Inc.**  
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Main Office: 5501 West William Cannon Dr., Austin, Texas 78750  
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www.cbdieng.com

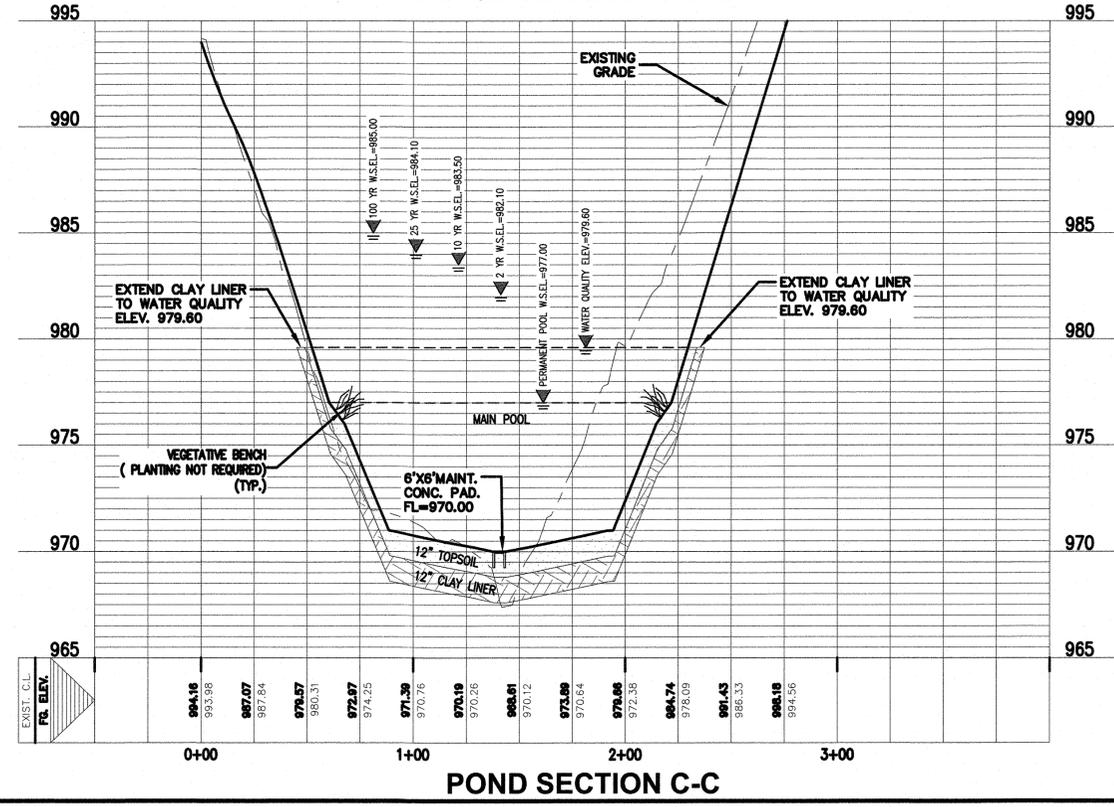
**UNDER CONSTRUCTION**

POND SECTION A-A

POND SECTION B-B



POND SECTION C-C



APPROVED  
RMG

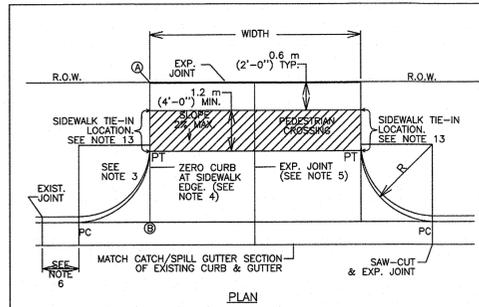
SHEET NAME: WET & DETENTION POND 'A' SECTIONS  
JOB NAME: BAR W RANCH EAST MIXED USE  
PROJECT: SITE DEVELOPMENT PLANS

07/23/2025  
STATE OF TEXAS  
CHARLES R. BRIGANCE, JR.  
64346  
LICENSED PROFESSIONAL ENGINEER  
CARLSON, BRIGANCE & DOERING, INC.  
ID# F3791

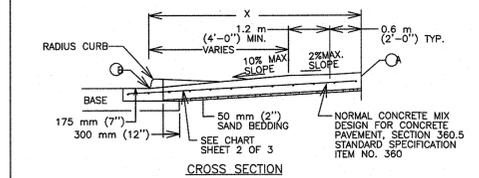
DATE	JULY 2025
JOB NUMBER	5375
SHEET	41 OF 63

SD-24-0243

FILE PATH: \ACAD\375\5\CONSTRUCTION PLAN\Site Plans\5-POND.dwg - Jul 23, 2024 - 7:57am

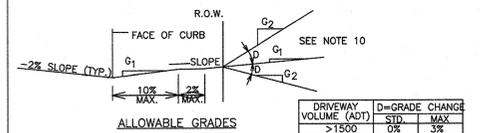


NOTE: ALL DRIVEWAYS SHALL BE SLOPED TOWARDS THE STREET FROM THE R.O.W. LINE. ELEVATION OF POINT (A) ABOVE POINT (B) IS, TYPICALLY A MINIMUM OF 150 mm (6") PLUS 20 mm/m (1/2" RISE/FOOT) OVER DISTANCE "X" IN METERS (FEET).



CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS TYPE II DRIVEWAY  
 RECORD COPY SIGNED BY CUONG TRAN 02/24/10 THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. 433S-2  
 STANDARD NO. 433S-2  
 1 OF 2

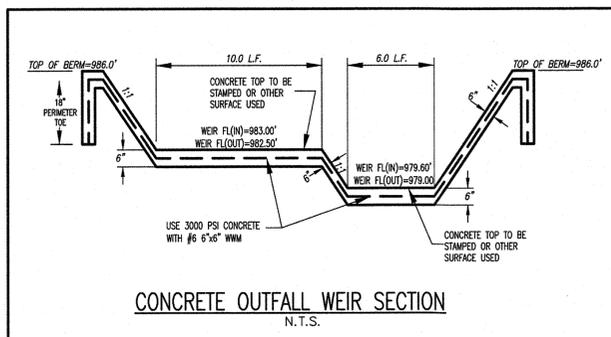
USE	THICKNESS	REINFORCEMENT
DRIVEWAYS FOR PASSENGER VEHICLE PARKING LOTS	150 mm (6") MIN.	125 mm (5") MIN. CONCRETE WITH ONE LAYER OF 3M (#4) BARS PLACED ON CHAIRS AT MIDDLE OF SLAB AT NO MORE THAN 450 mm (18") O.C. BOTH DIRECTIONS
ALL OTHERS	175 mm (7") MIN.	125 mm (5") MIN. CONCRETE WITH ONE LAYER OF 3M (#4) BARS PLACED ON CHAIRS AT MIDDLE OF SLAB AT NO MORE THAN 450 mm (18") O.C. BOTH DIRECTIONS



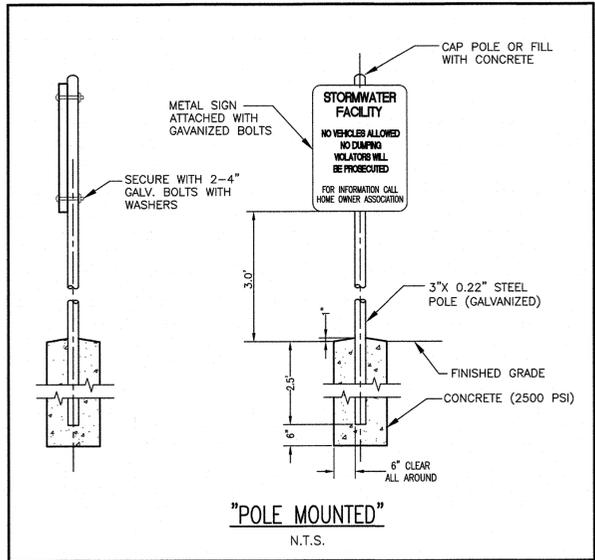
DRIVEWAY VOLUME (AOT)	STD.	MAX.
>1500	0%	3%
500-1500	3%	6%
< 500	6%	15%

- NOTES:
- ALL TYPE II DRIVEWAYS SHALL HAVE RADIUS ENDS.
  - DRIVEWAY WIDTHS AND RADIUS DIMENSIONS, ONE-WAY TRAVEL REQUIREMENTS, AND GEOMETRIC LAYOUT ARE HIGHLY VARIABLE. SUBJECT TO SITE-SPECIFIC CONDITIONS AND REQUIREMENTS. SEE TRANSPORTATION CRITERIA MANUAL, SECTION 5 "DRIVEWAYS".
  - THE DRIVEWAY EDGE SHALL BE SMOOTHLY TRANSITIONED INTO THE SIDEWALK TIE-IN LOCATION BEGINNING AT THE RADIUS PC LINE.
  - "ZERO" CURB AT PT OR SIDEWALK EDGE, WHICHEVER IS ENCOUNTERED FIRST.
  - PLACE AN EXPANSION JOINT DOWN THE CENTER OF DRIVEWAY ALL DRIVEWAYS.
  - IF DIMENSION IS LESS THAN 1.5 METERS (5 FEET), REMOVE CURB AND GUTTER TO EXISTING JOINT AND POUR MONOLITHICALLY WITH DRIVEWAY.
  - IF THE BASE IS OVER-EXCAVATED WHERE THE CURB AND GUTTER WERE REMOVED, BACKFILL WITH CONCRETE MONOLITHICALLY WITH THE DRIVEWAY.
  - TYPE II DRIVEWAYS ARE TO BE LOCATED NO CLOSER TO THE CORNER OF INTERSECTING RIGHT OF WAY THAN BOX OF PARCEL FRONTAGE AT 30 METERS (100 FEET), WHICHEVER IS LESS.
  - DRIVEWAY SHALL NOT BE CONSTRUCTED WITHIN THE CURB RETURN OF A STREET INTERSECTION.
  - WHILE THE PROPERTY OWNER REMAINS RESPONSIBLE FOR GRADE BREAKS WITHIN PRIVATE PROPERTY, THE ARCHITECT/ENGINEER SHALL BE RESPONSIBLE FOR THE DRIVEWAY IS ESSENTIAL TO EMERGENCY VEHICLE ACCESS AND IS GREATER THAN 10%.
  - USE 12 MM (1/2") ASPHALT BOARD OR OTHER APPROVED MATERIAL FOR CURB AND GUTTER EXPANSION JOINTS. SIDEWALK, AT THE R.O.W. LINE AND AT MIDWIDTH, SEE NOTE 5.
  - SEE TRANSPORTATION CRITERIA MANUAL, SECTION 5 FOR OTHER DRIVEWAY REQUIREMENTS.
  - THE SIDEWALK, REGARDLESS OF ITS LOCATION WITH RESPECT TO THE CURB OR PROPERTY LINE, SHALL BE CONNECTED TO THE DRIVEWAY AT THESE LOCATIONS.
  - WATER METER BOXES AND WASTEWATER CLEAN OUTS ARE PROHIBITED FROM BEING LOCATED IN DRIVEWAY AREAS.

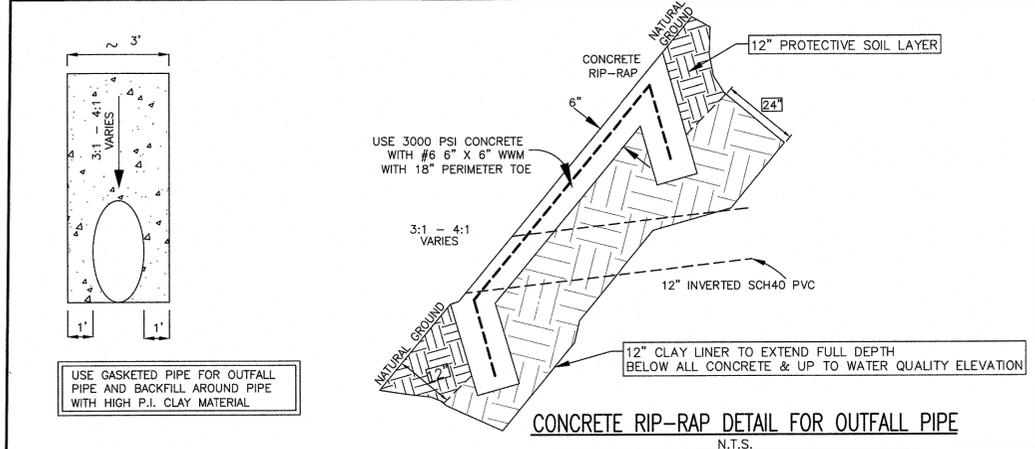
CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS TYPE II DRIVEWAY  
 RECORD COPY SIGNED BY CUONG TRAN 02/24/10 THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. 433S-2  
 STANDARD NO. 433S-2  
 2 OF 2



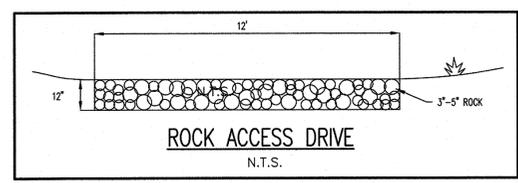
CONCRETE OUTFALL WEIR SECTION N.T.S.



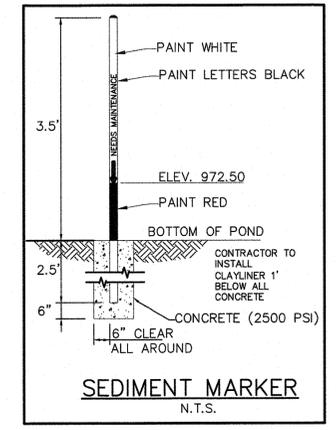
"POLE MOUNTED" N.T.S.



CONCRETE RIP-RAP DETAIL FOR OUTFALL PIPE N.T.S.



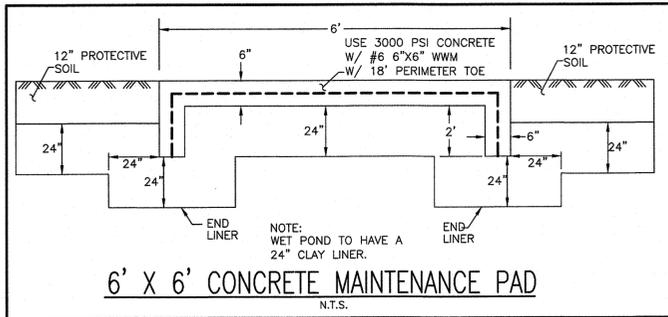
ROCK ACCESS DRIVE N.T.S.



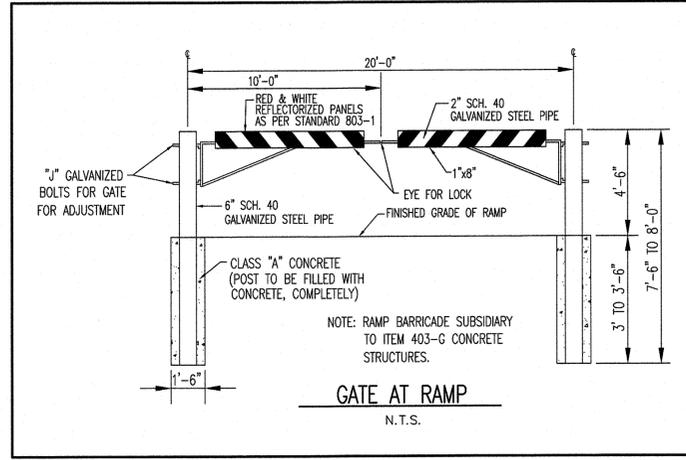
SEDIMENT MARKER N.T.S.



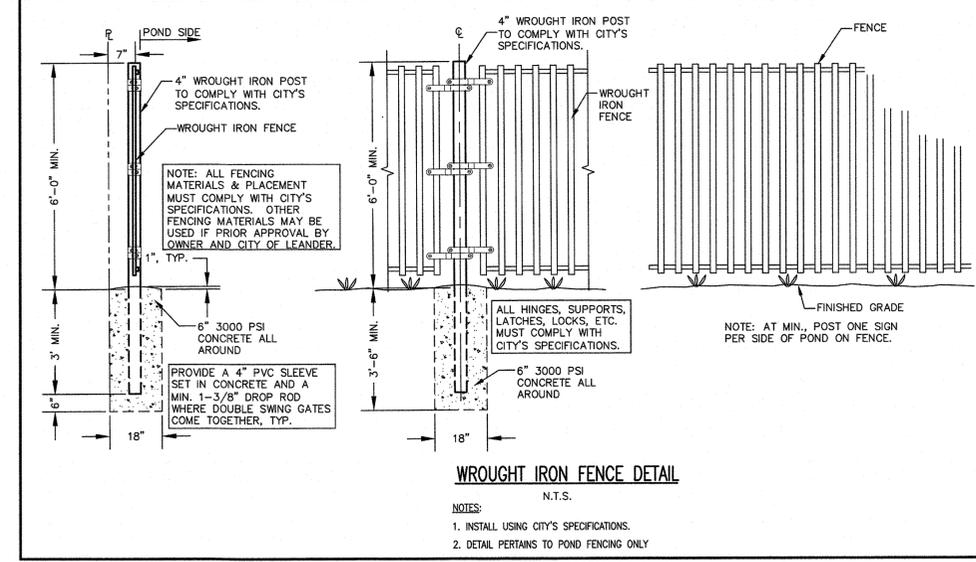
STORMWATER SIGN DETAIL N.T.S.



6' X 6' CONCRETE MAINTENANCE PAD N.T.S.



GATE AT RAMP N.T.S.



WROUGHT IRON FENCE DETAIL N.T.S.

DESIGNED BY CRB/PS  
 DRAFTED BY:  
 DATE:  
 REVISION:  
 Carlsson, Brigrance & Doering, Inc.  
 Civil Engineering & Surveying  
 FIRM ID #F3791  
 Main Office: 5501 West Loop South, Suite 600, Austin, Texas 78749  
 Phone No.: (512) 281-5160  
 www.cbdbeng.com

SHEET NAME: WET & DETENTION POND 'A' DETAILS  
 JOB NAME: BAR W RANCH EAST MIXED USE  
 PROJECT: SITE DEVELOPMENT PLANS

APPROVED  
 DATE: JULY 2025  
 JOB NUMBER: 5375  
 SHEET: 42 OF 63

UNDER CONSTRUCTION

ENGINEERING.CTB  
FILE PATH: J:\ACR\5375\5375\CONSTRUCTION PLANS\Site Plans\5375-POND.dwg - Jul 23, 2025 - 7:57am

STANDARD NOTES

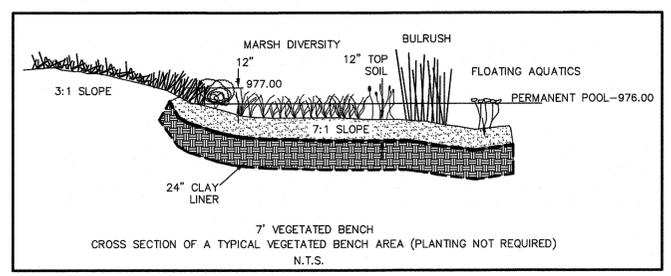
BASIN LINER (WET POND TO HAVE 12" CLAY LINER)  
Impermeable liner must be clay.  
Clay liners shall meet the following specifications:

WET POND LINER RECOMMENDATION  
A. SELECTION OF FILL MATERIAL SHOULD BE GUIDED BY THE FOLLOWING CRITERIA:

Table 3-6 Clay Liner Specifications (COA, 2004) with columns: Property, Test Method, Unit, Specification. Rows include Permeability, Plasticity Index of Clay, Liquid Limit of Clay, Clay Particles Passing, and Clay Compaction.

- B. COMPACTION SHOULD BE 95 PERCENT OF MAXIMUM LABORATORY DENSITY DETERMINED IN ACCORDANCE WITH AMERICAN SOCIETY OF TESTING MATERIALS, METHOD ASTM D 698, USING A COMPACTIVE EFFORT OF 7.16 FT.LBS./CU.IN.
- C. PLACEMENT SHOULD BE IN LIFTS NOT EXCEEDING EIGHT INCHES AFTER COMPACTION. EACH COMPACTED LIFT SHOULD BE INSPECTED AND TESTED FOR DENSITY COMPLIANCE BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACING THE NEXT LIFT.
- D. TESTING AND QUALIFICATION OF RAW FILL MATERIAL, PLACEMENT, AND COMPACTION SHALL BE PERFORMED BY THE GEOTECHNICAL ENGINEER. A 110 LB. SAMPLE OF PROPOSED FILL MATERIAL SHOULD BE SUBMITTED TO GEOTECHNICAL ENGINEER FOR APPROVAL AND FOR DETERMINATION OF MOISTURE-DENSITY RELATIONSHIP IN ADVANCE OF FILLING AND COMPACTION OPERATIONS TO PERMIT INSPECTION AND TESTING AS FILL IS PLACED.
- E. DEVIATIONS FROM THE ABOVE CRITERIA MAY BE PERMITTED ONLY UPON APPROVAL OF THE GEOTECHNICAL ENGINEER ON AN INDIVIDUAL BASIS.

