

Date: Apr 18, 2022, 11:08am User ID: Akolifo
File: H:\Projects\512\09\00\216 Final Plat\Documents\Plan Processing\City\Environmental Variances\Support Exhibits (same packet for both variances)\CONTEXT MAP.dwg



NO. REVISION		DATE

PAPE-DAWSON ENGINEERS

AUSTIN | SAN ANTONIO | HOUSTON | FORT WORTH | DALLAS
1801 N. MO-PAC EXPY, SUITE 3, STE 200 | AUSTIN, TX 78759 | 512.464.8711
TYPE FIRM REGISTRATION #470 | TYPE FIRM REGISTRATION #10028601

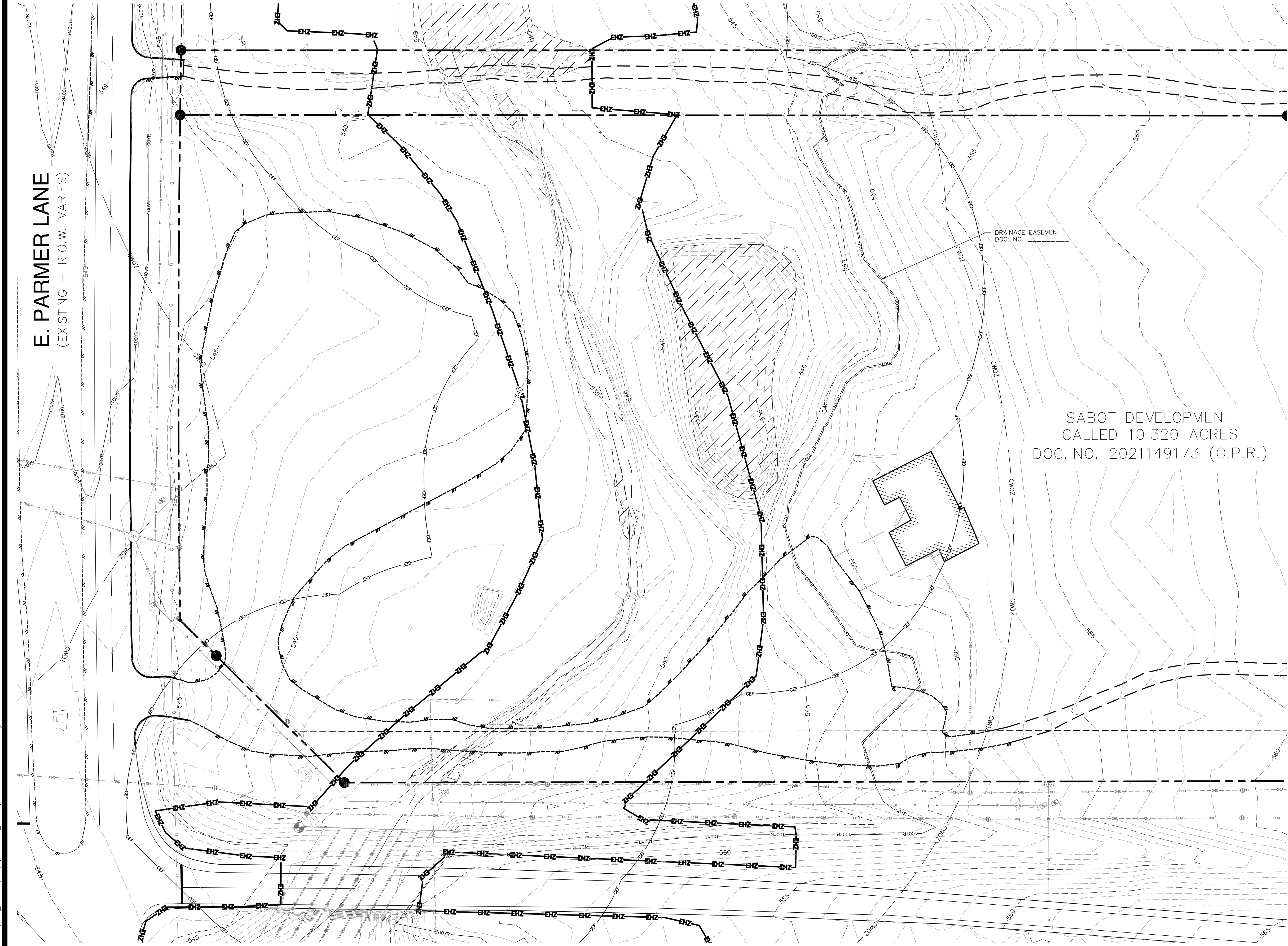
8020 PARMER/SH130 NW
AUSTIN, TEXAS

CONTEXT MAP EXHIBIT

JOB NO. 51209-00
DATE NOVEMBER 2021
DESIGNER TM
CHECKED DRAWN HJC
SHEET 01 OF 01

EXHIBIT 5 – TOPOGRAPHIC MAPS

Date: Apr 14, 2022, 9:18am User ID: ngarza
File: C:\Users\ngarza\Temp\AcadPlot111532\EX-GR-CF51209-00.dwg



LEGEND

- LOC LIMITS OF CONSTRUCTION
- EXISTING PROPERTY LINE
- ADJACENT PROPERTY LINE
- CWQZ EXISTING CRITICAL WATER QUALITY ZONE
- 100YR EXISTING ATLAS-14 100 YR FLOODPLAIN
- 25YR EXISTING ATLAS-14 25 YR FLOODPLAIN
- CEF EXISTING CRITICAL ENVIRONMENTAL FEATURE BUFFER
- X EXISTING FENCE
- 777 EXISTING CONTOUR LINE
- CHE EXISTING OVERHEAD ELECTRICAL
- W EXISTING PUBLIC WATER LINE
- X EXISTING BARBED WIRE FENCE
- X EXISTING PUBLIC WATER MANHOLE
- W EXISTING CLEANOUT
- X EXISTING SPRINKLER
- X EXISTING WATER METER
- X EXISTING ELECTRIC METER
- X EXISTING ELECTRIC CONTROLS
- X EXISTING POWER POLE W/ TRANSFORMER
- X EXISTING UTILITY POLE
- X EXISTING GUY ANCHOR
- X EXISTING LIGHT POLE
- X EXISTING BENCHMARK
- X EXISTING FOUND IRON ROD
- X EXISTING MAILBOX
- X EXISTING GATE

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AUSTIN | SAN ANTONIO | HOUSTON | FORT WORTH | DALLAS
1801 N. MO-PAC EXPY, SUITE 3, STE 200 | AUSTIN, TX 78759 | 512-664-8711
TYPE FIRM REGISTRATION #470 | TYPE FIRM REGISTRATION #10028801

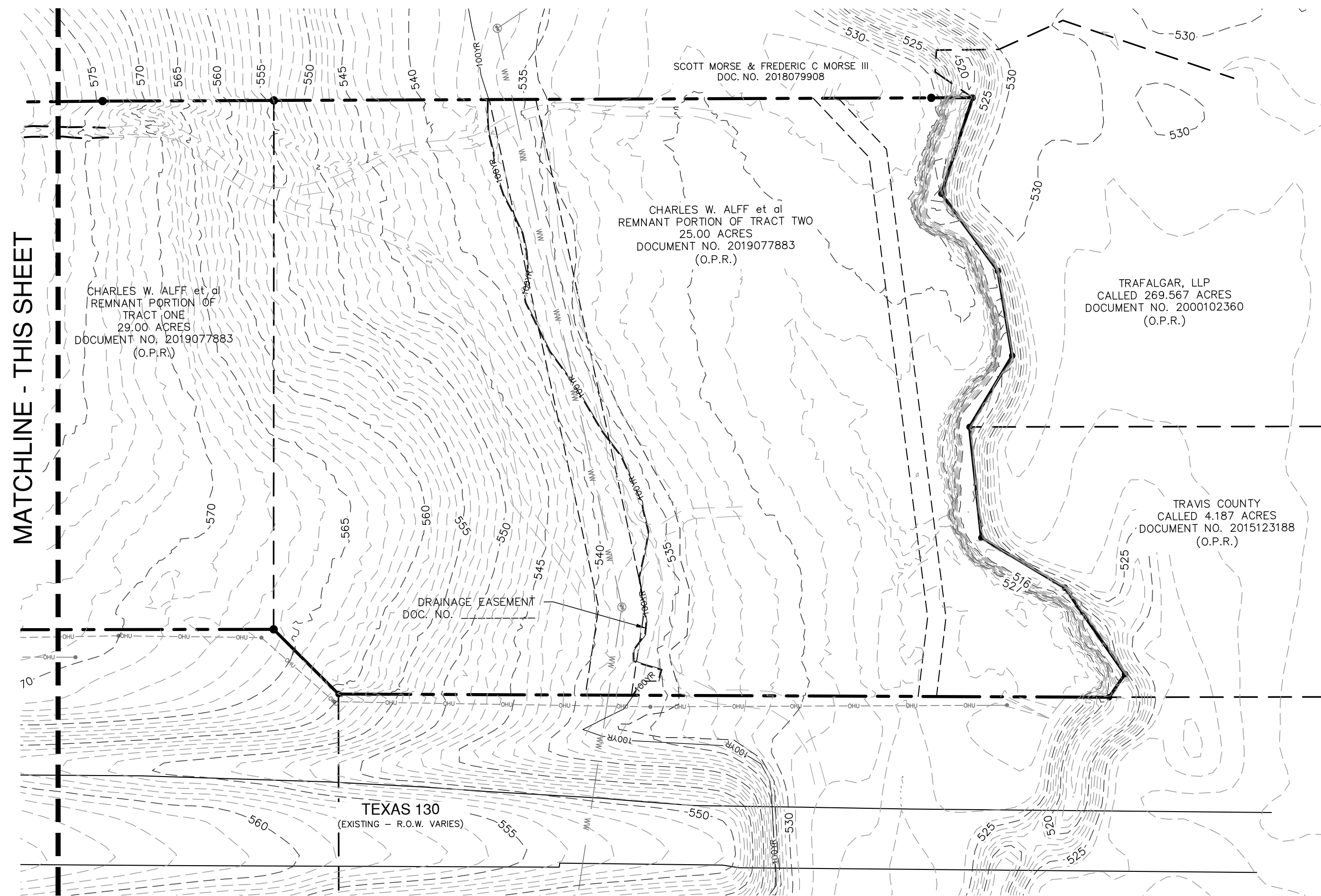
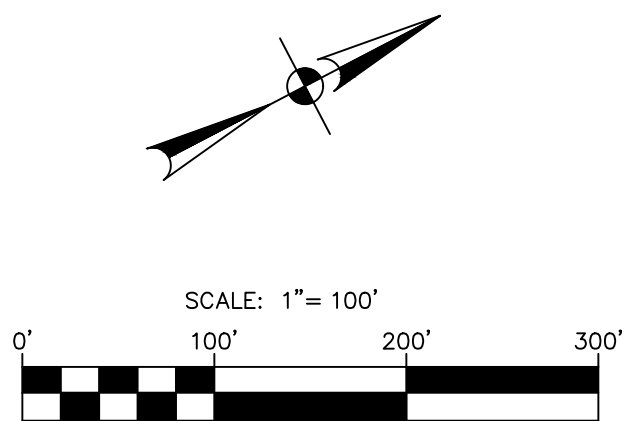
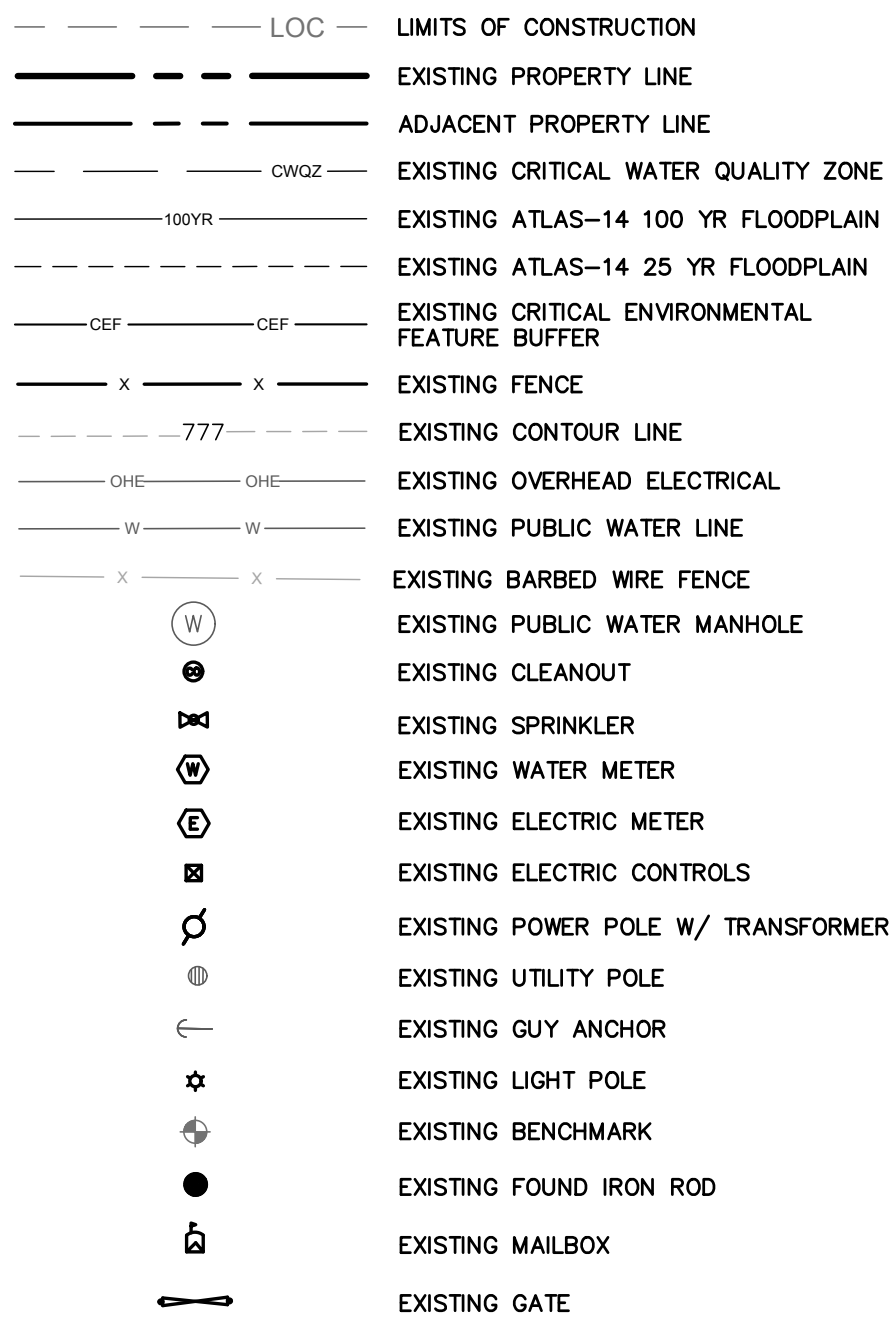
8020 PARMER/SH130 NW
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EXISTING GRADING PLAN EXHIBIT

JOB NO. 51209-00
DATE AUGUST 2021
DESIGNER TDM
CHECKED DRAWN HJC

SHEET 01 OF 04

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TS&PE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #100288601

8020 PARMER/SH130 NW
AUSTIN, TEXAS

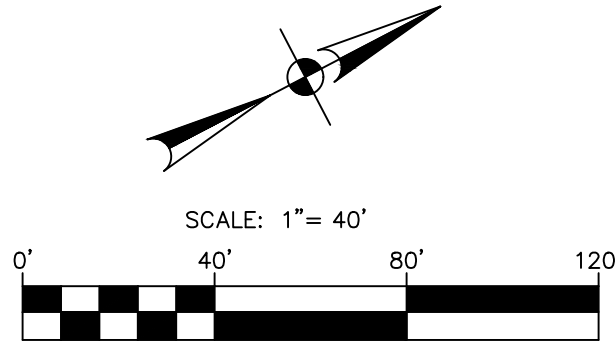
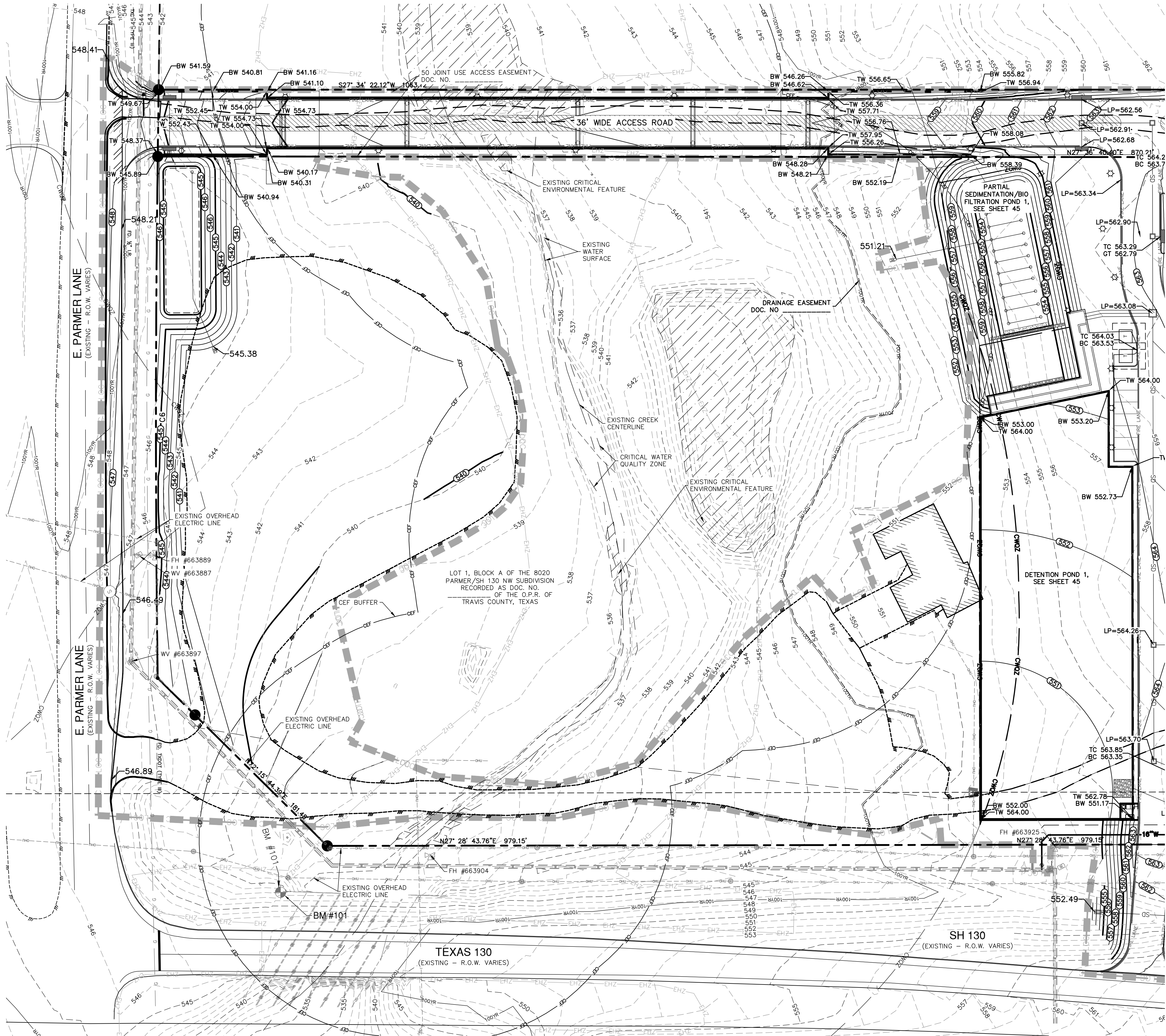
EXISTING GRADING PLAN EXHIBIT

JOB NO. 51209-00
DATE AUGUST 2021
DESIGNER TDM
CHECKED DRAWN HJG

SHEET 02 OF 04

Date: Apr 18, 2022, 11:57am User ID: Akolifo
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- LEGEND**
- PROPERTY BOUNDARY
 - PROPOSED SWALE
 - LOC LIMITS OF CONSTRUCTION
 - EXISTING OVERHEAD ELECTRIC LINE
 - PROPOSED RETAINING WALL
 - TIE INTO EXISTING PAVEMENT
 - EXISTING CONTOUR LINE
 - PROPOSED CONTOUR LINE
 - PROPOSED SIDEWALK
 - PROPOSED ADA PATH
 - DRAINAGE FLOW ARROW
 - EXISTING GRADE ELEVATION
 - FINISHED GROUND ELEVATION
 - TOP OF PAVEMENT ELEVATION
 - TOP OF SIDEWALK ELEVATION
 - TOP OF WALL ELEVATION
 - BOTTOM OF WALL ELEVATION
 - LOW POINT ELEVATION
 - LOW POINT IN PAVEMENT ELEVATION
 - HIGH POINT
 - ADA RAMP
 - EXISTING SIGN
 - EXISTING UTILITY POLE

**PAPE-DAWSON
ENGINEERS**

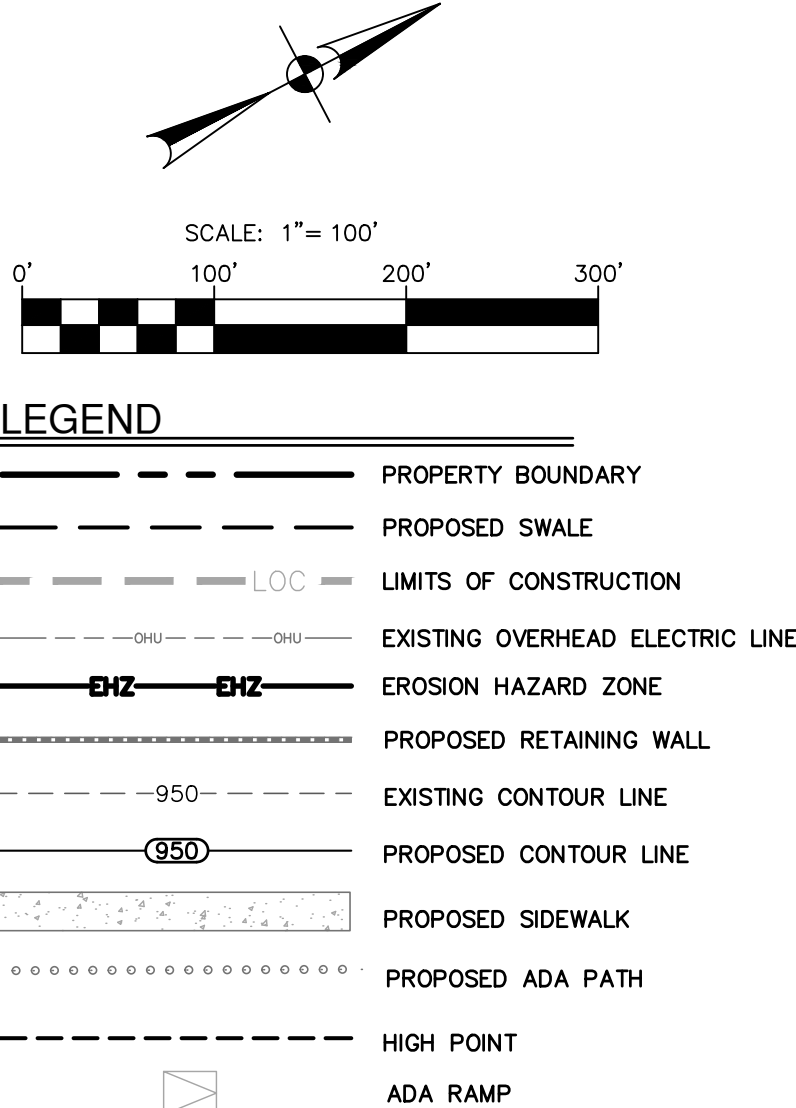
AUSTIN | SAN ANTONIO | HOUSTON | FORT WORTH | DALLAS
18001 N. MOPAC EXPY., SUITE 300 | AUSTIN, TX 78759 | 512.664.8711
TYPE FIRM REGISTRATION #470 | TYPE FIRM REGISTRATION #10028601

**8020 PARMER/SH130 NW
AUSTIN, TEXAS**

GRADING PLAN EXHIBIT

JOB NO. 51209-00
DATE NOVEMBER 2021
DESIGNER TM
CHECKED DRAWN HJC

SHEET 03 OF 04

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10801 N MOPAC EXPY, BLDG 3, STE 200 I AUSTIN, TX 78759 I 512.454.8711
TBPE FIRM REGISTRATION #470 I TBPLS FIRM REGISTRATION #10028801

8020 PARMER/SH130 NW
AUSTIN, TEXAS

OVERALL GRADING PLAN EXHIBIT

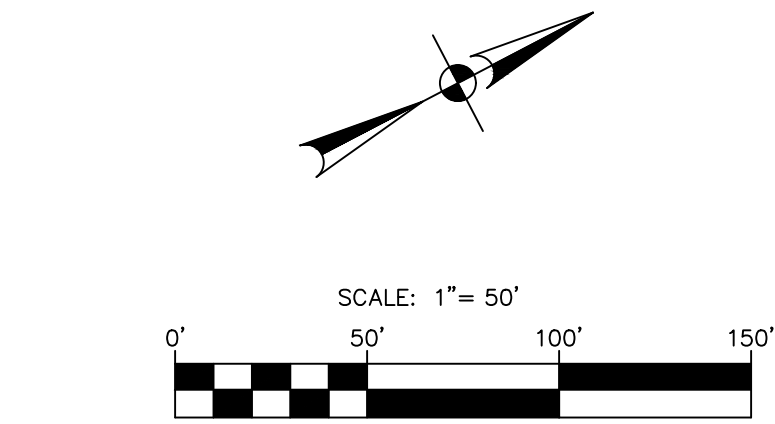
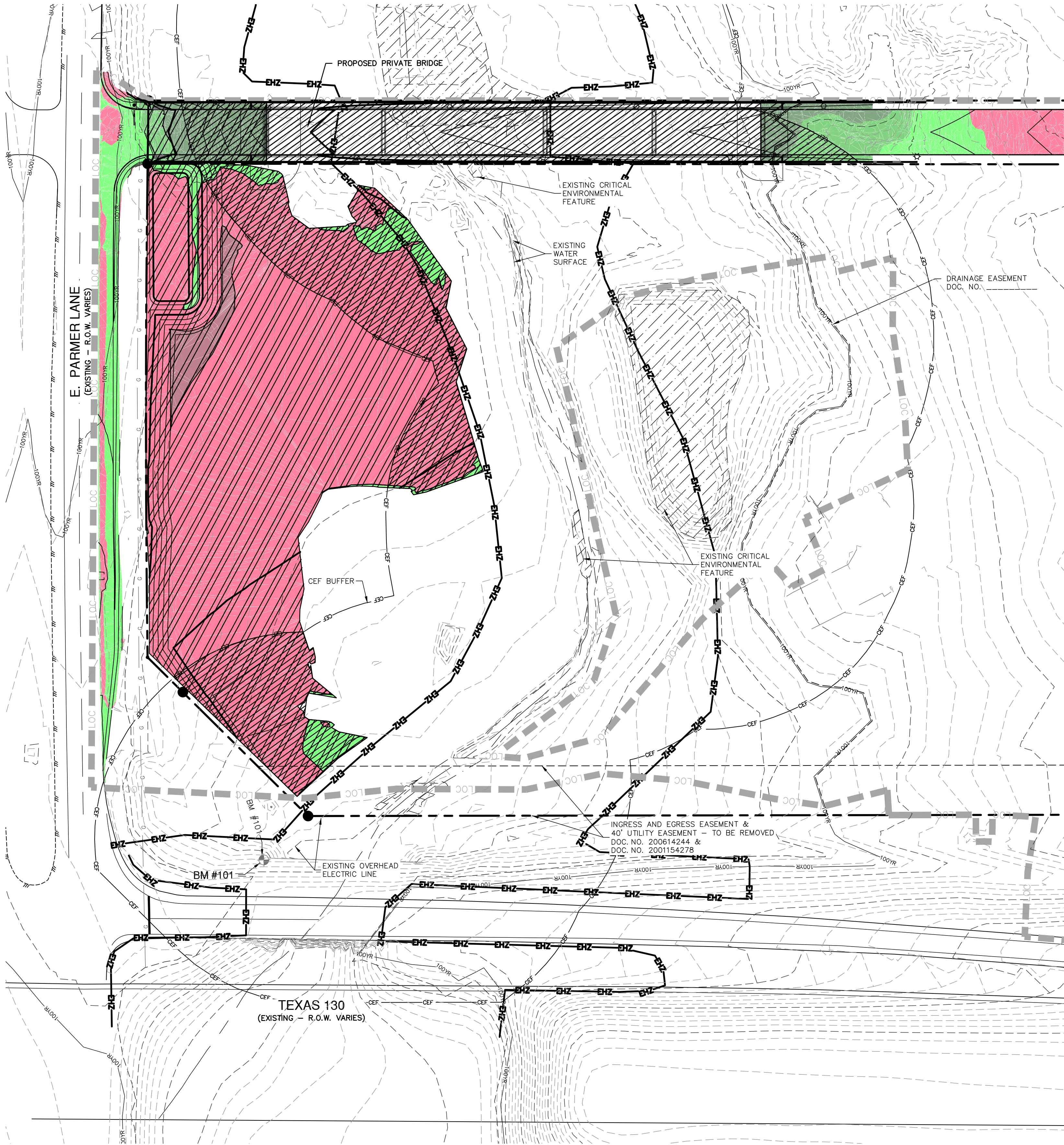
JOB NO. 51209-00
DATE NOVEMBER 2021
DESIGNER TM
CHECKED DRAWN HJ
SHEET 04 OF 04

EXHIBIT 6 – CUT/FILL EXHIBITS

Date: Mar 17, 2022, 4:41pm User ID: jRobinson
File Path: Projects\512\09\00\218 final plat\09\00\218.dwg

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REVISIONS				
No.	Revision Description	Prepared by:	(Date)	Reviewed by: (Date)



LEGEND	
	LOC
	LIMITS OF CONSTRUCTION
	PROPERTY BOUNDARY
	EXISTING CONTOUR LINE
	PROPOSED CONTOUR LINE
	CUT AREA: -8' TO -4' VOLUME: 24.33 CUBIC YDS
	CUT AREA: -4' TO 0' VOLUME: 4981.31 CUBIC YDS
	FILL AREA: 0' TO 4' VOLUME: 3,750.01 CUBIC YDS
	FILL AREA: 4' TO 8' VOLUME: 3,593.17 CUBIC YDS
	FILL AREA: 8' TO 15' VOLUME: 4,957.69 CUBIC YDS
	FILL AREA: 15' TO GREATER VOLUME: 386.65 CUBIC YDS

	53,473.46 SF AREA GRADING DISTURBANCE WITHIN CEF BUFFER
	109,540.81 SF AREA GRADING DISTURBANCE WITHIN FLOODPLAIN

SITE PLAN RELEASE	
SITE PLAN APPROVAL	SHEET 08 OF 21
FILE NUMBER C8J-2021-0141.0APA	APPLICATION DATE AUGUST 20, 2021
APPROVED BY COMMISSION	UNDER SECTION 112 OF
CHAPTER 25-5	OF THE CITY OF AUSTIN CODE.
EXPIRATION DATE (25-5-81, LDC)	CASE MANAGER XXXX
PROJECT EXPIRATION DATE (ORD. #970905-A)	DWPZ DDZ
DEVELOPMENT SERVICES DEPARTMENT	
RELEASED FOR GENERAL COMPLIANCE:	ZONING ETJ
Rev. 1	Correction 1
Rev. 2	Correction 2
Rev. 3	Correction 3
Final plan must be recorded by the Project Expiration Date, if applicable. Subsequent Site Plans Plans which do not comply with the Code current at the time of filing, and all required Building Permits and/or a notice of construction (if a building permit is not required), must also be approved prior to the Project Expiration Date.	

NO. REVISION

DATE

03/18/2022

Shelly Mitchell

PAPE-DAWSON ENGINEERS

AUSTIN | SAN ANTONIO | HOUSTON | FORT WORTH | DALLAS
1801 N. MO-PAC EXPY, SUITE 200 | AUSTIN, TX 78759 | 512.464.8711
TYPE FIRM REGISTRATION #470 | TYPE FIRM REGISTRATION #10058601

8020 PARMER/SH130 NW
AUSTIN, TEXAS

CUT - FILL PLAN

JOB NO. 51209-00

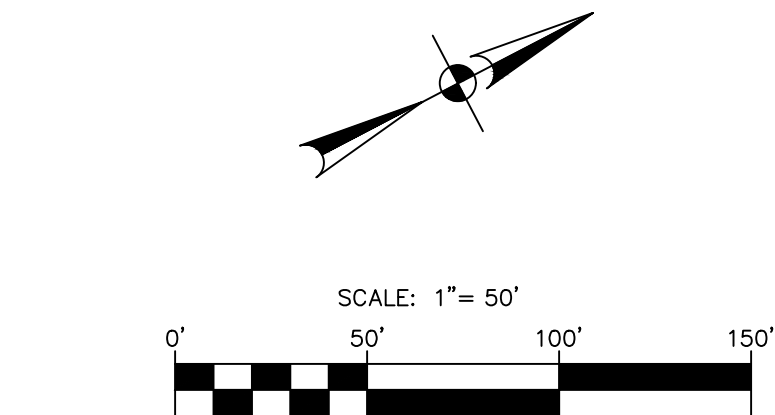
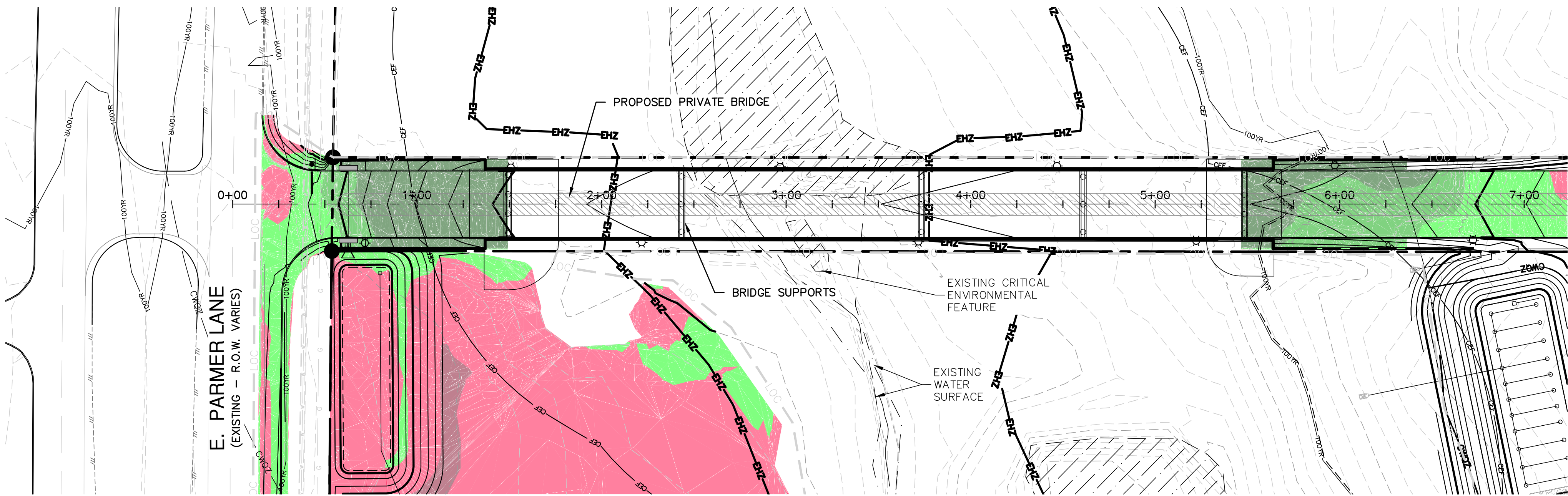
DATE AUGUST 2021

DESIGNER TDM

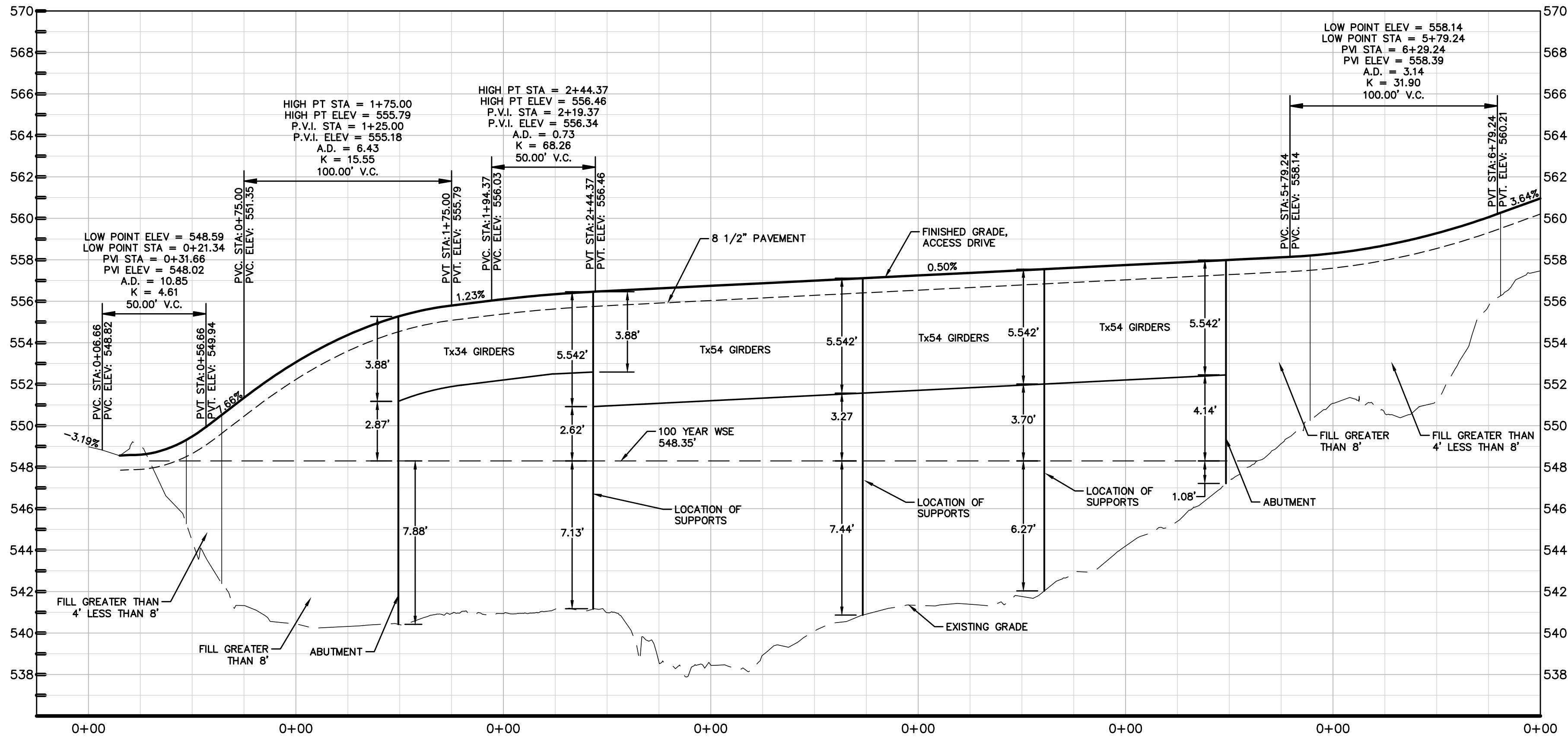
CHECKED TDM DRAWN KT

SHEET 08 of 22

REVISIONS				
No.	Revision Description	Prepared by:	(Date)	Reviewed by: (Date)



LEGEND	
	LIMITS OF CONSTRUCTION
	PROPERTY BOUNDARY
	PROPOSED CONTOUR LINE
	EXISTING CONTOUR LINE
	EXISTING CRITICAL WATER QUALITY ZONE
	EXISTING 100 YR FLOODPLAIN
	EXISTING CRITICAL ENVIRONMENTAL FEATURE BUFFER
	ENVIRONMENTAL HAZARD ZONE
	CUT AREA: -8' TO -4'
	CUT AREA: -4' TO 0'
	FILL AREA: 0' TO 4'
	FILL AREA: 4' TO 8'
	FILL AREA: 8' TO 15'



PROFILE VIEW LEGEND	
	FILL GREATER THAN 4' LESS THAN 8'
	FILL GREATER THAN 8'

SITE PLAN RELEASE

SITE PLAN APPROVAL

SHEET 08 OF 21

FILE NUMBER C8J-2021-0141.0APA

APPLICATION DATE AUGUST 20, 2021

APPROVED BY COMMISSION

UNDER SECTION 112 OF

CHAPTER 25-5

OF THE CITY OF AUSTIN CODE.

EXPIRATION DATE (25-5-81, LDC)

CASE MANAGER XXXX

PROJECT EXPIRATION DATE ORD. #970905-A)

DWPZ DDZ

DEVELOPMENT SERVICES DEPARTMENT

RELEASED FOR GENERAL COMPLIANCE:

Rev. 1

Correction 1

Rev. 2

Correction 2

Rev. 3

Correction 3

ZONING ETJ

Final plan must be recorded by the Project Expiration Date, if applicable. Subsequent Site Plans Plans which do not comply with the Code current at the time of filing, and all required Building Permits and/or a notice of construction (if a building permit is not required), must also be approved prior to the Project Expiration Date.