ELEVATION VERIFICATION  
CONTRACTOR MUST PROVIDE A SURVEY OF SUBGRADE, CLAY LINER, AND TOPSOIL AT EACH FINISHED GRADE ELEVATION BEFORE PROCEEDING. CONTRACTOR SHALL NOT PROCEED WITH CLAY LINER UNTIL SUBGRADE ELEVATION IS APPROVED. CONTRACTOR SHALL NOT PROCEED WITH TOPSOIL UNTIL CLAY LINER IS APPROVED. CONTRACTOR SHALL NOT FILL POND UNTIL TOPSOIL IS APPROVED.



NOTE: WETPOND TO HAVE 12" TOPSOIL & 24" CLAY LINER

GAMBUSIA AFFINIS(MOSQUITO FISH)  
=1.19 ACRES X 200 FISH/ACRES  
=238 FISH REQUIRED

GENERAL:

1. MICROBIAL INITIATION - A SUBSTANTIAL PORTION OF THE POLLUTANT REMOVAL IN WET PONDS IS DUE TO BIOLOGICAL PROCESSES. BACTERIA IN THE POND SUBSTRATE REMOVE NUTRIENTS THROUGH A PROCESS OF DENITRIFICATION. THESE MICROBIAL PROCESSES REQUIRE AN ORGANIC FOOD SOURCE, SUCH AS DECAYING PLANT LITTER. BECAUSE IT IS THE SUPPLY OF ORGANIC CARBON THAT DETERMINES NUTRIENT REMOVAL - MORE THAN UPTAKE BY LIVING PLANTS - DENITRIFICATION CAN BE EXPECTED TO CONTINUE EVEN DURING COLD-WEATHER PLANT DORMANCY.

2. INTEGRATED PEST MANAGEMENT - AS WITH ANY LANDSCAPE, THERE IS A NEED FOR PEST MANAGEMENT IN WET PONDS. TO THE EXTENT POSSIBLE, THESE CRITERIA ARE DESIGNED TO MINIMIZE THE POTENTIAL FOR PESTS WITHIN A WET POND.

ALGAE - HIGH NUTRIENT LOADS IN WET PONDS MAY CAUSE ALGAE BLOOMS TO OCCUR. PUNGENT ODOR IS OFTEN ASSOCIATED WITH THESE ALGAE BLOOMS. HOWEVER, TREATING WITH AN ALGACIDE IS NOT RECOMMENDED BECAUSE BLOOMS ARE USUALLY SHORT LIVED AND ARE CONSIDERED DESIRABLE FOR NUTRIENT REMOVAL.

WILDLIFE - WILDLIFE SUCH AS NUTRIA AND DEER ARE OCCASIONALLY A PEST OF WET PONDS IN THE AUSTIN AREA. EVALUATION OF THE POTENTIAL OF SUCH WILDLIFE INHABITING OR BEING ATTRACTED TO THE PROPOSED POND SITE IS REQUIRED.

MOSQUITO CONTROL - MOSQUITOES ARE PROBLEMATIC IN URBAN AREAS. THERE IS THE POTENTIAL FOR STANDING WATER IN WET PONDS TO BECOME IDEAL BREEDING LOCALITIES. THE WET POND SHOULD BE STOCKED WITH THE LOCAL NATIVE FISH SPECIES GAMBUSIA AFFINIS TO SERVE AS A BIOLOGICAL CONTROL FOR MOSQUITOES.

DOMESTIC WATERFOWL - DOMESTIC WATERFOWL, INCLUDING GEESE AND SWANS CAN DESTROY VEGETATION AND INCREASE POLLUTANT LOADING IN WET POND SYSTEMS. IN ADDITION, WATERFOWL CAN BECOME NUISANCES TO PROPERTY OWNERS NEAR THE POND.

CARP AND GOLDFISH - CARP AND GOLDFISH ARE BOTTOM-FEEDERS THAT CAN CAUSE TURBIDITY AND OTHER PROBLEMS. THEY SHOULD NOT BE INTRODUCED INTO A WET POND.

3. WATER - AFTER THE POND LINER IS COMPLETED, THE BASIN MUST FILL UP WITH WATER WITHIN A REASONABLE TIME PERIOD, PREFERABLY WITHIN ONE WEEK. SAFETY CONCERNS AND POND LINER INTEGRITY CONCERNS MUST BE PROPERLY ADDRESSED DURING POND CONSTRUCTION.

AERATION AND RECIRCULATION UNIT (OPTIONAL) - PRIVATELY MAINTAINED WET PONDS MAY INCLUDE SOME TYPE OF AERATION DEVICE (SUCH AS A FOUNTAIN) WHICH COULD ENHANCE THE DISSOLVED OXYGEN CONCENTRATION.

MAKE-UP WATER - A NEARBY SOURCE FOR MAKE-UP (SUPPLEMENTAL) WATER IS RECOMMENDED AS A WAY TO MAINTAIN AN ADEQUATE PERMANENT POOL LEVEL. SHOULD THE LEVEL DROP TO A SEVERE DROUGHT, THIS COULD INCLUDE A WELL, A HOSE BIBB, OR A NEARBY FIRE HYDRANT.

4. SOIL LINER MATERIAL MINIMUM PHYSICAL REQUIREMENTS REPRESENTATIVE SAMPLES OF THE SOILS TO BE USED FOR LINERS MUST FIRST BE TESTED. IN ACCORDANCE WITH THE FOLLOWING STANDARDS, IN A GEOTECHNICAL LABORATORY TO ENSURE THAT THEY MEET THE FOLLOWING MINIMUM REQUIREMENTS SET FORTH IN THE MSWR, TABLE I AT THE END OF THIS HANDBOOK LISTS THE REQUIRED QUALITY CONTROL TESTING AND MINIMUM REQUIREMENTS.

- A. SIEVE ANALYSIS - ASTM D 422 OR ASTM D 1140 - AT LEAST 60% PASSING THE #200 MESH SIEVE.
- B. ATTERBERG LIMITS - ASTM D 4318 - LIQUID LIMIT (LL) OF GREATER THAN 50 AND PLASTICITY INDEX (PI) OF GREATER THAN 30.
- C. COEFFICIENT OF PERMEABILITY - APPENDIX VII OF THE CORPS OF ENGINEERS MANUAL EM 1110-2-1906 OR ASTM D 5084 - 1X10-6CM/SEC. OR LESS.

SOILS FOR CONSTRUCTED LINERS MOISTURE/DENSITY (M/D) TESTING IN ADDITION TO THE MINIMUM TEST REQUIREMENTS IN 2.2, ABOVE, A MOISTURE/DENSITY RELATIONSHIP MUST BE DETERMINED FOR EACH SOIL BORROW SOURCE TO BE USED IN SOIL LINER CONSTRUCTION. THIS MOISTURE/DENSITY (M/D) COMPACTION CURVE MUST INCLUDE A ZERO-AIR-VOIDS LINE BASED UPON AN ESTIMATED OR MEASURED SPECIFIC GRAVITY OF THE COMPACTED SOIL. THE TWO ACCEPTABLE STANDARD MOISTURE/DENSITY RELATIONSHIP TEST PROCEDURES ARE: A. ASTM D 698 (STANDARD PROCTOR) - 12,400 FT-LBF/FT3 (FOR LIGHT-WEIGHT EQUIPMENT), OR B. ASTM D 1557 (MODIFIED PROCTOR) - 56,000 FT-LBF/FT3 (FOR HEAVY EQUIPMENT)

SOIL LINER MATERIAL MINIMUM PHYSICAL REQUIREMENTS CONT.

IN ORDER TO DETERMINE THAT THE PROPOSED SOIL IS SUITABLE FOR USE AS LINER MATERIAL, PERMEABILITY TESTS MUST BE CONDUCTED ON SAMPLES COMPACTED UNDER THE ABOVE-LISTED COMPACTIVE-EFFORT TEST PROCEDURES. THESE SOILS SHALL BE PREPARED AND TESTED AS NEXT DESCRIBED.

A. THERE SHOULD BE NO CONSTRUCTED LINERS PARALLEL TO SIDE SLOPES WITH GREATER THAN A 3:1 SLOPE ANGLE (3 HORIZONTAL TO 1 VERTICAL) DUE TO BOTH THE INHERENT LACK OF STABILITY OF THE COMPACTION EQUIPMENT ON THESE STEEP SLOPES AS WELL AS THE COMPACTION INEFFICIENCY. IT SHOULD BE REALIZED THAT SOIL LINERS CONSTRUCTED PARALLEL TO SIDE SLOPES HAVE INHERENT CONSTRUCTION PROBLEMS BECAUSE THE FULL COMPACTIVE FORCE OF THE COMPACTION EQUIPMENT IS NOT PERPENDICULAR TO THE SLOPE.

B. A KEYWAY FOR CONSTRUCTED SIDEWALLS IS REQUIRED UNLESS ALTERNATE CONSTRUCTION PROCEDURES HAVE PRIOR WRITTEN APPROVAL BY THE EXECUTIVE DIRECTOR. THE CONSTRUCTED KEYWAY AT THE TOE OF THE SIDEWALL MAY BE ELIMINATED FOR THOSE SIDEWALLS CONSTRUCTED ON A SLOPE ANGLE OF 4:1 OR FLATTER; THOSE CONSTRUCTED WITH THE FLOOR AS ONE UNIT(MONOLITHICALLY); OR SIDEWALLS PLACED IN HORIZONTAL LIFTS A MINIMUM OF 10 FT. IN WIDTH AND HAVING THE FIRST SIX INCH LIFT OF THE SIDEWALL COMPLETELY BONDED WITH THE TOP OF THE FLOOR LINER.

C. PLACEMENT OF CONSTRUCTED LINERS (CLAY-TYPE MATERIAL) SHOULD BE IN ACCORDANCE WITH THE FOLLOWING: 1. ALL SURFACE AREAS SHOULD BE PROPERLY SCARIFIED A MINIMUM OF SIX INCHES AND PREPARED TO RECEIVE THE LINER. 2. THE TOP OF EACH LIFT SHOULD BE ROUGHENED TO A SHALLOW DEPTH PRIOR TO THE PLACEMENT OF THE NEXT LIFT OF SOIL FOR COMPACTION.

3. NO LOOSE LIFT SHOULD BE THICKER THAN THE PADS OF THE COMPACTOR SO THAT COMPLETE BONDING WITH THE TOP OF THE PREVIOUS LIFT IS ACHIEVED. 4. EQUIPMENT AND SAFETY LIMITATIONS PROHIBIT FINISHED GRADES WITH SLOPES GREATER THAN 3:1 IF THE LINER IS CONSTRUCTED PARALLEL TO THE SURFACE. FOR AN EXCAVATED WALL WITH STEEPER THAN 3:1 SIDE SLOPES, THE SIDEWALL LINER MUST BE CONSTRUCTED IN SUCCESSIVE HORIZONTAL LIFTS.

5. THE TOP SURFACE OF THE COMPLETED SOIL LINER MUST BE PROOF ROLLED WITH A SMOOTH-WHEEL ROLLER, PRIOR TO FINAL LINER-THICKNESS SURVEYING WHEN PLACEMENT OF A GEOMEMBRANE LINER IS REQUIRED. 6. IT IS RECOMMENDED THAT THE SURFACE OF A SOIL LINER BE PROOF ROLLED WHEN CONSTRUCTION IS SHUT DOWN FOR MORE THAN 24 HOURS TO MITIGATE THE EFFECTS OF DESICCATION. IT IS FURTHER RECOMMENDED THAT IT BE DONE ON A ROUTINE BASIS DURING THE SUMMER MONTHS AT THE END OF EACH DAY'S LINER CONSTRUCTION.

2.3.2 CONSTRUCTED SOIL LINERS THESE CONSTRUCTED LINERS INCLUDE THOSE OF OVER-EXCAVATED AND RECOMPACTED IN SITU SOILS AND SOILS FROM A BORROW SOURCE. FOR ADDITIONAL SPECIFIC INFORMATION ON BENTONITE-AMENDED SOILS SEE SECTION 2.5.

CLOD AND ROCK SIZE THE MAXIMUM CLOD SIZE OF THE COMPACTED LINER SOILS SHALL BE APPROXIMATELY ONE INCH IN DIAMETER BUT IN ALL CASES SOIL CLOUDS SHALL BE REVISED TO THE SMALLEST SIZE NECESSARY TO ACHIEVE THE COEFFICIENT OF PERMEABILITY REPORTED BY THE TESTING LABORATORY AND TO DESTROY ANY MACROSTRUCTURE EVIDENCE AFTER THE COMPACTION OF THE CLOUDS UNDER DENSITY-CONTROLLED CONDITIONS. (8330.205(G), MSWR) THE LINER SOIL MATERIAL SHALL CONTAIN NO ROCKS OR STONES LARGER THAN ONE INCH IN DIAMETER OR THAT TOTAL MORE THAN 10% BY WEIGHT. (8330.205(H), MSWR). ONE-HUNDRED PERCENT OF THE MATERIAL USED IN THE SOIL LINER MUST PASS THE 1-INCH SCREEN. THE FINAL LIFT FOR COMPOSITE LINERS SHOULD NOT CONTAIN ANY ROCKS OR ANY OTHER MATERIALS THAT CAN CAUSE DAMAGE TO THE FML.

2 IT IS STRONGLY RECOMMENDED THAT THE TAMPING FEET HAVE A FACE AREA NOT LESS THAN SEVEN NOR MORE THAN TEN SQUARE INCHES. SELF-PROPELLED ROLLERS WITH TAMPING FEET SURFACE AREAS GREATER THAN 10 BUT LESS THAN 30 SQUARE INCHES CAN BE UTILIZED PROVIDED THE FEET HAVE TAPERED HEADS THAT ADD TO THE COMPACTIVE EFFORT.

16 COMPACTIVE EFFORT (SOILS COMPACTION) ALL CONSTRUCTED SOIL LINERS MUST BE COMPACTED WITH A PAD/TAMPING-FOOT (PREFERABLE) OR PRONGFOOT ROLLER (8330.205(G), MSWR). NO OTHER TYPE OF EQUIPMENT IS SUITABLE FOR THE COMPACTION OF CONSTRUCTED SOIL LINERS.

2 THE LIFT THICKNESS SHALL BE CONTROLLED SO THAT THERE IS TOTAL PENETRATION THROUGH THE LOOSE LIFT UNDER COMPACTION INTO THE TOP OF THE PREVIOUSLY COMPACTED LIFT; THEREFORE, THE COMPACTED LIFT THICKNESS MUST NOT BE GREATER THAN THE PAD OR PRONG LENGTH. THIS IS NECESSARY TO ACHIEVE ADEQUATE BONDING BETWEEN LIFTS AND REDUCE SEEPAGE PATHWAYS. ADEQUATE CLEANING DEVICES MUST BE IN PLACE AND MAINTAINED ON THE COMPACTION ROLLER SO THAT THE PRONGS OR PAD FEET DO NOT BECOME CLOGGED WITH CLAY SOILS TO THE POINT THAT THEY CANNOT ACHIEVE FULL PENETRATION DURING INITIAL COMPACTION. THE FOOTED ROLLER IS NECESSARY TO ACHIEVE BONDING AND TO REDUCE THE INDIVIDUAL CLOUDS AND A BLENDING OF THE SOIL MATRIX THROUGH ITS KNEADING ACTION. IN ADDITION TO THE KNEADING ACTION, WEIGHT OF THE COMPACTION EQUIPMENT IS IMPORTANT. WHEN USING ASTM TEST METHOD D 698(STANDARD PROCTOR) DENSITY, THE MINIMUM WEIGHT OF THE COMPACTOR SHOULD BE 1500 POUNDS PER LINEAR FOOT OF DRUM LENGTH, AND A MINIMUM OF EIGHT PASSES IS RECOMMENDED FOR THE COMPACTION PROCESS. COMPACTION EQUIPMENT THAT DEVELOPS A COMPACTIVE EFFORT EQUAL TO ASTM D 1557 (MODIFIED PROCTOR)

WILL RESULT IN GREATER COMPACTION. LOWER COEFFICIENT OF PERMEABILITY DUE TO DECREASED VOID SPACE, AND A LOWER OPTIMUM MOISTURE CONTENT NECESSARY TO ACHIEVE THE MAXIMUM DRY DENSITY. THIS LOWER OPTIMUM MOISTURE CONTENT MAY HELP IN CONTROLLING THE DESICCATION CRACKING OF HIGHLY PLASTIC CLAYS FREQUENTLY USED FOR LINER SOIL. ADEQUATE COMPACTION CANNOT BE ACHIEVED BY TRACK-TYPE (BULLDOZER) OR PNEUMATIC COMPACTORS. BULLDOZERS ARE BY THE NATURE OF THEIR WEIGHT DISTRIBUTION DESIGNED TO "FLOAT" ON THE SURFACE, RESULTING IN GREATLY DIMINISHED COMPACTION BY TRACK CONTACT AND THEREFORE SHOULD NOT BE USED TO COMPACT LINER SOILS. IN ADDITION, THE USE OF TRACKS OR RUBBER TIRES FOR COMPACTION DOES NOT ALLOW THE KNEADING ACTION REQUIRED TO REDUCE AND BLEND SOIL CLOUDS AS IS REALIZED BY PAD-FOOTED ROLLERS.

COMPACTION EQUIPMENT THE COMPACTION OF SOIL LINERS MUST BE WITH APPROPRIATE EQUIPMENT. 1. PAD/TAMPING-FOOT ROLLERS, OR 2. PRONG-FOOT (SHEEPSFOOT) ROLLERS THE FOLLOWING EQUIPMENT TYPES ARE EXAMPLES OF THAT WHICH IS NOT PERMITTED OR APPROPRIATE FOR THE COMPACTION OF SOIL LINERS. 1. BULLDOZER 2. RUBBER-TIRED (PNEUMATIC) ROLLERS 3. FLAT-WHEEL ROLLERS 4. RUBBER-TIRED SCRAPPERS OR BELLY DUMPS

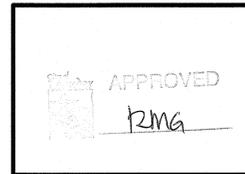
2.3.2.5 SOIL PLASTICITY QUALITY CONTROL OF THE SOIL PLASTICITY SHOULD BE CLOSELY ADHERED TO AND MAINTAINED DURING MATERIAL SELECTION FOR LINER CONSTRUCTION. TESTING OF THE ATTERBERG LIMITS AND GRADATION SHOULD BE CONTINUALLY CHECKED SO THAT ANY CHANGES IN EITHER PHYSICAL PROPERTY CAN BE DETECTED AND ADDITIONAL APPROPRIATE LABORATORY TESTING PERFORMED. ANY TIME THE LL OR PI CHANGES BY MORE THAN 10 POINTS, A NEW COMPACTION SERIES SHOULD BE RUN IN THE LABORATORY TO DETERMINE THE MAXIMUM DRY DENSITY, OPTIMUM MOISTURE, AND THE LABORATORY COEFFICIENT OF PERMEABILITY TO ADEQUATELY DETERMINE THE VARIABILITY OF THE SOIL USED FOR LINER CONSTRUCTION. IT IS STRONGLY RECOMMENDED THAT ALL LINER SOIL BORROW SOURCES BE THOROUGHLY TESTED PRIOR TO USE TO ESTABLISH THEIR ATTERBERG LIMITS AND COMPACTION PARAMETERS. THIS MAY REQUIRE DRILLING AUGER HOLES AT THE BORROW SOURCE TO RETRIEVE ADEQUATE SAMPLES TO DETERMINE THESE FACTORS. DUE TO THE HIGH SHRINK/SWELL AND DESICCATION CRACKING CHARACTERISTIC OF HIGHLY-PLASTIC CLAYS, THE PI OF CLAY LINER SOILS SHOULD BE GREATER THAN 30.

18 QUALITY ASSURANCE AND TESTING FREQUENCY FOR SOIL LINERS EACH IN SITU OR CONSTRUCTED LINER SIDEWALL AND FLOOR AREA DEVELOPED AS A SEPARATE SEGMENT (NON-MONOLITHICALLY) MUST BE CONSIDERED AS SEPARATELY EVALUATED AREAS INDEPENDENT OF EACH OTHER FOR THE PURPOSE OF CALCULATING DIMENSIONS TO DETERMINE THE REQUIRED NUMBER OF SAMPLES. THOSE SIDEWALL AND FLOOR AREAS CONSTRUCTED OR EXCAVATED AS A BOWL (MONOLITHICALLY) MAY BE ADDED TOGETHER FOR THE DETERMINATION OF THEIR TESTING FREQUENCY AND LOCATIONS. ALL HOLE DUG OR CREATED DURING ANY SAMPLING AND/OR TESTING SHALL BE BACKFILLED WITH A MIXTURE OF AT LEAST 20% BENTONITE-ENRICHED LINER SOIL AND COMPACTED BY HAND TAMPING OR FILLED WITH AN APPROPRIATE BENTONITE GROUT.

DESIGNED BY: CRB/PS DRAFTED BY: DATE: REVISION: SHEET NAME: WET & DETENTION POND 'A' NOTES JOB NAME: BAR W RANCH EAST MIXED USE PROJECT: SITE DEVELOPMENT PLANS SHEET: 43 OF 63 DATE: JULY 2025 JOB NUMBER: 5375 SHEET: SD-24-0243



UNDER CONSTRUCTION

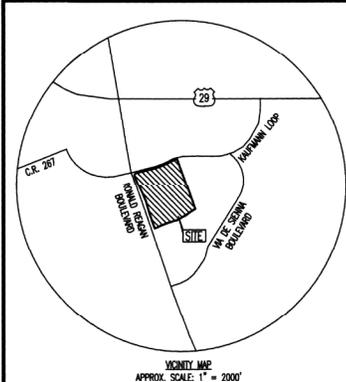






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# BAR W RANCH EAST MIXED USE FINAL PLAT



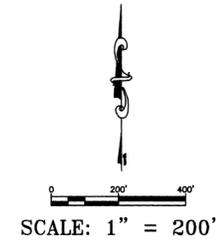
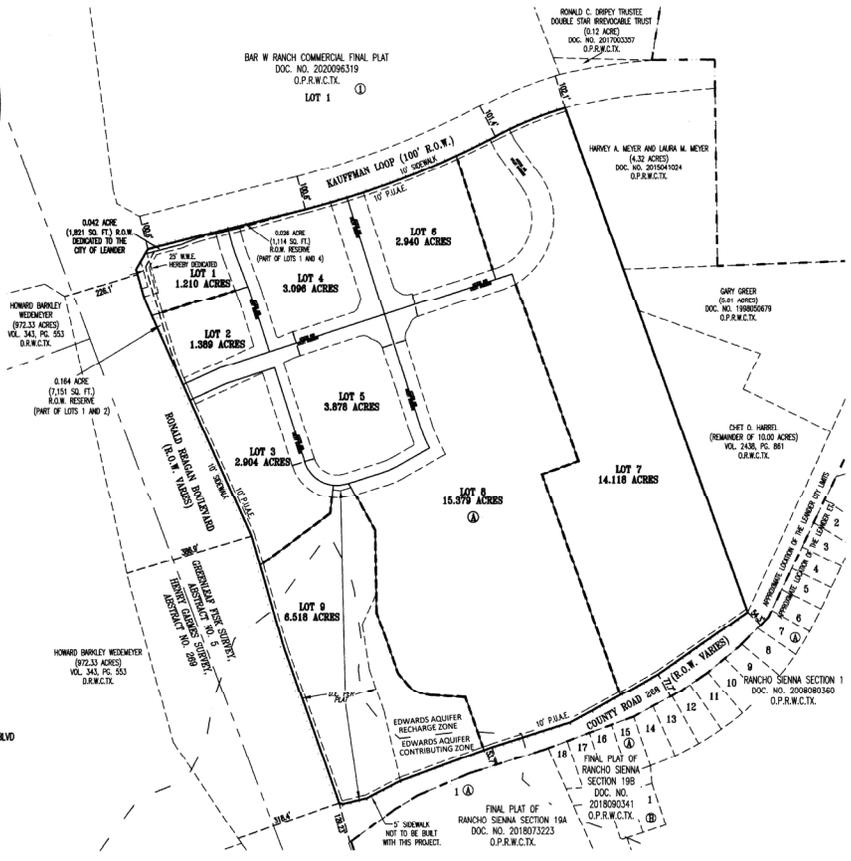
- INDEX:**  
 SHEET 1 - COVER SHEET AND PROJECT INFORMATION  
 SHEET 2 - NORTH PORTION OF PROJECT  
 SHEET 3 - SOUTH PORTION OF PROJECT  
 SHEET 4 - METES & BOUNDS, SIGNATURE BLOCKS, SURVEYOR, ENGINEER, LINE & CURVE TABLES  
 SHEET 5 - PLAT NOTES, SIGNATURE BLOCKS, OWNER, AND COUNTY

FILED DATE: AUGUST 20, 2024  
 DATE: JUNE 10, 2025  
 OWNER/DEVELOPER:  
 BAR W EAST COMMERCIAL, LTD.  
 901 S. MOPAC EXPRESSWAY, SUITE 550  
 AUSTIN, TEXAS 78746  
 ATTENTION: C. PATRICK OLES JR.  
 ENGINEER AND SURVEYOR:  
 CARLSON, BRIGANCE & DOERING, INC.  
 5501 WEST WILLIAM CANNON DRIVE  
 AUSTIN, TEXAS 78749  
 PHONE: (512) 280-5160

**BENCHMARK INFORMATION:**  
**BENCHMARK #1**  
 COTTON SPINDLE FOUND, SW INTERSECTION OF KAUFFMAN LOOP AND RONALD REAGAN BLVD  
 N: 10202297.62  
 E: 3084571.32  
 ELEV: 1029.23' (NAVD '88)  
**BENCHMARK #2**  
 MAG NAIL FOUND, SW INTERSECTION OF C.R. 268 AND RONALD REAGAN BLVD  
 N: 10200544.84  
 E: 3085209.63  
 ELEV: 980.74' (NAVD '88)  
 BASIS OF BEARINGS - TEXAS COORDINATE SYSTEM, CENTRAL ZONE (4203), NAD83  
 ELEVATION DATUM - NAVD '88, GEOID 03

TOTAL ACREAGE: 51.474 ACRES  
 SURVEY: GREENLEAF FISK SURVEY, ABSTRACT NO. 5  
 F.E.M.A. MAP NO. 4849100275E  
 WILLAMSON COUNTY, TEXAS AND INCORPORATED AREAS. DATED: SEPTEMBER 26, 2008

BAR W RANCH COMMERCIAL FINAL PLAT  
 DOC. NO. 2020096319  
 O.P.R.W.C.T.X.  
 LOT 1



- LEGEND**
- ⊕ BENCHMARK
  - ▲ CALCULATED POINT
  - ▲ RAILROAD SPIKE
  - FENCE POST (AS NOTED)
  - CAPPED 1/2" IRON ROD FOUND STAMPED "CSD SETSTONE" (UNLESS OTHERWISE NOTED)
  - CAPPED 1/2" CAPPED IRON ROD SET STAMPED "CSD SETSTONE"
  - APPROXIMATE SIDEWALK LOCATION
  - D.E. DRAINAGE EASEMENT
  - P.U.E. PUBLIC UTILITY EASEMENT
  - P.L.A.C. PUBLIC UTILITY, LANDSCAPE AND PEDESTRIAN ACCESS EASEMENT
  - W.W.E. WASTEWATER EASEMENT
  - ⓐ BLOCK DESIGNATION
  - CITY OF LEANDER CITY LIMIT LINE
  - BOUNDARY LINE
  - APPROXIMATE ORIGINAL SURVEY LINE
  - O.P.R.W.C.T.X. OFFICIAL PUBLIC RECORDS, WILLAMSON COUNTY, TEXAS
  - O.R.W.C.T.X. OFFICIAL RECORDS, WILLAMSON COUNTY, TEXAS
  - D.R.W.C.T.X. DEED RECORDS, WILLAMSON COUNTY, TEXAS

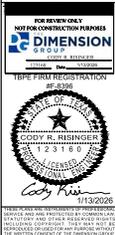
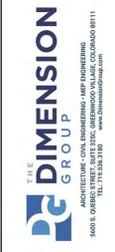
**LOT SUMMARY TABLE**

R.O.W. DEDICATION:	0.042 ACRES
NO. OF MIXED USE COMMERCIAL LOTS:	6 15.417 ACRES
NO. OF MIXED USE RESIDENTIAL LOTS:	3 36.615 ACRES
TOTAL ACREAGE:	51.474 ACRES
TOTAL NUMBER OF LOTS:	9
NO. OF BLOCKS:	1

SHEET NO. 1 OF 5

**Carlson, Brigrance & Doering, Inc.**  
 FIRM ID #37791 REG. # 10024900  
 Civil Engineering • Surveying  
 5501 West William Cannon • Austin, Texas 78749  
 Phone No. (512) 280-5160 • Fax No. (512) 280-5165

\\AC30\5375\SURVEY\PLAT - BAR W EAST MIXED USE



BY	REVISION DESCRIPTION	DATE	PROJECT NO.	DATE	SCALE	DATE
			230-792	1/17/2026	1:08 pm	

FINAL PLAT  
 CHUY'S TEX-MEX  
 RONALD REAGAN & KAUFFMAN LOOP LOT 3  
 2873 COMHAND DR  
 LEANDER, TEXAS 78628

I:\-M&E\dwg\24-0418\18a.dwg [24-0418\18a.dwg] C:\Users\dwg\OneDrive\Documents\24-0418\18a.dwg  
 Drawing Name: I:\-M&E\dwg\24-0418\18a.dwg - Location: TX (Central Region Blvd & Kaufman Loop)\24-0418\18a.dwg  
 Date: Jan 13, 2026 - 11:58am





DPC # 2025 054434

# BAR W RANCH EAST MIXED USE FINAL PLAT

Curve #	Length	Radius	Chord Direction	Chord Length	Tangent	DELTA
(C14)	30.38	165.00	S3757'22"E	30.34	15.23	10733'00"
(C15)	416.18	220.00	S1757'44"W	306.64	304.98	10922'15"
(C16)	30.00	33.00	S4522'38"W	28.48	16.40	52'00"46"
(C17)	21.81	81.50	S2838'08"W	21.75	10.97	152'00"4"
(C18)	30.38	33.00	S0914'37"W	28.34	14.28	61'23"4"
(C19)	97.02	465.00	S2346'17"E	96.84	48.88	175'15"
(C20)	80.80	230.00	S6646'50"W	50.51	25.40	127'05"1"
(C21)	216.59	130.00	N6228'57"W	195.53	137.28	89'18"25"
(C22)	3.37	2.00	N8605'57"W	2.88	2.24	96'28"56"
(C23)	4.37	3.00	N2754'53"E	4.00	2.88	83'31"94"
(C24)	29.80	491.00	N1941'46"W	29.80	14.91	342'14"
(C25)	72.34	539.00	N1742'12"W	72.28	36.22	741'25"
(C26)	62.54	468.00	S1742'12"E	62.48	31.32	741'25"
(C27)	34.82	534.00	S1841'46"E	34.51	17.27	342'14"
(C28)	11.63	61.50	S8928'38"E	6.78	3.38	87'16"58"
(C29)	42.38	334.00	N6821'23"E	42.33	21.21	716'58"
(C30)	23.57	24.00	N4401'26"E	22.63	12.83	56'15"27"
(C31)	13.88	81.50	N20741'30"E	13.84	6.84	67'30"27"
(C32)	21.80	26.00	N6746'30"E	21.08	11.32	437'30"27"

Curve #	Length	Radius	Chord Direction	Chord Length	Tangent	DELTA
(C33)	193.02	2000.00	N0729'35"E	193.01	91.52	216'11"
(C34)	21.58	28.50	S3930'54"E	21.05	11.25	437'30"27"
(C35)	7.73	81.50	S5828'05"E	7.73	3.87	57'28"0"
(C36)	30.05	33.00	S8127'06"E	28.06	16.12	57'24"10"
(C37)	261.20	155.00	N1927'44"E	254.41	51.84	10923'13"
(C38)	42.35	230.00	N3057'22"W	42.29	21.24	10733'00"
(C39)	46.45	150.00	N6330'37"E	46.44	23.23	218'51"
(C40)	26.14	28.50	N8134'25"W	25.23	14.07	52'32'29"
(C41)	340.52	500.00	N1659'18"W	340.46	170.32	3744'44"
(C42)	29.53	291.00	S8954'53"W	29.51	14.78	67'28"56"
(C43)	21.37	81.50	N6248'46"W	21.31	10.75	1070'18"
(C44)	4.37	3.00	S2254'53"W	4.00	2.88	83'31"94"
(C45)	30.38	33.00	N4425'41"W	29.28	16.26	5747'34"
(C46)	108.07	70.00	S8228'57"E	96.37	68.12	89'18"25"
(C47)	10.07	7.00	N1832'31"E	9.22	6.13	82'24'46"
(C48)	35.99	170.00	N6645'50"E	35.83	18.06	127'05"1"
(C49)	35.67	535.00	N1845'15"W	35.66	17.84	3746'12"
(C50)	298.08	2000.00	N6830'28"E	298.02	148.65	6732'41"
(C51)	177.21	1150.00	N60134'07"E	177.53	88.03	859'14"

Line #	Length	Direction
(L1)	25.00	N1911'28"W
(L2)	19.73	N7246'12"E
(L3)	78.17	N191546"W
(L4)	34.37	N3924'13"E
(L5)	124.76	S181546"E
(L6)	44.74	S7346'12"W
(L7)	72.88	N0954'20"E
(L8)	23.62	S8735'40"E
(L9)	32.02	N7246'12"E
(L10)	96.89	S3927'33"W
(L11)	136.52	S0954'20"E
(L12)	132.87	S181546"E
(L13)	216.80	S1318'08"E
(L14)	182.87	S1923'27"W
(L15)	127.03	S7812'47"W

Line #	Length	Direction
(L16)	240.29	S5249'24"E
(L17)	43.36	N6959'50"W
(L18)	51.12	N395446"E
(L19)	28.82	S7803'38"W
(L20)	18.39	S2546'32"E
(L21)	18.57	N6238'23"E
(L22)	116.36	S3813'53"E
(L23)	188.88	S7208'21"W
(L24)	138.58	S7208'21"W
(L25)	21.58	S6646'50"W
(L26)	127.88	S1727'32"W
(L27)	294.74	S1750'28"E
(L28)	116.07	N7252'46"E
(L29)	71.83	N6944'59"E
(L30)	128.48	S1780'24"E

Curve #	Length	Radius	Chord Direction	Chord Length	Tangent	DELTA
C1	867.44	2800.00	N6928'42"E	866.06	385.11	1725'10"
C2	224.16	1150.00	N6924'15"E	223.80	112.44	1716'05"
C3	128.68	2800.00	N7425'20"E	128.67	64.46	750'25"
C4	348.49	2800.00	N6929'22"E	348.23	174.50	746'48"
C5	130.07	2800.00	N6353'06"E	130.06	65.05	291'38"
C6	155.82	100.00	S8228'57"E	140.53	98.75	89'18'25"
C7	115.34	100.00	S0933'10"E	108.65	69.04	86'05'01"
C8	46.48	100.00	N6428'32"E	46.20	20.52	237'13'4"
C9	27.86	500.00	N1928'26"W	27.86	13.93	311'34"
C10	67.10	500.00	S1742'12"E	67.05	33.80	741'25"
C11	64.88	207.00	S2247'51"E	64.57	32.48	123'26"
C12	42.34	200.00	N6648'50"E	42.27	21.25	127'05"1"
C13	77.77	87.00	S8330'48"E	75.70	41.11	49'50"94"

Line #	Length	Direction
L1	74.10	S6150'21"W
L2	113.34	S6302'12"W
L3	75.46	S7630'27"W
L4	11.16	N0732'37"W
L5	102.46	N1611'28"W
L6	88.20	N0728'13"E
L7	24.58	S1351'30"E
L8	95.78	S8950'10"W
L9	110.74	N0708'30"E

### METES AND BOUNDS

BEING A 51.474 ACRE TRACT OF LAND SITUATED IN THE GREENLEAF FISK SURVEY, ABSTRACT NUMBER 5, WILLAMSON COUNTY, TEXAS, BEING ALL OF A CALLED 51.474 ACRE TRACT OF LAND DESCRIBED IN A CORRECTION DEED TO BAR W EAST COMMERCIAL, LTD. BY DEED RECORDED IN DOCUMENT NUMBER 2024064969, OFFICIAL PUBLIC RECORDS, WILLAMSON COUNTY, TEXAS (O.P.R.N.C.T.X.), SAID 51.474 ACRE TRACT MORE FULLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

BEGINNING AT A CAPPED 1/2 INCH IRON ROD FOUND WITH ILLEGIBLE CAP AT THE NORTHWEST CORNER OF SAID 51.474 ACRE TRACT OF LAND, BEING AT THE INTERSECTION OF THE SOUTH RIGHT-OF-WAY LINE OF KAUFFMAN LOOP (100' R.O.W.) AND THE EAST RIGHT-OF-WAY LINE OF RONALD REAGAN BOULEVARD (R.O.W. VARIES), FOR THE NORTHWEST CORNER AND POINT OF BEGINNING OF THE HEREIN DESCRIBED TRACT OF LAND,

THENCE, WITH THE NORTH LINE OF SAID 51.474 ACRE TRACT OF LAND AND THE SOUTH RIGHT-OF-WAY LINE OF SAID KAUFFMAN LOOP, THE FOLLOWING THREE (3) COURSES AND DISTANCES, NUMBERED 1 THROUGH 3:

- 1) N0708'37"E, A DISTANCE OF 482.34 FEET TO A 1/2 INCH IRON ROD FOUND, BEING AT THE BEGINNING OF A CURVE TO THE LEFT,
- 2) ALONG SAID CURVE TO THE LEFT, HAVING A RADIUS OF 2,600.00 FEET, PASSING AT AN ARC LENGTH OF 494.47 FEET A CAPPED 1/2 INCH IRON ROD FOUND STAMPED "WG", CONTINUING FOR A TOTAL ARC LENGTH OF 607.44 FEET, AND WHOSE CHORD BEARS N6908'42"E, A DISTANCE OF 606.06 FEET TO A CAPPED 1/2 INCH IRON ROD FOUND STAMPED "DIAMOND", BEING AT THE BEGINNING OF A CURVE TO THE RIGHT, AND,
- 3) ALONG SAID CURVE TO THE RIGHT, HAVING A RADIUS OF 1,150.00 FEET, AN ARC LENGTH OF 224.16 FEET, AND WHOSE CHORD BEARS N6904'15"E, A DISTANCE OF 223.80 FEET TO A CAPPED 1/2 INCH IRON ROD FOUND STAMPED "DIAMOND" AT THE NORTHEAST CORNER OF SAID 51.474 ACRE TRACT OF LAND, BEING AT LAURA M. MEYER BY DEED RECORDED IN DOCUMENT NUMBER 2015041024, O.P.R.N.C.T.X.,

THENCE, WITH THE EAST LINE OF SAID 51.474 ACRE TRACT OF LAND, WITH THE WEST LINE OF SAID 4.32 ACRE TRACT OF LAND, WITH THE WEST LINE OF A CALLED 5.01 ACRE TRACT OF LAND CONVEYED TO CHRY GREER BY DEED RECORDED IN DOCUMENT NUMBER 1998050078, O.P.R.N.C.T.X., AND WITH THE WEST LINE OF THE REMAINDER OF A CALLED 10.00 ACRE TRACT OF LAND CONVEYED TO CHET O. HARREL BY DEED RECORDED IN VOLUME 2438, PAGE 861, OFFICIAL RECORDS OF WILLAMSON COUNTY, TEXAS (O.R.N.C.T.X.), THE FOLLOWING TWO (2) COURSES AND DISTANCES, NUMBERED 1 AND 2:

- 1) S20700'59"E, A DISTANCE OF 505.11 FEET TO AN IRON RAILROAD SPIKE FOUND AT A COMMON CORNER OF SAID 4.32 ACRE TRACT OF LAND AND SAID 5.01 ACRE TRACT OF LAND, AND
- 2) S18544'37"E, PASSING AT A DISTANCE OF 133.73 FEET A 1/2 INCH IRON ROD FOUND FOR A COMMON CORNER OF SAID 5.01 ACRE TRACT OF LAND AND SAID REMAINDER OF A 10.00 ACRE TRACT OF LAND, CONTINUING FOR A TOTAL DISTANCE OF 1,080.47 FEET TO A 1/2 INCH IRON ROD FOUND ON THE NORTH RIGHT-OF-WAY LINE OF COUNTY ROAD 268 (R.O.W. VARIES) FOR THE SOUTHWEST CORNER OF SAID 51.474 ACRE TRACT OF LAND, SAME BEING THE SOUTHWEST CORNER OF SAID REMAINDER OF A 10.00 ACRE TRACT OF LAND,

THENCE, WITH THE SOUTH LINE OF SAID 51.474 ACRE TRACT OF LAND AND WITH THE NORTH RIGHT-OF-WAY LINE OF SAID COUNTY ROAD 268, THE FOLLOWING EIGHT (8) COURSES AND DISTANCES, NUMBERED 1 THROUGH 8:

- 1) S5523'14"W, A DISTANCE OF 324.24 FEET TO A CAPPED 1/2 INCH IRON ROD FOUND STAMPED "CB SECTION",
- 2) S8747'40"W, A DISTANCE OF 225.55 FEET TO A CAPPED 1/2 INCH IRON ROD FOUND STAMPED "CB SECTION",
- 3) S8152'01"W, A DISTANCE OF 74.10 FEET TO A CAPPED 1/2 INCH IRON ROD FOUND STAMPED "CB SECTION",
- 4) S7246'45"W, A DISTANCE OF 244.07 FEET TO A CAPPED 1/2 INCH IRON ROD FOUND STAMPED "CB SECTION",
- 5) S6956'10"W, A DISTANCE OF 298.89 FEET TO A 3/8 INCH IRON ROD FOUND,
- 6) S6302'12"W, A DISTANCE OF 113.34 FEET TO A CAPPED 1/2 INCH IRON ROD FOUND STAMPED "CB SECTION",
- 7) S7630'27"W, A DISTANCE OF 73.46 FEET TO A CAPPED 1/2 INCH IRON ROD FOUND STAMPED "CB SECTION", AND
- 8) N7033'37"W, A DISTANCE OF 11.16 FEET TO A 2-1/2 INCH METAL FENCE POST FOUND ON THE EAST RIGHT-OF-WAY LINE OF SAID RONALD REAGAN BOULEVARD, FOR THE SOUTHWEST CORNER OF SAID 51.474 ACRE TRACT OF LAND,

THENCE, WITH THE WEST LINE OF SAID 51.474 ACRE TRACT OF LAND AND WITH THE EAST RIGHT-OF-WAY LINE OF SAID RONALD REAGAN BOULEVARD, THE FOLLOWING FIVE (5) COURSES AND DISTANCES, NUMBERED 1 THROUGH 5:

- 1) N19228'31"W, A DISTANCE OF 491.76 FEET TO A CAPPED 1/2 INCH IRON ROD FOUND STAMPED "CB SECTION",
- 2) N1614'56"W, A DISTANCE OF 338.03 FEET TO A CAPPED 1/2 INCH IRON ROD FOUND STAMPED "CB SECTION",
- 3) N2420'24"W, A DISTANCE OF 761.15 FEET TO A CAPPED 1/2 INCH IRON ROD FOUND WITH ILLEGIBLE STAMP,
- 4) N11126'3"W, A DISTANCE OF 102.46 FEET TO A CAPPED 1/2 INCH IRON ROD FOUND WITH ILLEGIBLE STAMP, AND,
- 5) N3026'13"E, A DISTANCE OF 69.20 FEET TO THE POINT OF BEGINNING AND CONTAINING 51.474 ACRES OF LAND.