NO.	REVISION	DATE

PAPE-DAWSON
ENGINEERS

AUSTIN | SAN ANTONIO | HOUSTON | FORT WORTH | DALLAS
1801 N. MOPAC EXPY, SUITE 200 | AUSTIN, TX 78759 | 512.464.8711
TYPE FIRM REGISTRATION #4470 | TYPE FIRM REGISTRATION #10028601

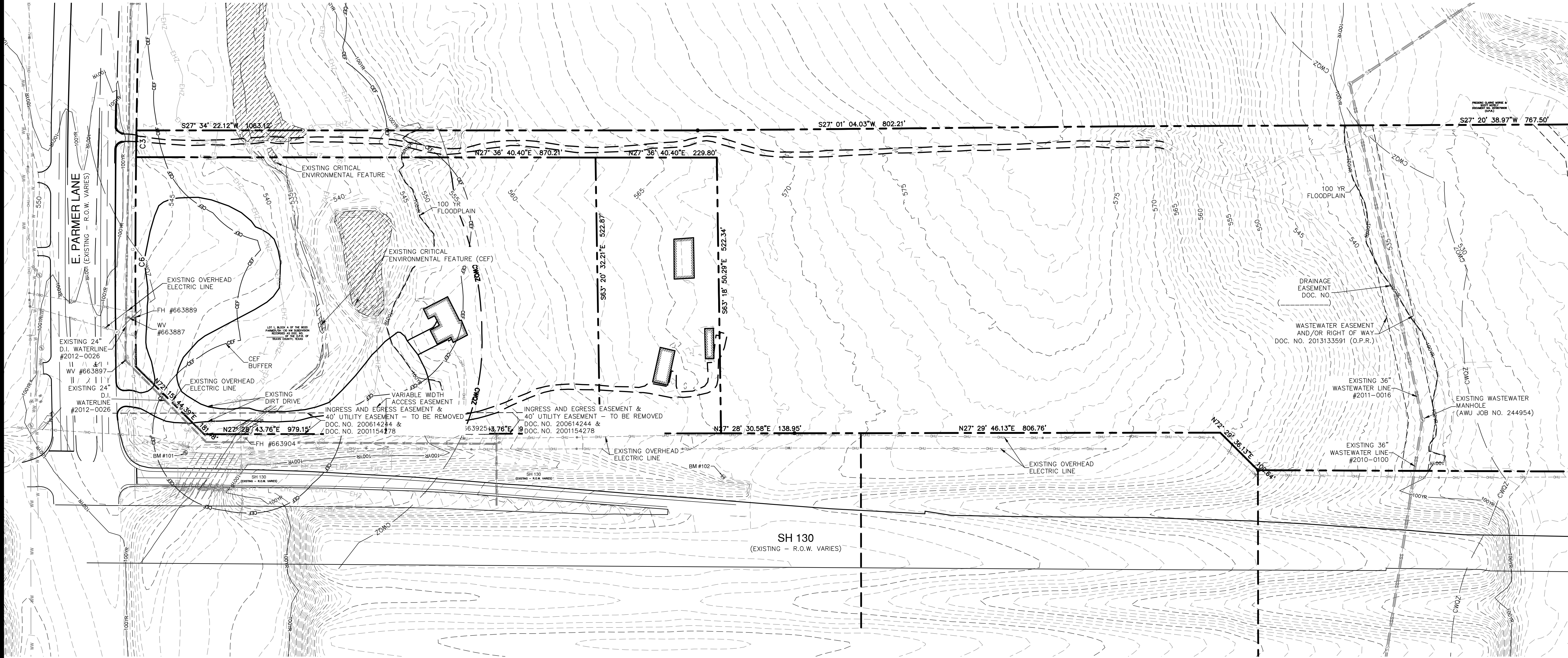
8020 PARMER/SH130 NW
AUSTIN, TEXAS

BRIDGE ACCESS DRIVE PLAN AND PROFILE EXHIBIT

JOB NO.	51209-00
DATE	AUGUST 2021
DESIGNER	TDM
CHECKED	TDM
DRAWN	KT
SHEET	FIG-1

EXHIBIT 7 – EXISTING CONDITIONS

Date: Apr 13, 2022, 9:55am User ID: ngarza
File: H:\Projects\512\09\00\218 Final Documents\Plan Processing\City\Environmental Variances\Exhibits\51209-00.dwg



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NO.	REVISION	DATE

THIS DOCUMENT IS RELEASED
FOR INTERIM REVIEW PURPOSES
ONLY UNDER THE AUTHORITY
OF
BRADLEY MITCHELL, P.E. 10662
DATE: APR 13, 2022
IT IS NOT TO BE USED FOR
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TCELA 197360

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ENGINEERS**
AUSTIN | SAN ANTONIO | HOUSTON | FORT WORTH | DALLAS
1800 N. MOPAC EXPY., SUITE 3, STE 200 | AUSTIN, TX 78759 | 512.664.6711
TYPE FIRM REGISTRATION #4470 | TYPE FIRM REGISTRATION #10028601

8020 PARMER/SH130 NW
AUSTIN, TEXAS

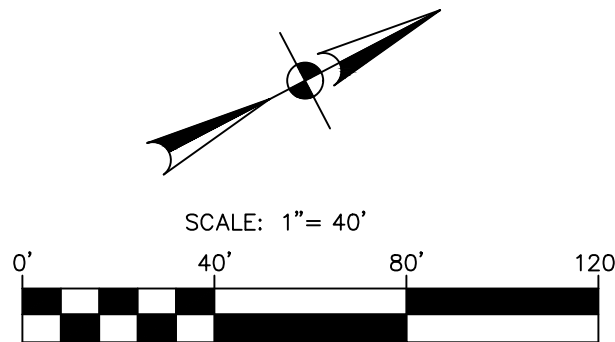
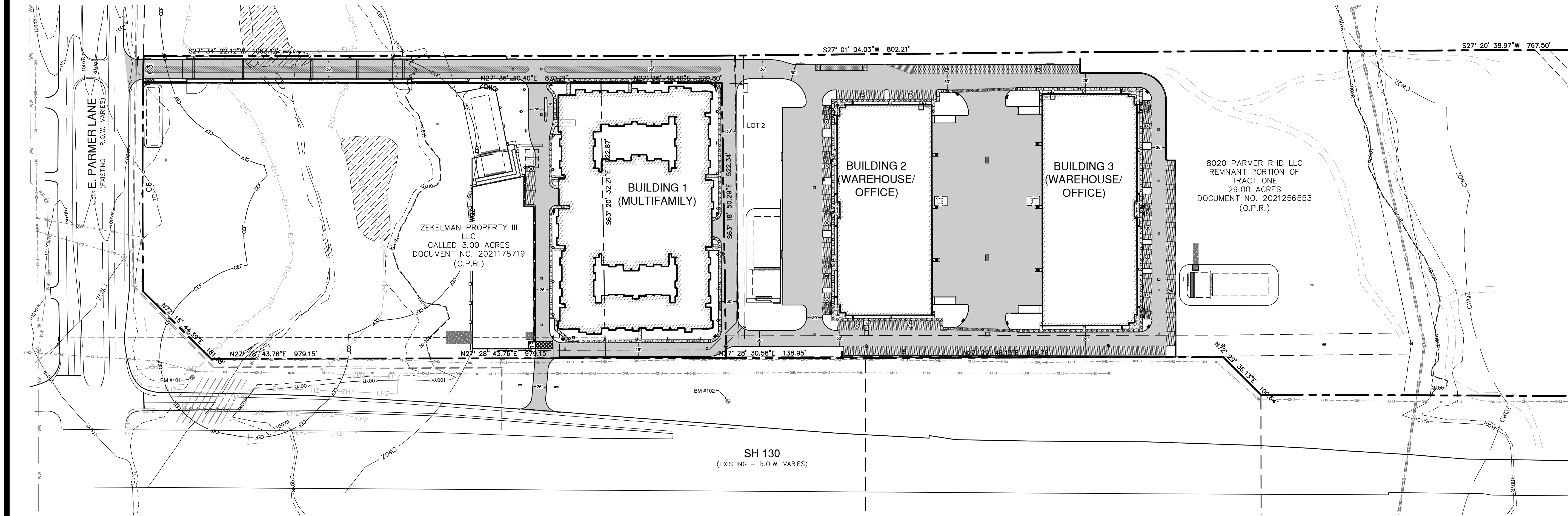
EXISTING CONDITIONS EXHIBIT

JOB NO. 51209-00
DATE NOVEMBER 2021
DESIGNER TM
CHECKED DRAWN HJC
SHEET 01 OF 01

EXHIBIT 8 — PROPOSED SITE PLAN



Date: Apr 14, 2022, 9:50am User ID: hgarza
File: C:\Users\Local_Hgarza\Temp\AcPlotian_111532\SP0451209-00.dwg



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AUSTIN | SAN ANTONIO | HOUSTON | FORT WORTH | DALLAS
1800 N. MOORE AVE., SUITE 300 | AUSTIN, TX 78759 | 512-664-8711
TYPE FIRM REGISTRATION #470 | TYPE FIRM REGISTRATION #10028601

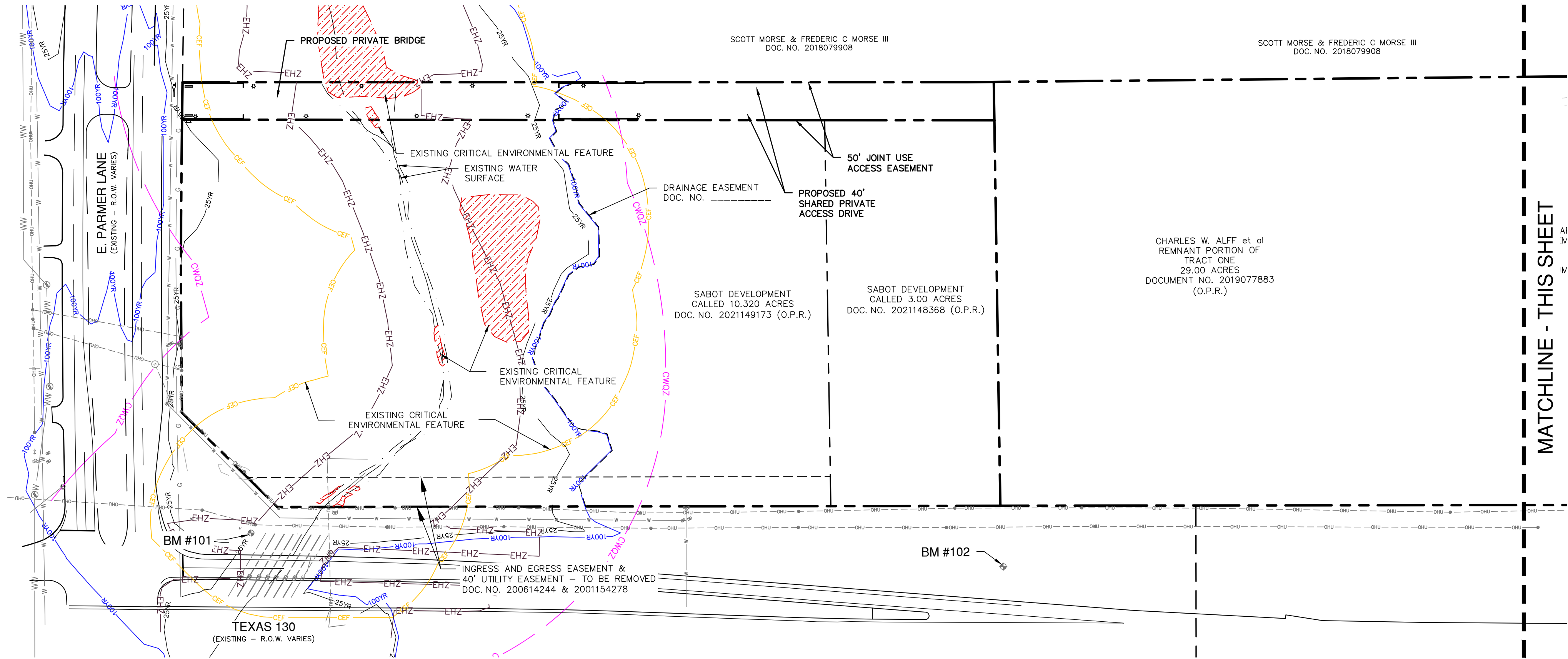
8020 PARMER/SH130 NW
AUSTIN, TEXAS
OVERALL SITE PLAN EXHIBIT

JOB NO. 51209-00
DATE NOVEMBER 2021
DESIGNER TM
CHECKED DRAWN HJC
SHEET 02 OF 02

EXHIBIT 9 – ENVIRONMENTAL MAP

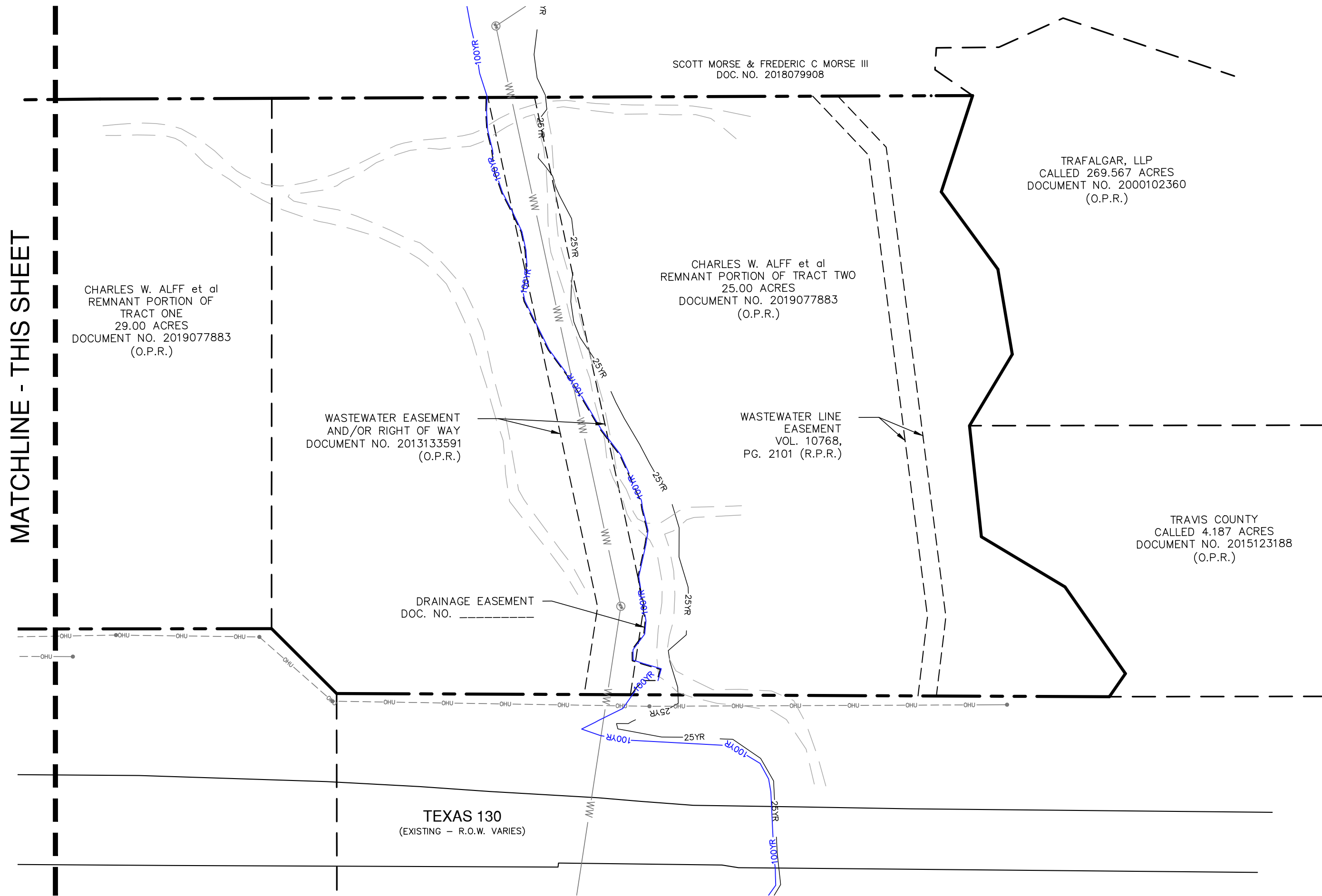
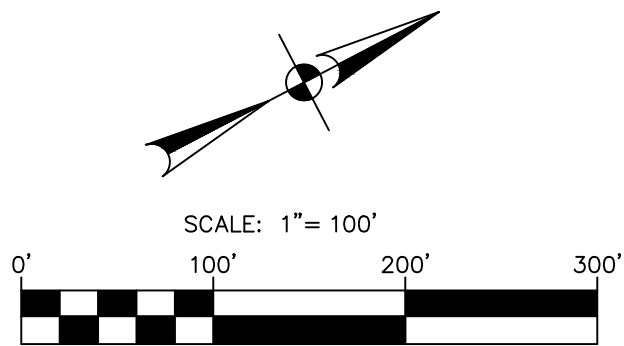
Date: Apr 18, 2022, 11:43am User ID: Akolifo
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LEGEND

- LOC --- LIMITS OF CONSTRUCTION
- PROPERTY LINE
- EXISTING EASEMENT LINE
- PROPOSED EASEMENT LINE
- EXISTING OVERHEAD ELECTRICAL
- X --- EXISTING FENCE
- CRITICAL WATER QUALITY ZONE
- CEF --- CRITICAL ENVIRONMENTAL FEATURE BUFFER
- EHZ --- EROSION HAZARD BUFFER ZONE (EHZ)
- 100YR --- 100 YEAR FLOODPLAIN
- 25YR --- 25 YEAR FLOODPLAIN
- WETLAND CRITICAL ENVIRONMENTAL FEATURE



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TYPE FIRM REGISTRATION #470 | TYPE FIRM REGISTRATION #10028601

8020 PARMER/SH130 NW
AUSTIN, TEXAS
ENVIRONMENTAL MAP EXHIBIT

JOB NO. 51209-00
DATE AUGUST 2021
DESIGNER TDM
CHECKED DRAWN HJC
SHEET 01 OF 01

EXHIBIT 10 – ENVIRONMENTAL RESOURCE INVENTORIES

July 28, 2021

Mr. Warren Hayes – Senior Vice President
Z Modular
227 West Monroe Street., Suite 2600
Chicago, IL 60606

Re: ±14.34-Acre Parmer MF
Environmental Resource Inventory

Dear Mr. Hayes,

Pape-Dawson Engineers, Inc. (Pape-Dawson) conducted a Environmental Resource Inventory (ERI) for the ±14.34-acre Parmer MF project site located in Travis County, Texas. The purpose of this report is to identify any critical environmental features (CEFs) that may exist within the project site.

Based on Pape-Dawson's ERI, the proposed project contains two freshwater scrub-shrub wetlands and four freshwater emergent wetlands which would be considered critical environmental features (CEFs). In addition to the wetlands identified, one intermittent stream was mapped within the project site.

The conclusions presented in this report represent the professional opinion of Pape-Dawson Engineers and are limited to the conditions observed at the project site at the time and date of the field investigation.

If you have questions or require additional information, please do not hesitate to contact me at (210) 375-9000 at your earliest convenience.

Sincerely,
Pape-Dawson Engineers, Inc.



Valerie Collins, M.S., AICP
Associate Vice President

H:\Projects\512\49\00\ENV\Parmer-MF_ERI\Draft\20210408_51249-00_CoverLetter_ParmerMF.docx

Environmental Resource Inventory

For the City of Austin

Related to LDC 25-8-121, City Code 30-5-121, ECM 1.3.0 & 1.10.0

The ERI is required for projects that meet one or more of the criteria listed in LDC 25-8-121(A), City Code 30-5-121(A).

1. SITE/PROJECT NAME: 14.34-Acre Parmer MF
2. COUNTY APPRAISAL DISTRICT PROPERTY ID (#'s): 236741, 236750, 526010
3. ADDRESS/LOCATION OF PROJECT: Northwest of Intersection of E Parmer Lane and SH 130
4. WATERSHED: Gilleland Creek Watershed

5. THIS SITE IS WITHIN THE (Check all that apply)

Edwards Aquifer Recharge Zone* (See note below) ☐ YES ☒ No

Edwards Aquifer Contributing Zone* ☐ YES ☒ No

Edwards Aquifer 1500 ft Verification Zone* ☐ YES ☒ No

Barton Spring Zone* ☐ YES ☒ No

*(as defined by the City of Austin – LDC 25-8-2 or City Code 30-5-2)

Note: If the property is over the Edwards Aquifer Recharge zone, the Hydrogeologic Report and karst surveys must be completed and signed by a Professional Geoscientist Licensed in the State of Texas.

6. DOES THIS PROJECT PROPOSE FLOODPLAIN MODIFICATION?..... ☒ YES** ☐ NO

If yes, then check all that apply:

- ☐ (1) The floodplain modifications proposed are necessary to protect the public health and safety;
- ☒ (2) The floodplain modifications proposed would provide a significant, demonstrable environmental benefit, as determined by a **functional assessment** of floodplain health as prescribed by the Environmental Criteria Manual (ECM), or
- ☒ (3) The floodplain modifications proposed are necessary for development allowed in the critical water **quality zone under LDC 25-8-261 or 25-8-262, City Code 30-5-261 or 30-5-262.**
- ☐ (4) The floodplain modifications proposed are outside of the Critical Water Quality Zone in an area determined to be in poor or fair condition by a **functional assessment** of floodplain health.

**** If yes, then a functional assessment must be completed and attached to the ERI (see ECM 1.7 and Appendix X for forms and guidance) unless conditions 1 or 3 above apply.**

7. IF THE SITE IS WITHIN AN URBAN OR SUBURBAN WATERSHED, DOES THIS PROJECT PROPOSE A UTILITY LINE PARALLEL TO AND WITHIN THE CRITICAL WATER QUALITY ZONE? ☒ YES*** ☐ NO

*****If yes, then riparian restoration is required by LDC 25-8-261(E) or City Code 30-5-261(E) and a functional assessment must be completed and attached to the ERI (see ECM 1.5 and Appendix X for forms and guidance).**

8. There is a total of 7 (#s) Critical Environmental Feature(s)(CEFs) on or within 150 feet of the project site. If CEF(s) are present, attach a detailed **DESCRIPTION** of the CEF(s), color **PHOTOGRAPHS**, the **CEF WORKSHEET** and provide **DESCRIPTIONS** of the proposed CEF buffer(s) and/or wetland mitigation. Provide the number of each type of CEFs on or within 150 feet of the site (Please provide the number of CEFs):

_____ (#'s) Spring(s)/Seep(s) _____ (#'s) Point Recharge Feature(s) _____ (#'s) Bluff(s)
 _____ (#'s) Canyon Rimrock(s) 7 (#'s) Wetland(s)

Note: Standard buffers for CEFs are 150 feet, with a maximum of 300 feet for point recharge features. Except for wetlands, if the standard buffer is not provided, you must provide a written request for an administrative variance from LDC 25-8-281(C)(1) and provide written findings of fact to support your request. Request forms for administrative variances from requirements stated in LDC 25-8-281 are available from Watershed Protection Department.

9. The following site maps are attached at the end of this report (Check all that apply and provide):

All ERI reports must include:

- ☒ **Site Specific Geologic Map with 2-ft Topography**
- ☒ **Historic Aerial Photo of the Site**
- ☒ **Site Soil Map**
- ☒ **Critical Environmental Features and Well Location Map on current Aerial Photo with 2-ft Topography**

Only if present on site (Maps can be combined):

- ☐ **Edwards Aquifer Recharge Zone with the 1500-ft Verification Zone**
(Only if site is over or within 1500 feet the recharge zone)
- ☐ **Edwards Aquifer Contributing Zone**
- ☐ **Water Quality Transition Zone (WQTZ)**
- ☒ **Critical Water Quality Zone (CWQZ)**
- ☐ **City of Austin Fully Developed Floodplains for all water courses with up to 64-acres of drainage**

10. **HYDROGEOLOGIC REPORT** – Provide a description of site soils, topography, and site specific geology below (Attach additional sheets if needed):

Surface Soils on the project site is summarized in the table below and uses the SCS Hydrologic Soil Groups*. If there is more than one soil unit on the project site, show each soil unit on the site soils map.

Soil Series Unit Names, Infiltration Characteristics & Thickness		
Soil Series Unit Name & Subgroup**	Group*	Thickness (feet)
See Table 1 & Exhibit 7		

***Soil Hydrologic Groups 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.

**Subgroup Classification – See Classification of Soil Series Table in County Soil Survey.

Description of Site Topography and Drainage *(Attach additional sheets if needed):*

Elevation at the project site ranged from 570 feet above sea level on the northern portion of the project site to approximately 540 feet above sea level on the southern portion. The project site had a general southeast sloping gradient.

List surface geologic units below:

Geologic Units Exposed at Surface		
Group	Formation	Member
Taylor Group	Navarro and Taylor Groups	N/A

Brief description of site geology *(Attach additional sheets if needed):*

The project site is located on the Navrro and Taylor Groups, undivided (Knt) geologic unit. The USGS describes the upper 250 feet of the geologic unit as mostly silty, calcar. clay with sandst beds and concentrionary masses near top, some interbeds of sandst. near base. The lower 200 feet are quartz sand, fine grained, silty, locally calcar. concentrations in discontin. beds.

The project site site is located outside the Edwards Aquifer and any associated zones.