THIS FLOOD STATEMENT, AS DETERMINED BY A HUD-FHA FLOOD INSURANCE RATE MAP, DOES NOT IMPLY THAT THE PROPERTY OR THE IMPROVEMENTS THEREON WILL BE FREE FROM FLOODING OR FLOOD DAMAGE, ON RARE OCCASIONS, GREATER FLOODS CAN AND WILL OCCUR, AND FLOOD HEIGHTS MAY INCREASE BY MAN-MADE OR NATURAL CAUSES.

THIS STATEMENT SHALL NOT CREATE LIABILITY ON THE PART OF ENGINEER OR SURVEYOR.

FLOODPLAIN NOTE: NO PORTION OF THIS TRACT IS WITHIN A FLOOD HAZARD AREA AS SHOWN ON THE FLOOD HAZARD BOUNDARY MAP NUMBER 494610275E FOR WILLAMSON COUNTY, TEXAS, DATED SEPTEMBER 28, 2008.

STATE OF TEXAS:

COUNTY OF TRAVIS:

I, CHARLES R. BRIGANCE, JR., P.E., AM AUTHORIZED UNDER THE LAWS OF THE STATE OF TEXAS TO PRACTICE THE PROFESSION OF ENGINEERING, AND DO HEREBY STATE THAT THIS PLAT CONFORMS WITH THE APPLICABLE ORDINANCES OF THE CITY OF LEANDER, TEXAS.

ENGINEERING BY: *Charles R. Brigance, Jr.* 6/10/2025  
 CHARLES R. BRIGANCE, JR., P.E. NO. 84346  
 CARLSON, BRIGANCE & DOERING, INC.  
 5501 WEST WILLAMM CANNON DRIVE  
 AUSTIN, TEXAS 78749  
 charlesr@cbdoeng.com



CARLSON, BRIGANCE & DOERING, INC.  
0847376

STATE OF TEXAS:

COUNTY OF TRAVIS:

I, ARON V. THOMASON, R.P.L.S., AM AUTHORIZED UNDER THE LAWS OF THE STATE OF TEXAS TO PRACTICE THE PROFESSION OF SURVEYING AND HEREBY STATE THAT I PREPARED THIS PLAT FROM AN ACTUAL AND ACCURATE ON-THE-GROUND SURVEY OF THE LAND AND THAT THE CORNER MONUMENTS SHOWN THEREON WERE PROPERLY PLACED UNDER MY PERSONAL SUPERVISION, IN ACCORDANCE WITH ALL CITY OF LEANDER ORDINANCES AND CODES, AND THAT ALL EXISTING EASEMENTS OF RECORD AS FOUND ON TITLE POLICY ISSUED BY FIRST AMERICAN TITLE INSURANCE COMPANY, FILE NO. 202401895, WITH AN EFFECTIVE DATE OF JULY 15, 2004, HAVE BEEN SHOWN OR NOTED HEREON.

SURVEYED BY: *Aron V. Thomason* 12 JUN 2025  
 ARON V. THOMASON, R.P.L.S. NO. 6214  
 CARLSON, BRIGANCE & DOERING, INC.  
 5501 WEST WILLAMM CANNON DRIVE  
 AUSTIN, TEXAS 78749  
 aronv@cbdoeng.com

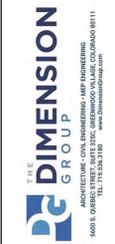


**SHEET NO. 4 OF 5**

**Carlson, Brigance & Doering, Inc.**  
 FIRM ID #13791 REG. # 1002990

Civil Engineering • Surveying  
 5901 West Williams Canyon • Austin, Texas 78749  
 Phone No. (512) 280-5160 • Fax No. (512) 280-5165

J:\AC3D\5375\Survey\PLAT - BAR W EAST MIXED USE



FOR REVIEW ONLY  
 NOT FOR CONSTRUCTION PURPOSES  
 THE FIRST PROFESSIONAL SEAL OF  
 CODY R. REISINGER  
 123160  
 6/10/2025  
 Cody Reisinger

DATE	REVISION DESCRIPTION	BY	DATE	APPROVED BY

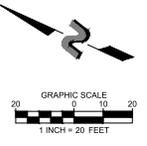
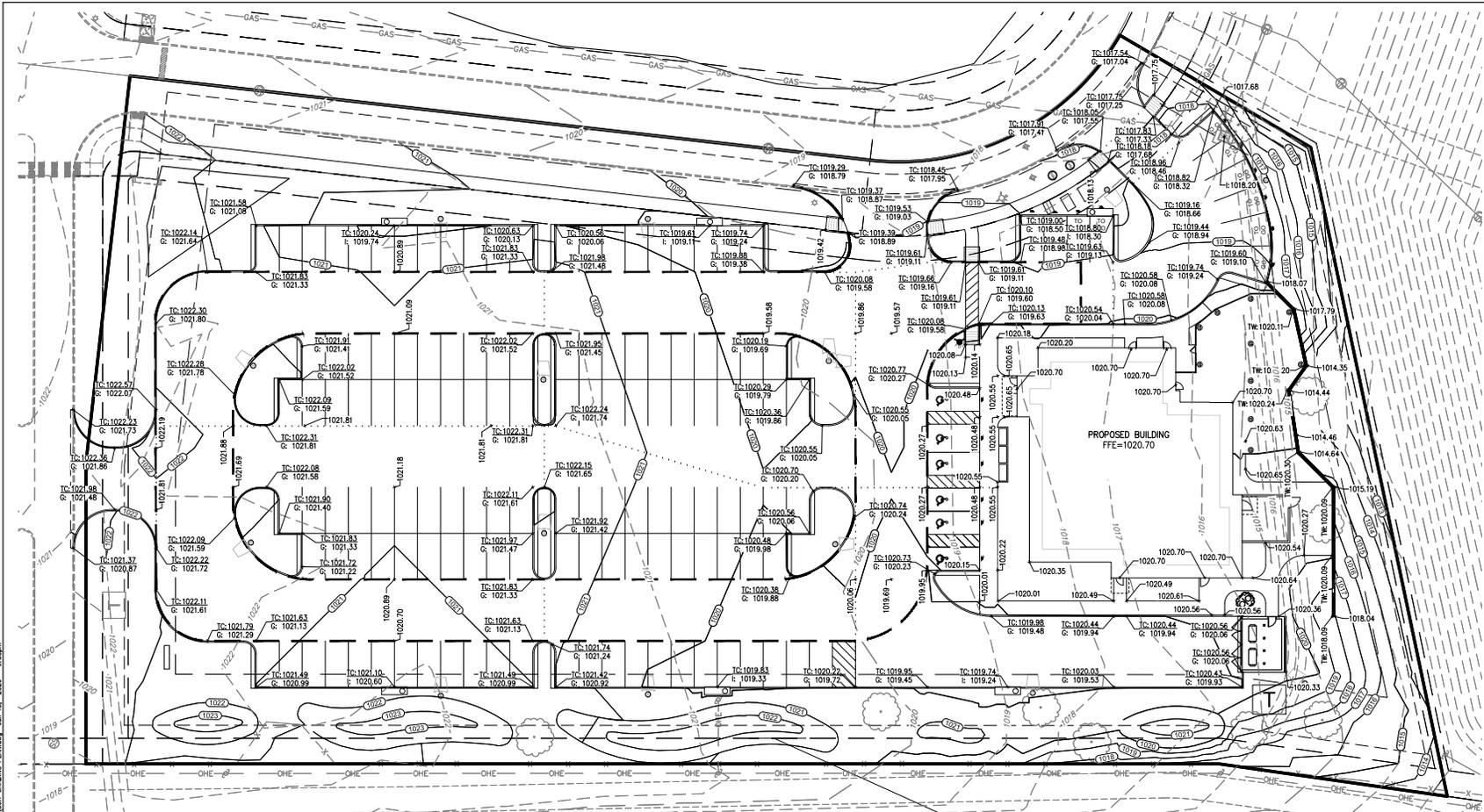
FINAL PLAT  
 CHUY'S TEX-MEX  
 RONALD REGAN & KAUFFMAN LOOP LOT 3  
 2873 COMPHAND DR  
 LEANDER, TEXAS 76828











**DETAILED GRADING NOTES:**

1. THIS SHEET IS FOR DETAILED GRADING REFERENCE ONLY. ALL EROSION AND SEDIMENT CONTROL SHALL BE COMPLETE PER SHEET 16.
2. CURB SPOT ELEVATIONS ARE TO FLOWLINE OF CURB UNLESS OTHERWISE NOTED.
3. ALL ELEVATIONS ARE TO FINISHED GRADE OF SURFACE UNLESS OTHERWISE NOTED.
4. CONTRACTOR MUST OBTAIN CONSTRUCTION ACTIVITIES STORMWATER DISCHARGE PERMIT.
5. GRADE BREAKS ARE IDENTIFIED AS

**GENERAL GRADING NOTES:**

1. REFER TO GEOTECHNICAL ENGINEERING REPORT PREPARED BY TERRACON, PROJECT NO. 96245144 DATED NOVEMBER 4, 2024 FOR SITE WORK.
2. TRENCH SAFETY: IF ANY TRENCH ON THIS JOB SITE, INCLUDING OPEN EXCAVATIONS WHOSE DIMENSIONS CAUSE THEM TO BE CONSIDERED TRENCHES BY O.S.H.A REGARDLESS OF WHETHER FOR THE INSTALLATION OF UTILITIES, FOUNDATIONS OR ANY OTHER SITE ELEMENT, IS EQUAL TO OR GREATER THAN 6.0' DEPTH, THEN THE CONTRACTOR SHALL NOT PERFORM ANY TRENCHING ON THIS SITE UNTIL HE HAS FIRST OBTAINED DETAILED PLANS AND SPECIFICATIONS FOR TRENCH SAFETY SYSTEMS CONFORMING TO O.S.H.A. REQUIREMENTS. SUCH PLANS AND SPECIFICATIONS SHALL BE PREPARED BY A REGISTERED PROFESSIONAL ENGINEER EMPLOYED BY OR CONTRACTED BY THE CONTRACTOR AND SHALL BE CONSIDERED A PART OF THE CONTRACTOR'S MEANS AND METHODS OF CONSTRUCTION. IF THIS PROJECT IS OFFERED FOR BID, THE BIDS MUST CONTAIN A SEPARATE UNIT PRICE PAY ITEM FOR TRENCH SAFETY.
3. ALL SURPLUS EXCAVATION AND WASTE MATERIAL SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND IT SHALL BE HIS SOLE RESPONSIBILITY TO REMOVE SUCH SURPLUS EXCAVATION AND WASTE MATERIAL FROM THE SITE TO A PUBLIC DUMP SITE APPROVED FOR THE DISPOSAL OF SUCH MATERIALS. IF SURPLUS EXCAVATION IS REMOVED FROM THIS SITE TO ANOTHER PROPERTY, IT SHALL BE PLACED ON SUCH PROPERTY WITH THE WRITTEN CONSENT OF THE OWNER(S) OF SUCH PROPERTY. A COPY OF SUCH WRITTEN CONSENT SHALL BE PROVIDED TO THE OWNER. IF THE CONTRACTOR WISHES TO DISPOSE OF SURPLUS EXCAVATION ON-SITE, IT SHALL BE ONLY WITH THE PRIOR APPROVAL OF THE OWNER'S PROJECT REPRESENTATIVE AND CARE SHOULD BE TAKEN TO AVOID BLOCKING NATURAL DRAINAGE AND INCREASING STEEP SLOPES.
4. THE CONTRACTOR IS REQUIRED TO PROVIDE THEIR OWN STAKING AND TO VERIFY PROJECT ELEVATIONS. "MATCH EXISTING" SHALL BE UNDERSTOOD TO APPLY TO BOTH VERTICAL ELEVATION AND HORIZONTAL ALIGNMENT.
5. ANY EXISTING SITE IMPROVEMENTS OR UTILITIES REMOVED, DAMAGED OR UNDERCUT BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED OR REPLACED AS DIRECTED BY THE OWNER'S REPRESENTATIVE AND AS APPROVED BY THE OWNER OF SUCH UTILITY. ANY SUCH REPAIR OR REPLACEMENT SHALL BE AT THE CONTRACTOR'S SOLE EXPENSE.
6. THE CONTRACTOR SHALL PREPARE ALL LANDSCAPE AREAS INCLUDING STREET RIGHT-OF-WAY AREAS TO AN ACCEPTABLE SUBGRADE CONDITION IN ACCORDANCE WITH THE LANDSCAPE PLANS. IF THE CONTRACTOR IS NOT EMPLOYED TO PROVIDE AND INSTALL LANDSCAPING, THE CONTRACTOR SHALL PREPARE A FINISHED AND COMPACTED SUBGRADE IN THE LANDSCAPING AREAS 4" BELOW NOMINAL FINISH GRADE AS SHOWN ON THE PLANS AND SHALL ADD 2" OF TOPSOIL TO BRING LANDSCAPING SUBGRADE AS PROVIDED TO THE LANDSCAPING CONTRACTOR, TO 2" BELOW NOMINAL FINISH GRADE.
7. THE CONTRACTOR SHALL STOCKPILE AN ADEQUATE QUANTITY OF TOPSOIL, FOR USE BY THE LANDSCAPER TO BRING FINISH GRADE IN THE LANDSCAPED AREAS TO NOMINAL FINISH GRADE AS SHOWN ON THESE PLANS. WHERE SOIL IS PLACED, ADJUST GRADES SO THAT TOP OF SOIL MATCHES TOP OF CURB AND FLOW LINES OF DRAINAGE SWALES, UNLESS OTHERWISE SPECIFIED ON THESE PLANS.
8. ANY AREA THAT IS DISTURBED BY THE CONSTRUCTION OF THIS PROJECT NEEDS TO BE REVEGETATED, EVEN THE AREAS OUTSIDE OF THE LOC, IN THE ROW, OR ON ADJACENT PROPERTIES.

**GRADING ABBREVIATIONS**

- SPOT ELEVATIONS:
- TC:XXX.X - TOP OF CURB
  - G:XXX.XX = GUTTER
  - I:XX.XX = INLET
  - XX.XX = FINISHED GRADE

PROPOSED	LEGEND	EXISTING
	EASEMENT	
	PROPERTY LINE	
	GRADE BREAK	
	OVERHEAD ELECTRIC	
	EDGE OF PAVEMENT / PAN	
	BACK OF CURB	
	SIDEWALK	
	PATIO	
	MAJOR CONTOUR	
	MINOR CONTOUR	
	SANITARY MANHOLE	
	FIRE HYDRANT	
	WATER METER	
	CURB INLET	
	STORM MANHOLE	
	ADA EMBLEM	
	GREASE TRAP	
	LIGHT POLE	
	DUMPSTER	
	PARKING STALL COUNT	

**CAUTION NOTICE TO CONTRACTORS**  
 THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL 811 AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATIONS OF THE UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATED ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THESE PLANS.



DATE	REVISION DESCRIPTION	BY
7/17/2028	230-792	drawn by
		designed by
		approved by



Runoff Coefficient Table				
	2-year	10-year	25-year	100-year
Grass Areas	0.21	0.25	0.29	0.36
Concrete	0.75	0.83	0.88	0.97

\*DRAINAGE AREA 9 NOT FACTORED IN TO COEFFICIENT CALCS DUE TO SEPERATE EXISTING DRAINAGE AREA ON LOT 3

	Percentage	Acreage
Impervious	73%	2.12
Pervious	27%	0.78

$$100yr C = \frac{(0.36)(0.81) + (0.97)(2.09)}{2.904} = 0.81$$

$$25yr C = \frac{(0.29)(0.81) + (0.88)(2.09)}{2.904} = 0.72$$

$$10yr C = \frac{(0.25)(0.81) + (0.83)(2.09)}{2.904} = 0.67$$

$$2yr C = \frac{(0.21)(0.81) + (0.75)(2.09)}{2.904} = 0.60$$

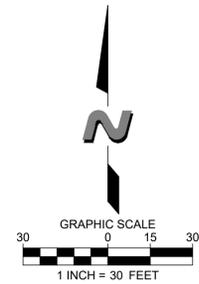
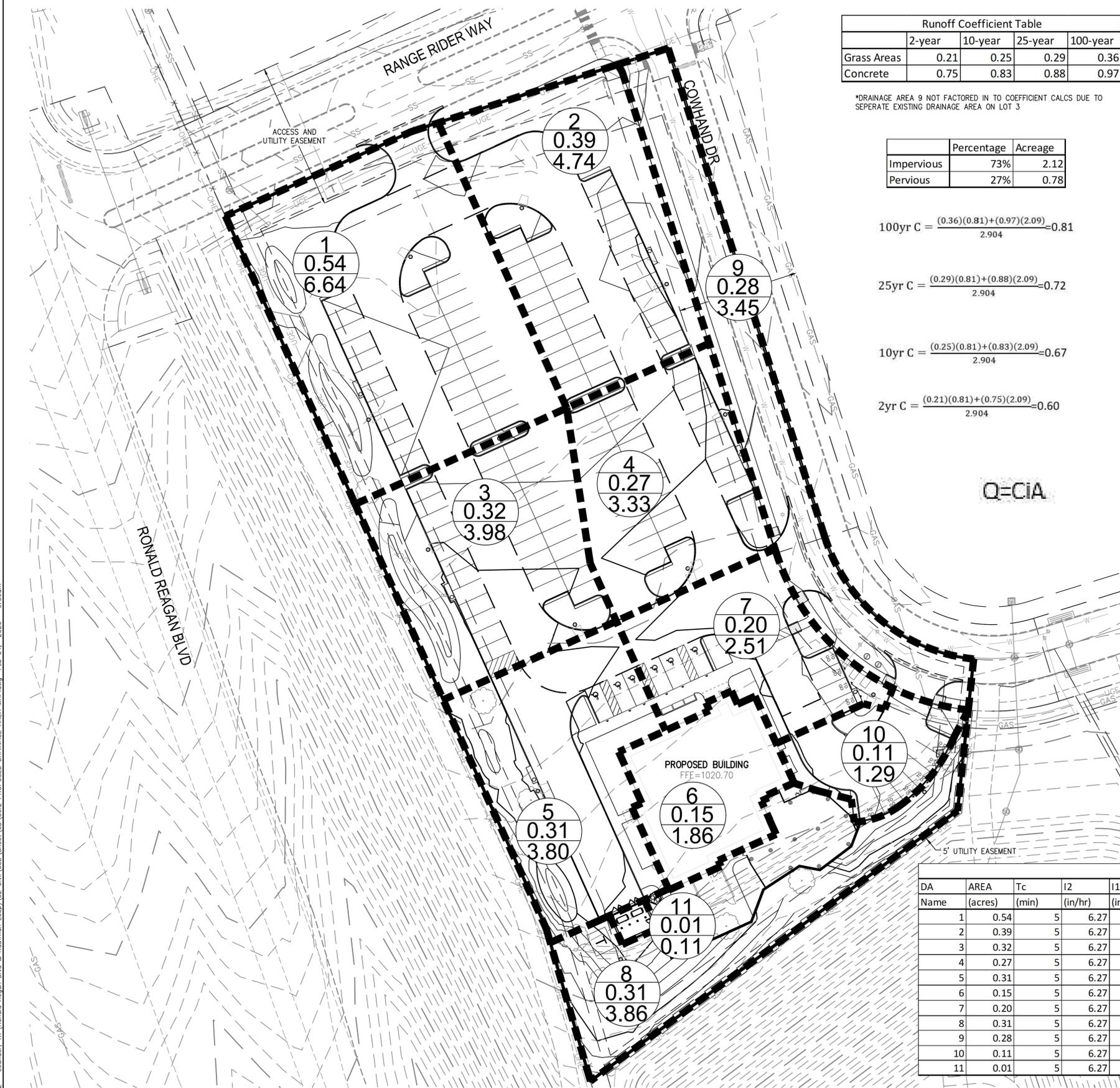
Intensity Calculations					
	a	b	c	i	Tc
2-year	46.99	9.58	0.75	6.27	5.00
10-year	60.75	8.36	0.72	9.43	5.00
25-year	64.56	7.38	0.68	11.62	5.00
100-year	76.90	6.73	0.66	15.32	5.00

Runoff Coefficient Table				
	2-year	10-year	25-year	100-year
Grass Areas	0.21	0.25	0.29	0.36
Concrete	0.75	0.83	0.88	0.97

Event	Assumed Peak Flow	Developed Peak Flow	Change
25-yr	20.20	19.38	-0.82
100-yr	29.80	28.55	-1.25

- \* ASSUMED PEAK FLOW WITH 84% IMPERVIOUS COVER AND 7.42 MINUTE TIME OF CONCENTRATION.
- \* DEVELOPED PEAK FLOW WITH 73% IMPERVIOUS COVER AND 7.45 MINUTE TIME OF CONCENTRATION.
- \* 5 MINUTE TIME OF CONCENTRATION WAS USED FOR PIPE SIZING AND ON SITE HYDRAULIC CALCULATIONS TO BE CONSERVATIVE.