Wells – Identify all recorded and unrecorded wells on site (test holes, monitoring, water, oil, unplugged, capped and/or abandoned wells, etc.):

There are 0 (#) wells present on the project site and the locations are shown and labeled

0 (#s) The wells are not in use and have been properly abandoned.

0 (#s) The wells are not in use and will be properly abandoned.

0 (#s) The wells are in use and comply with 16 TAC Chapter 76.

There are 0 (#s) wells that are off-site and within 150 feet of this site.

11. **THE VEGETATION REPORT** – Provide the information requested below:

Brief description of site plant communities (Attach additional sheets if needed):

The project site is depicted within the "Northern Blackland Prairie Level IV Ecoregion of Texas. The vegetation identified on the project site largely reflected vegetation common to this ecoregion. Examples of vegetation identified on the project site include Cedar Elm (*Ulmus crassifolia*), Ashe Juniper (*Juniperus ashei*), Sugar Hackberry (*Celtis laevigata*), Texas Pricklypear (*Opuntia engelmannii*), annual bastardcabbage (*Rapistrum rugosum*), Johnson grass (*Sorghum halepense*), and maximilian sunflower (*Helianthus maximiliani*).

There is woodland community on site ☒ YES ☐ NO (Check one).

If yes, list the dominant species below:

Woodland species	
Common Name	Scientific Name
Cedar Elm	<i>Ulmus crassifolia</i>
Ashe Juniper	<i>Juniperus ashei</i>
Sugar Hackberry	<i>Celtis laevigata</i>

There is grassland/prairie/savanna on site ☒ YES ☐ NO (Check one).

If yes, list the dominant species below:

Grassland/prairie/savanna species	
Common Name	Scientific Name
Maximilian Sunflower	<i>Helianthus maximiliani</i>
Annual Bastard Cabbage	<i>Rapistrum rugosum</i>
Johnson Grass	<i>Sorghum halepense</i>
Bermuda grass	<i>Cynodon dactylon</i>
Southern dewberry	<i>Rubus trivialis</i>

There is hydrophytic vegetation on site ☒ YES ☐ NO (Check one).

If yes, list the dominant species in table below (next page):

Hydrophytic plant species		
Common Name	Scientific Name	Wetland Indicator Status
Spike Rush	Eleocharis palustris	OBL
Broadleaf Cattail	Typha latifolia	OBL
Seaside Brookweed	Samolus parviflorus	OBL

A tree survey of all trees with a diameter of at least eight inches measured four and one-half feet above natural grade level has been completed on the site.

☐ YES ☒ NO (Check one).

12. WASTEWATER REPORT – Provide the information requested below.

Wastewater for the site will be treated by (Check of that Apply):

- ☐ On-site system(s)
☒ City of Austin Centralized sewage collection system
☐ Other Centralized collection system

Note: All sites that receive water or wastewater service from the Austin Water Utility must comply with City Code Chapter 15-12 and wells must be registered with the City of Austin

The site sewage collection system is designed and will be constructed to in accordance to all State, County and City standard specifications.

☒ YES ☐ NO (Check one).

Calculations of the size of the drainfield or wastewater irrigation area(s) are attached at the end of this report or shown on the site plan.

☐ YES ☐ NO ☒ Not Applicable (Check one).

Wastewater lines are proposed within the Critical Water Quality Zone?

☐ YES ☒ NO (Check one). If yes, then provide justification below:

Is the project site is over the Edwards Aquifer?

☐ YES ☒ NO (Check one).

If yes, then describe the wastewater disposal systems proposed for the site, its treatment level and effects on receiving watercourses or the Edwards Aquifer.

13. One (1) hard copy and one (1) electronic copy of the completed assessment have been provided.

Date(s) ERI Field Assessment was performed: 03/30/2021
Date(s)

My signature certifies that to the best of my knowledge, the responses on this form accurately reflect all information requested.

John Lee Gonzalez III

Print Name

John Lee Gonzalez III

Signature

(361) 585-8628

Telephone

johngonzalez@pape-dawson.com

Email Address

Pape-Dawson Engineers, Inc.

Name of Company

05/03/2021

Date

For project sites within the Edwards Aquifer Recharge Zone, my signature and seal also certifies that I am a licensed Professional Geoscientist in the State of Texas as defined by ECM 1.12.3(A).

P.G.
Seal

City of Austin Environmental Resource Inventory - Critical Environmental Feature Worksheet

1	Project Name:	14.34-Acre Parmer MF
2	Project Address:	8020 East Parmer Lane, Manor, TX 78653
3	Site Visit Date:	03/30/2021
4	Environmental Resource Inventory Date:	05/04/2021

5	Primary Contact Name:	John Lee Gonzalez III
6	Phone Number:	(361) 585-8628
7	Prepared By:	John Lee Gonzalez III
8	Email Address:	johnngonzalez@pape-dawson.com

[illegible]

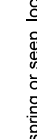
City of Austin Use Only	
CASE NUMBER:	

Please state the method of coordinate data collection and the approximate precision and accuracy of the points and the unit of measurement.


Method	Accuracy
GPS	<input checked="" type="checkbox"/> sub-meter
Surveyed	<input type="checkbox"/> meter
Other	<input type="checkbox"/> > 1 meter

Professional Geologists apply seal below


For rimrock, locate the midpoint of the segment that describes the feature.



For wetlands, locate the approximate center of the feature and the estimated area.



For a spring or seep, locate the source or groundwater that feeds a pool or stream.



±14.34-ACRE PARMER MF

Environmental Resource Inventory

July 2021



Transportation | Water Resources | Land Development | Surveying | Environmental

±14.34-ACRE PARMER MF

Environmental Resource Inventory

July 2021

±14.34-ACRE PARMER MF
Environmental Resource Inventory

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EXHIBITS

- Exhibit 1 – Location Map
- Exhibit 2 – Site Map
- Exhibit 3 – USGS Topographic Map (2019)
- Exhibit 4 – Floodplain Map
- Exhibit 5 – National Wetlands Inventory Map
- Exhibit 6 – Soils Map
- Exhibit 7 – Geologic Map
- Exhibit 8 – Edwards Aquifer Zone Map
- Exhibit 9 – Historical Aerial Photograph Map (1995)
- Exhibit 10 – Delineated Critical Environmental Features Map

APPENDICES

- Appendix A – Site Photographs
- Appendix B – Wetland Determination Form

±14.34-ACRE PARMER MF Environmental Resource Inventory

INTRODUCTION

Pape-Dawson Engineers, Inc. was contracted to conduct a City of Austin (COA) Environmental Resource Inventory (ERI) according to the Land Development Code (LDC) Section 25-8-121(A) and Title 30-5 for the approximately 14.34-acre Parmer MF project site in Travis County, Texas (**Exhibit 1**). The project site is located northwest of the intersection of East Parmer Lane and State Highway 130 in Austin, Texas (**Exhibit 2**).

The purpose of an ERI is to identify any critical environmental features (CEFs) within the project site. CEFs include bluffs, canyon rimrocks, caves, faults/fractures, seeps, sinkholes, springs, and wetlands (LDC 25-8-1; LDC 30-5-1).

METHODS

Desktop Review

Prior to a site investigation, a desktop review was performed utilizing the following resources to evaluate the project site for potential critical environmental features.

- COA environmental data;
- Railroad Commission of Texas (RRC) oil/gas well data;
- Texas Water Development Board (TWDB) water well data;
- Texas Commission of Environmental Quality (TCEQ) water well data;
- U.S. Geological Survey (USGS) historical and current topographic maps;
- Federal Emergency Management Agency (FEMA)'s digital flood insurance rate maps (dFIRM);
- U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI);
- National Resources Conservation Service (NRCS)' Web Soil Survey; and
- USGS geologic and structural feature data;
- TCEQ Edwards Aquifer zone data; and
- Google Earth Pro readily available historical and readily available current aerial imagery

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Field Methods

A Pape-Dawson environmental scientist familiar with the requirements of an ERI conducted a site investigation on March 30, 2021. Wetlands and other aquatic resources were delineated using the routine method described in the “Corps of Engineers Wetlands Delineation Manual” (Environmental Laboratory 1987) and the “U.S. Army Corps of Engineers (USACE) Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Great Plains Region (Version 2.0)” (Great Plains Regional Supplement Version 2010). The site was evaluated for other potential CEFs with transects similar to the protocols for assessing wetlands and consistent with the guidelines set forth by the City of Austin.

RESULTS

Desktop Review

Elevation at the site ranged from 570 feet above sea level (ASL) on the northern portion of the project site to approximately 540 feet ASL on the southern portion of the project site and had a general southeast sloping gradient. The COA depicts three tributaries within the project site. Two of the tributaries converge near the center of the project site and drain into the main tributary that transects the project site from west to east and drains southeast off the project site. The RRC, TWDB, and TCEQ do not depict any wells within 150 feet of the project site (**Exhibit 2**) (COA 2021; RRC 2021; TWDB 2021; TCEQ 2021).

The project site is depicted on the 2019 USGS Manor, TX 7.5-minute series topographic quadrangle map. The USGS depicts one pond near the center of the project site and one tributary just south of the depicted pond. The tributary transects the project site from west to east and drains southeast off the project site (**Exhibit 3**) (USGS 2019).

Review of FEMA’s dFIRM panels 48453C0480J (effective August 18, 2014) reveal that the southern half of the project site is transected by the 100-year floodplain of Gilleland Creek Tributary 1C. This tributary feature is depicted to drain southeast into Gilleland Creek. Two additional unnamed tributary features are depicted to converge near the center of the project site before draining south into Gilleland Creek Tributary 1C (**Exhibit 4**) (FEMA 2021).

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USFWS NWI depict a freshwater pond near the center of the project site and a riverine wetland that transects the project site from west to east before draining off the project site (**Exhibit 5**) (USFWS 2021).

According to the NRCS Web Soil Survey, four soil units are mapped within the project site Ferris-Heiden complex, 8 to 20 percent slopes, severely eroded (FhF3); Heiden clay, 3 to 5 percent slopes, eroded (HeC2); Heiden clay, 5 to 8 percent (HeD2); and Tinn clay, 0 to 1 percent slopes, frequently flooded (Tw) are all depicted within the project site (**Exhibit 6**). The soil unit's characteristics mapped within the project site are summarized in **Table 1** (NRCS 2020b). Only Tw is considered a hydric soil by the National Technical Committee for Hydric Soils (NRCS 2020a).

Table 1. Soil units within the project site according to the NRCS Web Soil Survey.

Mapping Unit	Soil Hydrologic Group	Drainage Class	Thickness
Ferris-Heiden complex, 8 to 20 percent slopes, severely eroded (FhF3)	D	Well drained	36-60 inches
Heiden clay, 3 to 5 percent slopes, eroded (HeC2)	D	Well drained	40-65 inches
Heiden clay, 5 to 8 percent (HeD2)	D	Well drained	40-65 inches
Tinn clay, 0 to 1 percent slopes, frequently flooded (Tw)	D	Moderately well drained	>80 inches

The project site is depicted wholly within the Navarro and Taylor groups, undivided (Knt) geologic unit (**Exhibit 7**). This geologic unit is described as areas where the Pecan Gap Chalk is not present because of gradation to marl, similar to that of the Marlbrook and Ozon Formations. The upper 250 feet is comprised of mostly silty, calcareous clay with sandstone beds and concretionary masses near the top, with some interbeds of sandstone near the base. The lower 200 feet of the unit is primarily composed of quartz sand, fine grained, silty locally calcareous concentrations in discontinued beds. The geologic age of the geologic unit is the Late Cretaceous epoch (Barnes 1983).

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The project site is not located within any designated TCEQ Edwards Aquifer zone (**Exhibit 8**) (TCEQ 2021).

A historical aerial photograph from 1995 was available and utilized to effectively investigate the site for CEFs. One tributary feature is depicted to transect the southern portion of the project site from west to east. A pond is visible north of the tributary feature. No direct surface water connections exist between the tributary or the pond identified (**Exhibit 9**) (Google Earth Pro 2021).

Field Results

No bluffs, canyon rimrock, caves, faults/fractures, seeps, sinkholes, or springs were found within the study area during the time of the site visit.

One intermittent stream, two freshwater scrub-shrub wetlands, four freshwater emergent wetlands, and one freshwater excavated pond were identified and mapped within the project site. Characteristics of the environmental features identified are described in **Table 2** below.

Table 2. Environmental Features Identified Within the Project Site.

ID	Feature Type	OHWL (Linear Feet)	Length (Linear Feet)	Area (Acres)	Jurisdictional Opinion
W-01	Freshwater Emergent Wetland	N/A	N/A	0.0567	Jurisdictional
W-02	Freshwater Scrub-Shrub Wetland	N/A	N/A	0.0072	Jurisdictional
W-03	Freshwater Emergent Wetland	N/A	N/A	0.0990	Jurisdictional
OW-01	Freshwater Pond	N/A	N/A	0.2444	Non-Jurisdictional
W-04	Freshwater Scrub-Shrub Wetland	N/A	N/A	0.0036	Jurisdictional
W-05	Freshwater Emergent Wetland	N/A	N/A	0.0047	Jurisdictional
W-06	Freshwater Emergent Wetland	N/A	N/A	0.0021	Jurisdictional
S-01	Intermittent Stream	8	799	0.280	Jurisdictional

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The intermittent stream identified (S-01) displayed flowing water and a consistent and well-defined ordinary high-water mark (OHWM) at the time of the site visit. A portion of S-01 had pooled near the south-central boundary of the project site. S-01 drains southeast and off the project site.

Two freshwater scrub-shrub wetlands (W-02, W-04) were identified within the project site. These freshwater scrub-shrub wetlands were identified within the riparian corridor of the intermittent stream (S-01) identified. Specifically, W-02 was identified on the southwestern portion of the project site, within the OHWM of S-01, on a topographically elevated portion of the stream. W-04 abutted S-01 near the center of the project site.

Four freshwater emergent wetlands (W-01, W-03, W-05, W-06) were identified within the project site. These wetlands were identified within the riparian corridor of the intermittent stream (S-01). W-01 is located east and on the edge of the project site. W-05 and W-06 are located where the intermittent stream drains southeast and off the project site. W-03 surrounds the freshwater pond (W-03) and is located near the center of the project site.

A freshwater pond (W-03) was identified within the project site. The freshwater pond is located approximately 75 feet north of S-01, near the center of the project site. This pond is separated by a natural berm. No direct channelized surface water connection was observed between the pond and S-01.

Site Photographs are included in **Appendix A**. Wetland Determination Forms are included in **Appendix B**.

DISCUSSION

Based on Pape-Dawson's ERI, seven environmental features were identified within the project site. Of the seven environmental features, Pape-Dawson would not consider the freshwater pond (W-03) to be a CEF.

The freshwater pond (OW-01) is excavated and would likely not be considered jurisdictional by the USACE. The earliest available USGS topographic map from 1968 does not depict a pond at the present-day location of the pond. USACE guidance mandates that artificial lakes and ponds are not jurisdictional if they are constructed or excavated in upland or non-jurisdictional waters. Because this pond is separated by a

±14.34-ACRE PARMER MF Environmental Resource Inventory

natural berm, there is likely no contribution of surface water flow to the pond in a typical year. Additionally, because the pond is artificial in nature and constructed in an upland; the freshwater pond (W-03) identified would likely not be considered jurisdictional. The COA mandates that permitted water quality wet ponds, roadside ditches, and ponds fed by wells or other artificial sources of hydrology are not considered wetlands. Because W-03 would not exist without artificial manipulation, Pape-Dawson would not consider W-03 to be a CEF.

The intermittent stream and two freshwater scrub-shrub wetlands were delineated and mapped according to USACE and COA protocols. The COA's critical water quality zone for the intermittent stream identified was utilized for this report. A 150-foot buffer was added to both freshwater scrub-shrub wetlands identified, in accordance with COA guidance. The intermittent stream (OW-01), two freshwater scrub-wetlands (W-02, W-04), four freshwater emergent wetlands, and associated buffers are depicted in **Exhibit 10**.

CONCLUSION

Based on Pape-Dawson's ERI, the proposed project contains two freshwater scrub-shrub wetlands and four freshwater emergent wetlands which would be considered critical environmental features (CEFs). In addition to the wetlands identified, one intermittent stream was mapped within the project site.

The conclusions presented in this report represent the professional opinion of Pape-Dawson Engineers and are limited to the conditions observed at the project site at the time and date of the field investigation.

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REFERENCES

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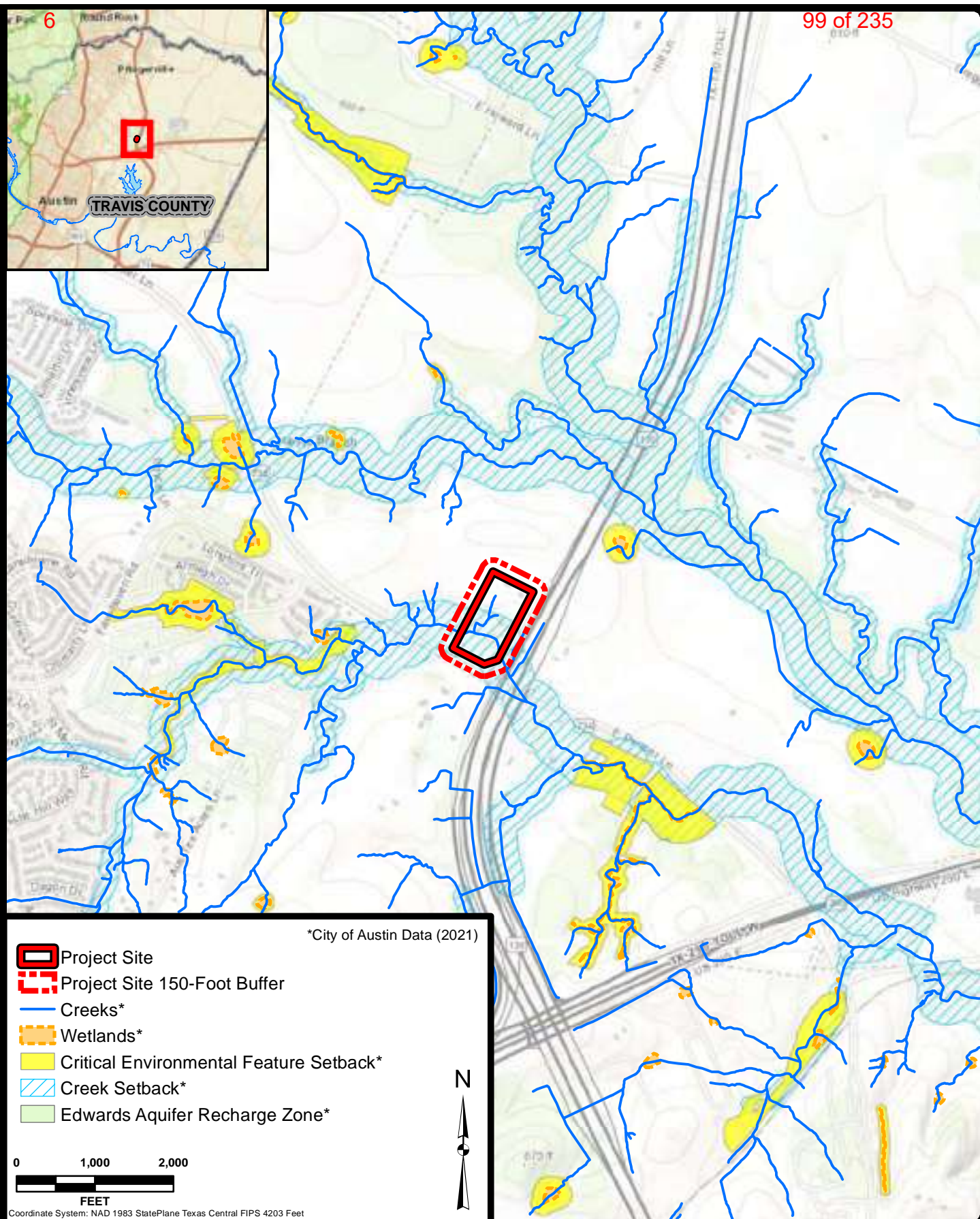
<https://www.fws.gov/wetlands/data/data-download.html>.

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EXHIBITS

EXHIBIT 1

Location Map



*City of Austin Data (2021)

-  Project Site
-  Project Site 150-Foot Buffer
-  Creeks*
-  Wetlands*
-  Critical Environmental Feature Setback*
-  Creek Setback*
-  Edwards Aquifer Recharge Zone*

0 1,000 2,000
FEET

Coordinate System: NAD 1983 StatePlane Texas Central FIPS 4203 Feet

N
↑

JOB NO.	51249-00
DATE	May 2021
DESIGNER	JG
CHECKED	VC
DRAWN	JG
SHEET	EXHIBIT 01

Parmer MF

Environmental Resources Inventory

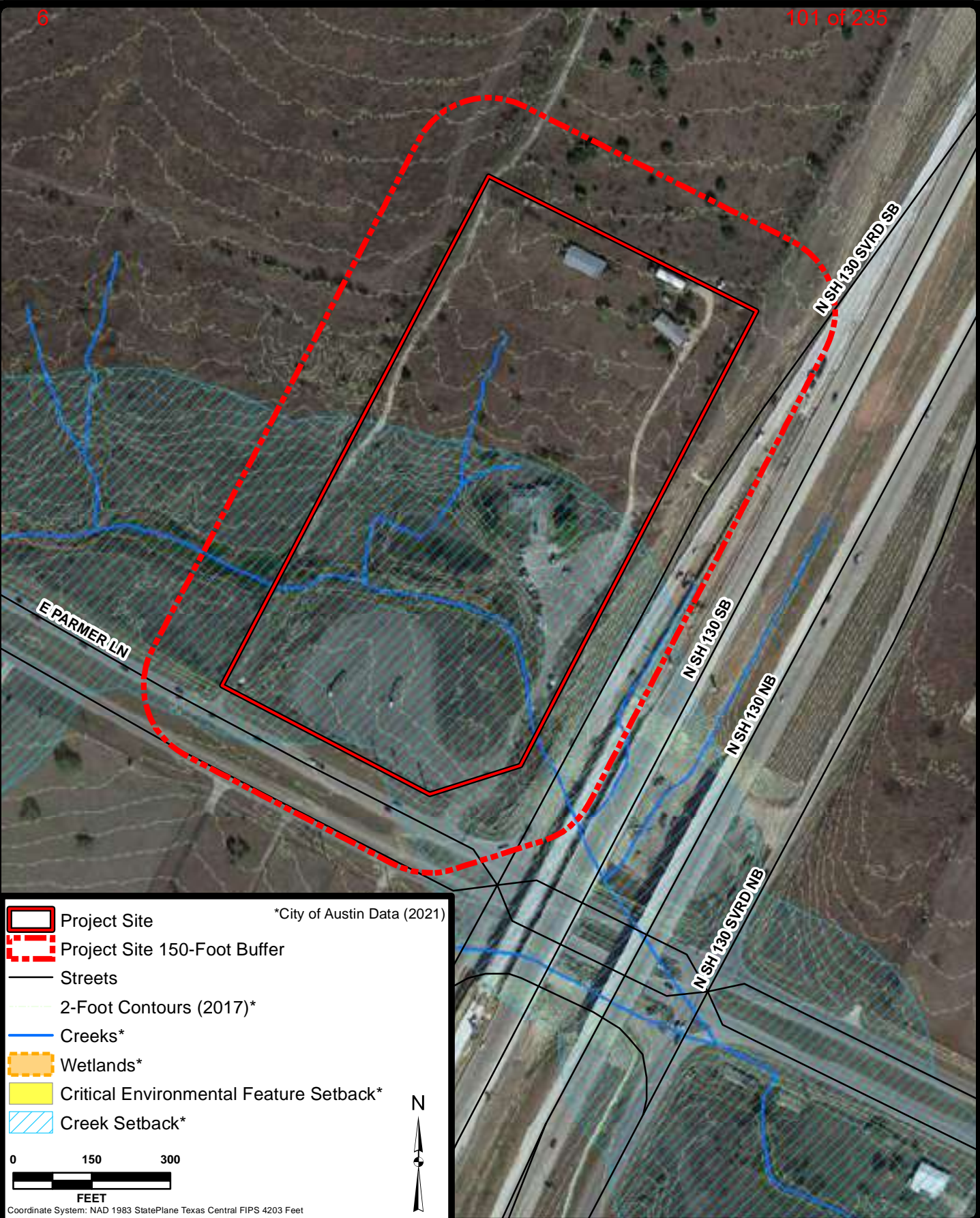
LOCATION MAP

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 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

EXHIBIT 2

Site Map



Project Site

Project Site 150-Foot Buffer

Streets

2-Foot Contours (2017)*

Creeks*

Wetlands*

Critical Environmental Feature Setback*

Creek Setback*

*City of Austin Data (2021)

0

150

300

FEET

Coordinate System: NAD 1983 StatePlane Texas Central FIPS 4203 Feet

N

JOB NO.	51249-00
DATE	May 2021
DESIGNER	JG
CHECKED	VC
DRAWN	JG
SHEET	EXHIBIT 02

Parmer MF

Environmental Resource Inventory

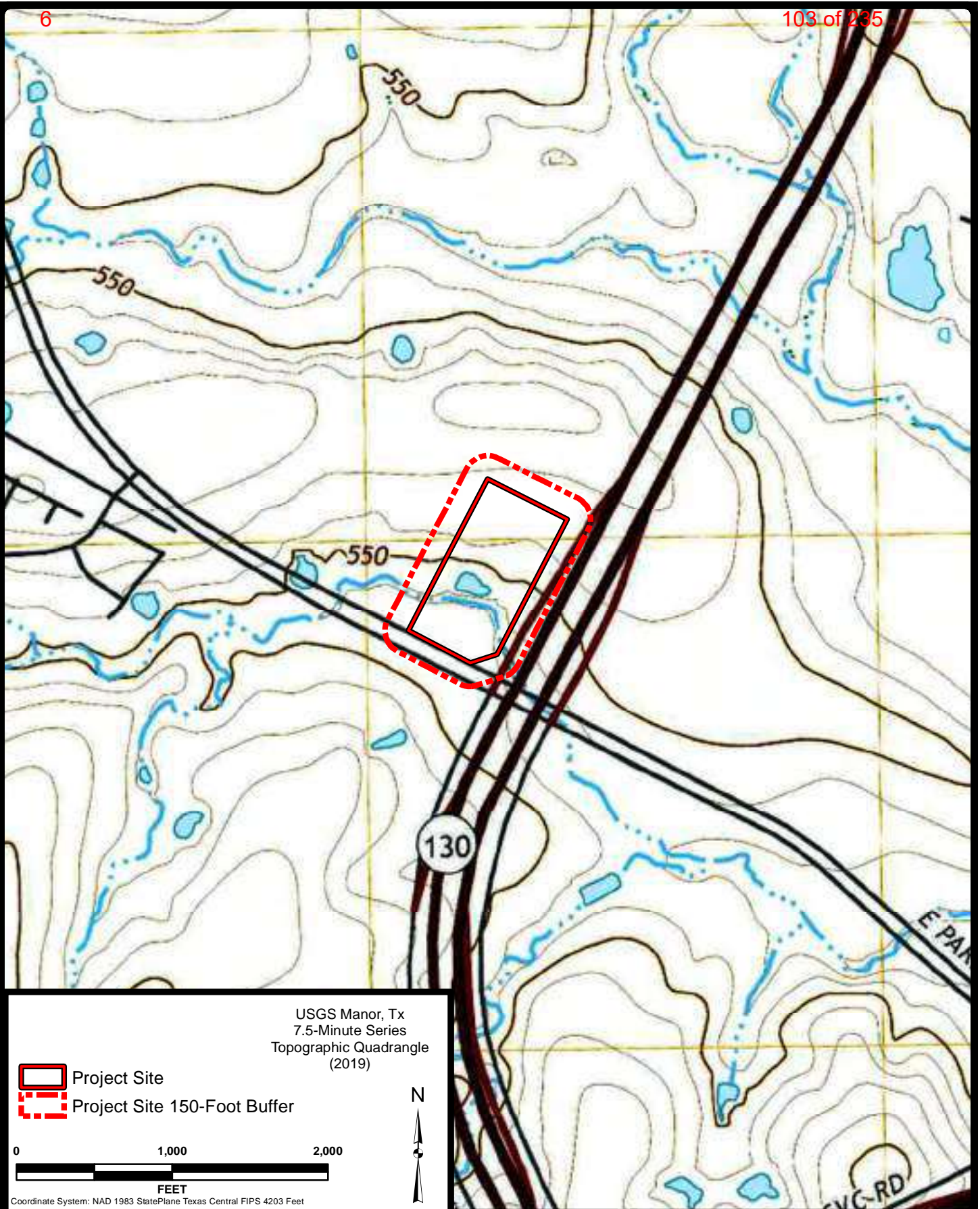
SITE MAP

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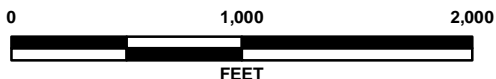
EXHIBIT 3

USGS Topographic Map (2019)



Project Site

Project Site 150-Foot Buffer



Coordinate System: NAD 1983 StatePlane Texas Central FIPS 4203 Feet

USGS Manor, Tx
7.5-Minute Series
Topographic Quadrangle
(2019)

JOB NO. 51249-00
DATE May 2021
DESIGNER JG
CHECKED VC DRAWN JG
SHEET EXHIBIT 03
Backup page 56 of 88

Parmer MF
Environmental Resource Inventory
USGS TOPOGRAPHIC MAP (2019)

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2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

EXHIBIT 4

Floodplain Map



Project Site
Project Site 150-Foot Buffer
Streets
Tributary (FEMA 2020)
100-Year Floodplain (FEMA 2020)

0 150 300
FEET

Coordinate System: NAD 1983 StatePlane Texas Central FIPS 4203 Feet

FEMA FIRM Panel:
48453C0480J
Effective Date:
08/18/2014

N

JOB NO.	51249-00
DATE	May 2021
DESIGNER	JG
CHECKED	VC
DRAWN	JG
SHEET	EXHIBIT 04

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Environmental Resource Inventory
FLOODPLAIN MAP

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TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

EXHIBIT 5

National Wetlands Inventory

Map



- Project Site
 Project Site 150-Foot Buffer
 Streets
NWI Data (2020)
 Freshwater Pond
 Riverine

0 150 300
FEET

Coordinate System: NAD 1983 StatePlane Texas Central FIPS 4203 Feet

JOB NO. 51249-00
 DATE May 2021
 DESIGNER JG
 CHECKED VC DRAWN JG
 SHEET EXHIBIT 05
 Backup page 60 of 88

Parmer MF
Environmental Resource Inventory
NATIONAL WETLANDS INVENTORY MAP

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 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

EXHIBIT 6

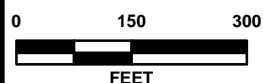
Soils Map



- Project Site
- Project Site 150-Foot Buffer
- Streets

NRCS Soil Units (2021)

- Ferris-Heiden complex, 8 to 20 percent slopes, severely eroded (FhF3)
- Heiden clay, 3 to 5 percent slopes, eroded (HeC2)
- Heiden clay, 5 to 8 percent slopes, eroded (HeD2)
- Tinn clay, 0 to 1 percent slopes, frequently flooded (Tw)



Coordinate System: NAD 1983 StatePlane Texas Central FIPS 4203 Feet



JOB NO. 51249-00
 DATE May 2021
 DESIGNER JG
 CHECKED VC DRAWN JG
 SHEET EXHIBIT 06

Parmer MF

Environmental Resource Inventory

Soils Map


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ENGINEERS


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 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

EXHIBIT 7


Geologic Map




 Project Site

 Project Site 150-Foot Buffer

Geologic Units

 Navarro and Taylor Groups, undivided (Knt)



0 500 1,000

FEET



Coordinate System: NAD 1983 StatePlane Texas Central FIPS 4203 Feet

JOB NO.	51249-00
DATE	May 2021
DESIGNER	JG
CHECKED	VC
DRAWN	JG
SHEET	EXHIBIT 07

Parmer MF

Environmental Resource Inventory

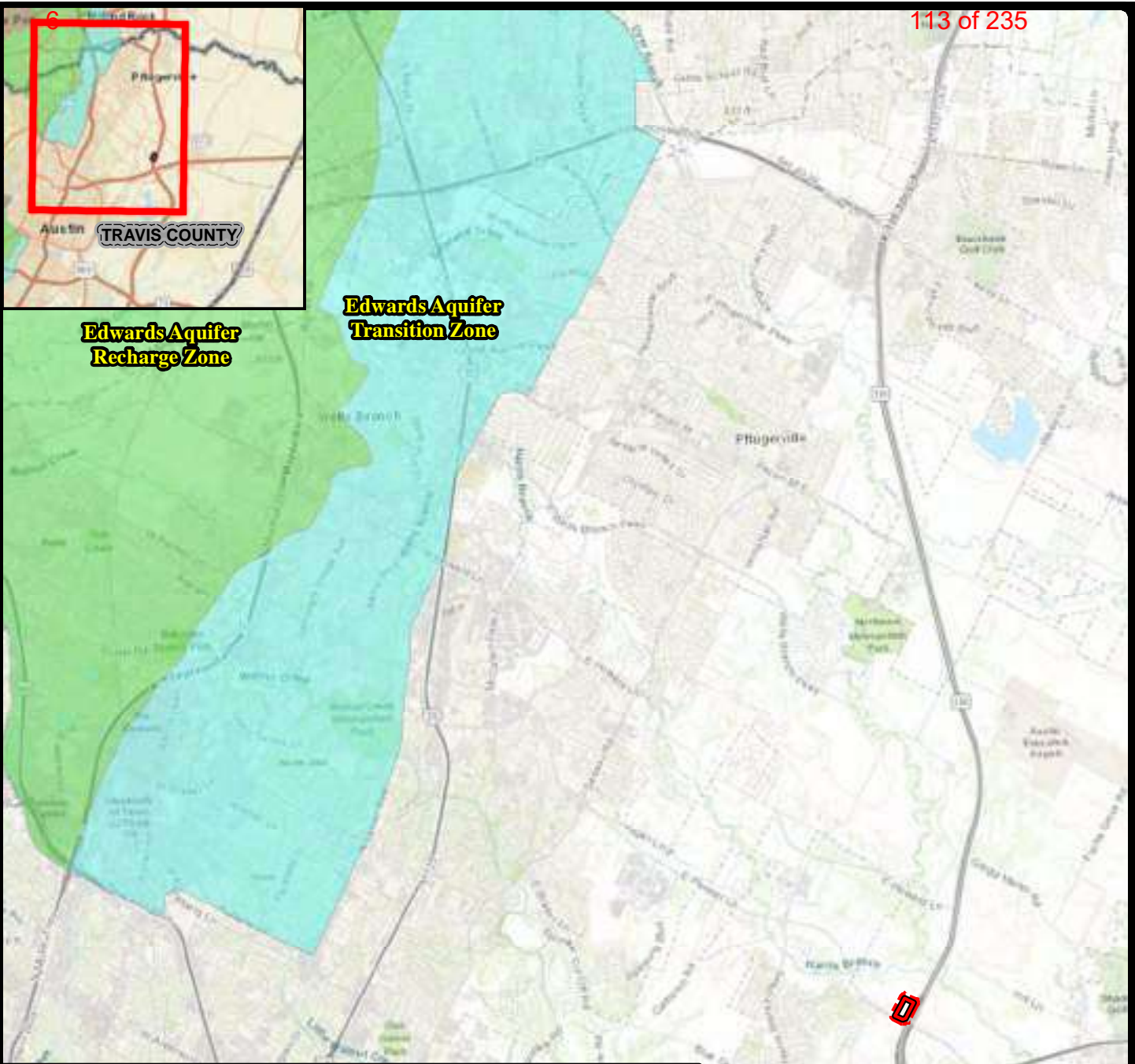
GEOLOGIC MAP

 **PAPE-DAWSON
ENGINEERS**

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EXHIBIT 8





Edwards Aquifer Zone Map

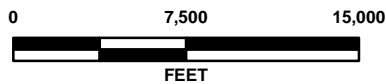


-  Project Site
-  Project Site 150-Foot Buffer

Edwards_Aquifer

TYPE

-  Edwards Aquifer Contributing Zone
-  Edwards Aquifer Contributing Zone within the Transition Zone
-  Edwards Aquifer Recharge Zone
-  Edwards Aquifer Transition Zone



Coordinate System: NAD 1983 StatePlane Texas Central FIPS 4203 Feet



JOB NO.	51249-00
DATE	May 2021
DESIGNER	JG
CHECKED	VC
DRAWN	JG
SHEET	EXHIBIT 08

Backup page 66 of 88

Parmer MF

Environmental Resource Inventory

EDWARDS AQUIFER ZONE MAP



SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

EXHIBIT 9

1995 Historical Aerial Photograph Map



 Project Site
 Project Site 150-Foot Buffer

0 150 300
FEET

Coordinate System: NAD 1983 StatePlane Texas Central FIPS 4203 Feet

JOB NO. 51249-00
DATE May 2021
DESIGNER JG
CHECKED VC DRAWN JG
SHEET EXHIBIT 09

Parmer MF
Environmental Resource Inventory
Historical Aerial Photograph (1995)










PAPE-DAWSON
ENGINEERS

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

EXHIBIT 10

Delineated Critical Environmental Features Map



- | | |
|--|--|
|  Project Site |  150-Foot CEF Setback |
|  Project Site 150-Foot Buffer |  Freshwater Emergent Wetland |
|  Streets |  Freshwater Pond (Excavated) |
|  Proposed Grading |  Freshwater Scrub-Shrub Wetland |
|  Data Points (DPs) | |
- Coordinate System: NAD 1983 StatePlane Texas Central FIPS 4203 Feet



JOB NO.	51249-00
DATE	Jul 2021
DESIGNER	JG
CHECKED	VC
DRAWN	JG
SHEET	EXHIBIT 10

Parmer MF
Environmental Resource Inventory
DELINEATED CRITICAL
ENVIRONMENTAL FEATURES MAP

**PAPE-DAWSON
ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

APPENDIX

APPENDIX A

Site Photographs

±14.34-ACRE PARMER MF Environmental Resource Inventory

Photo No. 1	Date: 03-30-2021
Description: View of the paved portion of the project site facing southeast, on the southeastern corner of the project site.	

A wide-angle photograph of a large, flat, paved area, possibly a parking lot or a construction site. The ground is a light brownish-grey color with some darker patches. In the background, there are several tall utility poles with cross-arms, and a bridge structure is visible on the left side. The sky is overcast and grey. The overall scene is industrial or utilitarian.

Photo No. 2	Date: 03-30-2021	
Description: A typical view of upland habitat that bordered the paved parking lot, on the southeastern portion of the project site. The habitat was a largely mixture of disturbed herbaceous vegetation.		

±14.34-ACRE PARMER MF Environmental Resource Inventory

Photo No. 3	Date: 03-30-2021	
Description: A typical view of the intermittent stream (S-01) identified on the project site, facing east, near the southeastern boundary of the project site.		

Photo No. 4	Date: 03-30-2021	
Description: A view of one of the freshwater scrub-shrub wetlands (W-01) identified on the project site. This wetland was topographically elevated and within the OHWM of the intermittent stream (S-01) identified.		

±14.34-ACRE PARMER MF Environmental Resource Inventory

Photo No. 5	Date: 03-30-2021	
Description: A view of the second freshwater scrub-shrub wetland (W-02) observed on the project site. This wetland abutted the intermittent stream (S-01) identified.		

Photo No. 6	Date: 03-30-2021	
Description: A view of the freshwater pond (W-03) observed on the project site. This pond is located north of the intermittent stream (S-01) identified. The pond was topographically depressed and separated from S-01 by a natural berm.		

**±14.34-ACRE PARMER MF
Environmental Resource Inventory**



Photo No. 7	Date: 03-30-2021	
Description: Another view of the intermittent stream (S-01) identified. This photo was taken on the western boundary of the project site. S-01 drained across an existing cobble road and diverged around the freshwater scrub-shrub wetland (W-01) identified above.		

Photo No. 8	Date: 03-30-2021	
Description: A typical view of upland habitat near the center of the project site, facing northeast.		

±14.34-ACRE PARMER MF **Environmental Resource Inventory**

Photo No. 9	Date: 03-30-2021
Description: A view of the upland habitat observed on the northern portion of the project site.	

A photograph of an upland habitat. The foreground is a grassy field with some taller, dry grasses. In the middle ground, there are several trees and a large, dark-colored barn with a corrugated metal roof. The background shows more trees and a cloudy sky.

Photo No. 10	Date: 03-30-2021	
Description: A view of piles of fill observed on the southwestern portion of the project site facing southwest.		

APPENDIX B

Wetland Determination Forms

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project Site:	Parmer MF	City/ County:	Travis County	Sampling Date:	3/30/2021
Applicant/Owner:	Z Modular	State:	TX	Sampling Point:	DP-01
Investigator(s):	JG	Section, Township, Range:	N/A		
Landform (hillside, terrace, etc.):	Plains	Local relief (concave, convex, none):	None	Slope (%):	1-2%
Subregion (LRR or MLRA):	LRR-J	Lat: 30.353935	Long: -97.593634	Datum:	NAD83
Soil Map Unit Name:	Tinn clay, 0 to 1 percent slopes, frequently flooded (Tw)			NWI Classification:	N/A

Are climatic/hydrological conditions on the site typical for this time of year? ☒ Yes ☐ No (If no, explain in Remarks.)

Are Vegetation, Soil, or Hydrology significantly disturbed? ☐ Yes ☒ No Are "Normal Circumstances" Present? ☒ Yes ☐ No

Are Vegetation, Soil, or Hydrology naturally problematic? ☐ Yes ☒ No (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS- Attach site map showing sample point locations, transects, important features, etc.

Hydrophytic vegetation present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is the Sampled Area within a Wetland? Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>
Remarks: None of the three parameters, hydrophytic vegetation, wetland hydrology, and hydric soil indicators, were observed. The Data Point (DP) is not within a wetland. This Data Point was taken on the paved parking lot on the southern portion of the project site.	
Habitat ID:	Habitat Type: N/A

Vegetation - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status		
Tree stratum (Plot size : 30')					
1. _____	_____	_____	_____	Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: _____ (B) Percent of Dominant Species That are OBL, FACW, or FAC: _____ (A/B)	
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
Sapling/Shrub Stratum (Plot size : 15')					
1. _____	_____	_____	_____	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL Species _____ x 1 = _____ FACW Species _____ x 2 = _____ FAC Species _____ x 3 = _____ FACU Species _____ x 4 = _____ UPL Species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____	
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
Herb Stratum (Plot size : 5')					
1. _____	_____	_____	_____	Hydrophytic Vegetation Indicators: Dominance Test is >50% Prevalence Index is ≤3.01 Problematic Hydrophytic Vegetation ¹ (Explain)	
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
Woody Vine Stratum (Plot size : 30')					
1. _____	_____	_____	_____	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
2. _____	_____	_____	_____		
% Bare Ground in Herb Stratum: <u>100</u>					Hydrophytic Vegetation Present? Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>

Remarks: (if observed, list morphological adaptations below).

Percentage of dominant plants that are OBL, FACW, or FAC is less than or equal to 50%. The hydrophytic vegetation parameter is not met.

SOIL

Sampling Point: DP-01

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- | | |
|--|---|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Gleyed Matrix (S4) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) | <input type="checkbox"/> High Plains Depressions (F16) (MLRA 72 & 73 of LRRH) |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S2) (LRR G, H) | |

Indicators for Problematic Hydric Soils³:

- | |
|--|
| <input type="checkbox"/> 1 cm Muck (A9) (LRR I, J) |
| <input type="checkbox"/> Coast Prairie Redox (A16) (LRR F, G, H) |
| <input type="checkbox"/> Dark Surface (S7) (LRR G) |
| <input type="checkbox"/> High Plains Depressions (F16) |
| (LRR H outside of MLRA 75 & 73) |
| <input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A) |
| <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T) |
| <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (Explain in Remarks) |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soils Present?

☐ Yes☒ No

Remarks:

Indicators of hydric soils lacking; hydric soils parameter is not met.