PROPOSED DRAINAGE AREAS											
DA Name	AREA (acres)	Tc (min)	I2 (in/hr)	I10 (in/hr)	I25 (in/hr)	I100 (in/hr)	Q2 (CFS)	Q10 (CFS)	Q25 (CFS)	Q100 (CFS)	Description
1	0.54	5	6.27	9.43	11.62	15.32	2.06	3.45	4.54	6.69	Drains to Curb Inlet #1
2	0.39	5	6.27	9.43	11.62	15.32	1.47	2.46	3.25	4.78	Drains to Curb Inlet #2
3	0.32	5	6.27	9.43	11.62	15.32	1.23	2.06	2.72	4.01	Drains to Curb Inlet #3
4	0.27	5	6.27	9.43	11.62	15.32	1.03	1.73	2.28	3.36	Drains to Curb Inlet #4
5	0.31	5	6.27	9.43	11.62	15.32	1.18	1.97	2.60	3.83	Drains to Curb Inlet #6
6	0.15	5	6.27	9.43	11.62	15.32	0.58	0.97	1.27	1.88	Roof Drain
7	0.20	5	6.27	9.43	11.62	15.32	0.78	1.30	1.72	2.53	Drains to Curb Inlet #5
8	0.31	5	6.27	9.43	11.62	15.32	1.19	2.00	2.64	3.89	Drains offsite to existing Detention Pond
9	0.28	5	6.27	9.43	11.62	15.32	1.07	1.79	2.36	3.48	Drains to Existing Curb inlet in access easement
10	0.11	5	6.27	9.43	11.62	15.32	0.40	0.67	0.88	1.30	Drains to Junction box with grate top
11	0.01	5	6.27	9.43	11.62	15.32	0.03	0.06	0.07	0.11	Drains to Trench Drain



FOR REVIEW ONLY  
NOT FOR CONSTRUCTION PURPOSES

BY	DATE	REVISION DESCRIPTION

PROPOSED DRAINAGE AREA MAP  
CHUY'S TEX-MEX  
BAR W RANCH EAST  
2873 COWHAND DR.  
GEORGETOWN, TEXAS 78628

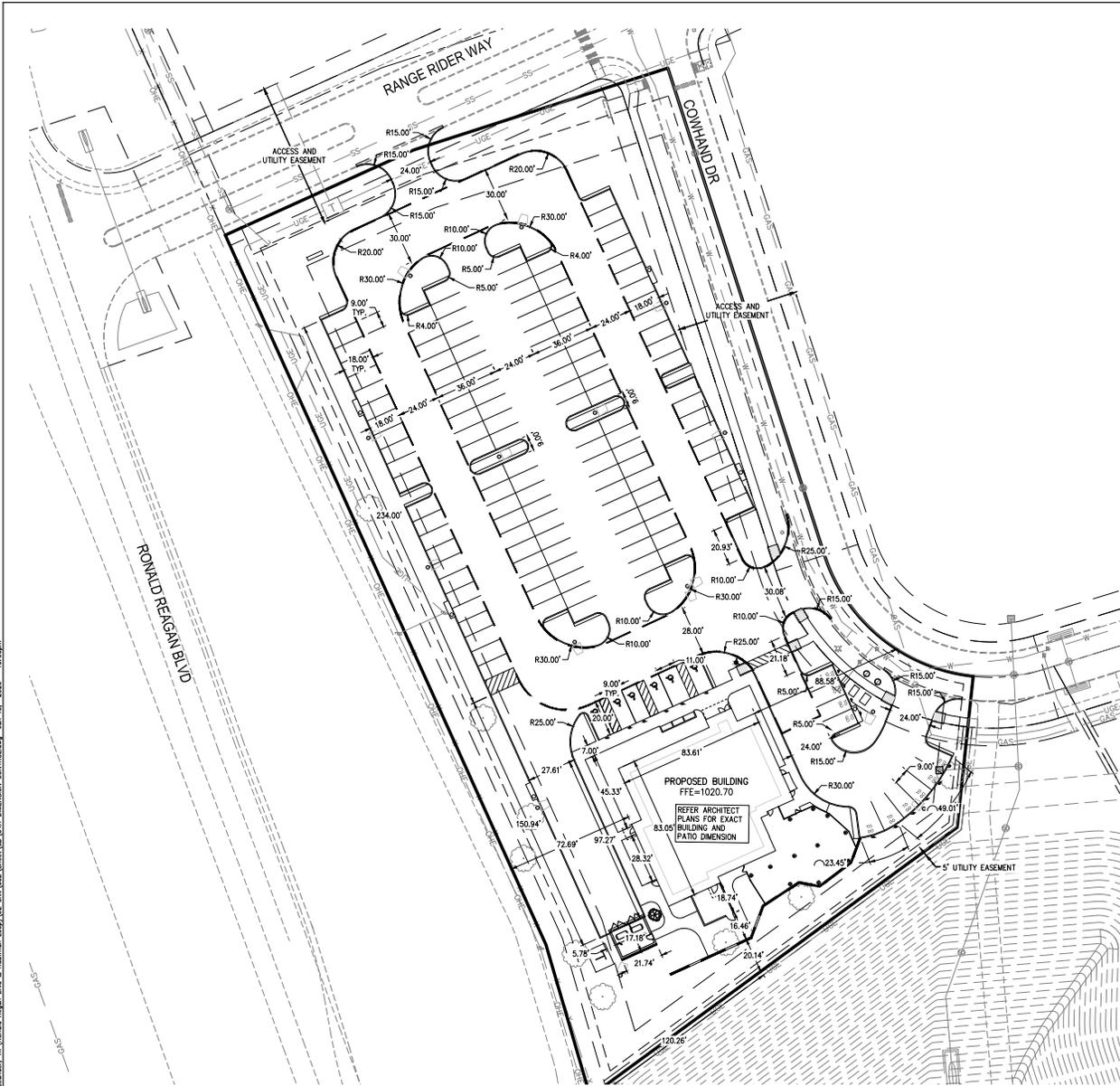
**CAUTION NOTICE TO CONTRACTORS**  
THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL 811 AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATIONS OF THE UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATED ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THESE PLANS.



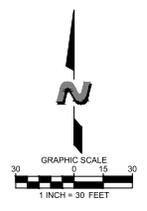








- DIMENSION CONTROL NOTES:**
1. SEE DETAILS ON SITE SHEET C7.2
  2. WHERE CONSTRUCTION DETAILS AND SPECIFICATIONS ARE NOT NOTED ON THESE PLANS USE CITY OF LEANDER STANDARD DRAWINGS FOR DESIGN AND CONSTRUCTION.
  3. ALL DIMENSIONS ARE TO FLOWLINE UNLESS OTHERWISE NOTED.
  4. SEE ARCHITECTURAL SITE PLAN FOR SPECIFIC SITE DETAILS.



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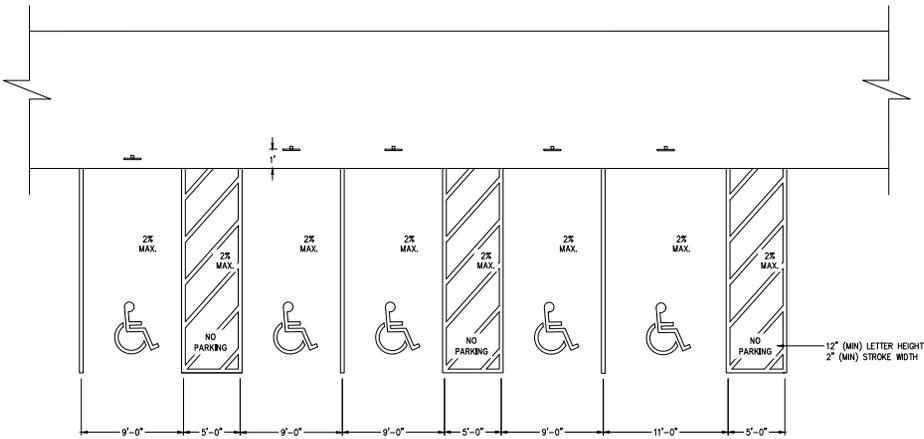
FOR REVIEW ONLY  
 NOT FOR CONSTRUCTION PURPOSES  
**THE DIMENSION GROUP**  
 1800 N. QUINCY STREET, SUITE 200, LEANDER, CA 94548  
 TEL: 774.526.2100  
 WWW.DIMENSIONGROUP.COM

DATE	REVISION DESCRIPTION	BY
7/17/2008 <td>230-792 <td>drawn by</td> </td>	230-792 <td>drawn by</td>	drawn by
		designed by
		approved by

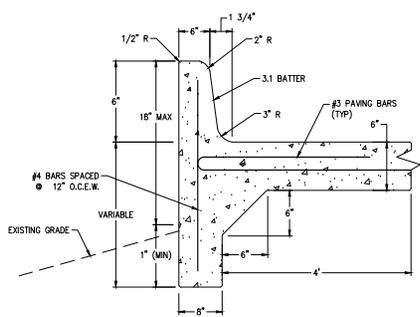
**DIMENSION CONTROL PLAN**  
 CHUY'S TEX-MEX  
 RONALD REGAN & KAUFMAN LOOP LOT 3  
 2873 COMMAND DR  
 LEANDER, TEXAS 9828



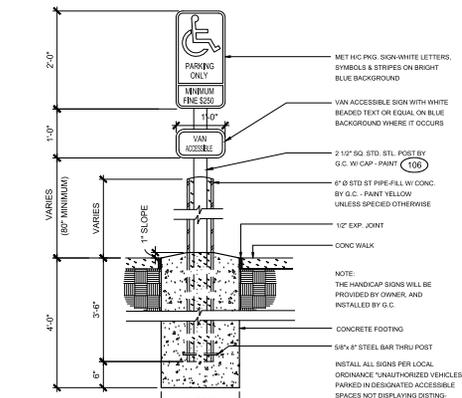
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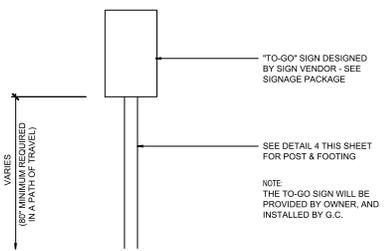
1 HANDICAPPED ACCESSIBLE CURB RAMP DETAIL (FRONT APPROACH)  
N.T.S.



3 6" INTEGRAL CURB W/10e DOWN  
N.T.S.



2 ACCESSIBLE SIGN



4 TO GO SIGN

DATE	REVISION DESCRIPTION
1/13/2008	1.00
1/13/2008	1.01
1/13/2008	1.02
1/13/2008	1.03
1/13/2008	1.04
1/13/2008	1.05
1/13/2008	1.06
1/13/2008	1.07
1/13/2008	1.08
1/13/2008	1.09
1/13/2008	1.10
1/13/2008	1.11
1/13/2008	1.12
1/13/2008	1.13
1/13/2008	1.14
1/13/2008	1.15
1/13/2008	1.16
1/13/2008	1.17
1/13/2008	1.18
1/13/2008	1.19
1/13/2008	1.20
1/13/2008	1.21
1/13/2008	1.22
1/13/2008	1.23
1/13/2008	1.24
1/13/2008	1.25
1/13/2008	1.26
1/13/2008	1.27
1/13/2008	1.28
1/13/2008	1.29
1/13/2008	1.30
1/13/2008	1.31
1/13/2008	1.32
1/13/2008	1.33
1/13/2008	1.34
1/13/2008	1.35
1/13/2008	1.36
1/13/2008	1.37
1/13/2008	1.38
1/13/2008	1.39
1/13/2008	1.40
1/13/2008	1.41
1/13/2008	1.42
1/13/2008	1.43
1/13/2008	1.44
1/13/2008	1.45
1/13/2008	1.46
1/13/2008	1.47
1/13/2008	1.48
1/13/2008	1.49
1/13/2008	1.50

PRIVATE PAVING DETAILS  
 CHUY'S TEX-MEX  
 RONALD REGAN & KAUFMAN LOOP LOT 3  
 2873 COMHAND DR  
 LEANDER, TEXAS 78628

















### MAJOR CORRIDOR PLANT SCHEDULE

TREES	CODE	COMMON / BOTANICAL NAME	SIZE	CONTAINER	QTY
	QP	Mexican White Oak / <i>Quercus polymorpha</i>	REQUIRED TREE / MITIGATION TREE	CONT. 4" Cal	10
	QV	Live Oak / <i>Quercus virginiana</i>	MITIGATION TREE	CONT. 4" Cal	12
	UC	Cedar Elm / <i>Ulmus crassifolia</i>	MITIGATION TREE	CONT. 4" Cal	13

NOTE: ALL PROPOSED TREES ARE LARGE TREES / SHADE TREES AS DEFINED BY THE GROW GREEN GUIDE

SHRUBS	CODE	COMMON / BOTANICAL NAME	SIZE	QTY
	HP	Red Yucca / <i>Hesperaloe parviflora</i>	5 gal	131
	AG	Rose Creek Abelia / <i>Abelia grandiflora</i> 'Rose Creek'	5 gal	70
	LF	Compact Texas Sage / <i>Leucophyllum frutescens</i> 'Compacta'	5 gal	34
	SG	Autumn Sage / <i>Salvia Greggii</i> 'Furman's Red'	5 gal	199

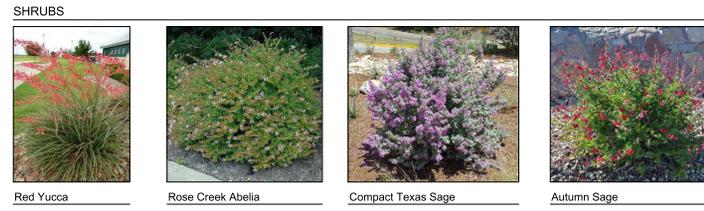
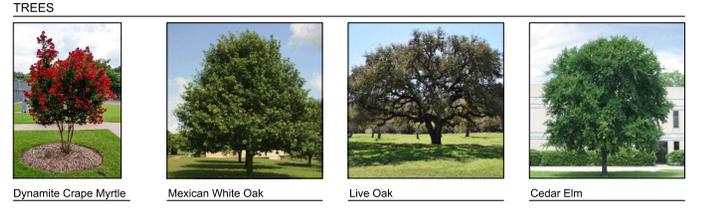
GROUND COVERS	CODE	COMMON / BOTANICAL NAME	SIZE	QTY
	CD	Ti419 Bermuda Grass / <i>Cynodon dactylon</i> 'Ti419'	1' x 4' sod	20,865 sf

DECOMPOSED GRANITE, 3" THICK LAYER COMPACTED OVER LANDSCAPE FABRIC (ANY APPROVED)

SEE SHEET LP-1 FOR LANDSCAPE CALCULATIONS

### MULCHES

AFTER ALL PLANTING IS COMPLETE, CONTRACTOR SHALL INSTALL 3" THICK LAYER OF 1-1/2" SHREDDED WOOD MULCH, NATURAL (UNDYED), OVER LANDSCAPE FABRIC IN ALL PLANTING AREAS EXCEPT FOR TURF AND SEEDING AREAS. CONTRACTOR SHALL SUBMIT SAMPLES OF ALL MULCHES TO LANDSCAPE ARCHITECT AND OWNER FOR APPROVAL PRIOR TO CONSTRUCTION. ABSOLUTELY NO EXPOSED GROUND SHALL BE LEFT SHOWING ANYWHERE ON THE PROJECT AFTER MULCH HAS BEEN INSTALLED (SUBJECT TO THE CONDITIONS AND REQUIREMENTS OF THE "GENERAL GRADING AND PLANTING NOTES" AND SPECIFICATIONS).



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**811**

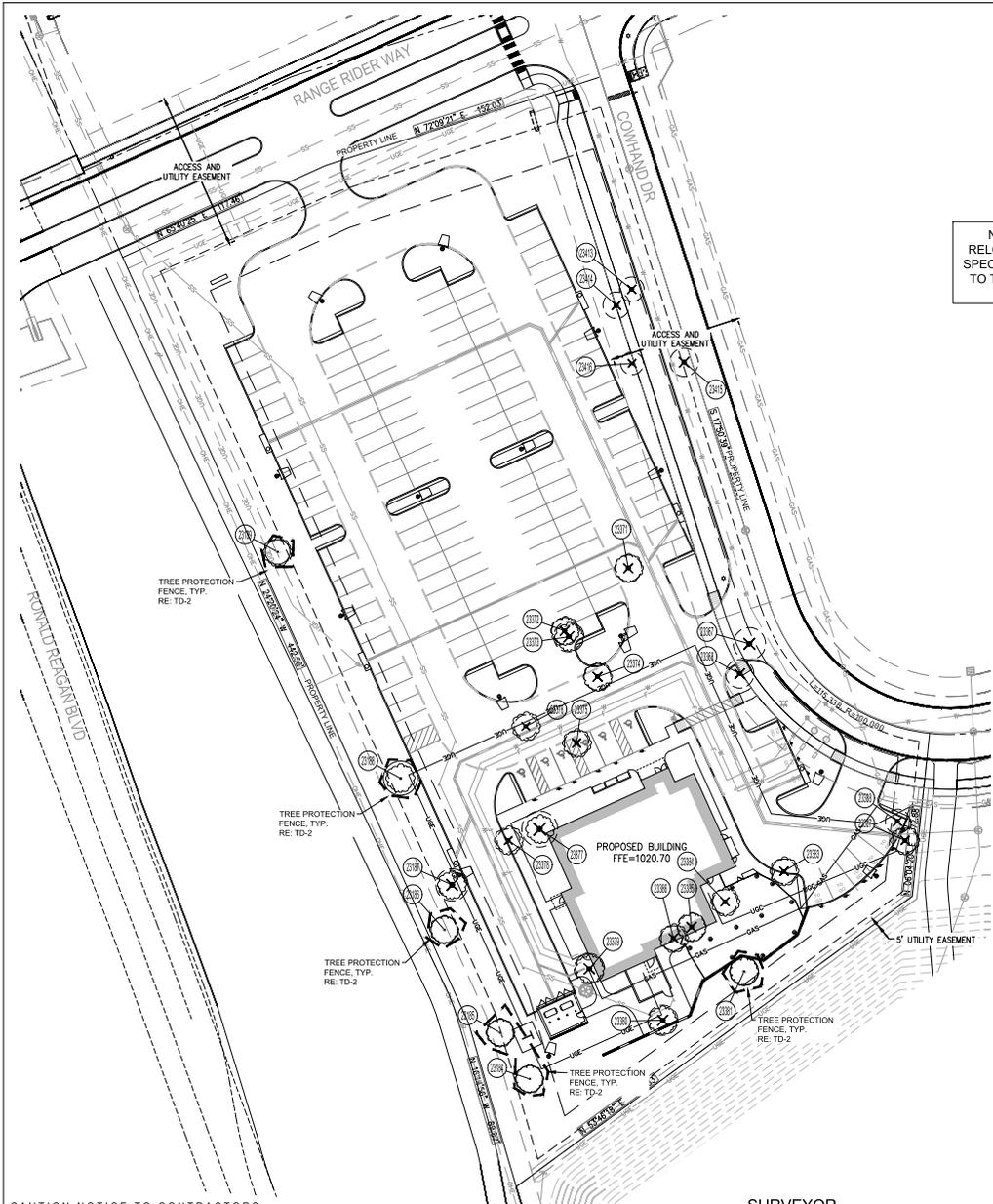
**NOTE:**  
 THE IRRIGATION PERMIT REQUIRES A SEPARATE APPLICATION AS THE IRRIGATION SYSTEM IS NOT REVIEWED, APPROVED, OR INCLUDED WITH THE SITE OR BUILDING PERMITS.