Hydrology

Wetland Hydrology Indicators:

Primary indicators (minimum of one required; check all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Salt Crust (B11) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Dry Season Water Table (C2) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3) | Where not tilled |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Thick Muck Surface (C7) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other |
| <input type="checkbox"/> Water-Stained Leaves (B9) | |

Secondary Indicators (minimum of two required)

- | |
|---|
| <input type="checkbox"/> Surface Soil Cracks (B6) |
| <input type="checkbox"/> Sparsely Vegetated Concrete Surface (B8) |
| <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| Where tilled |
| <input type="checkbox"/> Crayfish Burrows (C8) |
| <input type="checkbox"/> Saturation Visible on Aerial Imagery (C5) |
| <input type="checkbox"/> Occasional Pore in GZ |
| <input type="checkbox"/> FAC-Neutral Test (D5) |
| <input type="checkbox"/> Frost-Heave Hummocks (D7) (LRR F) |

Field Observations:

Surface Water Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth (Inches): _____
Water Table Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth (Inches): _____
Saturation Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth (Inches): _____

(includes capillary fringe)

Wetland Hydrology Present?:

Yes ☐No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No indicators of wetland hydrology were present. The wetland hydrology parameter is not met.

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project Site:	Parmer MF	City/ County:	Travis County	Sampling Date:	3/30/2021
Applicant/Owner:	Z Modular	State:	TX	Sampling Point:	DP-02
Investigator(s):	JG	Section, Township, Range:	N/A		
Landform (hillside, terrace, etc.):	Plains	Local relief (concave, convex, none):	Concave	Slope (%):	1-2%
Subregion (LRR or MLRA):	LRR-J	Lat: 30.353604	Long: -97.592881	Datum:	NAD83
Soil Map Unit Name:	Tinn clay, 0 to 1 percent slopes, frequently flooded (Tw)			NWI Classification:	N/A

Are climatic/hydrological conditions on the site typical for this time of year? ☒ Yes ☐ No (If no, explain in Remarks.)

Are Vegetation, Soil, or Hydrology significantly disturbed? ☐ Yes ☒ No Are "Normal Circumstances" Present? ☒ Yes ☐ No

Are Vegetation, Soil, or Hydrology naturally problematic? ☐ Yes ☒ No (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS- Attach site map showing sample point locations, transects, important features, etc.

Hydrophytic vegetation present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is the Sampled Area within a Wetland? Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>
Remarks: Hydric soils were observed; however, hydrophytic vegetation and hydrology were not. The data point is not within a wetland.	
Habitat ID:	Habitat Type: N/A

Vegetation - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree stratum (Plot size : 30')				
1. _____	_____	_____	_____	Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That are OBL, FACW, or FAC: <u>0%</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
Sapling/Shrub Stratum (Plot size : 15')				
1. _____	_____	_____	_____	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL Species _____ x 1 = _____ FACW Species _____ x 2 = _____ FAC Species _____ x 3 = _____ FACU Species <u>100</u> x 4 = <u>400</u> UPL Species _____ x 5 = _____ Column Totals: <u>100</u> (A) <u>400</u> (B) Prevalence Index = B/A = <u>4.00</u>
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
Herb Stratum (Plot size : 5')				
1. <i>Helianthus maximiliani</i>	45	Yes	FACU	Hydrophytic Vegetation Indicators: No Dominance Test is >50% No Prevalence Index is ≤3.01 No Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>
2. <i>Bromus japonicus</i>	25	Yes	FACU	
3. <i>Cynodon dactylon</i>	15	No	FACU	
4. <i>Bowlesia incana</i>	15	No	FACU	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
Woody Vine Stratum (Plot size : 30')				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
% Bare Ground in Herb Stratum: <u>0</u>				

Remarks: (if observed, list morphological adaptations below).

Percentage of dominant plants that are OBL, FACW, or FAC is less than or equal to 50%. The hydrophytic vegetation parameter is not met.

SOIL

Sampling Point: DP-02

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	10YR 4/1	100					Clay	
6-14	10YR 5/2	85	5YR 5/6	15	C	M	Clay	Rocks throughout

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- | | |
|--|---|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Gleyed Matrix (S4) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) | <input checked="" type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) | <input type="checkbox"/> High Plains Depressions (F16) (MLRA 72 & 73 of LRRH) |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S2) (LRR G, H) | |

Indicators for Problematic Hydric Soils³:

- | |
|--|
| <input type="checkbox"/> 1 cm Muck (A9) (LRR I, J) |
| <input type="checkbox"/> Coast Prairie Redox (A16) (LRR F, G, H) |
| <input type="checkbox"/> Dark Surface (S7) (LRR G) |
| <input type="checkbox"/> High Plains Depressions (F16) |
| (LRR H outside of MLRA 75 & 73) |
| <input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A) |
| <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T) |
| <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (Explain in Remarks) |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soils Present?

☒ Yes☐ No

Remarks:

Indicators of hydric soils were observed; hydric soil parameter is met.

Hydrology

Wetland Hydrology Indicators:

Primary indicators (minimum of one required; check all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Salt Crust (B11) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Dry Season Water Table (C2) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3) | Where not tilled |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Thick Muck Surface (C7) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other |
| <input type="checkbox"/> Water-Stained Leaves (B9) | |

Secondary Indicators (minimum of two required)

- | |
|---|
| <input type="checkbox"/> Surface Soil Cracks (B6) |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) |
| <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| Where tilled |
| <input type="checkbox"/> Crayfish Burrows (C8) |
| <input type="checkbox"/> Saturation of Soil on Aerial Imagery (C5) |
| <input type="checkbox"/> Occasional Pore in GZ |
| <input type="checkbox"/> FAC-Neutral Test (D5) |
| <input type="checkbox"/> Frost-Heave Hummocks (D7) (LRR F) |

Field Observations:

Surface Water Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth (Inches): _____
Water Table Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth (Inches): _____
Saturation Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth (Inches): _____

(includes capillary fringe)

Wetland Hydrology Present?:

Yes ☐No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No indicators of wetland hydrology were present. The wetland hydrology parameter is not met.

Project Site: Parmer MF City/ County: Travis County Sampling Date: 3/30/2021
 Applicant/Owner: Z Modular State: TX Sampling Point: DP-03
 Investigator(s): JG Section, Township, Range: N/A
 Landform (hillside, terrace, etc.): Plains Local relief (concave, convex, none): Concave Slope (%): 2-5%
 Subregion (LRR or MLRA): LRR-J Lat: 30.353982 Long: -97.592778 Datum: NAD83
 Soil Map Unit Name: Tinn clay, 0 to 1 percent slopes, frequently flooded (Tw) NWI Classification: N/A

Are climatic/hydrological conditions on the site typical for this time of year? ☒ Yes ☐ No (If no, explain in Remarks.)

Are Vegetation, Soil, or Hydrology significantly disturbed? ☐ Yes ☒ No Are "Normal Circumstances" Present? ☒ Yes ☐ No

Are Vegetation, Soil, or Hydrology naturally problematic? ☐ Yes ☒ No (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS- Attach site map showing sample point locations, transects, important features, etc.

Hydrophytic vegetation present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is the Sampled Area within a Wetland? Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>
Remarks: Hydric Soils were observed; however hydrology and hydrophytic vegetation were not. The data point is not within a wetland.	
Habitat ID:	Habitat Type: N/A

Vegetation - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:
Tree stratum (Plot size : 30')				Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That are OBL, FACW, or FAC: <u>50%</u> (A/B)
1. <u>Celtis laevigata</u>	<u>25</u>	<u>Yes</u>	<u>FAC</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
Sapling/Shrub Stratum (Plot size : 15')				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL Species _____ x 1 = _____ FACW Species <u>5</u> x 2 = <u>10</u> FAC Species <u>35</u> x 3 = <u>105</u> FACU Species <u>105</u> x 4 = <u>420</u> UPL Species <u>5</u> x 5 = <u>25</u> Column Totals: <u>150</u> (A) <u>560</u> (B) Prevalence Index = B/A = <u>3.73</u>
1. <u>Celtis laevigata</u>	<u>10</u>	<u>Yes</u>	<u>FAC</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
Herb Stratum (Plot size : 5')				Hydrophytic Vegetation Indicators: No Dominance Test is >50% No Prevalence Index is ≤3.01 No Problematic Hydrophytic Vegetation ¹ (Explain)
1. <u>Rubus trivialis</u>	<u>45</u>	<u>Yes</u>	<u>FACU</u>	
2. <u>Helianthus maximiliani</u>	<u>45</u>	<u>Yes</u>	<u>FACU</u>	
3. <u>Solidago altissima</u>	<u>15</u>	<u>No</u>	<u>FACU</u>	
4. <u>Polytaenia texana</u>	<u>5</u>	<u>No</u>	<u>UPL</u>	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5. <u>Helenium autumnale</u>	<u>5</u>	<u>No</u>	<u>FACW</u>	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
Woody Vine Stratum (Plot size : 30')				Hydrophytic Vegetation Present? Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
% Bare Ground in Herb Stratum: <u>0</u>				

Remarks: (if observed, list morphological adaptations below).

Percentage of dominant plants that are OBL, FACW, or FAC is less than or equal to 50%. The hydrophytic vegetation parameter is not met.

SOIL

Sampling Point: DP-03

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-8	10YR 4/1	100					Clay Loam	
8-14	10YR 5/2	85	10YR 6/2	25	C	M	Clay Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- | | |
|--|---|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Gleyed Matrix (S4) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) | <input checked="" type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) | <input type="checkbox"/> High Plains Depressions (F16) (MLRA 72 & 73 of LRRH) |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S2) (LRR G, H) | |

Indicators for Problematic Hydric Soils³:

- | |
|--|
| <input type="checkbox"/> 1 cm Muck (A9) (LRR I, J) |
| <input type="checkbox"/> Coast Prairie Redox (A16) (LRR F, G, H) |
| <input type="checkbox"/> Dark Surface (S7) (LRR G) |
| <input type="checkbox"/> High Plains Depressions (F16) |
| (LRR H outside of MLRA 75 & 73) |
| <input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A) |
| <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T) |
| <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (Explain in Remarks) |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soils Present?

☒ Yes☐ No

Remarks:

Indicators of hydric soils were observed; hydric soil parameter is met.

Hydrology

Wetland Hydrology Indicators:

Primary indicators (minimum of one required; check all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Salt Crust (B11) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Dry Season Water Table (C2) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3) | Where not tilled |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Thick Muck Surface (C7) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other |
| <input type="checkbox"/> Water-Stained Leaves (B9) | |

Secondary Indicators (minimum of two required)

- | |
|---|
| <input type="checkbox"/> Surface Soil Cracks (B6) |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) |
| <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| Where tilled |
| <input type="checkbox"/> Crayfish Burrows (C8) |
| <input type="checkbox"/> Saturation of Soil on Aerial Imagery X% |
| <input type="checkbox"/> Occasional Pore in GZ |
| <input type="checkbox"/> FAC-Neutral Test (D5) |
| <input type="checkbox"/> Frost-Heave Hummocks (D7) (LRR F) |

Field Observations:

Surface Water Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth (Inches): _____
Water Table Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth (Inches): _____
Saturation Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth (Inches): _____

(includes capillary fringe)

Wetland Hydrology Present?:

Yes ☐No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No indicators of wetland hydrology were present. The wetland hydrology parameter is not met.

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project Site:	Parmer MF	City/ County:	Travis County	Sampling Date:	3/30/2021
Applicant/Owner:	Z Modular	State:	TX	Sampling Point:	DP-04
Investigator(s):	JG	Section, Township, Range:	N/A		
Landform (hillside, terrace, etc.):	Plains	Local relief (concave, convex, none):	Concave	Slope (%):	2-5%
Subregion (LRR or MLRA):	LRR-J	Lat: 30.354116	Long: -97.592938	Datum:	NAD83
Soil Map Unit Name:	Tinn clay, 0 to 1 percent slopes, frequently flooded (Tw)			NWI Classification:	N/A

Are climatic/hydrological conditions on the site typical for this time of year? ☒ Yes ☐ No (If no, explain in Remarks.)

Are Vegetation, Soil, or Hydrology significantly disturbed? ☐ Yes ☒ No Are "Normal Circumstances" Present? ☒ Yes ☐ No

Are Vegetation, Soil, or Hydrology naturally problematic? ☐ Yes ☒ No (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS- Attach site map showing sample point locations, transects, important features, etc.

Hydrophytic vegetation present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the Sampled Area within a Wetland? Yes: <input checked="" type="checkbox"/> No: <input type="checkbox"/>
Remarks: Hydrophytic vegetation, wetland hydrology and hydric soil indicators were all observed. The Data Point (DP) is within a wetland.	
Habitat ID: _____ Habitat Type: Freshwater Forested Wetland	

Vegetation - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree stratum (Plot size : 30')				
1. <i>Ptelea trifoliata</i>	5	Yes	FAC	Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>7</u> (B) Percent of Dominant Species That are OBL, FACW, or FAC: <u>71%</u> (A/B)
2. <i>Celtis laevigata</i>	5	Yes	FAC	
3. _____				
4. _____	10			
Sapling/Shrub Stratum (Plot size : 15')				
1. <i>Ptelea trifoliata</i>	20	Yes	FAC	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL Species <u>25</u> x 1 = <u>25</u> FACW Species <u>10</u> x 2 = <u>20</u> FAC Species <u>45</u> x 3 = <u>135</u> FACU Species <u>40</u> x 4 = <u>160</u> UPL Species _____ x 5 = _____ Column Totals: <u>120</u> (A) <u>340</u> (B) Prevalence Index = B/A = 2.83
2. <i>Celtis laevigata</i>	15	Yes	FAC	
3. _____				
4. _____				
5. _____	35			
Herb Stratum (Plot size : 5')				
1. <i>Rubus trivialis</i>	25	Yes	FACU	Hydrophytic Vegetation Indicators: Yes Dominance Test is >50% Yes Prevalence Index is ≤3.01 No Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes: <input checked="" type="checkbox"/> No: <input type="checkbox"/>
2. <i>Solidago altissima</i>	15	Yes	FACU	
3. <i>Eleocharis palustris</i>	15	Yes	OBL	
4. <i>Ptilimnium capillaceum</i>	10	No	FACW	
5. <i>Samolus parviflorus</i>	5	No	OBL	
6. <i>Typha latifolia</i>	5	No	OBL	
7. _____				
8. _____				
9. _____				
10. _____	75			
Woody Vine Stratum (Plot size : 30')				
1. _____				
2. _____				
% Bare Ground in Herb Stratum: <u>25</u>				

Remarks: (if observed, list morphological adaptations below).

Percentage of dominant plants that are OBL, FACW, or FAC is greater than 50%. The hydrophytic vegetation parameter is met.

SOIL

Sampling Point: DP-04

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-4	10YR 4/1	100					Clay	
4-8	10YR 6/1	65	7.5YR 5/8	35	C	M	Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- | | |
|--|---|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Gleyed Matrix (S4) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) | <input checked="" type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) | <input type="checkbox"/> High Plains Depressions (F16) (MLRA 72 & 73 of LRRH) |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S2) (LRR G, H) | |

Indicators for Problematic Hydric Soils³:

- | |
|--|
| <input type="checkbox"/> 1 cm Muck (A9) (LRR I, J) |
| <input type="checkbox"/> Coast Prairie Redox (A16) (LRR F, G, H) |
| <input type="checkbox"/> Dark Surface (S7) (LRR G) |
| <input type="checkbox"/> High Plains Depressions (F16) |
| (LRR H outside of MLRA 75 & 73) |
| <input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A) |
| <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T) |
| <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (Explain in Remarks) |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soils Present?

☒ Yes☐ No

Remarks:

Indicators of hydric soils were observed; hydric soil parameter is met.

Hydrology

Wetland Hydrology Indicators:

Primary indicators (minimum of one required; check all that apply)

- | | |
|---|---|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Salt Crust (B11) |
| <input checked="" type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input checked="" type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input checked="" type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Dry Season Water Table (C2) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input checked="" type="checkbox"/> Drift Deposits (B3) | Where not tilled |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Thick Muck Surface (C7) |
| <input checked="" type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other |
| <input type="checkbox"/> Water-Stained Leaves (B9) | |

Secondary Indicators (minimum of two required)

- | |
|---|
| <input type="checkbox"/> Surface Soil Cracks (B6) |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) |
| <input checked="" type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| Where tilled |
| <input type="checkbox"/> Crayfish Burrows (C8) |
| <input type="checkbox"/> Saturation of Soil on Aerial Imagery (C5) |
| <input type="checkbox"/> Occasional Potholes (C2) |
| <input type="checkbox"/> FAC-Neutral Test (D5) |
| <input type="checkbox"/> Frost-Heave Hummocks (D7) (LRR F) |

Field Observations:

Surface Water Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth (Inches):	
Water Table Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Depth (Inches):	8
Saturation Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Depth (Inches):	2

(includes capillary fringe)

Wetland Hydrology Present?:

Yes ☒No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Five primary indicators and one secondary indicator of wetland hydrology were observed. The wetland hydrology parameter is met.

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project Site: Parmer MF City/ County: Travis County Sampling Date: 3/30/2021
 Applicant/Owner: Z Modular State: TX Sampling Point: DP-05
 Investigator(s): JG Section, Township, Range: N/A
 Landform (hillside, terrace, etc.): Plains Local relief (concave, convex, none): Concave Slope (%): 2-5%
 Subregion (LRR or MLRA): LRR-J Lat: 30.354325 Long: -97.593924 Datum: NAD83
 Soil Map Unit Name: Tinn clay, 0 to 1 percent slopes, frequently flooded (Tw) NWI Classification: Riverine

Are climatic/hydrological conditions on the site typical for this time of year? ☒ Yes ☐ No (If no, explain in Remarks.)

Are Vegetation, Soil, or Hydrology significantly disturbed? ☐ Yes ☒ No Are "Normal Circumstances" Present? ☒ Yes ☐ No

Are Vegetation, Soil, or Hydrology naturally problematic? ☐ Yes ☒ No (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS- Attach site map showing sample point locations, transects, important features, etc.

Hydrophytic vegetation present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the Sampled Area within a Wetland? Yes: <input checked="" type="checkbox"/> No: <input type="checkbox"/>
Remarks: Hydrophytic vegetation, wetland hydrology and hydric soil indicators were all observed. The Data Point (DP) is within a wetland.	
Habitat ID: _____ Habitat Type: Freshwater Forested Wetland	

Vegetation - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:
Tree stratum (Plot size : 30')				Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That are OBL, FACW, or FAC: <u>83%</u> (A/B)
1. <u>Ulmus crassifolia</u>	<u>10</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Celtis laevigata</u>	<u>10</u>	<u>Yes</u>	<u>FAC</u>	
3. _____	_____	_____	_____	
Sapling/Shrub Stratum (Plot size : 15')				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL Species <u>10</u> x 1 = <u>10</u> FACW Species <u>10</u> x 2 = <u>20</u> FAC Species <u>35</u> x 3 = <u>105</u> FACU Species _____ x 4 = _____ UPL Species <u>20</u> x 5 = <u>100</u> Column Totals: <u>75</u> (A) <u>235</u> (B) Prevalence Index = B/A = <u>3.13</u>
1. <u>Ptelea trifoliata</u>	<u>10</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Celtis laevigata</u>	<u>5</u>	<u>Yes</u>	<u>FAC</u>	
3. _____	_____	_____	_____	
Herb Stratum (Plot size : 5')				Hydrophytic Vegetation Indicators: Yes Dominance Test is >50% No Prevalence Index is ≤3.01 No Problematic Hydrophytic Vegetation ¹ (Explain)
1. <u>Torilis arvensis</u>	<u>15</u>	<u>Yes</u>	<u>UPL</u>	
2. <u>Valerianella radiata</u>	<u>10</u>	<u>Yes</u>	<u>FACW</u>	
3. <u>Anemone berlandieri</u>	<u>5</u>	<u>No</u>	<u>UPL</u>	
4. <u>Eleocharis palustris</u>	<u>5</u>	<u>No</u>	<u>OBL</u>	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5. <u>Typha latifolia</u>	<u>5</u>	<u>No</u>	<u>OBL</u>	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
Woody Vine Stratum (Plot size : 30')				Hydrophytic Vegetation Present? Yes: <input checked="" type="checkbox"/> No: <input type="checkbox"/>
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
% Bare Ground in Herb Stratum: <u>60</u>				

Remarks: (if observed, list morphological adaptations below).

Percentage of dominant plants that are OBL, FACW, or FAC is greater than 50%. The hydrophytic vegetation parameter is met.

SOIL

Sampling Point: DP-05

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-8	10YR 4/1	85	5YR 5/6	15	C	M	Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- | | |
|--|---|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Gleyed Matrix (S4) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) | <input checked="" type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) | <input type="checkbox"/> High Plains Depressions (F16) (MLRA 72 & 73 of LRRH) |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S2) (LRR G, H) | |

Indicators for Problematic Hydric Soils³:

- | |
|--|
| <input type="checkbox"/> 1 cm Muck (A9) (LRR I, J) |
| <input type="checkbox"/> Coast Prairie Redox (A16) (LRR F, G, H) |
| <input type="checkbox"/> Dark Surface (S7) (LRR G) |
| <input type="checkbox"/> High Plains Depressions (F16) |
| (LRR H outside of MLRA 75 & 73) |
| <input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A) |
| <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T) |
| <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (Explain in Remarks) |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type:		
Depth (inches):		Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Remarks:	Indicators of hydric soils were observed; hydric soil parameter is met.	

Hydrology

Wetland Hydrology Indicators:

Primary indicators (minimum of one required; check all that apply)

- | | |
|---|---|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Salt Crust (B11) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input checked="" type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input checked="" type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Dry Season Water Table (C2) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input checked="" type="checkbox"/> Drift Deposits (B3) | Where not tilled |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Thick Muck Surface (C7) |
| <input checked="" type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other |
| <input type="checkbox"/> Water-Stained Leaves (B9) | |

Secondary indicators (minimum of two required)

- | |
|---|
| <input type="checkbox"/> Surface Soil Cracks (B6) |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) |
| <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| Where tilled |
| <input type="checkbox"/> Crayfish Burrows (C8) |
| <input type="checkbox"/> Saturation of Soil on Aerial Imagery (C5) |
| <input type="checkbox"/> Occasional Potholes (C2) |
| <input type="checkbox"/> FAC-Neutral Test (D5) |
| <input type="checkbox"/> Frost-Heave Hummocks (D7) (LRR F) |

Field Observations:

Surface Water Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth (Inches): _____
Water Table Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth (Inches): _____
Saturation Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Depth (Inches): _____ 3

(includes capillary fringe)

Wetland Hydrology Present?: Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Four primary indicators and no secondary indicators of wetland hydrology were observed. The wetland hydrology parameter is met.