BY	REVISION DESCRIPTION	DATE
AK	drawn by	2/20/25
AK	designed by	2/20/25
SS	approved by	2/20/25

MAJOR CORRIDOR STREETSCAPE PLAN  
 CHUI'S  
 RONALD REGAN & KAUFMAN LOOP  
 LEANDER, TEXAS 76628





**LEGEND**



**NOTE: TREE PROTECTION FOR ANY PRESERVED OR RELOCATED TREES MUST BE PROVIDED PER DETAILS AND SPECIFICATIONS ON SHEET TD-2. THESE MUST BE UP PRIOR TO THE COMMENCEMENT OF ANY WORK AND MAINTAINED THROUGHOUT CONSTRUCTION.**

**NOTE: ALL TREE TRIMMING MUST BE APPROVED BY THE OWNER AND LOCAL JURISDICTION PRIOR TO COMMENCEMENT OF WORK. ALL TREE TRIMMING MUST BE DONE BY AN ISA CERTIFIED ARBORIST IN ACCORDANCE WITH LOCAL TREE PRESERVATION ORDINANCE.**

**TREE TABLE**

POINT	DESCRIPTION	CALIPER INCH	REMOVED	PROTECTED	HERITAGE	REMOVAL REASON
23184	OAK	14		14		
23185	OAK	14		14		
23186	OAK	14		14		
23187	OAK	17	17			
23188	OAK	18		18		
23189	OAK	13		13		
23367	OAK	17	17			EASEMENT
23368	OAK	15	15			EASEMENT
23371	OAK	14	14			
23372	OAK	14	14			
23373	OAK	16	16			
23374	OAK	14	14			
23375	OAK	13	13			
23376	OAK	12	12			
23377	OAK	14	14			
23378	OAK	12	12			
23379	OAK	16	16			
23380	OAK	16	16			
23381	OAK	15		15		
23383	OAK	13	13			
23384	OAK	13	13			
23385	OAK	15	15			
23386	OAK	13	13			
23387	OAK	13	13			GRADING
23388	OAK	13	13			GRADING
23413	OAK	13	13			EASEMENT
23414	OAK	14	14			EASEMENT
23415	OAK	15	15			EASEMENT
23416	OAK	12	12			EASEMENT

**MIGITATION**

TREE MITIGATION REQUIREMENT LOT 3:	TOTAL INCHES	INCHES REMOVED	MITIGATION	INCHES RETAINED
<b>SIGNIFICANT TREES 8"-18" SUBDIVISION</b>	29 TREES: 412	23 TREES: 324	118	88
<b>SIGNIFICANT TREES 18"-24" SUBDIVISION</b>	0 TREES: 0	0	0	0
<b>HERITAGE TREES (2-1 REQUIRED) SUBDIVISION</b>	0 TREES: 0	0	0	0
<b>TOTAL INCHES OF TREES</b>	29 TREES: 412	23 TREES: 324	118	88

**TREE PROTECTION GENERAL NOTES**

- (A) PRIOR TO THE LAND CLEARING STAGE OF DEVELOPMENT, THE CONTRACTOR SHALL CLEARLY MARK ALL PROTECTED TREES FOR WHICH A TREE REMOVAL PERMIT HAS NOT BEEN ISSUED AND SHALL ERRECT BARRIERS FOR THE PROTECTION OF THE TREES ACCORDING TO THE FOLLOWING:
  - (1) AROUND AN AREA AT OR GREATER THAN A SIX-FOOT RADIUS OF ALL SPECIES OF MANGROVES AND PROTECTED CABBAGE PALMS;
  - (2) AROUND AN AREA AT OR GREATER THAN THE FULL DRIPLINE OF ALL PROTECTED NATIVE PINES;
  - (3) AROUND AN AREA AT OR GREATER THAN TWO-THIRDS OF THE DRIPLINE OF ALL OTHER PROTECTED SPECIES.
- (B) NO PERSON SHALL ATTACH ANY SIGN, NOTICE OR OTHER OBJECT TO ANY PROTECTED TREE OR FASTEN ANY WIRES, CABLES, NAILS OR SCREWS TO ANY PROTECTED TREE IN ANY MANNER THAT COULD PROVE HARMFUL TO THE PROTECTED TREE, EXCEPT AS NECESSARY IN CONJUNCTION WITH ACTIVITIES IN THE PUBLIC INTEREST.
- (C) DURING THE CONSTRUCTION STAGE OF DEVELOPMENT, THE CONTRACTOR SHALL NOT CAUSE OR PERMIT THE CLEANING OF EQUIPMENT OR MATERIAL WITHIN THE OUTSIDE PERIMETER OF THE CROWN (DRIPLINE) OR ON THE NEARBY GROUND OF ANY TREE OR GROUP OF TREES WHICH IS TO BE PRESERVED. WITHIN THE OUTSIDE PERIMETER OF THE CROWN (DRIPLINE) OF ANY TREE OR ON NEARBY GROUND, THE CONTRACTOR SHALL NOT CAUSE OR PERMIT STORAGE OF BUILDING MATERIAL AND/OR EQUIPMENT OR DISPOSAL OF WASTE MATERIAL SUCH AS PAINTS, OIL, SOLVENTS, ASPHALT, CONCRETE, MORTAR OR ANY OTHER MATERIAL HARMFUL TO THE LIFE OF THE TREE.
- (D) NO PERSON SHALL PERMIT ANY UNNECESSARY FIRE OR BURNING WITHIN 30 FEET OF THE DRIPLINE OF A PROTECTED TREE.
- (E) ANY LANDSCAPING ACTIVITIES WITHIN THE BARRIER AREA SHALL BE ACCOMPLISHED WITH HAND LABOR.
- (F) PRIOR TO ISSUING A CERTIFICATE OF OCCUPANCY OR COMPLIANCE FOR ANY DEVELOPMENT, BUILDING OR STRUCTURE, ALL TREES DESIGNATED TO BE PRESERVED THAT WERE DESTROYED DURING CONSTRUCTION SHALL BE REPLACED BY THE CONTRACTOR WITH TREES OF EQUIVALENT DIAMETER AT BREAST HEIGHT TREE CALIPER AND OF THE SAME SPECIES AS SPECIFIED BY THE COUNTY ADMINISTRATOR, BEFORE OCCUPANCY OR USE, UNLESS APPROVAL FOR THEIR REMOVAL HAS BEEN GRANTED UNDER PERMIT.
- (G) THE COUNTY ADMINISTRATOR MAY CONDUCT PERIODIC INSPECTIONS OF THE SITE DURING LAND CLEARANCE AND CONSTRUCTION.
- (H) IN THE OPINION OF THE COUNTY ADMINISTRATOR, DEVELOPMENT ACTIVITIES WILL SO SEVERELY STRESS SLASH PINES OR OTHER PROTECTED TREE SUCH THAT THEY ARE MADE SUSCEPTIBLE TO INSECT ATTACK, PREVENTATIVE SPRAYING OF THESE TREES BY THE CONTRACTOR MAY BE REQUIRED.

**NOTE:**

A. IN THE EVENT OF A CONFLICT WITH TREE REMOVAL/PRESERVATION CALL OUTS ON PLAN SHEET(S) VERSUS TREE REMOVAL/PRESERVATION MATRIX, THE TREE REMOVAL/PRESERVATION MATRIX SHALL APPLY. IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY WITH CITY STAFF SHOULD ANY INCONSISTENCY EXIST WITHIN AN APPROVED PLAN SET. NO IN-FIELD CHANGES ARE MADE TO THE APPROVED PLANS, NO EXCEPTIONS.

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**SURVEYOR**

SITE SURVEY & TREE LOCATIONS.  
 Carlson, Briggance & Doering, Inc.  
 License #: 10024900  
 Contact information:  
 512-280-5100



REVISION DESCRIPTION

BY	DATE	DESCRIPTION
AK	2/30/25	drawn by
AK		designed by
SS	2/03/25-08-08	approved by

DATE	DESCRIPTION

TREE DISPOSITION PLAN  
 CHUIYS  
 RONALD REGAN & KAUFMAN LOOP  
 LEANDER, TEXAS 76628



**TREE PROTECTION SPECIFICATIONS**

**MATERIALS**

- FABRIC: 4 FOOT HIGH ORANGE PLASTIC FENCING AS SHOWN ON THE PLANS AND SHALL BE WOVEN WITH 2 INCH MESH OPENINGS SUCH THAT IN A VERTICAL DIMENSION OF 23 INCHES ALONG THE DIAGONALS OF THE OPENINGS THERE SHALL BE AT LEAST 7 MESHES.
- POSTS: POSTS SHALL BE A MINIMUM OF 72 INCHES LONG AND STEEL T7 SHAPED WITH A MINIMUM WEIGHT OF 1.3 POUNDS PER LINEAR FOOT.
- TIE WIRE: WIRE FOR ATTACHING THE FABRIC TO THE T-POSTS SHALL BE NOT LESS THAN NO. 12 GAUGE GALVANIZED WIRE.
- USED MATERIALS: PREVIOUSLY-USED MATERIALS, MEETING THE ABOVE REQUIREMENTS AND WHEN APPROVED BY THE OWNER, MAY BE USED.

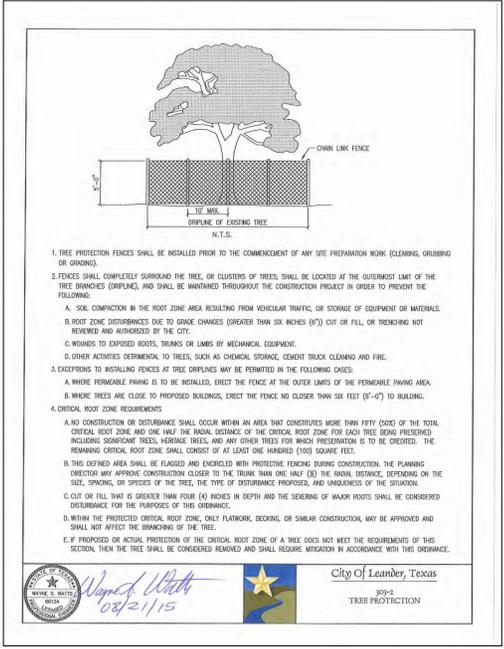
**CONSTRUCTION METHODS**

- ALL TREES AND SHRUBS SHOWN TO REMAIN WITHIN THE PROXIMITY OF THE CONSTRUCTION SITE SHALL BE PROTECTED PRIOR TO BEGINNING ANY DEVELOPMENT ACTIVITY.
- EMPLOY THE SERVICES OF AN ISA (INTERNATIONAL SOCIETY OF ARBORICULTURE) CERTIFIED ARBORIST AND OBTAIN ALL REQUIRED PERMITS TO PRUNE THE EXISTING TREES FOR CLEANING, RAISING AND THINNING AS MAY BE REQUIRED.
- PROTECTIVE FENCING SHALL BE ERECTED OUTSIDE THE CRITICAL ROOT ZONE (CRZ, EQUAL TO 1/2 FROM THE TRUNK FOR EVERY 1" OF DBH) AT LOCATIONS SHOWN IN THE PLANS OR AS DIRECTED BY THE LANDSCAPE CONSULTANT AND/OR CITY ARBORIST, AND IN ACCORDANCE WITH THE DETAILS SHOWN ON THE PLANS. FENCING SHALL BE MAINTAINED AND REPAIRED BY THE CONTRACTOR DURING SITE CONSTRUCTION. TREES IN CLOSE PROXIMITY SHALL BE FENCED TOGETHER, RATHER THAN INDIVIDUALLY.
- PROTECTIVE FENCE LOCATIONS IN CLOSE PROXIMITY TO STREET INTERSECTIONS OR DRIVES SHALL ADHERE TO THE APPLICABLE JURISDICTIONS SIGHT DISTANCE CRITERIA.
- THE PROTECTIVE FENCING SHALL BE ERECTED BEFORE SITE WORK COMMENCES AND SHALL REMAIN IN PLACE DURING THE ENTIRE CONSTRUCTION PHASE.
- THE INSTALLATION POSTS SHALL BE PLACED EVERY 6 FEET ON CENTER AND EMBEDDED TO 18 INCHES DEEP. MESH FABRIC SHALL BE ATTACHED TO THE INSTALLATION POSTS BY THE USE OF SUFFICIENT WIRE TIES TO SECURELY FASTEN THE FABRIC TO THE T-POSTS TO HOLD THE FABRIC IN A STABLE AND UPRIGHT POSITION.
- WITHIN THE CRZ:
  - DO NOT CLEAR, FILL OR GRADE IN THE CRZ OF ANY TREE.
  - DO NOT STORE, STOCKPILE OR DUMP ANY JOB MATERIAL, SOIL, OR RUBBISH UNDER THE SPREAD OF THE TREE BRANCHES.
  - DO NOT PARK OR STORE ANY EQUIPMENT OR SUPPLIES UNDER THE TREE CANOPY.
  - DO NOT SET UP ANY CONSTRUCTION OPERATIONS UNDER THE TREE CANOPY (SUCH AS PIPE CUTTING AND THREADING, MORTAR MIXING, PAINTING OR LUMBER CUTTING).

- DO NOT NAIL OR ATTACH TEMPORARY SIGNS METERS, SWITCHES, WIRES, BRACING OR ANY OTHER ITEM TO THE TREES.
- DO NOT PERMIT RUNOFF FROM WASTE MATERIALS INCLUDING SOLVENTS, CONCRETE WASHOUTS, ASPHALT TACK COATS (M-CO) OR ETC. TO ENTER THE CRZ. BARRIERS ARE TO BE PROVIDED TO PREVENT SUCH RUNOFF SUBSTANCES FROM ENTERING THE CRZ WHENEVER POSSIBLE, INCLUDING IN AN AREA WHERE RAIN OR SURFACE WATER COULD CARRY SUCH MATERIALS TO THE ROOT SYSTEM OF THE TREE.
- ROUTE UNDERGROUND UTILITIES TO AVOID THE CRZ IF DIGGING IS UNAVOIDABLE, BORE UNDER THE ROOTS, OR HAND DIG TO AVOID SEVERING THEM.
- WHERE EXCAVATION IN THE VICINITY OF TREES MUST OCCUR, SUCH AS FOR IRRIGATION INSTALLATION, PROCEED WITH CAUTION, AND USING HAND TOOLS ONLY.
- THE CONTRACTOR SHALL NOT CUT ROOTS LARGER THAN ONE INCH IN DIAMETER WHEN EXCAVATION OCCURS NEAR EXISTING TREES. ALL ROOTS LARGER THAN ONE INCH IN DIAMETER ARE TO BE CUT CLEANLY. FOR OAKS ONLY, ALL WOUNDS SHALL BE PAINTED WITH WOUND SEALER WITHIN 30 MINUTES.
- REMOVE ALL TREES, SHRUBS OR BUSHES TO BE CLEARED FROM PROTECTED ROOT ZONE AREAS BY HAND.
- TREES DAMAGED OR KILLED DUE TO CONTRACTOR'S NEGLIGENCE DURING CONSTRUCTION SHALL BE MITIGATED AT THE CONTRACTOR'S EXPENSE, AND TO THE PROJECT OWNERS' AND LOCAL JURISDICTIONS' SATISFACTION.
- ANY TREE REMOVAL SHALL BE APPROVED BY THE OWNER AND LOCAL JURISDICTION PRIOR TO ITS REMOVAL, AND THE CONTRACTOR SHALL HAVE ALL REQUIRED PERMITS FOR SUCH ACTIVITIES.
- COVER EXPOSED ROOTS AT THE END OF EACH DAY WITH SOIL, MULCH OR WET BURLAP.
- IN CRITICAL ROOT ZONE AREAS THAT CANNOT BE PROTECTED DURING CONSTRUCTION AND WHERE HEAVY TRAFFIC IS ANTICIPATED, COVER THE SOIL WITH EIGHT INCHES OF ORGANIC MULCH TO MINIMIZE SOIL COMPACTION. THIS EIGHT INCH DEPTH OF MULCH SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION.
- WATER ALL TREES IMPACTED BY CONSTRUCTION ACTIVITIES, DEEPLY, ONCE A WEEK DURING PERIODS OF HOT DRY WEATHER. SPRAY TREE CROWNS WITH WATER PERIODICALLY TO REDUCE DUST ACCUMULATION ON THE LEAVES.
- WHEN INSTALLING CONCRETE ADJACENT TO THE ROOT ZONE OF A TREE, USE A PLASTIC VAPOR BARRIER BEHIND THE CONCRETE TO PROHIBIT LEACHING OF LIME INTO THE SOIL.
- CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL TREE PROTECTION FENCING WHEN ALL THREATS TO THE EXISTING TREES FROM CONSTRUCTION RELATED ACTIVITIES HAVE BEEN REMOVED.

**TREE PROTECTION GENERAL NOTES**

- PRIOR TO THE LAND CLEARING STAGE OF DEVELOPMENT, THE CONTRACTOR SHALL CLEARLY MARK ALL PROTECTED TREES FOR WHICH A TREE REMOVAL PERMIT HAS NOT BEEN ISSUED AND SHALL ERECT BARRIERS FOR THE PROTECTION OF THE TREES ACCORDING TO THE FOLLOWING:
  - AROUND AN AREA AT OR GREATER THAN A SIX-FOOT RADIUS OF ALL SPECIES OF MANGROVES AND PROTECTED CABBAGE PALMS.
  - AROUND AN AREA AT OR GREATER THAN THE FULL DRIPLINE OF ALL PROTECTED NATIVE PINES.
  - AROUND AN AREA AT OR GREATER THAN TWO-THIRDS OF THE DRIPLINE OF ALL OTHER PROTECTED SPECIES.
- NO PERSON SHALL ATTACH ANY SIGN, NOTICE OR OTHER OBJECT TO ANY PROTECTED TREE OR FASTEN ANY WIRES, CABLES, NAILS OR SCREWS TO ANY PROTECTED TREE IN ANY MANNER THAT COULD PROVE HARMFUL TO THE PROTECTED TREE, EXCEPT AS NECESSARY IN CONJUNCTION WITH ACTIVITIES IN THE PUBLIC INTEREST.
- DURING THE CONSTRUCTION STAGE OF DEVELOPMENT, THE CONTRACTOR SHALL NOT CAUSE OR PERMIT THE CLEANING OF EQUIPMENT OR MATERIAL WITHIN THE OUTSIDE PERIMETER OF THE CROWN (DRIPLINE) OR ON THE NEARBY GROUND OF ANY TREE OR GROUP OF TREES WHICH IS TO BE PRESERVED. WITHIN THE OUTSIDE PERIMETER OF THE CROWN (DRIPLINE) OF ANY TREE OR ON NEARBY GROUND, THE CONTRACTOR SHALL NOT CAUSE OR PERMIT STORAGE OF BUILDING MATERIAL AND/OR EQUIPMENT, OR DISPOSAL OF WASTE MATERIAL SUCH AS PAINTS, OIL, SOLVENTS, ASPHALT, CONCRETE, MORTAR OR ANY OTHER MATERIAL HARMFUL TO THE LIFE OF THE TREE.
- NO PERSON SHALL PERMIT ANY UNNECESSARY FIRE OR BURNING WITHIN 30 FEET OF THE DRIPLINE OF A PROTECTED TREE.
- ANY LANDSCAPING ACTIVITIES WITHIN THE BARRIER AREA SHALL BE ACCOMPLISHED WITH HAND LABOR.
- PRIOR TO ISSUING A CERTIFICATE OF OCCUPANCY OR COMPLIANCE FOR ANY DEVELOPMENT, BUILDING OR STRUCTURE, ALL TREES DESIGNATED TO BE PRESERVED THAT WERE DESTROYED DURING CONSTRUCTION SHALL BE REPLACED BY THE CONTRACTOR WITH TREES OF EQUIVALENT DIAMETER AT GREATEST HEIGHT TREE CALIPER AND OF THE SAME SPECIES AS SPECIFIED BY THE CITY STAFF, BEFORE OCCUPANCY OR USE, UNLESS APPROVAL FOR THEIR REMOVAL HAS BEEN GRANTED UNDER PERMIT.
- THE CITY STAFF MAY CONDUCT PERIODIC INSPECTIONS OF THE SITE DURING LAND CLEARANCE AND CONSTRUCTION.
- IF IN THE OPINION OF THE CITY STAFF, DEVELOPMENT ACTIVITIES WILL SO SEVERELY STRESS SLASH PINES OR ANY OTHER PROTECTED TREE SUCH THAT THEY ARE MADE SUSCEPTIBLE TO INSECT ATTACK, PREVENTATIVE SPRAYING OF THESE TREES BY THE CONTRACTOR MAY BE REQUIRED.



- TREE PROTECTION FENCES SHALL BE INSTALLED PRIOR TO THE COMMENCEMENT OF ANY SITE PREPARATION WORK (CLEANING, GRUBBING OR GRADING).
- FENCES SHALL COMPLETELY SURROUND THE TREE, OR CLUSTERS OF TREES, SHALL BE LOCATED AT THE OUTERMOST LIMIT OF THE TREE DRIPLINES (DRIPLINE), AND SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PROJECT IN ORDER TO PREVENT THE FOLLOWING:
  - SOIL COMPACTION IN THE ROOT ZONE AREA RESULTING FROM VEHICULAR TRAFFIC, OR STORAGE OF EQUIPMENT OR MATERIALS.
  - ROOT ZONE DISTURBANCES DUE TO GRADE CHANGES (GREATER THAN SIX INCHES (6") CUT OR FILL, OR TRIMMING NOT REQUIRED AND APPROVED BY THE CITY).
  - WOUNDS TO EXPOSED ROOTS, TRUNKS OR LIMBS BY MECHANICAL EQUIPMENT.
  - OTHER ACTIVITIES DETRIMENTAL TO TREES, SUCH AS CHEMICAL STORAGE, CEMENT TRUCK CLEANING AND FIRE.
- EXCEPT FOR INSTALLING FENCES AT TREE DRIPLINES MAY BE PERMITTED IN THE FOLLOWING CASES:
  - WHERE FENCEABLE PARKING IS TO BE INSTALLED, DIRECT THE FENCE AT THE OUTER LIMITS OF THE FENCEABLE PARKING AREA.
  - WHERE TREES ARE CLOSE TO PROPOSED BUILDINGS, DIRECT THE FENCE NO CLOSER THAN SIX FEET (6'-0") TO BUILDING.
- CRITICAL ROOT ZONE REQUIREMENTS
  - NO CONSTRUCTION OR DISTURBANCE SHALL OCCUR WITHIN AN AREA THAT CONSTITUTES MORE THAN FIFTY (50%) OF THE TOTAL CRITICAL ROOT ZONE AND ONE HALF THE RADIAL DISTANCE OF THE CRITICAL ROOT ZONE FOR EACH TREE BEING PRESERVED (INCLUDING SPOBTREE TREES, HERONIA TREES, AND ANY OTHER TREES FOR WHICH PRESERVATION IS TO BE OBTAINED). THE REMAINING CRITICAL ROOT ZONE SHALL CONSIST OF AT LEAST ONE HUNDRED (100) SQUARE FEET.
  - THIS DEFINED AREA SHALL BE FLAGGED AND ENCLOSED WITH PROTECTIVE FENCING DURING CONSTRUCTION. THE PLANNING DIRECTOR MAY APPROVE CONSTRUCTION CLOSER TO THE TRUNK THAN ONE HALF (1/2) THE RADIAL DISTANCE, DEPENDING ON THE SIZE, SPACING, OR SPECIES OF THE TREE, THE TYPE OF DISTURBANCE PROPOSED, AND UNUSUALNESS OF THE SITUATION.
  - CUT OR FILL THAT IS GREATER THAN FOUR (4) INCHES IN DEPTH AND THE SEVERING OF MAJOR ROOTS SHALL BE CONSIDERED DISTURBANCE FOR THE PURPOSES OF THIS ORDINANCE.
  - WITHIN THE PROTECTED CRITICAL ROOT ZONE, ONLY PLANKING, DECKING, OR SIMILAR CONSTRUCTION MAY BE APPROVED AND SHALL NOT AFFECT THE GROWTHING OF THE TREE.
  - IF PROPOSED OR ACTUAL PROTECTION OF THE CRITICAL ROOT ZONE OF A TREE DOES NOT MEET THE REQUIREMENTS OF THE SECTION, THEN THE TREE SHALL BE CONSIDERED REMOVED AND SHALL REQUIRE MITIGATION IN ACCORDANCE WITH THIS ORDINANCE.

City of Leander, Texas  
89-1  
TREE PROTECTION

**CAUTION NOTICE TO CONTRACTORS**

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL 811 AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATIONS OF THE UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATED ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THESE PLANS.



BY	DATE	REVISION DESCRIPTION
SS		approved by
JK		designed by
JK		drawn by

DATE	REVISION DESCRIPTION
01/13/2026	
2/30/2025	
2/20/2025	

TREE DISPOSITION SPECIFICATIONS AND DETAILS

CHUIV'S  
RONALD REGAN & KAUFMAN LOOP  
LEANDER, TEXAS 78628



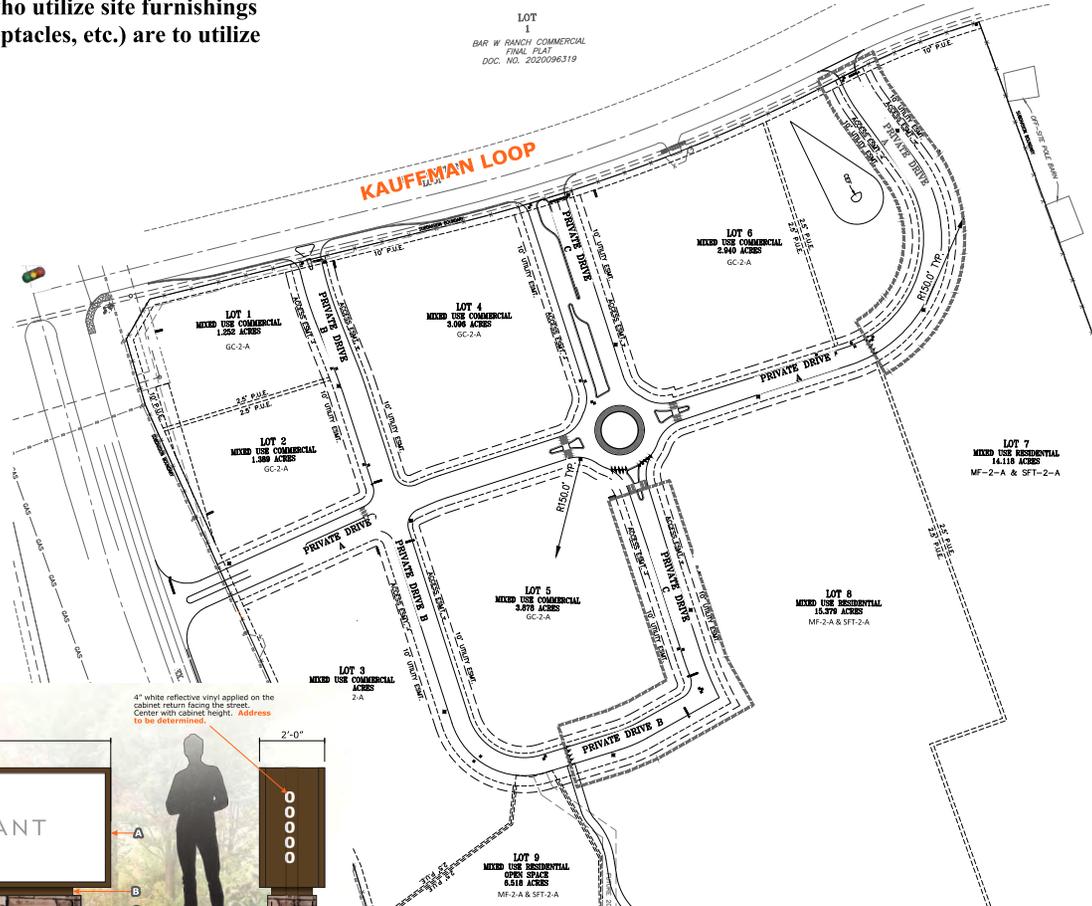
# Bar W East - Master Architectural Plan for Commercial Users

**PLAN**

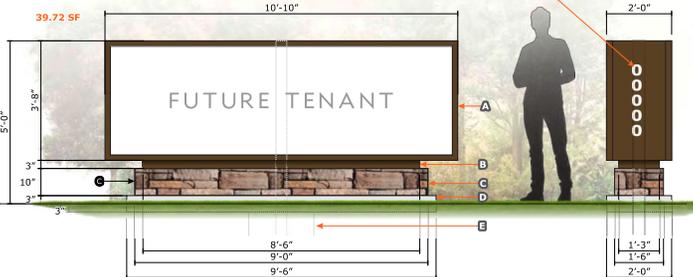
SITE PLAN

1" = 185'-0"

1. All Commercial land users who utilize site furnishings (benches, bike racks, trash receptacles, etc.) are to utilize bronze colored furnishings.



4" white reflective vinyl applied on the cabinet return facing the street. Center with cabinet height. Address to be determined.



2. All Commercial land users who construct a monument sign are to utilize a design with masonry facade and bronze side panels



3. All Commercial land users who construct site lighting are to utilize bronze site lighting poles and fixtures

Job Name:

BARSHOP & OLKES  
COMPANY

VILLAGE AT  
BAR W RANCH

Client: Barshop & Olkes  
Location: Leander, TX

Revisions (M/D/Y)-(initials): desc.

Bar W East  
Master Architectural  
Plan for Commercial  
Users

30 OF 31



**THE DIMENSION GROUP**  
 ARCHITECTURE CIVIL ENGINEERING MEP ENGINEERING  
 10755 SANDHILL ROAD, DALLAS, TEXAS 75238  
 TEL: 214-363-9493 [www.thedimensiongroup.com](http://www.thedimensiongroup.com)

THESE PLANS ARE INSTRUMENTS OF PROFESSIONAL SERVICE AND ARE PROTECTED BY COMMON LAW, STATUTE AND OTHER RESERVED RIGHTS INCLUDING COPYRIGHT. THEY ARE NOT TO BE REPRODUCED OR USED FOR ANY PURPOSE WITHOUT THE WRITTEN CONSENT OF THE DIMENSION GROUP.

PROJECT NAME  
**CHUY'S TEX MEX - LEANDER**

489 KAUFFMAN LOOP  
 LEANDER, TX 76043

PROJECT NAME

REVISION RECORD

No.	DATE	REVISION DESCRIPTION
1	12.04.25	CITY COMMENTS

DRAWN: APPROVED:

PROJECT NUMBER  
 230-752  
 SHEET TITLE  
 EXTERIOR ELEVATIONS

SHEET NUMBER  
**31 OF 31**

**EXTERIOR ELEVATION GENERAL NOTES**

1. PROVIDE CONTROL AND CONSTRUCTION JOINTS AS REQUIRED BY PRODUCT MANUFACTURERS BOTH VERTICAL AND HORIZONTAL. PREFERRED LOCATIONS ARE TO ALIGN WITH WINDOWS, DOORS, AND CHANGES IN MATERIALS.
2. REFER TO SHEET AREA - FINISH SCHEDULES FOR FINISHES AND MATERIALS.



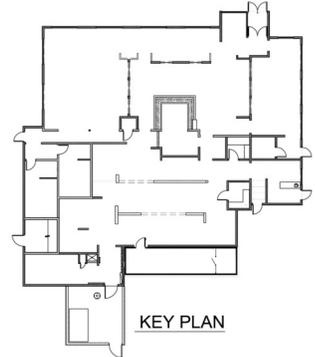
**1 NORTHWEST ELEVATION (KAUFFMAN LOOP)**  
 SCALE: 1/4" = 1'-0"

**DESIGN FEATURES**

1. VERTICAL ROOF HEIGHTS
2. GATED ENTRY TOWER
3. FULL GLASS STOREFRONT
4. EMERALD LIPS STOREFRONT DESIGN
5. BRICK AND STUCCO
6. FLAT ROOF WITH CORRUGATED METAL
7. CORROSION PROTECTIVE TOWER
8. SITE LIGHT FIXTURES TO BE DARK BRONZE FINISH

**MATERIAL LEGEND**

MATERIAL - FCB-02 - CEMENTITIOUS ASSEMBLY PAINT - PF-5 - SHERWIN WILLIAMS DYNAMIC BLUE SW 6659	MATERIAL - STC-01 - STUCCO PAINT - PT-2 - SHERWIN WILLIAMS LUSTY RED SW 6603
MATERIAL - STC-01 - STUCCO PAINT - PF-8 - SHERWIN WILLIAMS AZUL ACE CORAL SW 0058	MATERIAL - BRK-01 - ACME BRICK TERRAZO BRICK - FLAMMATER PAINT - PT-1 - SHERWIN WILLIAMS BLUEBLOOD SW 6666
MATERIAL - STC-01 - STUCCO PAINT - PF-4 - SHERWIN WILLIAMS NAVEL SW 6687	MATERIAL - FCB-02 - CEMENTITIOUS ASSEMBLY PAINT - PF-4 - SHERWIN WILLIAMS OVERT GREEN SW 6778
MATERIAL - CP-01 - TERRA Y FUEGO CONCRETE PAVEN TILE	MATERIAL - CP-01 - TERRA Y FUEGO CONCRETE PAVEN TILE
MATERIAL - BRK-02 - ACME BRICK TERRAZO BRICK - KENLAKNORTH	MATERIAL - MT-02 - NICKEL/RO METAL MATERIAL - MT-02 - NICKEL/RO METAL COLOR: CITYSCAPE



**ATTACHMENT "G"**  
**OPERATION AND MAINTENANCE PLAN**  
**BAR W RANCH EAST MIXED USE**

**PROJECT DESCRIPTION**

Bar W Ranch East Mixed Use is a 51.474-acre tract of land located in the city limits of Leaner and Williamson County. It is a development of six commercial lots, two mixed use residential lots and one open space lot. This project will utilize one partial sedimentation-filtration pond for the entire site. The property is in the South Fork San Gabriel Watershed and is in a portion the Edward's Aquifer Recharge Zone and Contributing Zone.

**PEST MANAGEMENT**

The following Integrated Pest Management plan for Bar W Ranch East Mixed Use will assume that primary pests of concern will be Aphids, Beetles, Beneficial Insects, Caterpillars, Fertilizing Recommendations, Fire Ants, Fleas, Galls, Hiring a Landscaping Professional, Landscaping, Lawn Care, Lawn Problems, Mosquitos, Poison Ivy, Pruning, Spider Mites, Product Ratings, Scale, Snails, Stink Bugs, and Weeks. The anticipated pest problems have been derived from the type of pests that typically inhabit subdivisions and developments within local proximity to the project.

Non-toxic and less persistent control products should be employed in controlling pests before more persistent products are considered. More persistent control products should only be used after all other tactics have been employed. It is advisable to utilize a pest control professional, familiar with the IPM approaches, before resorting to highly toxic and persistent chemicals. Regularly scheduled pesticide applications are not considered to be part of the Integrated Pest management.

**Sand Filter System**

Regular, routine maintenance is essential to effective, long-lasting performance of sand filters. Neglect or failure to service the filters on a regular basis will lead to poor performance and eventual costly repairs. It is recommended that sand filter BMPs be inspected on a quarterly basis and after large storms for the first year of operation. This intensive monitoring is intended to ensure proper operation and provide maintenance personnel with a feel for the operational characteristics of the filter. Subsequent inspections can be limited to semi-annually or more often if deemed necessary (Young et al., 1996).

Certain construction and maintenance practices are essential to efficient operation of the filter. The biggest threat to any filtering system is exposure to heavy sediment loads that clog the filter media. Construction within the watershed should be complete prior to minimize sediment loads. Runoff from any unstabilized construction areas should be treated via a separate sediment system that bypasses the filter media.

Another important consideration in constructing the filter bed is to ensure that the top of the media is completely level. The filter design is based on the use of the entire filter media surface area; a sloped filter surface would result in disproportionate use of the filter media.

Other recommended maintenance guidelines include:

- **Inspections.** BMP facilities must be inspected at least twice a year (once during or immediately following wet weather) to evaluate facility operation. During each inspection, erosion areas inside and downstream of the BMP must be identified and repaired or revegetated immediately. With each inspection, any damage to the structural elements of the system (pipes, concrete drainage structures, retaining walls, etc.) must be identified and repaired immediately. Cracks, voids and undermining should be patched/filled to prevent additional structural damage. Trees and root systems should be removed to prevent growth in cracks and joints that can cause structural damage.



- **Sediment Removal.** Remove sediment from the inlet structure and sedimentation chamber when sediment buildup reaches a depth of 6 inches or when the proper functioning of inlet and outlet structures is impaired. Sediment should be cleared from the inlet structure at least every year and from the sedimentation basin at least every 5 years.
- **Media Replacement.** Maintenance of the filter media is necessary when the draw-down time exceeds 48 hours. When this occurs, the upper layer of sand should be removed and replaced with new material meeting the original specifications. Any discolored sand should also be removed and replaced. In filters that have been regularly maintained, this should be limited to the top 2 to 3 inches.
- **Debris and Litter Removal.** Debris and litter will accumulate near the sedimentation basin outlet device and should be removed during regular mowing operations and inspections. Particular attention should be paid to floating debris that can eventually clog the control device or riser.
- **Filter Underdrain.** Clean underdrain piping network to remove any sediment buildup as needed to maintain design drawdown time.
- **Mowing.** Grass areas in and around sand filters must be mowed at least twice annually to limit vegetation height to 18 inches. More frequent mowing to maintain aesthetic appeal may be necessary in landscaped areas. Vegetation on the pond embankments should be mowed as appropriate to prevent the establishment of woody vegetation.



**ATTACHMENT "G" (cont.)  
OPERATION AND MAINTENANCE PLAN  
BAR W RANCH EAST MIXED USE**

**DEVELOPER CONTACT INFORMATION**

Bar W East Commercial, LTD.  
901 S. Mopac Expressway, Suite 550  
Austin, TX 78746

*Dean Wheat*

Developer / Owner Signature

Vice President, B&O Bar W East G.P. LLC., General Partner  
of Bar W East Commercial, LTD.

*10/21/24*

Date

**ATTACHMENT "G" (cont.)  
INSPECTION, MAINTENANCE, REPAIR AND RETROFIT PLAN  
BAR W RANCH EAST MIXED USE**

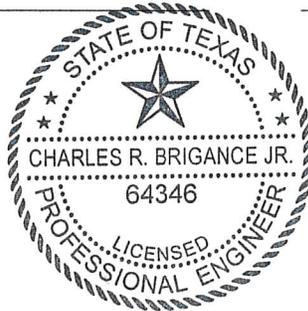
MAINTENANCE SCHEDULE	
ITEM:	SCHEDULE OF WORK:
MOWING	TWICE A YEAR OR WHEN VEGETATION REACHES 18 INCHES HIGH
INSPECTIONS	ONCE EVERY SIX MONTHS
DEBRIS AND LITTER REMOVAL	REMOVE EVERYTIME MOWING OCCURS
EROSION CONTROL	SCHEDULE WORK UPON DISCOVERY
NUISANCE CONTROL	SCHEDULE WORK UPON DISCOVERY
STRUCTURAL REPAIRS	SCHEDULE WORK UPON DISCOVERY
SEDIMENT REMOVAL	UPON 20% OF VOLUME BUILD UP OR EVERY 20 YEARS.
HARVESTING	SCHEDULE WORK UPON DISCOVERY

Inspections shall be documented in a report and the Owner is responsible for keeping this report at their office and will be available to TCEQ upon request.

The Inspection, Maintenance, Repair and Retrofit Plan follows the RG-348 Guidance.

  
Engineer Signature/Seal

  
Date



CARLSON, BRIGANCE & DOERING, INC.  
ID# F3791

ATTACHMENT "G" (cont.)  
INSPECTION, MAINTENANCE, REPAIR AND RETROFIT PLAN  
BAR W RANCH EAST MIXED USE

DEVELOPER CONTACT INFORMATION

Bar W East Commercial, LTD.  
901 S. Mopac Expressway, Suite 550  
Austin, TX 78746



---

Developer / Owner Signature

12-3-2024

---

Date

## **PERMANENT STORMWATER SECTION**

### **ATTACHMENT "1"**

This project is served by a water quality wet basin located downstream of the site built with the Bar W Ranch East Mixed Use project. The proposed facilities controlling the resulting run-off have been designed with measures to minimize stream bank erosion at the point of discharge to the adjacent stream. The outfall from the water quality facility is equipped with large dump rock which will slow down the stormwater discharge velocities, thus stopping the undermining of soil and sediment transport in the stream.