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project Site: Parmer MF City/ County: Travis County Sampling Date: 3/30/2021
 Applicant/Owner: Z Modular State: TX Sampling Point: DP-06
 Investigator(s): JG Section, Township, Range: N/A
 Landform (hillside, terrace, etc.): Plains Local relief (concave, convex, none): Convex Slope (%): 2-5%
 Subregion (LRR or MLRA): LRR-J Lat: 30.354441 Long: -97.593651 Datum: NAD83
 Soil Map Unit Name: Tinn clay, 0 to 1 percent slopes, frequently flooded (Tw) NWI Classification: N/A

Are climatic/hydrological conditions on the site typical for this time of year? ☒ Yes ☐ No (If no, explain in Remarks.)

Are Vegetation, Soil, or Hydrology significantly disturbed? ☐ Yes ☒ No Are "Normal Circumstances" Present? ☒ Yes ☐ No

Are Vegetation, Soil, or Hydrology naturally problematic? ☐ Yes ☒ No (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS- Attach site map showing sample point locations, transects, important features, etc.

Hydrophytic vegetation present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is the Sampled Area within a Wetland? Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>
Remarks: None of the three parameters, hydrophytic vegetation, wetland hydrology, and hydric soil indicators, were observed. The Data Point (DP) is not within a wetland.	
Habitat ID: _____ Habitat Type: <u>N/A</u>	

Vegetation - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:
Tree stratum (Plot size : 30')				Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That are OBL, FACW, or FAC: <u>33%</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
Sapling/Shrub Stratum (Plot size : 15')				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL Species _____ x 1 = _____ FACW Species _____ x 2 = _____ FAC Species <u>5</u> x 3 = <u>15</u> FACU Species <u>90</u> x 4 = <u>360</u> UPL Species <u>15</u> x 5 = <u>75</u> Column Totals: <u>110</u> (A) <u>450</u> (B) Prevalence Index = B/A = <u>4.09</u>
1. <u>Ulmus crassifolia</u>	<u>5</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Prosopis glandulosa</u>	<u>5</u>	<u>Yes</u>	<u>FACU</u>	
3. _____	_____	_____	_____	
Herb Stratum (Plot size : 5')				Hydrophytic Vegetation Indicators: No Dominance Test is >50% No Prevalence Index is ≤3.01 No Problematic Hydrophytic Vegetation ¹ (Explain)
1. <u>Solidago altissima</u>	<u>85</u>	<u>Yes</u>	<u>FACU</u>	
2. <u>Torilis arvensis</u>	<u>15</u>	<u>No</u>	<u>UPL</u>	
3. _____	_____	_____	_____	
Woody Vine Stratum (Plot size : 30')				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
% Bare Ground in Herb Stratum: <u>0</u>				

Remarks: (if observed, list morphological adaptations below).

Percentage of dominant plants that are OBL, FACW, or FAC is less than or equal to 50%. The hydrophytic vegetation parameter is not met.

SOIL

Sampling Point: DP-06

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-8	10YR 4/1	100					Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- | | |
|--|---|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Gleyed Matrix (S4) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) | <input type="checkbox"/> High Plains Depressions (F16) (MLRA 72 & 73 of LRRH) |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S2) (LRR G, H) | |

Indicators for Problematic Hydric Soils³:

- | |
|--|
| <input type="checkbox"/> 1 cm Muck (A9) (LRR I, J) |
| <input type="checkbox"/> Coast Prairie Redox (A16) (LRR F, G, H) |
| <input type="checkbox"/> Dark Surface (S7) (LRR G) |
| <input type="checkbox"/> High Plains Depressions (F16) |
| (LRR H outside of MLRA 75 & 73) |
| <input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A) |
| <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T) |
| <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (Explain in Remarks) |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soils Present?

☐ Yes☒ No

Remarks:

Indicators of hydric soils lacking; hydric soils parameter is not met.

Hydrology

Wetland Hydrology Indicators:

Primary indicators (minimum of one required; check all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Salt Crust (B11) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Dry Season Water Table (C2) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3) | Where not tilled |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Thick Muck Surface (C7) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other |
| <input type="checkbox"/> Water-Stained Leaves (B9) | |

Secondary Indicators (minimum of two required)

- | |
|---|
| <input type="checkbox"/> Surface Soil Cracks (B6) |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) |
| <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| Where tilled |
| <input type="checkbox"/> Crayfish Burrows (C8) |
| <input type="checkbox"/> Saturation of Soil on Aerial Imagery (C5) |
| <input type="checkbox"/> Occasional Potholes (C2) |
| <input type="checkbox"/> FAC-Neutral Test (D5) |
| <input type="checkbox"/> Frost-Heave Hummocks (D7) (LRR F) |

Field Observations:

Surface Water Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth (Inches): _____
Water Table Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth (Inches): _____
Saturation Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth (Inches): _____

(includes capillary fringe)

Wetland Hydrology Present?:

Yes ☐No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No indicators of wetland hydrology were present. The wetland hydrology parameter is not met.

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project Site: Parmer MF City/ County: Travis County Sampling Date: 3/30/2021
 Applicant/Owner: Z Modular State: TX Sampling Point: DP-07
 Investigator(s): JG Section, Township, Range: N/A
 Landform (hillside, terrace, etc.): Plains Local relief (concave, convex, none): Concave Slope (%): 1-8%
 Subregion (LRR or MLRA): LRR-J Lat: 30.354709 Long: -97.593271 Datum: NAD83
 Soil Map Unit Name: Ferris-Heiden complex, 8 to 20 percent slopes, severely eroded (FhF3) NWI Classification: Freshwater Pond

Are climatic/hydrological conditions on the site typical for this time of year? ☒ Yes ☐ No (If no, explain in Remarks.)

Are Vegetation, Soil, or Hydrology significantly disturbed? ☐ Yes ☒ No Are "Normal Circumstances" Present? ☒ Yes ☐ No

Are Vegetation, Soil, or Hydrology naturally problematic? ☐ Yes ☒ No (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS- Attach site map showing sample point locations, transects, important features, etc.

Hydrophytic vegetation present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is the Sampled Area within a Wetland? Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>
Remarks: None of the three parameters, hydrophytic vegetation, wetland hydrology, and hydric soil indicators, were observed. The Data Point (DP) is not within a wetland.	
Habitat ID: _____ Habitat Type: <u>N/A</u>	

Vegetation - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:
Tree stratum (Plot size : 30')				Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That are OBL, FACW, or FAC: <u>0%</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
Sapling/Shrub Stratum (Plot size : 15')				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL Species _____ x 1 = _____ FACW Species _____ x 2 = _____ FAC Species <u>10</u> x 3 = <u>30</u> FACU Species <u>5</u> x 4 = <u>20</u> UPL Species <u>80</u> x 5 = <u>400</u> Column Totals: <u>95</u> (A) <u>450</u> (B) Prevalence Index = B/A = <u>4.74</u>
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
Herb Stratum (Plot size : 5')				Hydrophytic Vegetation Indicators: No Dominance Test is >50% No Prevalence Index is ≤3.01 No Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>
1. <u>Torilis arvensis</u>	<u>75</u>	<u>Yes</u>	<u>UPL</u>	
2. <u>Sonchus asper</u>	<u>10</u>	<u>No</u>	<u>FAC</u>	
3. <u>Galium aparine</u>	<u>5</u>	<u>No</u>	<u>FACU</u>	
4. <u>Rapistrum rugosum</u>	<u>5</u>	<u>No</u>	<u>UPL</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	<u>95</u>	_____	_____	
Woody Vine Stratum (Plot size : 30')				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
% Bare Ground in Herb Stratum: <u>5</u>				

Remarks: (if observed, list morphological adaptations below).

Percentage of dominant plants that are OBL, FACW, or FAC is less than or equal to 50%. The hydrophytic vegetation parameter is not met.

SOIL

Sampling Point: DP-07

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-16	10YR 4/1	100					Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- | | |
|--|---|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Gleyed Matrix (S4) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Redox Dark Surface (F5) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) | <input type="checkbox"/> High Plains Depressions (F16) |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S2) (LRR G, H) | (MLRA 72 & 73 of LRRH) |

Indicators for Problematic Hydric Soils³:

- | |
|--|
| <input type="checkbox"/> 1 cm Muck (A9) (LRR I, J) |
| <input type="checkbox"/> Coast Prairie Redox (A16) (LRR F, G, H) |
| <input type="checkbox"/> Dark Surface (S7) (LRR G) |
| <input type="checkbox"/> High Plains Depressions (F16) |
| (LRR H outside of MLRA 75 & 73) |
| <input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A, |
| <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T) |
| <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (Explain in Remarks) |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soils Present?

☐ Yes☒ No

Remarks:

Indicators of hydric soils lacking; hydric soils parameter is not met.

Hydrology

Wetland Hydrology Indicators:

Primary indicators (minimum of one required; check all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Salt Crust (B11) |
| <input checked="" type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Dry Season Water Table (G2) |
| <input type="checkbox"/> Redox Deposition (B2) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3) | Where not tilled |
| <input checked="" type="checkbox"/> Algal Mat or Oils (B4) | <input type="checkbox"/> Presence of Redox Iron (C4) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Thick Muck Surface (C7) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other |
| <input type="checkbox"/> Mitten-Shaped Leaves (B9) | |

Secondary indicators (minimum of two required)

- | |
|--|
| <input type="checkbox"/> Surface Soil Cracks (B6) |
| <input type="checkbox"/> Sparsely Vegetated or Concrete Surface (B8) |
| <input type="checkbox"/> Drainage Patterns (B10) |
| <input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| Where tilled |
| <input type="checkbox"/> Crayfish Burrows (C8) |
| <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Decomposing Plant Matter (D2) |
| <input type="checkbox"/> FAC-Neutral Test (D5) |
| <input type="checkbox"/> Frost-Heave Hummocks (D7) (LRR F) |

Field Observations:

Surface Water Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth (Inches): _____
Water Table Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth (Inches): _____
Saturation Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth (Inches): _____

(includes capillary fringe)

Wetland Hydrology Present?:

Yes ☐No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No indicators of wetland hydrology were present. The wetland hydrology parameter is not met.

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project Site:	Parmer MF	City/ County:	Travis County	Sampling Date:	3/30/2021
Applicant/Owner:	Z Modular	State:	TX	Sampling Point:	DP-08
Investigator(s):	JG	Section, Township, Range:	N/A		
Landform (hillside, terrace, etc.):	Plains	Local relief (concave, convex, none):	Convex	Slope (%):	1-2%
Subregion (LRR or MLRA):	LRR-J	Lat: 30.355375	Long: -97.593029	Datum:	NAD83
Soil Map Unit Name:	Heiden clay, 3 to 5 percent slopes, eroded (HeC2)			NWI Classification:	N/A

Are climatic/hydrological conditions on the site typical for this time of year? ☒ Yes ☐ No (If no, explain in Remarks.)

Are Vegetation, Soil, or Hydrology significantly disturbed? ☐ Yes ☒ No Are "Normal Circumstances" Present? ☒ Yes ☐ No

Are Vegetation, Soil, or Hydrology naturally problematic? ☐ Yes ☒ No (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS- Attach site map showing sample point locations, transects, important features, etc.

Hydrophytic vegetation present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is the Sampled Area within a Wetland? Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>
Remarks: None of the three parameters, hydrophytic vegetation, wetland hydrology, and hydric soil indicators, were observed. The Data Point (DP) is not within a wetland.	
Habitat ID: _____ Habitat Type: N/A	

Vegetation - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:
Tree stratum (Plot size : 30')				Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That are OBL, FACW, or FAC: <u>0%</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
Sapling/Shrub Stratum (Plot size : 15')				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL Species _____ x 1 = _____ FACW Species _____ x 2 = _____ FAC Species _____ x 3 = _____ FACU Species <u>90</u> x 4 = <u>360</u> UPL Species <u>15</u> x 5 = <u>75</u> Column Totals: <u>105</u> (A) <u>435</u> (B) Prevalence Index = B/A = <u>4.14</u>
1. <u>Prosopis glandulosa</u>	<u>15</u>	<u>Yes</u>	<u>FACU</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
Herb Stratum (Plot size : 5')				Hydrophytic Vegetation Indicators: No Dominance Test is >50% No Prevalence Index is ≤3.01 No Problematic Hydrophytic Vegetation ¹ (Explain)
1. <u>Schizachyrium scoparium</u>	<u>75</u>	<u>Yes</u>	<u>FACU</u>	
2. <u>Engelmannia peristenia</u>	<u>10</u>	<u>No</u>	<u>UPL</u>	
3. <u>Anemone berlandieri</u>	<u>5</u>	<u>No</u>	<u>UPL</u>	
Woody Vine Stratum (Plot size : 30')				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
% Bare Ground in Herb Stratum: <u>10</u>				

Remarks: (if observed, list morphological adaptations below).

Percentage of dominant plants that are OBL, FACW, or FAC is less than or equal to 50%. The hydrophytic vegetation parameter is not met.

SOIL

Sampling Point: DP-08

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-16	10YR 3/1	100					Clay loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- | | |
|--|---|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Gleyed Matrix (S4) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Redox Dark Surface (F5) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) | <input type="checkbox"/> High Plains Depressions (F16) |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S2) (LRR G, H) | (MLRA 72 & 73 of LRRH) |

Indicators for Problematic Hydric Soils³:

- | |
|--|
| <input type="checkbox"/> 1 cm Muck (A9) (LRR I, J) |
| <input type="checkbox"/> Coast Prairie Redox (A16) (LRR F, G, H) |
| <input type="checkbox"/> Dark Surface (S7) (LRR G) |
| <input type="checkbox"/> High Plains Depressions (F16) |
| (LRR H outside of MLRA 75 & 73) |
| <input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A, |
| <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T) |
| <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (Explain in Remarks) |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soils Present?

☐ Yes☒ No

Remarks:

Indicators of hydric soils lacking; hydric soils parameter is not met.

Hydrology

Wetland Hydrology Indicators:

Primary indicators (minimum of one required; check all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Salt Crust (B11) |
| <input checked="" type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Dry Season Water Table (G2) |
| <input type="checkbox"/> Redox Iron Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3) | Where not tilled |
| <input checked="" type="checkbox"/> Algal Mat or Oils (B4) | <input type="checkbox"/> Presence of Redox Iron (C4) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Thick Muck Surface (C7) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other |
| <input type="checkbox"/> Mitten Shaped Leaves (B9) | |

Secondary indicators (minimum of two required)

- | |
|--|
| <input type="checkbox"/> Surface Soil Cracks (B6) |
| <input type="checkbox"/> Sparsely Vegetated or Concrete Surface (B8) |
| <input type="checkbox"/> Drainage Patterns (B10) |
| <input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| Where tilled |
| <input type="checkbox"/> Crayfish Burrows (C8) |
| <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Decomposing Plant Matter (D2) |
| <input type="checkbox"/> FAC-Neutral Test (D5) |
| <input type="checkbox"/> Frost-Heave Hummocks (D7) (LRR F) |

Field Observations:

Surface Water Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth (Inches): _____
Water Table Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth (Inches): _____
Saturation Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth (Inches): _____

(includes capillary fringe)

Wetland Hydrology Present?:

Yes ☐No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No indicators of wetland hydrology were present. The wetland hydrology parameter is not met.

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project Site:	Parmer MF	City/ County:	Travis County	Sampling Date:	3/30/2021
Applicant/Owner:	Z Modular	State:	TX	Sampling Point:	DP-09
Investigator(s):	JG	Section, Township, Range:	N/A		
Landform (hillside, terrace, etc.):	Plains	Local relief (concave, convex, none):	None	Slope (%):	1-2%
Subregion (LRR or MLRA):	LRR-J	Lat: 30.355675	Long: -97.592602	Datum:	NAD83
Soil Map Unit Name:	Heiden clay, 3 to 5 percent slopes, eroded (HeC2)			NWI Classification:	N/A

Are climatic/hydrological conditions on the site typical for this time of year? ☒ Yes ☐ No (If no, explain in Remarks.)

Are Vegetation, Soil, or Hydrology significantly disturbed? ☐ Yes ☒ No Are "Normal Circumstances" Present? ☒ Yes ☐ No

Are Vegetation, Soil, or Hydrology naturally problematic? ☐ Yes ☒ No (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS- Attach site map showing sample point locations, transects, important features, etc.

Hydrophytic vegetation present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is the Sampled Area within a Wetland? Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>
Remarks: None of the three parameters, hydrophytic vegetation, wetland hydrology, and hydric soil indicators, were observed. The Data Point (DP) is not within a wetland.	
Habitat ID: _____ Habitat Type: N/A	

Vegetation - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:
Tree stratum (Plot size : 30')				Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That are OBL, FACW, or FAC: <u>50%</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
Sapling/Shrub Stratum (Plot size : 15')				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL Species _____ x 1 = _____ FACW Species _____ x 2 = _____ FAC Species <u>85</u> x 3 = <u>255</u> FACU Species <u>10</u> x 4 = <u>40</u> UPL Species <u>5</u> x 5 = <u>25</u> Column Totals: <u>100</u> (A) <u>320</u> (B) Prevalence Index = B/A = <u>3.20</u>
1. <u>Prosopis glandulosa</u>	<u>5</u>	<u>Yes</u>	<u>FACU</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
Herb Stratum (Plot size : 5')				Hydrophytic Vegetation Indicators: No Dominance Test is >50% No Prevalence Index is ≤3.01 No Problematic Hydrophytic Vegetation ¹ (Explain)
1. <u>Paspalum notatum</u>	<u>85</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Schizachyrium scoparium</u>	<u>5</u>	<u>No</u>	<u>FACU</u>	
3. <u>Engelmannia peristenia</u>	<u>5</u>	<u>No</u>	<u>UPL</u>	
Woody Vine Stratum (Plot size : 30')				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
% Bare Ground in Herb Stratum: <u>5</u>				Hydrophytic Vegetation Present? Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>

Remarks: (if observed, list morphological adaptations below).

Percentage of dominant plants that are OBL, FACW, or FAC is less than or equal to 50%. The hydrophytic vegetation parameter is not met.

SOIL

Sampling Point: DP-09

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-16	10YR 3/1	100					Clay loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- | | |
|--|---|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Gleyed Matrix (S4) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Redox Dark Surface (F5) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) | <input type="checkbox"/> High Plains Depressions (F16) |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S2) (LRR G, H) | (MLRA 72 & 73 of LRRH) |

Indicators for Problematic Hydric Soils³:

- | |
|--|
| <input type="checkbox"/> 1 cm Muck (A9) (LRR I, J) |
| <input type="checkbox"/> Coast Prairie Redox (A16) (LRR F, G, H) |
| <input type="checkbox"/> Dark Surface (S7) (LRR G) |
| <input type="checkbox"/> High Plains Depressions (F16) |
| (LRR H outside of MLRA 75 & 73) |
| <input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A, |
| <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T) |
| <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (Explain in Remarks) |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soils Present?

☐ Yes☒ No

Remarks:

Indicators of hydric soils lacking; hydric soils parameter is not met.

Hydrology

Wetland Hydrology Indicators:

Primary indicators (minimum of one required; check all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Salt Crust (B11) |
| <input checked="" type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Dry Season Water Table (G2) |
| <input type="checkbox"/> Redox Deposition (B2) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3) | Where not tilled |
| <input checked="" type="checkbox"/> Algal Mat or Oils (B4) | <input type="checkbox"/> Presence of Redox Iron (C4) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Thick Muck Surface (C7) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other |
| <input type="checkbox"/> Mammal Signatures (B9) | |

Secondary indicators (minimum of two required)

- | |
|--|
| <input type="checkbox"/> Surface Soil Cracks (B6) |
| <input type="checkbox"/> Sparsely Vegetated or Concrete Surface (B8) |
| <input type="checkbox"/> Drainage Patterns (B10) |
| <input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| Where tilled |
| <input type="checkbox"/> Crayfish Burrows (C8) |
| <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Decomposing Plant Matter (D2) |
| <input type="checkbox"/> FAC-Neutral Test (D5) |
| <input type="checkbox"/> Frost-Heave Hummocks (D7) (LRR F) |

Field Observations:

Surface Water Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth (Inches): _____
Water Table Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth (Inches): _____
Saturation Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth (Inches): _____

(includes capillary fringe)

Wetland Hydrology Present?:

Yes ☐No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No indicators of wetland hydrology were present. The wetland hydrology parameter is not met.

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project Site: Parmer MF City/ County: Travis County Sampling Date: 3/30/2021
 Applicant/Owner: Z Modular State: TX Sampling Point: DP-10
 Investigator(s): JG Section, Township, Range: N/A
 Landform (hillside, terrace, etc.): Plains Local relief (concave, convex, none): Convex Slope (%): 1-2%
 Subregion (LRR or MLRA): LRR-J Lat: 30.355130 Long: -97.592482 Datum: NAD83
 Soil Map Unit Name: Ferris-Heiden complex, 8 to 20 percent slopes, severely eroded (FhF3) NWI Classification: N/A

Are climatic/hydrological conditions on the site typical for this time of year? ☒ Yes ☐ No (If no, explain in Remarks.)

Are Vegetation, Soil, or Hydrology significantly disturbed? ☐ Yes ☒ No Are "Normal Circumstances" Present? ☒ Yes ☐ No

Are Vegetation, Soil, or Hydrology naturally problematic? ☐ Yes ☒ No (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS- Attach site map showing sample point locations, transects, important features, etc.

Hydrophytic vegetation present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is the Sampled Area within a Wetland? Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>
Remarks: None of the three parameters, hydrophytic vegetation, wetland hydrology, and hydric soil indicators, were observed. The Data Point (DP) is not within a wetland.	
Habitat ID: _____ Habitat Type: <u>N/A</u>	

Vegetation - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:
Tree stratum (Plot size : 30')				Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That are OBL, FACW, or FAC: <u>33%</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
Sapling/Shrub Stratum (Plot size : 15')				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL Species _____ x 1 = _____ FACW Species _____ x 2 = _____ FAC Species <u>5</u> x 3 = <u>15</u> FACU Species <u>90</u> x 4 = <u>360</u> UPL Species <u>15</u> x 5 = <u>75</u> Column Totals: <u>110</u> (A) <u>450</u> (B) Prevalence Index = B/A = <u>4.09</u>
1. <u>Prosopis glandulosa</u>	<u>15</u>	<u>Yes</u>	<u>FACU</u>	
2. <u>Ulmus crassifolia</u>	<u>5</u>	<u>Yes</u>	<u>FAC</u>	
3. _____	_____	_____	_____	
Herb Stratum (Plot size : 5')				Hydrophytic Vegetation Indicators: No Dominance Test is >50% No Prevalence Index is ≤3.01 No Problematic Hydrophytic Vegetation ¹ (Explain)
1. <u>Schizachyrium scoparium</u>	<u>75</u>	<u>Yes</u>	<u>FACU</u>	
2. <u>Engelmannia peristenia</u>	<u>10</u>	<u>No</u>	<u>UPL</u>	
3. <u>Anemone berlandieri</u>	<u>5</u>	<u>No</u>	<u>UPL</u>	
Woody Vine Stratum (Plot size : 30')				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
% Bare Ground in Herb Stratum: <u>10</u>				

Remarks: (if observed, list morphological adaptations below).