**VII**

**AGENT AUTHORIZATION FORM**

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

I Robbie Keithley  
Print Name

Vice President, B+O BarW East GP, LLC, General Partner  
Title - Owner/President/Other

of Bar W East Commercial, LTD.  
Corporation/Partnership/Entity Name

have authorized Lee A. Whited, P.E.  
Print Name of Agent/Engineer

of Carlson, Brigance & Doering, 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:

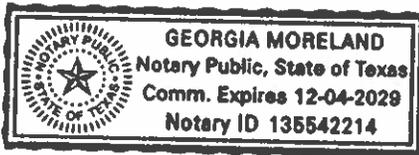
Robbie Keithley  
Applicant's Signature

1/28/26  
Date

THE STATE OF TEXAS §  
County of Travis §

BEFORE ME, the undersigned authority, on this day personally appeared Robbie Keithley 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 28 day of January, 2026.



[Signature]  
NOTARY PUBLIC  
Georgia Moreland  
Typed or Printed Name of Notary

MY COMMISSION EXPIRES: 12/04/2029

**VIII**

**APPLICATION FEE FORM**

# Application Fee Form

**Texas Commission on Environmental Quality**

Name of Proposed Regulated Entity: Chuys Tex-Mex Bar W East Commercial  
 Regulated Entity Location: SE corner of Ronald Reagan Blvd. & Kauffman Loop  
 Name of Customer: Bar W East Commercial, LTD.  
 Contact Person: Lee A. Whited, P.E. Phone: (512) 280-5160  
 Customer Reference Number (if issued): CN 606357127  
 Regulated Entity Reference Number (if issued): RN 112154331

**Austin Regional Office (3373)**

- Hays  Travis  Williamson

**San Antonio Regional Office (3362)**

- Bexar  Medina  Uvalde  
 Comal  Kinney

Application fees must be paid by check, certified check, or money order, payable to the **Texas Commission on Environmental Quality**. Your canceled check will serve as your receipt. **This form must be submitted with your fee payment.** This payment is being submitted to:

- Austin Regional Office  San Antonio Regional Office  
 Mailed to: TCEQ - Cashier  Overnight Delivery to: TCEQ - Cashier  
 Revenues Section 12100 Park 35 Circle  
 Mail Code 214 Building A, 3rd Floor  
 P.O. Box 13088 Austin, TX 78753  
 Austin, TX 78711-3088 (512)239-0357

**Site Location (Check All That Apply):**

- Recharge Zone  Contributing Zone  Transition Zone

<i>Type of Plan</i>	<i>Size</i>	<i>Fee Due</i>
Water Pollution Abatement Plan, Contributing Zone Plan: One Single Family Residential Dwelling	Acres	\$
Water Pollution Abatement Plan, Contributing Zone Plan: Multiple Single Family Residential and Parks	Acres	\$
Water Pollution Abatement Plan, Contributing Zone Plan: Non-residential	2.905 Acres	\$ 4,000
Sewage Collection System	L.F.	\$
Lift Stations without sewer lines	Acres	\$
Underground or Aboveground Storage Tank Facility	Tanks	\$
Piping System(s)(only)	Each	\$
Exception	Each	\$
Extension of Time	Each	\$

Signature: Robbie Keithley

Date: 1/28/26

# Application Fee Schedule

Texas Commission on Environmental Quality

Edwards Aquifer Protection Program 30 TAC Chapter 213 (effective 05/01/2008)

## ***Water Pollution Abatement Plans and Modifications***

### ***Contributing Zone Plans and Modifications***

<b><i>Project</i></b>	<b><i>Project Area in Acres</i></b>	<b><i>Fee</i></b>
One Single Family Residential Dwelling	< 5	\$650
Multiple Single Family Residential and Parks	< 5	\$1,500
	5 < 10	\$3,000
	10 < 40	\$4,000
	40 < 100	\$6,500
	100 < 500	\$8,000
	≥ 500	\$10,000
Non-residential (Commercial, industrial, institutional, multi-family residential, schools, and other sites where regulated activities will occur)	< 1	\$3,000
	1 < 5	\$4,000
	5 < 10	\$5,000
	10 < 40	\$6,500
	40 < 100	\$8,000
	≥ 100	\$10,000

### ***Organized Sewage Collection Systems and Modifications***

<b><i>Project</i></b>	<b><i>Cost per Linear Foot</i></b>	<b><i>Minimum Fee- Maximum Fee</i></b>
Sewage Collection Systems	\$0.50	\$650 - \$6,500

### ***Underground and Aboveground Storage Tank System Facility Plans and Modifications***

<b><i>Project</i></b>	<b><i>Cost per Tank or Piping System</i></b>	<b><i>Minimum Fee- Maximum Fee</i></b>
Underground and Aboveground Storage Tank Facility	\$650	\$650 - \$6,500

### ***Exception Requests***

<b><i>Project</i></b>	<b><i>Fee</i></b>
Exception Request	\$500

### ***Extension of Time Requests***

<b><i>Project</i></b>	<b><i>Fee</i></b>
Extension of Time Request	\$150

**IX**

**CORE DATA FORM**



# 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

<b>1. Reason for Submission</b> (If other is checked please describe in space provided.)		
<input checked="" type="checkbox"/> New Permit, Registration or Authorization (Core Data Form should be submitted with the program application.)		
<input type="checkbox"/> Renewal (Core Data Form should be submitted with the renewal form)	<input type="checkbox"/> Other	
<b>2. Customer Reference Number</b> (if issued)	<a href="#">Follow this link to search for CN or RN numbers in Central Registry**</a>	<b>3. Regulated Entity Reference Number</b> (if issued)
CN 606357127		RN 112154331

## SECTION II: Customer Information

<b>4. General Customer Information</b>		<b>5. Effective Date for Customer Information Updates</b> (mm/dd/yyyy)	
<input checked="" type="checkbox"/> New Customer <input type="checkbox"/> Update to Customer Information <input type="checkbox"/> Change in Regulated Entity Ownership <input type="checkbox"/> Change in Legal Name (Verifiable with the Texas Secretary of State or Texas Comptroller of Public Accounts)			
<i>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).</i>			
<b>6. Customer Legal Name</b> (If an individual, print last name first: eg: Doe, John)		<i>If new Customer, enter previous Customer below:</i>	
Bar W East Commercial, Ltd.			
<b>7. TX SOS/CPA Filing Number</b>	<b>8. TX State Tax ID</b> (11 digits)	<b>9. Federal Tax ID</b> (9 digits)	<b>10. DUNS Number</b> (if applicable)
0804580343	32084729691		
<b>11. Type of Customer:</b>	<input type="checkbox"/> Corporation	<input type="checkbox"/> Individual	Partnership: <input type="checkbox"/> General <input checked="" type="checkbox"/> Limited
Government: <input type="checkbox"/> City <input type="checkbox"/> County <input type="checkbox"/> Federal <input type="checkbox"/> Local <input type="checkbox"/> State <input type="checkbox"/> Other	<input type="checkbox"/> Sole Proprietorship		<input type="checkbox"/> Other:
<b>12. Number of Employees</b>		<b>13. Independently Owned and Operated?</b>	
<input type="checkbox"/> 0-20 <input type="checkbox"/> 21-100 <input type="checkbox"/> 101-250 <input type="checkbox"/> 251-500 <input type="checkbox"/> 501 and higher		<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>14. Customer Role</b> (Proposed or Actual) – as it relates to the Regulated Entity listed on this form. Please check one of the following			
<input type="checkbox"/> Owner <input checked="" type="checkbox"/> Operator <input type="checkbox"/> Owner & Operator <input type="checkbox"/> Other: <input type="checkbox"/> Occupational Licensee <input type="checkbox"/> Responsible Party <input type="checkbox"/> VCP/BSA Applicant			
<b>15. Mailing Address:</b>	901 S. Mopac Expressway, Suite 550		
	<b>City</b>	Austin	<b>State</b> TX
	<b>ZIP</b>	78746	<b>ZIP + 4</b>
<b>16. Country Mailing Information</b> (if outside USA)		<b>17. E-Mail Address</b> (if applicable)	
		rkeithley@barshop-oles.com	

<b>18. Telephone Number</b>	<b>19. Extension or Code</b>	<b>20. Fax Number (if applicable)</b>
( 512 ) 477-1212		( ) -

### **SECTION III: Regulated Entity Information**

<b>21. General Regulated Entity Information</b> (If 'New Regulated Entity' is selected, a new permit application is also required.)								
<input checked="" type="checkbox"/> New Regulated Entity <input type="checkbox"/> Update to Regulated Entity Name <input type="checkbox"/> Update to Regulated Entity Information								
<i>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).</i>								
<b>22. Regulated Entity Name</b> (Enter name of the site where the regulated action is taking place.)								
Chuy's Tex-Mex Bar W East Commercial								
<b>23. Street Address of the Regulated Entity:</b>  (No PO Boxes)	2873 Cowhand Drive							
	<b>City</b>	Georgetown	<b>State</b>	TX	<b>ZIP</b>	78628	<b>ZIP + 4</b>	7862
<b>24. County</b>	Williamson							

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

<b>25. Description to Physical Location:</b>	2873 Cowhand Drive								
<b>26. Nearest City</b>	Georgetown				<b>State</b>	TX	<b>Nearest ZIP Code</b>		78628
<i>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).</i>									
<b>27. Latitude (N) In Decimal:</b>		30.62853056			<b>28. Longitude (W) In Decimal:</b>		97.82484722		
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds				
30	37	42.71	97	49	29.45				
<b>29. Primary SIC Code</b>	<b>30. Secondary SIC Code</b>		<b>31. Primary NAICS Code</b>		<b>32. Secondary NAICS Code</b>				
(4 digits)	(4 digits)		(5 or 6 digits)		(5 or 6 digits)				
1521			236115		236116				
<b>33. What is the Primary Business of this entity?</b> (Do not repeat the SIC or NAICS description.)									
Land development.									
<b>34. Mailing Address:</b>	901 S. Mopac Expressway, Suite 550								
	<b>City</b>	Austin	<b>State</b>	TX	<b>ZIP</b>	78746	<b>ZIP + 4</b>		
<b>35. E-Mail Address:</b>	rkeithley@barshop-oles.com								
<b>36. Telephone Number</b>	<b>37. Extension or Code</b>			<b>38. Fax Number (if applicable)</b>					
( 512 ) 477-1212				( ) -					

**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.

<input type="checkbox"/> Dam Safety	<input type="checkbox"/> Districts	<input checked="" type="checkbox"/> Edwards Aquifer	<input type="checkbox"/> Emissions Inventory Air	<input type="checkbox"/> Industrial Hazardous Waste
<input type="checkbox"/> Municipal Solid Waste	<input type="checkbox"/> New Source Review Air	<input type="checkbox"/> OSSF	<input type="checkbox"/> Petroleum Storage Tank	<input type="checkbox"/> PWS
<input type="checkbox"/> Sludge	<input type="checkbox"/> Storm Water	<input type="checkbox"/> Title V Air	<input type="checkbox"/> Tires	<input type="checkbox"/> Used Oil
<input type="checkbox"/> Voluntary Cleanup	<input type="checkbox"/> Wastewater	<input type="checkbox"/> Wastewater Agriculture	<input type="checkbox"/> Water Rights	<input type="checkbox"/> Other:

**SECTION IV: Preparer Information**

<b>40. Name:</b>	Lee A. Whited, P.E.	<b>41. Title:</b>	Engineer
<b>42. Telephone Number</b>	<b>43. Ext./Code</b>	<b>44. Fax Number</b>	<b>45. E-Mail Address</b>
( 512 ) 280-5160		( ) -	lee@cbdeng.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.

<b>Company:</b>	Carlson, Brigance & Doering, Inc.	<b>Job Title:</b>	Engineer
<b>Name (In Print):</b>	Lee A. Whited, P.E.	<b>Phone:</b>	( 512 ) 280- 5160
<b>Signature:</b>		<b>Date:</b>	2-4-26

**X**

**APPROVAL LETTER OF WPAP PREVIOUSLY  
APPROVED FOR THIS SITE**

Brooke Paup, *Chairwoman*  
Bobby Janecka, *Commissioner*  
Catarina R. Gonzales, *Commissioner*  
Kelly Keel, *Executive Director*



## TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

*Protecting Texas by Reducing and Preventing Pollution*

April 25, 2025

Dan Wheat  
Bar W East Commercial, LTD  
901 South Mopac Expressway, Suite 550  
Austin, Texas 78746-5776

Re: Approval of a Water Pollution Abatement Plan (WPAP) and Approval of an Organized Sewage Collection System (SCS) Plan  
Bar W Ranch East Mixed Use; Located Southeast of Kauffman Loop and Ronald Regan Blvd.; Leander, Williamson County, Texas  
Edwards Aquifer Protection Program ID: 11004349 and 11004350, Regulated Entity No. RN112154331

Dear Dan Wheat:

The Texas Commission on Environmental Quality (TCEQ) has completed its review on the applications for the above-referenced project submitted to the Edwards Aquifer Protection Program (EAPP) by Carlson, Brigance & Doering, Inc. on behalf of the applicant, Bar W East Commercial, LTD, on February 24, 2025. Final review of the applications was completed after additional material was received on April 16, 2025 and April 23, 2025.

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

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

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

### PROJECT DESCRIPTION

#### WPAP DESCRIPTION

The proposed mixed use (commercial and residential) project will have an area of approximately 51.48 acres. The project will include 6 lots for commercial development and 3 lots for residential development, drives and associated appurtenances. The impervious cover will be 38.86 acres (75.5 percent). The off-site impervious cover that is included in the 38.86 acres is 0.65 acres.

SCS DESCRIPTION

The proposed sewage collection system will provide disposal service for a mixed use (commercial and residential) development. The system includes gravity lines, a force main and other appurtenances necessary for conveying wastewater to a treatment plant. The proposed SCS includes the lines listed in the table below:

Pipe Diameter (inches)	Linear Feet	Pipe Material	Specifications
12	1,056	PVC SDR 26	ASTM D3034
8	134	PVC SDR 26	ASTM D3034
6	53	PVC DR 18	ASTM D3034
4	347	PVC SDR 26	ASTM D2241
Total Linear Feet	1,590		

TREATMENT FACILITY

The system will be connected to an existing City of Leander Wastewater Line for conveyance to the City of Liberty Hill Wastewater Treatment Plant for treatment and disposal. **The proposed system shall be connected for conveyance prior to use of the development.** The project will conform to all applicable codes, ordinances, and requirements of the City of Leander.

PERMANENT POLLUTION ABATEMENT MEASURES

To prevent the pollution of stormwater runoff originating on-site or upgradient of the site and potentially flowing across and off the site after construction, a new wet basin designed using the TCEQ technical guidance, *RG-348, Complying with the Edwards Aquifer Rules: Technical Guidance on Best Management Practices*, will be constructed to treat stormwater runoff. The required total suspended solids (TSS) treatment for this project is 33,824 pounds of TSS generated from the 38.86 acres of impervious cover. The approved permanent BMPs and measures meet the required 80 percent removal of the increased load in TSS caused by the project.

**The permanent BMPs shall be operational prior to occupancy or use of the proposed project.** Inspection, maintenance, repair, and retrofit of the permanent BMPs shall be in accordance with the approved application.

GEOLOGY

According to the Geologic Assessment (GA) included with the application, the surficial unit of the site is the Edwards Limestone (Ked). One sensitive feature (sinkhole F-1) was identified in the GA. The project will meet the required setbacks to the feature as illustrated on the site plan. No regulated activities (such as construction or soil disturbing activities) will take place within the natural buffer. The site assessment conducted on March 31, 2025, by TCEQ staff determined the site to be generally as described by the GA.

STANDARD CONDITIONS

1. The plan holder (applicant) must comply with all provisions of 30 TAC Chapter §213 and technical specifications contained in the approved plan. The plan holder should also acquire and comply with additional and separate approvals, permits, registrations or authorizations

from other TCEQ Programs (i.e., Stormwater, Water Rights, Dam Safety, Underground Injection Control, Water Quality) as required based on the specifics of the plan.

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

Prior to Commencement of Construction:

3. Within 60 days of receiving written approval of an Edwards Aquifer protection plan, the plan holder must submit to the EAPP proof of recordation of notice in the county deed records, with the volume and page number(s) of the county record. A description of the property boundaries shall be included in the deed recordation in the county deed records. TCEQ form, Deed Recordation Affidavit (TCEQ-0625), may be used.
4. The plan holder of any approved Edwards Aquifer protection plan must notify the EAPP and obtain approval from the executive director prior to initiating any modification to the activities described in the referenced application following the date of the approval.
5. The plan holder must provide written notification of intent to commence construction, replacement, or rehabilitation of the referenced project. Notification must be submitted to the EAPP no later than 48 hours prior to commencement of the regulated activity. Notification must include the date on which the regulated activity will commence, the name of the approved plan and program ID number for the regulated activity, and the name of the prime contractor with the name and telephone number of the contact person.
6. Temporary erosion and sedimentation (E&S) controls as described in the referenced application, must be installed prior to construction, and maintained during construction. Temporary E&S controls may be removed when vegetation is established, and the construction area is stabilized. The TCEQ may monitor stormwater discharges from the site to evaluate the adequacy of temporary E&S control measures. Additional controls may be necessary if excessive solids are being discharged from the site.
7. All borings with depths greater than or equal to 20 feet must be plugged with non-shrink grout from the bottom of the hole to within three (3) feet of the surface. The remainder of the hole must be backfilled with cuttings from the boring or gravel. All borings less than 20 feet must be backfilled with cuttings from the boring. All borings must be backfilled or plugged within four (4) days of completion of the drilling operation.

During Construction:

8. This approval does not authorize the installation of temporary or permanent aboveground storage tanks on this project that will have a total storage capacity of 500 gallons or more of static hydrocarbons or hazardous substances without prior approval of an Aboveground Storage Tank facility application.
9. If any sensitive feature is encountered during construction, replacement, or rehabilitation on this project, all regulated activities must be **immediately** suspended near it and notification must be made to TCEQ EAPP staff. Temporary BMPs must be installed and maintained to protect the feature from pollution and contamination. Regulated activities near the feature may not proceed until the executive director has reviewed and approved the methods proposed to protect the feature and the aquifer from potentially adverse impacts to water quality.
10. All water wells, including injection, dewatering, and monitoring wells shall be identified in the geologic assessment and must be in compliance with the requirements of the Texas Department of Licensing and Regulation 16 TAC Chapter §76 and all other locally applicable rules, as appropriate.

11. If sediment escapes the construction site, the sediment must be removed at a frequency sufficient to minimize offsite impacts to water quality (e.g., fugitive sediment in street being washed into surface streams or sensitive features by the next rain). Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been reduced by 50 percent. Litter, construction debris, and construction chemicals shall be prevented from becoming stormwater discharge pollutants.
12. Intentional discharges of sediment laden water are not allowed. If dewatering becomes necessary, the discharge must be filtered through appropriately selected BMPs.
13. The following records shall be maintained and made available to the executive director upon request: the dates when major grading activities occur, the dates when construction activities temporarily or permanently cease on a portion of the site, and the dates when stabilization measures are initiated.
14. Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, and construction activities will not resume within 21 days. When the initiation of stabilization measures by the 14th day is precluded by weather conditions, stabilization measures shall be initiated as soon as practicable.

After Completion of Construction:

15. Owners of permanent BMPs and temporary measures must ensure that the BMPs and measures are constructed and function as designed. A Texas licensed PE **must certify** in writing that the permanent BMPs or measures were constructed as designed. The certification letter must be submitted to the EAPP within 30 days of site completion.
16. The applicant shall be responsible for maintaining the permanent BMPs after construction until such time as the maintenance obligation is either assumed in writing by another entity having ownership or control of the property or the ownership of the property is transferred to the entity. A copy of the transfer of responsibility must be filed with the executive director through the EAPP within 30 days of the transfer. TCEQ form, Change in Responsibility for Maintenance on Permanent BMPs and Measures (TCEQ-10263), may be used.
17. No part of the organized sewage collection system may be used as a sewage holding tank, as defined in 30 TAC §213.3 (excluding lift stations), over the Edwards Aquifer recharge zone.
18. A Texas licensed PE **must certify** in writing that the new sewage collection system (including force mains) has passed all required testing. The certification shall be submitted to the EAPP within 30 days of test completion and prior to the new sewage collection system being put into service.
19. A Texas licensed PE **must certify** subsequent testing required every five years of the existing sewage collection system after being put into use to determine types and locations of structural damage and defects such as offsets, open joints, or cracked or crushed lines that would allow exfiltration to occur. The test results must be retained by the plan holder for five years and made available to the executive director upon request.

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

Dan Wheat  
Page 5  
April 25, 2025

This action is taken as delegated by the executive director of the Texas Commission on Environmental Quality. If you have any questions or require additional information, please contact Bob Castro, P.E., of the Edwards Aquifer Protection Program at 512-239-6992 or the regional office at 512-339-2929.

Sincerely,

*Monica Reyes*

Monica Reyes, Section Manager  
Edwards Aquifer Protection Program  
Texas Commission on Environmental Quality

MR/rbc

cc: Patrick Sullivan, P.E. Carlson, Brigance & Doering, Inc.