Percentage of dominant plants that are OBL, FACW, or FAC is less than or equal to 50%. The hydrophytic vegetation parameter is not met.

SOIL

Sampling Point: DP-10

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-16	10YR 3/1	100					Clay loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- | | |
|--|---|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Gleyed Matrix (S4) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Redox Dark Surface (F5) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) | <input type="checkbox"/> High Plains Depressions (F16) |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S2) (LRR G, H) | (MLRA 72 & 73 of LRRH) |

Indicators for Problematic Hydric Soils³:

- | |
|---|
| <input type="checkbox"/> 1 cm Muck (A9) (LRR I, J) |
| <input type="checkbox"/> Coast Prairie Redox (A16) (LRR F, G, H) |
| <input type="checkbox"/> Dark Surface (S7) (LRR G) |
| <input type="checkbox"/> High Plains Depressions (F16) |
| (LRR H outside of MLRA 75 & 73) |
| <input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A, |
| Piedmont Floodplain Soils (F19) (LRR P, S, T) |
| <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (Explain in Remarks) |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type:		
Depth (inches):		Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Remarks:	Indicators of hydric soils lacking; hydric soils parameter is not met.	

Hydrology

Wetland Hydrology Indicators:

Primary indicators (minimum of one required; check all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Salt Crust (B11) |
| <input checked="" type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Dry Season Water Table (G2) |
| <input type="checkbox"/> Redox Deposition (B2) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3) | Where not tilled |
| <input checked="" type="checkbox"/> Algal Mat or Oils (B4) | <input type="checkbox"/> Presence of Redox Iron (C4) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Thick Muck Surface (C7) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other |
| <input type="checkbox"/> Mammal Signatures (B9) | |

Secondary indicators (minimum of two required)

- | |
|--|
| <input type="checkbox"/> Surface Soil Cracks (B6) |
| <input type="checkbox"/> Sparsely Vegetated or Concrete Surface (B8) |
| <input type="checkbox"/> Drainage Patterns (B10) |
| <input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| Where tilled |
| <input type="checkbox"/> Crayfish Burrows (C8) |
| <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Decomposing Plant Matter (D2) |
| <input type="checkbox"/> FAC-Neutral Test (D5) |
| <input type="checkbox"/> Frost-Heave Hummocks (D7) (LRR F) |

Field Observations:

Surface Water Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth (Inches): _____
Water Table Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth (Inches): _____
Saturation Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth (Inches): _____

(includes capillary fringe)

Wetland Hydrology Present?: Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No indicators of wetland hydrology were present. The wetland hydrology parameter is not met.

**CITY OF AUSTIN
ENVIRONMENTAL RESOURCE INVENTORY
FOR THE
8020 EAST PARMER TRACT**

Travis County, Texas

November 2020

Submitted to:

Vincent F. Barletta
BDG Acquisitions, LLC
40 Shamut Road, Suite 200
Canton, Massachusetts 02021

Prepared By:

aci consulting
1001 Mopac Circle
Austin, Texas 78746

aci Project No.: 35-20-174

Environmental Resource Inventory

For the City of Austin
Relating to the Land Development Code (LDC) Section 25-8, Title 30-5, ECM 1.3.0 & 1.10.0
Effective October 28, 2013

The ERI is required for projects that meet one or more of the criteria listed in (LDC) Section 25-8-121(A), Title 30-5-121(A).

1. SITE/PROJECT NAME: 8020 East Parmer ERI
2. COUNTY APPRAISAL DISTRICT PROPERTY ID (#'s): 236741 & 247979
3. ADDRESS/LOCATION OF PROJECT: 8020 East Parmer Lane, Manor, Texas 78653
4. WATERSHED: Harris Branch and Gilleland Creek
5. THIS SITE IS WITHIN THE *(Check all that apply)*
 - Edwards Aquifer Recharge Zone* *(See note below)* ☐ YES ☒ No
 - Edwards Aquifer Contributing Zone* ☐ YES ☒ No
 - Edwards Aquifer 1500 ft Verification Zone* ☐ YES ☒ No
 - Barton Spring Zone* ☐ YES ☒ No

**(as defined by the City of Austin – LDC 25-8-2)*

Note: If the property is over the Edwards Aquifer Recharge zone, the Hydrogeologic Report and karst surveys must be completed and signed by a Professional Geoscientist Licensed in the State of Texas.

6. DOES THIS PROJECT PROPOSE FLOODPLAIN MODIFICATION?.....☒ YES** ☐ NO
If yes, then check all that apply:
 - ☐ (1) The floodplain modifications proposed are necessary to protect the public health and safety;
 - ☒ (2) The floodplain modifications proposed would provide a significant, demonstrable environmental benefit, as determined by a **functional assessment** of floodplain health as prescribed by the Environmental Criteria Manual, or
 - ☒ (3) The floodplain modifications proposed are necessary for development allowed in the critical water **quality zone under Section 25-8-261 or 25-8-262 of the LDC.**
 - ☐ (4) The floodplain modifications proposed are outside of the Critical Water Quality Zone in an area determined to be in poor or fair condition by a **functional assessment** of floodplain health.

**** If yes, then a functional assessment must be completed and attached to the ERI (see Section 1.7 and Appendix X in the Environmental Criteria Manual for forms and guidance) unless conditions 1 or 3 above apply.**

7. IF THE SITE IS WITHIN AN URBAN OR SUBURBAN WATERSHED, DOES THIS PROJECT PROPOSE A UTILITY LINE PARALLEL TO AND WITHIN THE CRITICAL WATER QUALITY ZONE? ☒ YES*** ☐ NO

*****If yes, then riparian restoration is required by Section 25-8-261(E) of the LDC and a functional assessment must be completed and attached to the ERI (see Section 1.5 and Appendix X in the Environmental Criteria Manual for forms and guidance).**

8. There is a total of 1 (#'s) Critical Environmental Feature(s)(CEFs) on or within 150 feet of the project site. If CEF(s) are present, attach a detailed **DESCRIPTION** of the CEF(s), color **PHOTOGRAPHS**, the **CEF WORKSHEET** and provide **DESCRIPTIONS** of the proposed CEF buffer(s) and/or wetland mitigation. Provide the number of each type of CEFs on or within 150 feet of the site *(Please provide the number of CEFs):*

_____ (#'s) Spring(s)/Seep(s) _____ (#'s) Point Recharge Feature(s) _____ (#'s) Bluff(s)
 _____ (#'s) Canyon Rimrock(s) 1 (#'s) Wetland(s)

Note: Standard buffers for CEFs are 150 feet, with a maximum of 300 feet for point recharge features. Except for wetlands, if the standard buffer is not provided, you must provide a written request for an administrative variance from Section 25-8-281(C)(1) and provide written findings of fact to support your request. Request forms for administrative variances from requirements stated in LDC 25-8-281 are available from Watershed Protection Department.

9. The following site maps are attached at the end of this report (Check all that apply and provide):

All ERI reports must include:

- ☒ **Site Specific Geologic Map with 2-ft Topography**
- ☒ **Historic Aerial Photo of the Site**
- ☒ **Site Soil Map**
- ☒ **Critical Environmental Features and Well Location Map on current Aerial Photo with 2-ft Topography**

Only if present on site (Maps can be combined):

- ☐ **Edwards Aquifer Recharge Zone with the 1500-ft Verification Zone**
(Only if site is over or within 1500 feet the recharge zone)
- ☐ **Edwards Aquifer Contributing Zone**
- ☐ **Water Quality Transition Zone (WQTZ)**
- ☒ **Critical Water Quality Zone (CWQZ)**
- ☐ **City of Austin Fully Developed Floodplains for all water courses with up to 64-acres of drainage**

10. **HYDROGEOLOGIC REPORT** – Provide a description of site soils, topography, and site specific geology below (Attach additional sheets if needed):

Surface Soils on the project site is summarized in the table below and uses the SCS Hydrologic Soil Groups*. If there is more than one soil unit on the project site, show each soil unit on the site soils map.

Soil Series Unit Names, Infiltration Characteristics & Thickness		
Soil Series Unit Name & Subgroup**	Group*	Thickness (feet)
See Q10-1. Surface Soils		

*Soil Hydrologic Groups 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.

**Subgroup Classification – See Classification of Soil Series Table in County Soil Survey.

Description of Site Topography and Drainage *(Attach additional sheets if needed):*

According to the Manor U.S. Geologic Survey (USGS) 7.5-Minute Topographic Quadrangle and the City of Austin 2015 two-foot contours, the elevation within the subject area ranges from 450 feet above mean sea level (MSL) to 432 feet above MSL. The subject area slopes from southwest to northwest across the subject area (USGS 1988).

(COA) City of Austin. 2015. Two-foot Topographic Lines. City of Austin: Austin, TX.

(USGS) U.S. Geologic Survey. 1988. Manor Texas Quadrangle. USGS - Department of the Interior: Denver, CO.

List surface geologic units below:

Geologic Units Exposed at Surface		
Group	Formation	Member
Taylor Group	Navarro and Taylor Groups	N/A
	undivided (Knt)	
N/A	Alluvium (Qal)	N/A

Brief description of site geology *(Attach additional sheets if needed):*

The subject area is mapped as Navarro and Taylor Groups undivided (Knt) and Alluvium (Qal)

Knt - "in areas where Pecan Gap Chalk is not present because of gradation of marl similar to that of the Marlbrook and Ozan Formations"

Qal - "Floodplain deposits, including indistinct low terrace deposit; clay, sand, and gravel; silt and clay, calcareous to surface, dark gray to dark brown; sand largely quartz; gravel, siliceous, mostly chert, quartzite, limestone, and petrified wood, along Colorado River much igneous and metamorphic rock, probably mostly reworked from terrace deposits; fluvial morphology well preserved with point bars, oxbows, and abandoned channel segments"

(USGS) U.S. Geologic Survey. 2020a. Texas Geology Web Map. Last accessed: November 25, 2020. <https://txpub.usgs.gov>.

Wells – Identify all recorded and unrecorded wells on site (test holes, monitoring, water, oil, unplugged, capped and/or abandoned wells, etc.):

There are 1 (#) wells present on the project site and the locations are shown and labeled

 0 (#s) The wells are not in use and have been properly abandoned.

 0 (#s) The wells are not in use and will be properly abandoned.

 1 (#s) The wells are in use and comply with 16 TAC Chapter 76.

There are 0 (#s) wells that are off-site and within 150 feet of this site.

11. THE VEGETATION REPORT – Provide the information requested below:

Brief description of site plant communities *(Attach additional sheets if needed):*

The subject area contains but is not limited to honey mesquite (*Prosopis glandulosa*), sugar hackberry (*Celtis laevigata*), common hackberry (*Celtis occidentalis*), green ash (*Fraxinus pennsylvanica*), southern bristle grass (*Setaria schreelei*), late bonset (*Eupatorium serotinum*), spike rush (*Eleocharis palustris*), cedar elm (*Ulmus crassifolia*), Johnson grass (*Sorghum halepense*), velvety goldenrod (*Solidago mollis*), balloon vine (*Cardiospermum halicacabum*), redosier dogwood (*Cornus sericea*), annual bastardcabbage (*Rapistrum rugosum*), eastern red cedar (*Juniperus virginiana*), silver bluestem (*Bothriochloa saccharoides*), maximilian sunflower (*Helianthus maximiliani*), Texas pricklypear (*Opuntia engelmannii*), gum bumelia (*Sideroxylon lanuginosum*), antelope horn (spider milkweed), broom-corn (*Sorghum bicolor*), common hoptree (*Ptelea trifoliata*), and broadleaf cattail (*Typha latifolia*).

There is woodland community on site☒ YES ☐ NO *(Check one).*

If yes, list the dominant species below:

Woodland species	
Common Name	Scientific Name
eastern red cedar	<i>Juniperus virginiana</i>
cedar elm	<i>Ulmus crassifolia</i>
common hoptree	<i>Ptelea trifoliata</i>
green ash	<i>Fraxinus pennsylvanica</i>
common hackberry	<i>Celtis occidentalis</i>

There is grassland/prairie/savanna on site.....☒ YES ☐ NO *(Check one).*

If yes, list the dominant species below:

Grassland/prairie/savanna species	
Common Name	Scientific Name
silver bluestem	<i>Bothriochloa saccharoides</i>
Johnson grass	<i>Sorghum halepense</i>
southern bristle grass	<i>Setaria schreelei</i>

There is hydrophytic vegetation on site☒ YES ☐ NO *(Check one).*

If yes, list the dominant species in table below *(next page):*

Hydrophytic plant species		
Common Name	Scientific Name	Wetland Indicator Status
spike rush	Eleocharis palustris	OBL
broadleaf cattail	Typha latifolia	OBL

A tree survey of all trees with a diameter of at least eight inches measured four and one-half feet above natural grade level has been completed on the site.

☐ YES ☒ NO (Check one).

12. WASTEWATER REPORT – Provide the information requested below.

Wastewater for the site will be treated by (Check of that Apply):

- ☐ On-site system(s)
☒ City of Austin Centralized sewage collection system
☐ Other Centralized collection system

Note: All sites that receive water or wastewater service from the Austin Water Utility must comply with Chapter 15-12 of Austin City Code and wells must be registered with the City of Austin

The site sewage collection system is designed and will be constructed to in accordance to all State, County and City standard specifications.

☒ YES ☐ NO (Check one).

Calculations of the size of the drainfield or wastewater irrigation area(s) are attached at the end of this report or shown on the site plan.

☐ YES ☐ NO ☒ Not Applicable (Check one).

Wastewater lines are proposed within the Critical Water Quality Zone?

☐ YES ☒ NO (Check one). If yes, then provide justification below:

Is the project site is over the Edwards Aquifer?

☐ YES ☒ NO (Check one).

If yes, then describe the wastewater disposal systems proposed for the site, its treatment level and effects on receiving watercourses or the Edwards Aquifer.

13. One (1) hard copy and one (1) electronic copy of the completed assessment have been provided.

Date(s) ERI Field Assessment was performed: 12/01/2020
Date(s)

My signature certifies that to the best of my knowledge, the responses on this form accurately reflect all information requested.

Stephen Meyer

(512) 852-3860

Print Name

Telephone



smeyer@aci-group.net

Signature

Email Address

aci consulting

12/7/2020

Name of Company

Date

For project sites within the Edwards Aquifer Recharge Zone, my signature and seal also certifies that I am a licensed Professional Geoscientist in the State of Texas as defined by ECM 1.12.3(A).

P.G.
Seal

Print Form

**List of Attachments for the
Environmental Resource Inventory Form**

Question 8:

Q8-1. CEF Worksheet

Q8-2. CEF Description

Question 9:

Q9-1. Site Specific Geologic Map with 2-ft Topography

Q9-2. Historic Aerial Photo of the Site (1996)

Q9-3. Site Soils Map

Q9-4. Critical Environmental Features (CEF) current Aerial Photo with 2-ft Topography

Q9-5. City of Austin Critical Water Quality Zones (CRQZ)

Q9-6. FEMA Flood Hazard Zones

Question 10:

Q10-1. Surface Soils

Q10-2. Wells

Q10-3. Functional Assessment of Floodplain Health

Question 8 Attachments

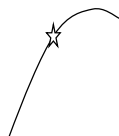
City of Austin Environmental Resource Inventory - Critical Environmental Feature Worksheet

5	Primary Contact Name:	Stephen Meyer
6	Phone Number:	(512) 347-3860
7	Prepared By:	Stephen Meyer
8	Email Address:	smeyer@aci-group.net

[illegible]

City of Austin Use Only CASE NUMBER:	
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For rimrock, locate the midpoint of the segment that describes the feature.



For wetlands, locate the approximate centroid of the feature and the estimated area.



For a spring or seep, locate the source of groundwater that feeds a pool or stream.



Please state the method of coordinate data collection and the approximate precision and accuracy of the points and the unit of measurement.

Accuracy

X

X sub-meter

meter

> 1 meter

> 1 meter X

Professional Geologists apply seal below

Q8-2. CEF Description

Section 25-8-1 of the City of Austin (COA) LDC defines Critical Environmental Features (CEF) as “features that are of critical importance to the protection of environmental resources, and include bluffs, canyon rimrocks, caves, faults and fractures, seeps, sinkholes, springs, and wetlands.”

Aerial photographs and topographic maps were utilized to orient surveyors in the field. If potential CEFs were identified in the field, they were carefully examined and recorded, and each potential feature was described, photographed and its location recorded using a handheld Garmin GPS unit.

Field reconnaissance was conducted on December 1, 2020. One CEF was identified within the subject area.

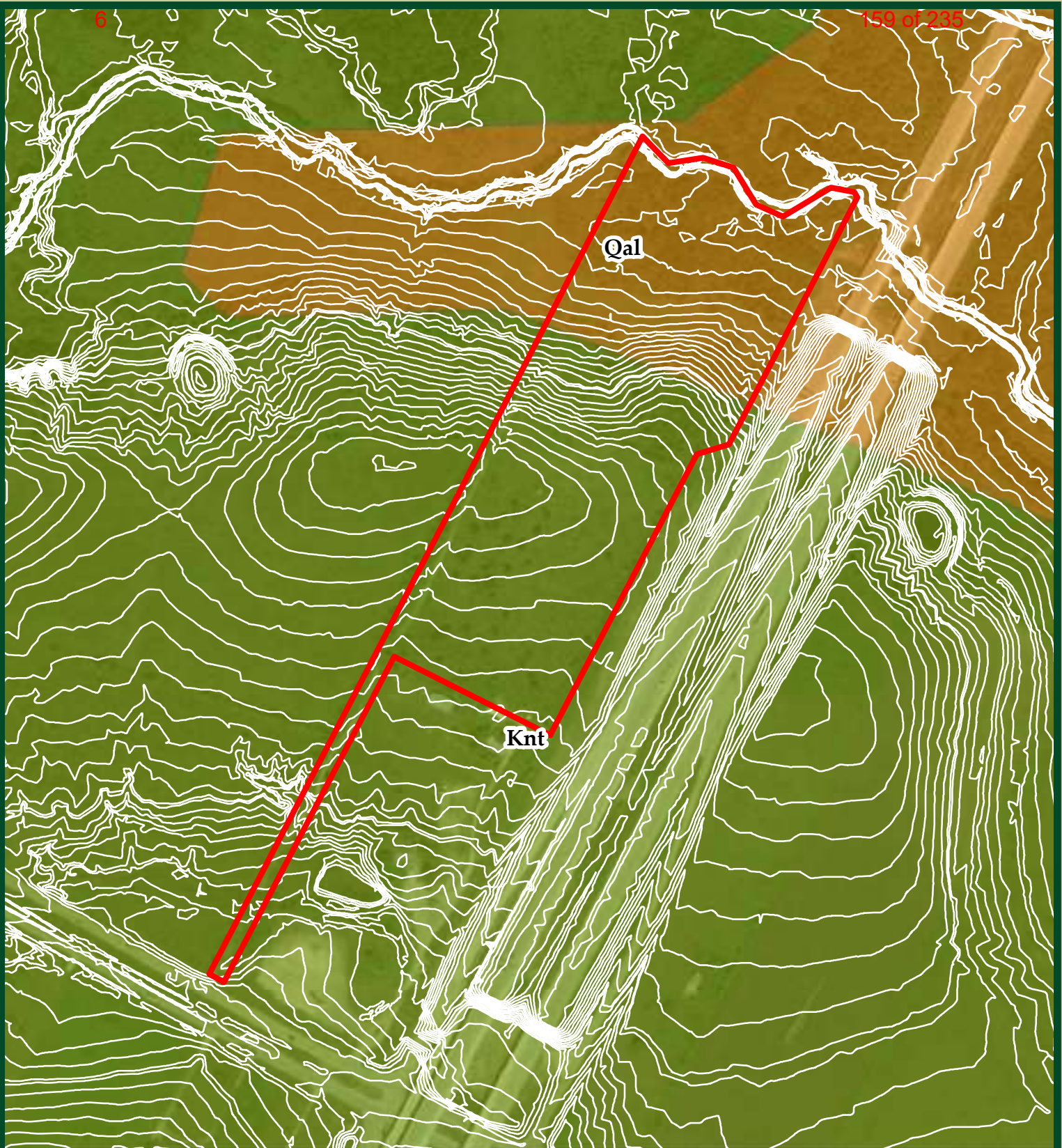
CEF-1

CEF-1 is an emergent wetland located in the southern portion of the subject area. CEF-1 was inundated at the time of the field visit. CEF-1 has wetland hydrology, hydric soils, and is dominated by hydrophytic vegetation such as spike rush and cattails. The boundary between CEF-1 and the adjacent non-wetland was identified based on changes in hydrology, dominant plant composition, and soils. The 1% Annual Chance FEMA Flood Hazard Zone extends on subject area at CEF-1. The total area of CEF-1 is approximately 1,012 square feet, or approximately 0.023 acre within the subject area (Photo 1).

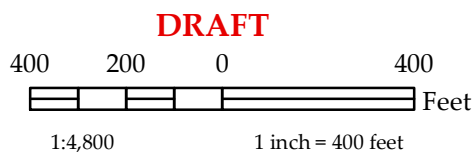


8020 East Parmer ERI Tract Date: 12/1/2020	Feature	CEF-1	Photo 1
	Description	CEF-1 in the southern portion of the subject area	Direction: North
	Photographer	aci consulting	


Question 9 Attachments



This map is intended for planning purposes only. All map data should be considered preliminary. All boundaries and designations are subject to confirmation.



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 **Subject Area**

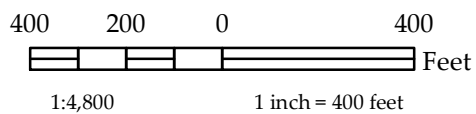





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 **Subject Area**



HeC2

6

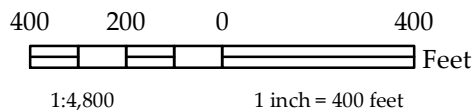
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This map is intended for planning purposes only. All map data should be considered preliminary. All boundaries and designations are subject to confirmation.



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 Subject Area

